SHRINK-FIT HOLDER SLIMLINE

English

07 02

SHRINK-FIT HOLDER

SLIMLINE

Slimline can be used with all high-speed, high-precision machining centers.

Slimline can be used in a wide variety of applications.

Fine-precision machining
High speed and high feed
High speed and heavy duty cutting
Syncronize 5 axis machining
High quality machining
Linear motor drive

MIKRON
HSM400 / UCP600, UCP800, UCP1350
DIXI
Jig 1200 5 axes
WILLEMIN-MACODEL
W408-MT, W418, W428, W-518S, W-518MT

Switzerland

KONDIA
Seaska600
NICOLAS CORREA
Pantera, Rapid Aero

Spain

Italy

FIDIA
HS664RT / KR211 / K199 / K165RT
MECOF
Linea Dynamill 2000
PARPAS
Omnia series / Diamond series
FAMUP
MF560-X5B, HV2000-X5
JOBS
JO'MACH series, JO'MACH2 series, Linx BLITZ, Linx COMPACT,

Medical
Optical communication
Aerospace
Car・Mobile
Fuel battery
Semiconductor device

MITSUI SEIKI
VL30 / HU Series
ROKU-ROKU
MEGAⅢ / NANO-21 / CEGA-542
SODICK HIGHTECH
MC430L / MC650L / HS150L
MAKINO
V22 / V33 / J3
MORI SEIKI
NVD1500 DCG / NV4000 DCG / NX2000 DCG / NMV5000DCG
MITSUBISHI
μ machining V1
NIPPEI TOYAMA
Zμ3500
BROTHER
TC-32B QT
MATSUURA
LX-1 / LX-0 / MAM72 Series
SUGINO
V9 / Xion- Ⅱ
OKK
VD300

Japan

Germany

KERN
HSPC2525
OPS-INGERSOLL
OPS600
ROEDERS GMBH
RHP 600
HERMLE
C Series
ALTZMETALL
G800
CHIRON
FZ15KS, FZ15S, FZ18S
DIGMA
HSC800 / 5
DMG
DMC60S-FD
HURCO
MTX U
STAMA
MC526 / MT, MC531 / MT
WALDRICH-SIEGEN
Multi Contour, Multi Profiler

CINCINNATI MACHINE
V5-2000, V5-3000, V5-4000, H5-800/1000
HAAS AUTOMATION
5-AXIS TRUNNION 5-AXIS PROFILING

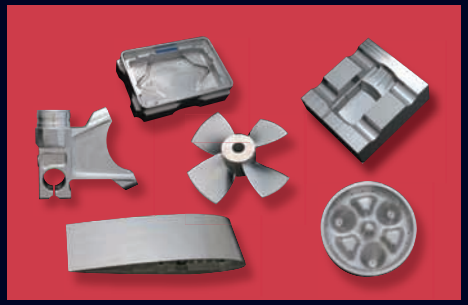
U.S.A.

U.K. **BRIDGEPORT**
5AX-400, 500, 630

France

FOREST-LINE
Aerostar, Aeromill, Minumac, Vstar, etc.
HURON
KX8 Five, KX15, KX100, KX200, KXG45

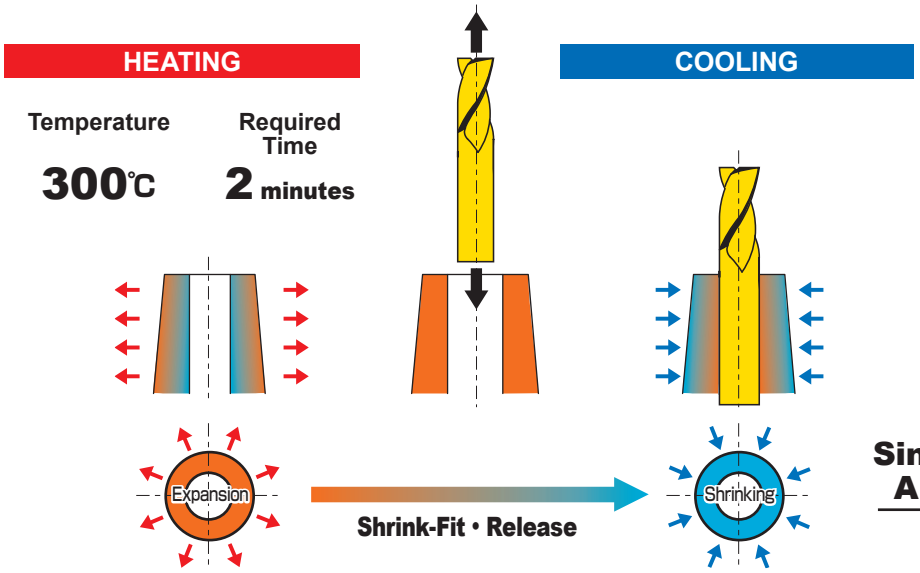
NAK81
Inconel Zirconia
HRC62° Ti-6AI-4V
SKD61 Quartz glass
STAVAX



Heat Shrink Mechanism

SLIMLINE

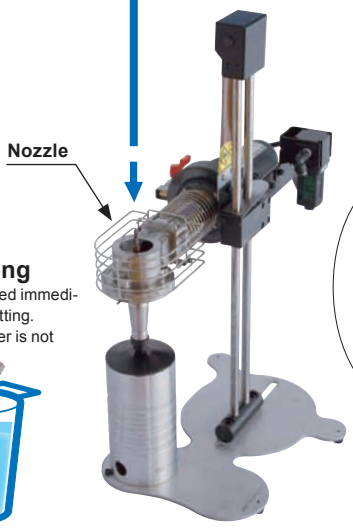
Slimline is a shrink-fit system that holds a carbide cutting tool firmly and accurately. MST's unique and exclusive material used in manufacturing the holder is able to achieve cool shrink fitting at temperatures of 300℃ or lower. Slimline uses an industrial-dryer-based, hot-air, shrink-fit heater. A lineup of 3,000 holders with different shapes is available for a wide variety of applications. Its simple, ultra-slim shape allows the shortest possible cutter overhang, providing strong, stable clamping strength while maintaining high precision.



Special Material for Shrink-Fit

- Its thermal expansion coefficient is 1.6 times higher than that of regular steel.
- Shrink fitting and removing is achieved using a hot-air heater.
- Can be immersed in water to cool it off.
- Will not overheat even if heated for a long time.
- Ultra-thin 1.5 mm edge walls.

HOT AIR HEATER
Required Carbide Cutter Shank Tolerance
(φ3～5→h6 / φ6～25→h7)



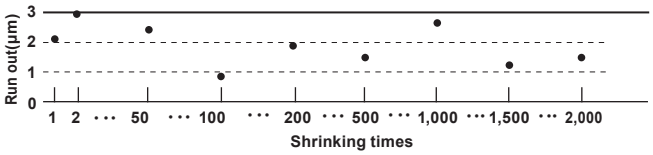
Induction Heating System
HEAT ROBO
DENJI 電磁 1200
φ3～φ12

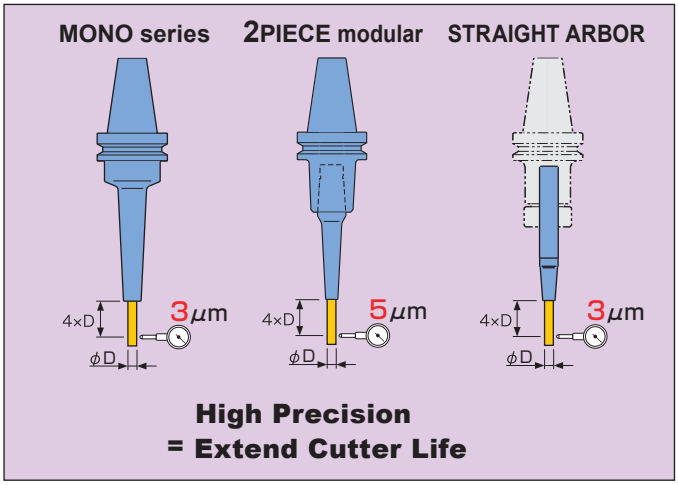
Water Cooling
Can be water-cooled immediately after shrink fitting.
A large-scale cooler is not required.

High Precision

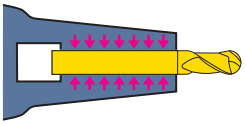
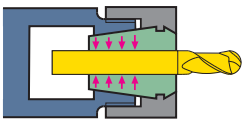
Regardless of skill level can insert tools firmly and with high precision. Slimline holders can be used for more than 2,000 shrink fittings and releases without compromising precision.

Repeated Shrink Fitting and Removing Test





Strong Clamping Force

	Shrink-Fit holder (Slimline)	Collet Holder (Existing Holder)
Chucking Principle	A shrink-fit system that uses the difference between the thermal expansion coefficient of the holder and carbide cutting tool.	A system to hold a cutting tool that uses elastic deformation of a collet which has slits.
Clamping Force (ϕ6)	6.2kgf・m	2.1kgf・m
	 Thermal Expansion ➡ Shrinkage Force	 Elastic Deformation

Twice Long Tool Life

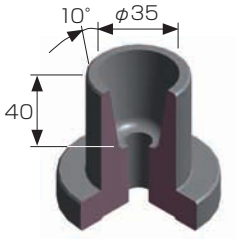
Cutting distance per an end-mill

Process	Rough Cutting		Finish Cutting	
Tool / Material	Collet Holder E32-CTH10-55 (C10-6P)	Slimline E32-SLRA6-50-M22	Collet Holder E32-CTH10-55 (C10-6P)	Slimline E32-SLRA6-50-M22
SKD61 (50HRC)	Twice → 180m	360m	1.5 Times → 90m	135m
SKD11 (60HRC)	1.5 Times → 40m	60m	Twice → 45m	90m

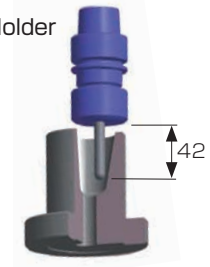
F (Feed) : 3,000mm/min.
t (Depth of cutting) : 0.15mm
N (Rotation speed) : 24,000min^{-1}

Machine :
SODICK HIGHTECH MC430L

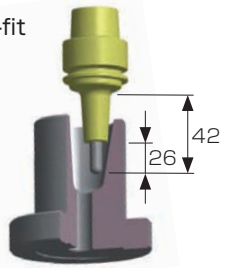
Cutter :
MITSUBISHI MATERIAL KOBE TOOLS
2 flutes carbide cutting tool
IMPACT MIRACLE Ball End Mill (R3)
VF-2SB-R0300S06



Collet Holder

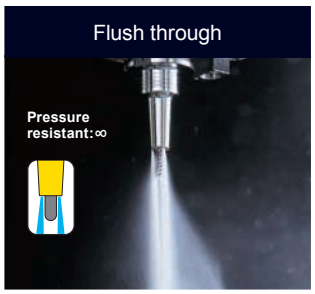


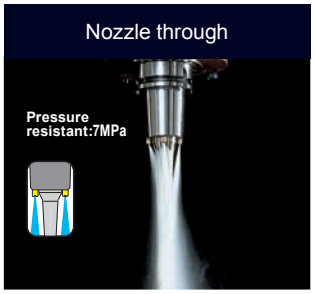
Shrink-fit holder



Compatible with The Coolant-Through Capability

Allows reliable coolant supply without leakage. No need for accessory parts.





Use Customization

User customization (additional machining) is also possible to avoid interference by reducing the edge wall thickness down to 1.5 mm.

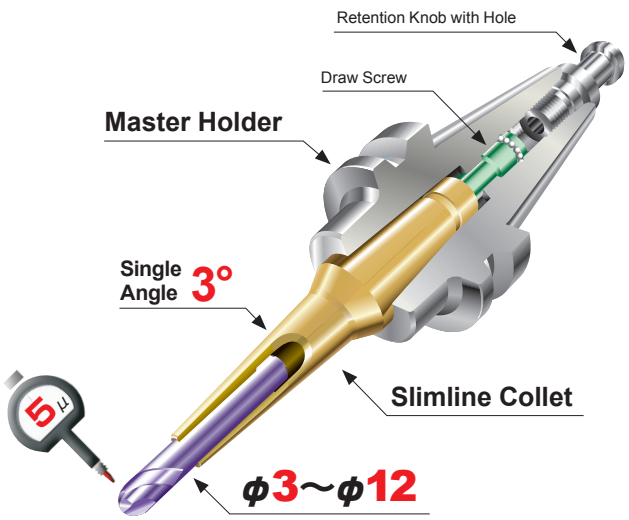
See P.156 for instructions.

Modular System

2 PIECE MODULAR SYSTEM

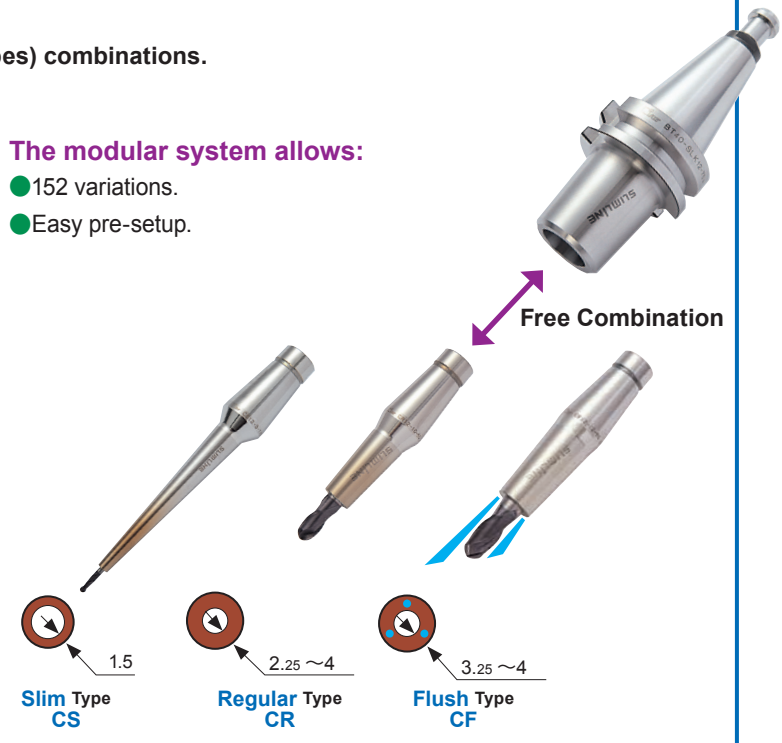
Compatible Diameters of Cutting Tools
φ3~φ12

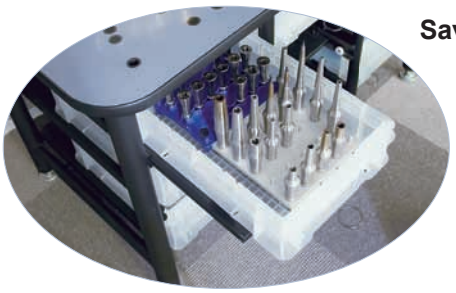
- Compact- easy to store and handle.
- Variety of shank shape (21 types) and collet (80 types) combinations.



The modular system allows:

- 152 variations.
- Easy pre-setup.





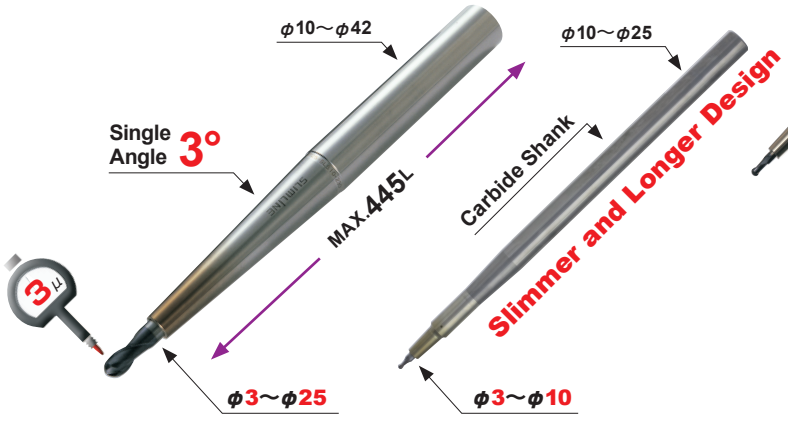
Saves Space

Recombination of Collets

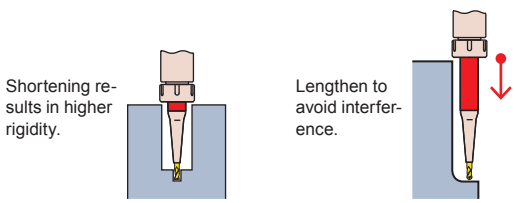
STRAIGHT ARBOR SYSTEM

Compatible Diameters of Cutting Tools
φ3~φ25

- Precisely extending the reach of standard cutting tools.
- 111 variations are possible when combined with carbide types.



The length is freely adjustable for a perfect fit.

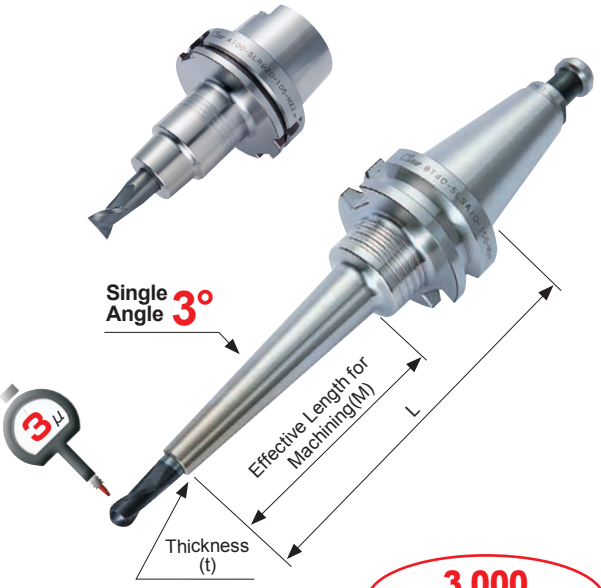


Mono Block Series

MONO SERIES SYSTEM

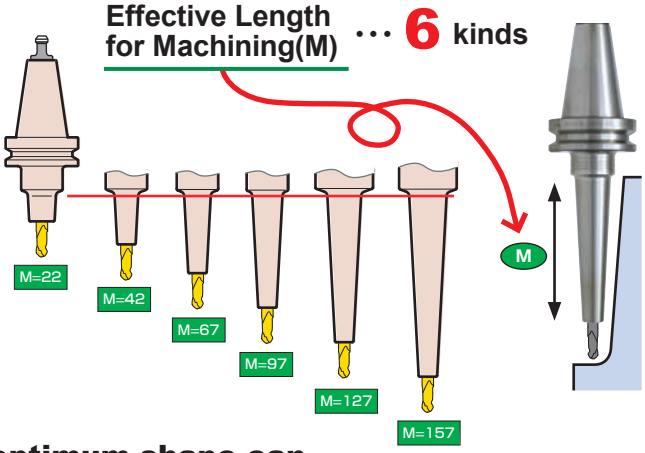
Compatible Diameters of Cutting Tools
φ3～φ25

➤ The holder best suited to your machining needs can be selected from 3,000 variations of differing shank shapes, cutting tool chucking diameters, holder lengths (L), effective machining lengths (M), and holder edge thicknesses.



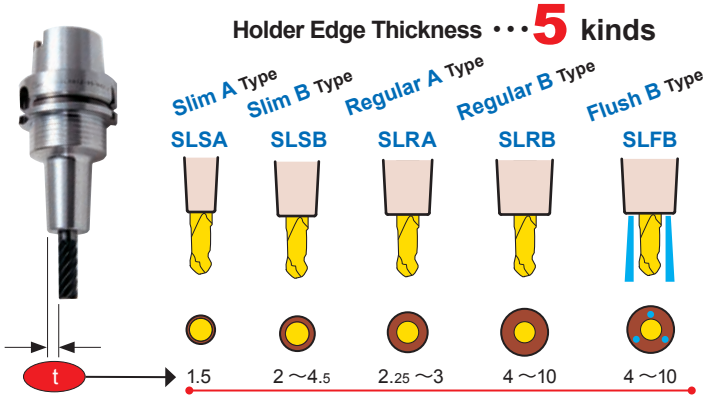
3,000 Variations

Effective Length for Machining(M) ··· 6 kinds



The optimum shape can be selected based on your work piece dimensions.

Holder Edge Thickness ···5 kinds



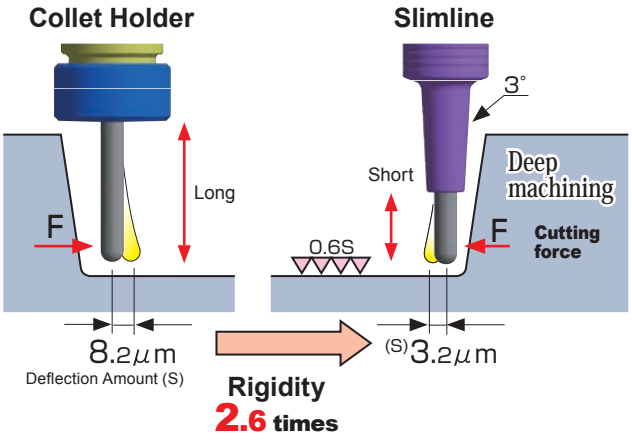
High Rigidity

➤ Slimline holders rarely interfere with work pieces because of their highly compact, slim design with a single angle of 3 degrees and a wall thickness of just 1.5 mm.

Slimline ensures a much longer service life for your cutting tools. Deep machining, which is difficult for conventional holders, is possible.

Ideal for machining a deep cavity with a three-dimensional shape or machining a 5-axis turbine blade.

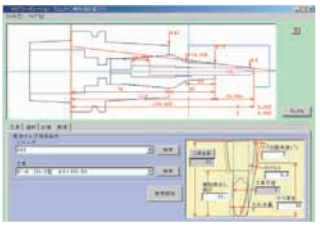
The Minimum Cutter Projection



➤ **The most suitable setting for high rigidity is calculated automatically.**

Static Rigidity Calculation Software for Slimline

Free software for checking interference with work pieces is provided.



See P.159

The overhang of the cutting tool has a great influence on deflection (rigidity).
Deflection increases in proportion to the overhang length (L3).

$$\text{Deflection Amount(S)} = \frac{6.8 \times F \times L^3}{E \times D^4}$$

S:Deflection amount L:Length of overhang E:Young's modulus (Carbide 59000kgf/mm^2)
D:Shaft diameter F:Load

SHRINK-FIT HOLDER
SLIMLINE

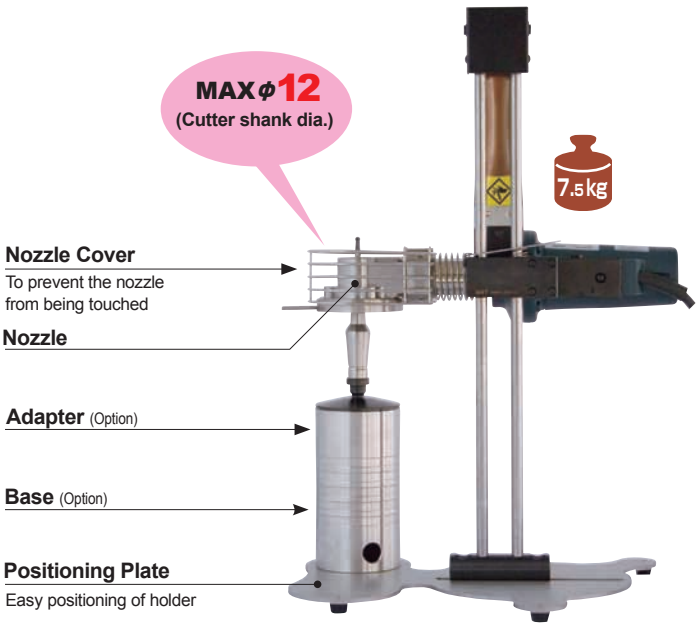
SHRINK-FIT HEATER

HEAT ROBO Baby 1200S

HOT AIR HEATER
100V 120V 1.2kW
120 sec. (φ12 collet)

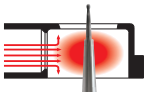
CODE	HRB-02S	HRB-02S-120NA
VOLTAGE	AC100V	AC120V
POWER SUPPLY	1200W	
SIZE	W362 × D105 × H570	
EFFECTIVE SHRINK-FIT DIMENSIONS	 Max C = dia. 32 (Max dia. 24 only for M22 type)	
HEATING TIME	120SEC. (φ12 collet)	

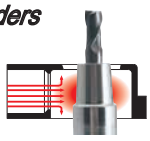
■Standard Accessories ●Heat-resistant gloves ●Tweezers ●Timer
■Option ●Please choose from the common parts on P. 8.



HEAT ROBO Baby 3000S

Compatible with All MST Shrink-Fit Holders


Small Dia.


Large Dia.

High power

HOT AIR HEATER
200V 230V 3kW
70 sec. (φ12 collet)
Air Cooling 10 min.
CE 230EU

CODE	HRB-03S	HRB-03S-230NA -230EU -230AS
VOLTAGE	AC200V	AC230V
POWER SUPPLY	3000W	
SIZE	W450 × D215 × H570	
HEATING TIME	70SEC. (φ12 collet)	

■Standard Accessories
●Tweezers ●Heat-resistant gloves ●Timer
■Note ●Factory compressed air(5kgf/cm^2) is required.(consumption air volume : 245 ℓ /min)
●Please prepare an air tube (outer diameter of 8 mm) and connection coupling.
■Option ●Please choose from the common parts on P. 8.

★*Cost-Effective Hot-Air Type*

★*Electromagnetic Induction Heater*

★*Instant Shrink Fitting*

★ *Easy Operation*

★ *Easy positioning by single hand.*

★*Water Cooling - Significantly Reduced Cooling Time*

★ *Low-Temperature Shrink Fitting at 300℃*

ELECTROMAGNETIC INDUCTION HEATER

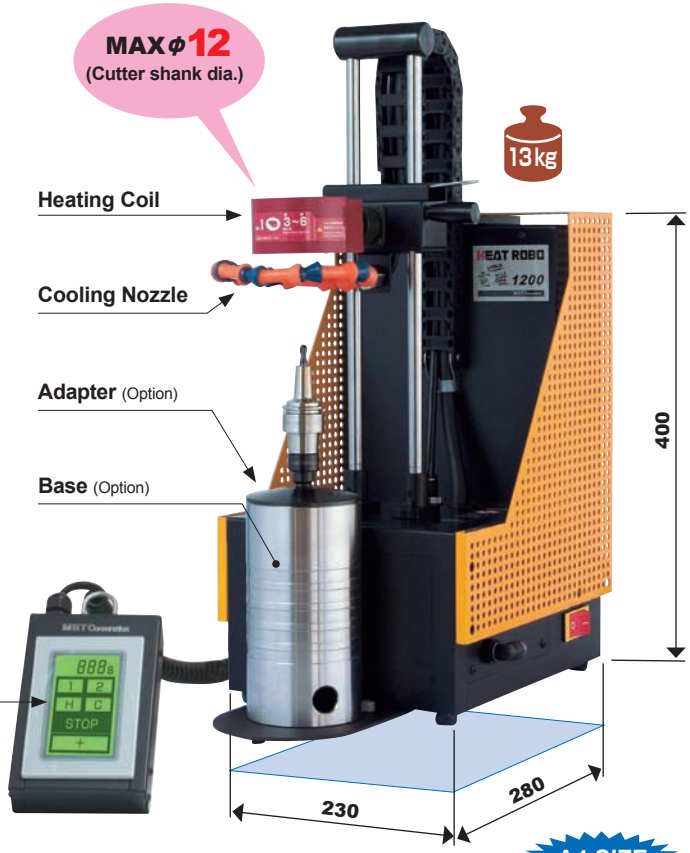
100V 1.2kW

18 sec. (φ12 collet)

Air Cooling 1 min.

CE

Desk Top Type



HEAT ROBO DENJI 電磁 1200

CODE	HRD—01
VOLTAGE	AC100V
POWER SUPPLY	1200W
SIZE	W270 × D410 × H550
HEATING TIME	18 SEC. (φ12 collet)

■Standard Accessories
•Tweezers •Heat-resistant gloves •Coil (2pcs.)
■Note •Factory compressed air (5kgf/cm²) is required. (Consumption air volume : 245l/min)
•Please prepare an air tube (outer diameter of 8 mm) and connection coupling.

Transformer for HEAT ROBO DENJI 1200

HEAT ROBO DENJI 1200 is for 100V. The transformer is required for 120V and 230V. (MST can supply them.) Below is specification.

OUTPUT	100V	
FREQUENCY	50/60Hz	
CAPACITY	1500 W	
INPUT	120V	230V
INPUT PLUG	A type	SE type

Heating Coil (Standard Accessories)

	CODE	Heating time	Cutter shank
Coil 1	HRD—CL1—01	18sec.	φ3～ 6mm
Coil 2	—CL2—01	33sec.	φ7～12mm

Coil 1 φ18

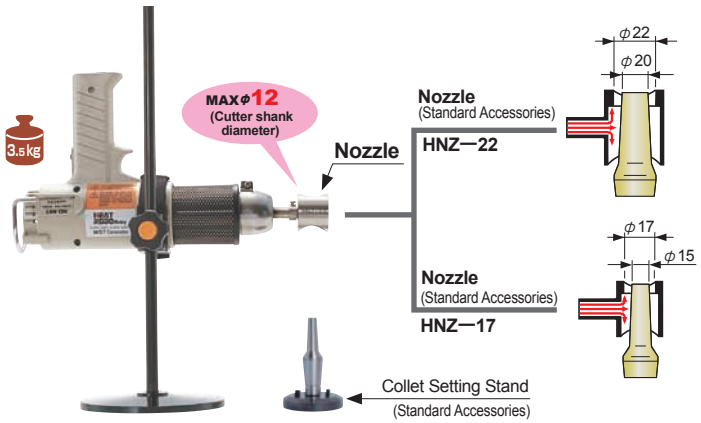
Coil 2 φ28

HOT AIR HEATER

100V 1kW

180 sec. (φ12collet)

Economical Simplified Model



HEAT ROBO Baby1000

CODE	HRB—01
VOLTAGE	AC100V
POWER SUPPLY	1000W
SIZE	W340 × D160 × W410
HEATING TIME	180SEC. (φ12 collet)

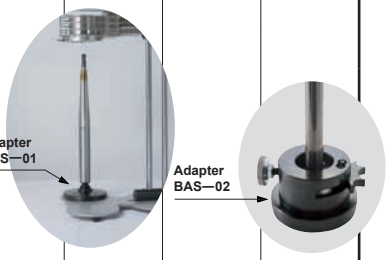
■Standard Accessories •Tweezers
•Heat-resistant gloves •Timer
•Collet setting stand •Nozzle(2pcs.)

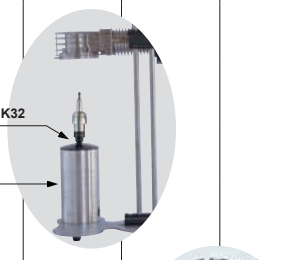
Required !

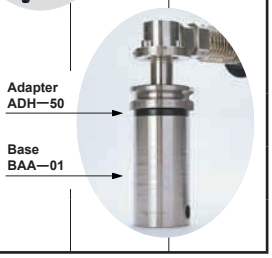
Setup Jigs for Shrink-Fit Holders (Adapter・Base)

The table below shows the jigs for attaching and positioning a Slimline shrink-fit holder to a shrink-fit heater. Adapters are used stand-alone or in combination with a base.

Holder Type	Holder Form		Adapter	Base	Shrink-Fit Heater Types Available for Use HRD—01	HRB—02S	HRB—03S	HRB—01
2 PIECE MODULAR	CS(Slim type) CR(Regular type) CF(Flush type) Screw size →	M10	ADH—SLK M 6 M 8 M10 φ79 φ88	BAA—01	○	○	○	×
STRAIGHT ARBOR	ST10	M 6	BAS—01 M10 M16 M24 φ88		○	○	○	○
	ST12	M 8						
	ST16/20/25	M10						
	ST32	M16						
	ST42	M24						
	Carbide shank STOOC	—	BAS—02 φ42 φ88 φ102					
MONO SERIES	E25	ADH—HSK25	E25=φ14 E32=φ17 E40=φ21 E50=φ26 φ79 φ88	BAA—01	○	○	○	○
	E32	—HSK32						
	A40 / A40S / E40	—HSK40						
	A50 / E50 / F63	—HSK50						
	BT40 / A63 / F63	—40	φ63.5 φ50 φ100 φ78 φ79 φ88 φ88 φ107	φ88 φ79 165				
	BT50 / A100	—50						
	15TR3	—15TR	15TR=φ19.3 S20T=φ22.5 BT30=φ32 φ79 φ88					
	RS20 / S20TR	—S20TR						
	BT30	—BT30						







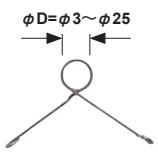
Required !

Cutter Stopper

Used as a stopper in the holder hole when shrink fitting or removing a cutting tool.

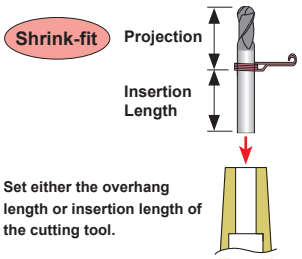
HSA type (Coil Spring Type)

CODE	D	Q'ty (1 set)
HSA—D	3, 3.175(1/8), 4, 5, 6, 7, 8, 9, 10, 11, 12, 16, 20, 25, 3/16, 1/4, 5/16, 3/8, 1/2	Contains 10 pcs. in each size
—F	3, 4, 5, 6, 7, 8, 9, 10, 11, 12	10pcs. in total with each one
—EF	3, 4, 5, 6, 8, 10, 12, 16, 20, 25	10pcs. in total with each one (in end-mill size increments)

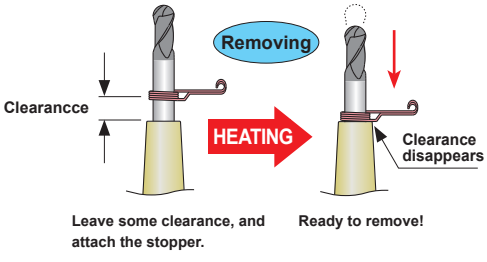


- Compatible with cutting tools with a diameter of 3 to 25 mm.
  Note: Cannot be used with Heat Robo Denji.

Insertion



Removing



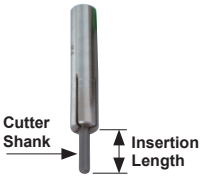
HSB type (Plate Spring Type)

CODE	D
HSB —D	3, 3.175, 4, 6, 8, 10, 12, 16, 20, 25

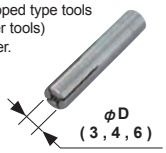
- Can be firmly affixed and stabilized.

HSC type (Slit Collet Type)

CODE	φD
HSC —3	3
—3.175	3.175
—4	4
—6	6



- Convenient for stepped type tools (non-inverse diameter tools) with a small diameter.



Useful Optional Accessories

Convenience !

Collet Stand

Stand for Slimline Collets

CODE
SDK−01

Size:190×190

- For compact storage of Slimline collets.
- Made of aluminum, assuring superior cooling for a maximum of 25 collets.

Holder Stand

Stand for Slimline Mono Series Small-Sized Holders (E25, E32)

CODE	HOLDER CODE
SDT−01	HSK-E25,E32

Size:160×170

- For compact storage of up to E25 and E32 holders.
- Made of aluminum, assuring superior cooling of hot cutting tools.

Cutter Tray

Cooling Tray for Heated Cutting Tools Immediately After Removal From Holder

CODE
SDH −01

Size:170×170

- Used for cooling cutting tools on the tray.
- Made from aluminum.

Heat-Resistant Gloves

Additional Options

CODE	NOTE
HTB −01	−
−R	Right Hand
−L	Left Hand

- Be sure to wear heat-resistant gloves, as heat is produced during operation.
- All shrink-fitting heaters come with a pair of gloves.

Cutter Pliers

No gloves are required for shrink fitting and removing. (Pliers are used.)

CODE
HPY−01

- Cutter shanks with a diameter of 3 to 12 mm can be chucked.

Stopper Pliers

Pliers for Cutter Stopper (HSB type)

CODE
SPY −01

Brush Set

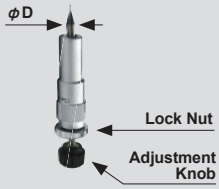
Cleaning Brush for Slimline Chucking Hole

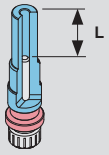
CODE
AQC−BR−SET

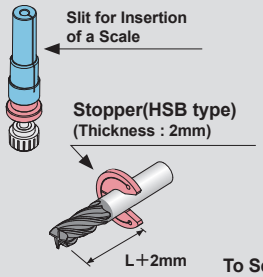
- Including diameter for 3,4,6 in each 1set

Cutter Adjuster

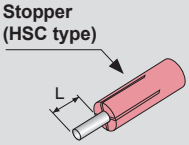
Allows you to set the overhang of a cutting tool or align the lengths of several cutting tools (Used in combination with an HSB- or HSC-type stopper)



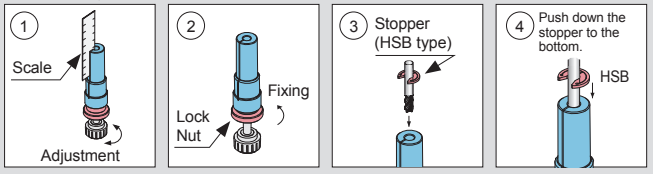




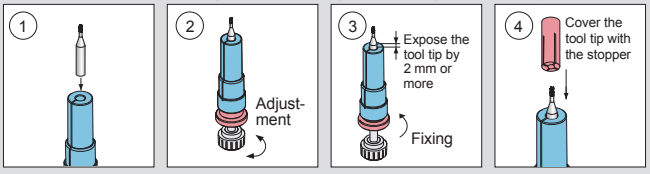
CODE	φD	L
HAJ − 3	3	10~ 30
− 3.175	3.175	
− 4	4	13~ 30
− 6	6	19~ 45
− 8	8	25~ 55
−10	10	31~ 70
−12	12	31~ 85
−16	16	33~ 90
−20	20	41~100
−25	25	46~100



To Set The Overhang of a Cutting Tool Using The HSB-Type Stopper



To Set The Insertion Length of a Cutting Tool Using The HSC Type Stopper



Aqua Cool Kit

Handy Water-Cooling Kit for Cooling Slimline Holders After Shrink Fitting or Removing

1. Reducing The Cooling Time Finishes in just 10 seconds.

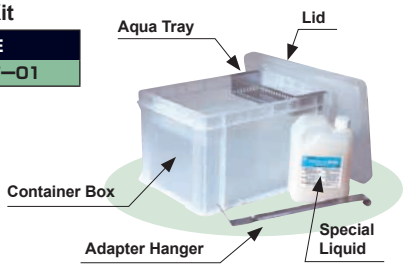
2. Safety Allows you to water-cool a heated holder together with its adapter.

3. Anti-rust Effect Anti-rust treatment provides long-term rust prevention.

4. Cleaning Effect Can also be used to clean grease and dirt.

Aqua Cool Kit

CODE
AQC−KIT−01



Content of Kit Each 1 set

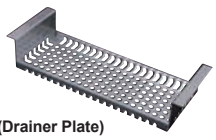
Special Liquid

CODE
AQC−EK−01−2

- Including 2l of Undiluted Solution
- Use at a dilution ratio of 3%.

Aqua Tray

CODE
AQC−AT−01



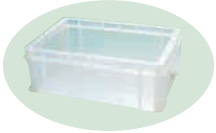
(Drainer Plate)

Adapter Hanger

CODE
AQC−AH−01

Container Box

CODE
CN−245



Lid for Container Box

CODE
CN−FT

Tool Holder Storing Cabinet

Storage Box for Shrink-Fit Holders Used in Small-Sized High-Speed Machining Centers

Compact Storage Box with Anti-Rust Treatment for Slimline Shrink-Fit Holders

Compatible with a Variety of Holders

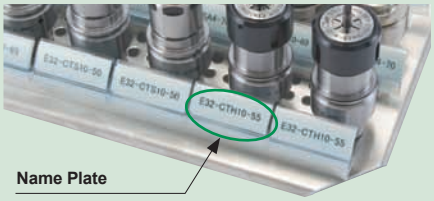
Holder code
HSK—A40
HSK—A50
HSK—E25
HSK—E32
HSK—E40
HSK—E50 , F63
15T (BROTHER)
20T (SUGINO)

Transparent case!!

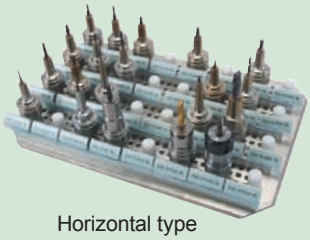
Arrangeable

A multi-hole base plate is employed.
Supports a variety of holder specifications using pins that can be freely changed and relocated.

Orderly storing with name plate!



- Maximum number of holders that can be stored: 40 (standard: 32) (HSK-E25/32)
- The direction of the box can be freely changed to horizontal or vertical depending on the intended use.

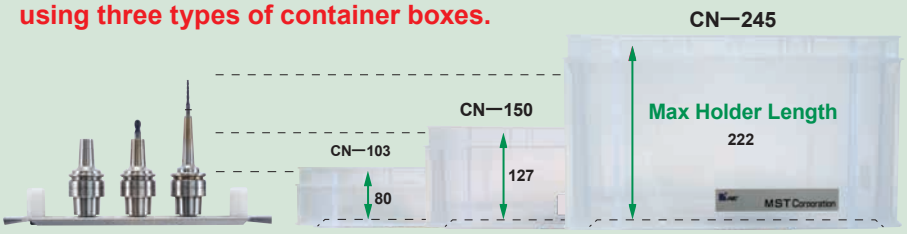


Horizontal type

Vertical type

Piling Cabinets

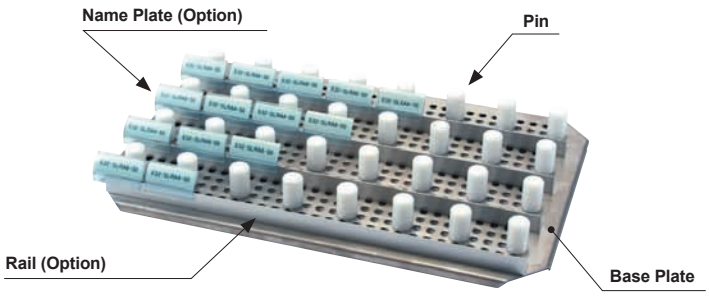
Holders with different lengths can be stored using three types of container boxes.



Standard Set

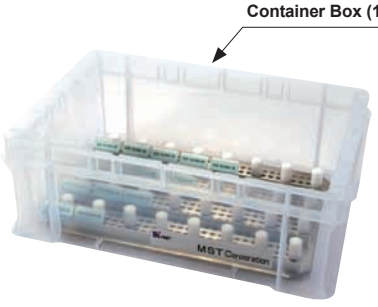
CODE	Container Box	Max. Q'ty	Number of pins supplied
HSK—A40	HBX—A40	24	18
—A50	—A50	15	15
—E25	—E25	40	32
—E32	—E32		
—E40	—E40	24	18
—E50	—E50	15	15
—F63	—F63	10	
15T (BROTHER)	—15T	40	16
20T (SUGINO)	—20T		

■ **Contents of set** ●Base plate ●Container box ●Pin



Lid for Container Box

CODE
CN—FT

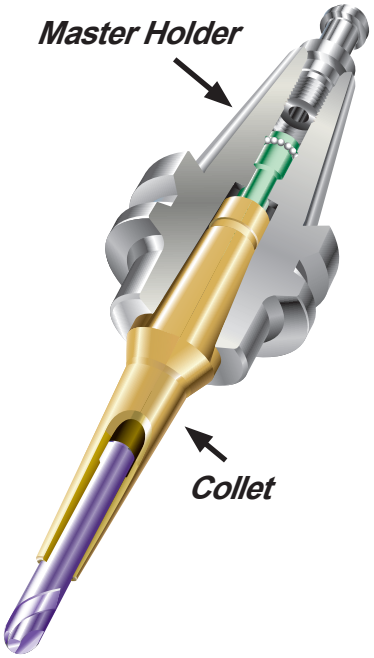


SHRINK-FIT HOLDER

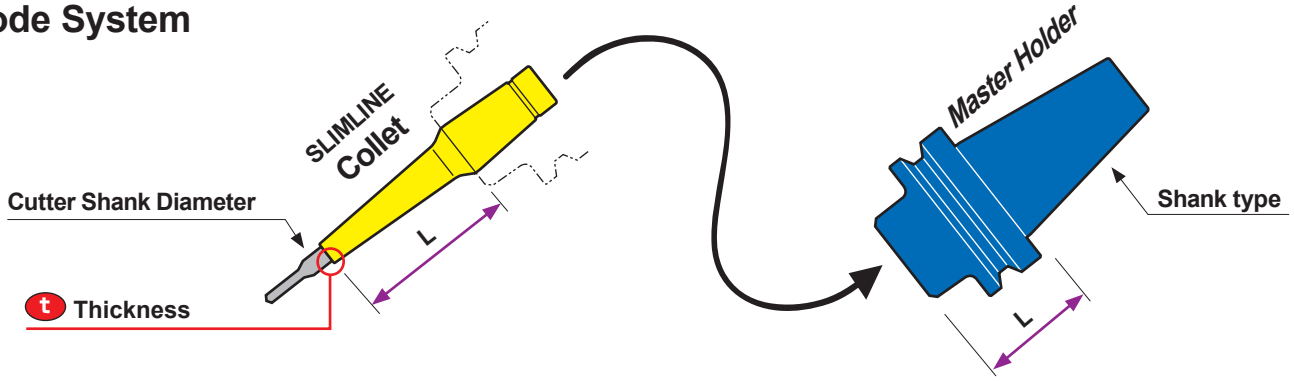
SLIMLINE

Modular type

2 PIECE modular



Code System



Collet type	The size of collet internal bore (MAX0φ12)	t
CS (Slim type)		1.5 (Constant)
CR (Regular type)		2.25 ~ 4
CF (Flush type)		3.25 ~ 4

Cutter Shank Diameter

METRIC											INCH					
3	3.175	4	5	6	7	8	9	10	11	12	1/8	3/16	1/4	5/16	3/8	1/2
3		4		6		8		10		12	1/8	3/16	1/4	5/16	3/8	1/2
3		4		6		8		10		12	1/8	3/16	1/4		3/8	1/2

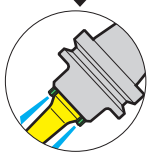
Shank type

MAS	BT30·BT40·BT50
HSK	A50·A63·A100 / F63 / E50
DIN	DN40·DN50
CAT.	CT40·CT50

Order No. / The size of collet internal bore(MAXφ12)

L

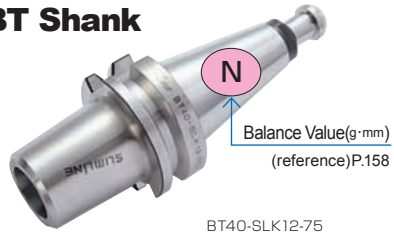
With nozzles for coolant through



2 PIECE modular

Master Holder

BT Shank



BT40-SLK12-75

Fig.1

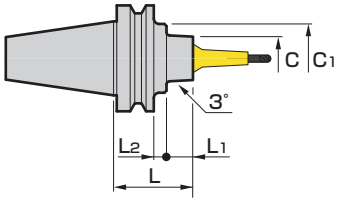
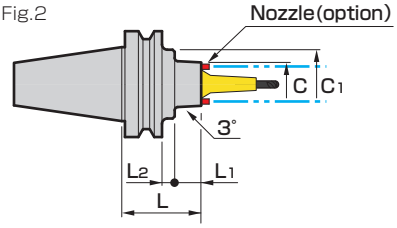


Fig.2



HSK Shank

A63-SLK12-75F

Fig.3

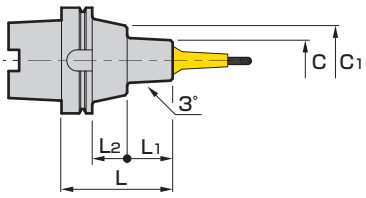
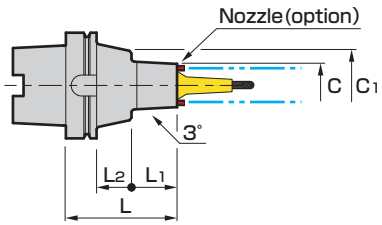


Fig.4



CODE	Fig.	L	φC	L1	L2	φC1	Kg lbs	N
BT30—SLK12— 35	1	35	38	13	—	—	0.4	1.0
BT40—SLK12— 45		45		18			1.1	1.4
— 45F	2		41					1.6
— 75	1	75	38	48			1.4	
— 75F	2		41					1.8
—135F		135		108			2.2	3.2
BT50—SLK12— 75	1	75	38	25	12	65	4.0	4.7
— 75F	2		41					4.9
—105F		105		55			4.4	5.3
—135F		135		85			4.7	5.7
—225	1	225	38	150	37		6.4	14.3
—315		315			127	90	11.0	31.3
A 50—SLK12— 75	3	75	38	49	—	—	0.8	9.6
A 63—SLK12— 75							1.0	5.0
— 75F	4		41				1.1	5.5
—135	3	135	38	109			1.7	8.5
—135F	4		41				1.9	8.6
A100—SLK12—105	3	105	38	43	33	65	3.4	20.7
—105F	4		41				3.5	20.8
—135F		135		73			3.8	21.1
—225	3	225	38	163		83	5.4	36.3
—315		315		150	136		6.4	46.5
E 50—SLK12— 75		75		49	—	—	0.8	2.9
F63M—SLK12— 75							1.0	3.4
DN40AD—SLK12— 45	1	45	38	13.8	12.1	45	1.0	4.6
— 45F	2		41	7.9	18			4.3
— 75	1	75	38	43.8	12.1		1.3	5.8
— 75F	2		41	55.9	—			5.5
DN50AD—SLK12— 75	1	75	38	40	15.9	70	3.4	12.6
— 75F	2						3.5	12.3
—135F		135	41	100			4.3	19.0
CT40—SLK12— 45	1	45 (1.77)	41 (1.61)	26 (1.02)	—	44.45 (1.75)	1.1 (2.4)	3.6
CT50—SLK12— 75		75 (2.95)	38 (1.50)	40 (1.57)	15.9 (.63)	70 (2.75)	3.3 (7.3)	8.0

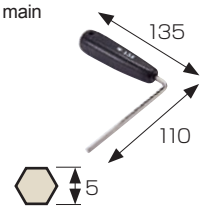
BT / HSK / DIN / CAT.

■**Optional accessories** ●Slimline collet ●Wrench ●Nozzle ●Retention knob (BT , DIN , CAT)
■**Standard accesories** ●Coolant duct (HSK)
■**Note** ●A dedicated retention knob is supplied with the BT30 as a standard accessory. When ordering, specify whether a MAS-1 or MAS-2 retention knob is required.
■**Caution** ●To fasten the BT30, use a commercially available 14 mm single-ended wrench.

Wrench

Required for clamping the main body and Slimline collet.

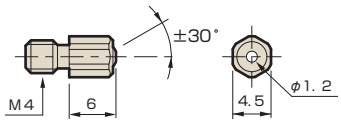
CODE
W—135



■ **NOTE** •To fasten the BT30, use a commercially available 14 mm single-ended wrench.

Nozzle(For F-type)

CODE	Q'ty
NOZ—M4—12	12
—60	60

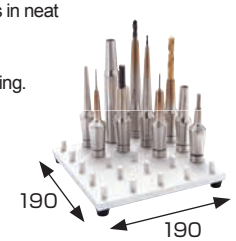


■ **NOTE** •Four nozzles are required for each master holder.

Collet stand

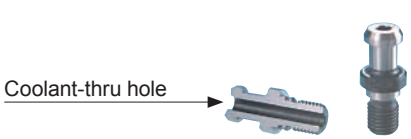
This compact stand can keep a maximum of 25 collets in neat and proper order.
Made from aluminum, assuring superior cooling.

CODE
SDK—01



Retention knob with hole

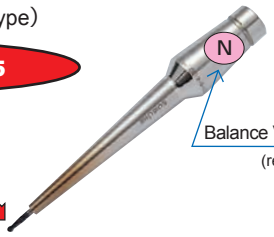
There is no need to remove a retention knob with .236" diameter coolant-thru hole when tightening or loosening Slimline taper adapters.



Metric

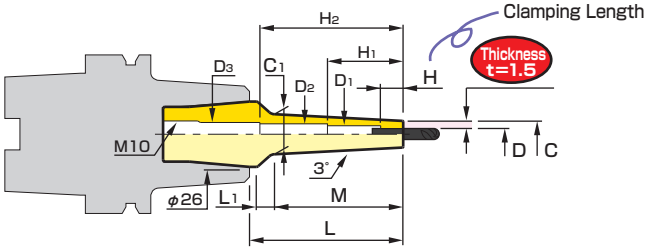
CS12 (Slim type)

Thickness = 1.5



Balance Value(g・mm)
(reference)P.158

Rigidity Value(μm/kgf)※
(reference)P.159

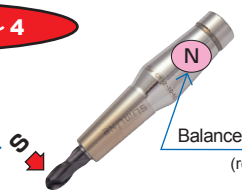


※The values below are given for the BT40-SLK12-45.
(The values below are comparable for any shank combination.)

CODE	φD	φC	Thickness t	L	M	L1	φC1	H	S	N	Kg	Max. insertion length	φD1	φD2	φD3	H1	H2
CS12− 3− 35	3	6	1.5	35	22	9.5	8.4	10	4.8	0.5	0.2	65	−	−	4	−	−
− 55				55	42		10.5		9.5			85					
− 80				80	67		13.1		15.0	0.7		110	4	6	8.6	39.4	74.3
−110				110	97		16.2		20.6	0.8		140					104.3
CS12−3.175− 35	3.175	6.175	1.5	35	22	9.5	8.5	10	4.6	0.5	0.2	65	−	−	4	−	−
− 55				55	42		10.6		9.0			85					
− 80				80	67		13.2		14.3	0.7		110	4	6	8.6	39.4	74.3
−110				110	97		16.4		19.7	0.8		140					104.3
CS12− 4− 35	4	7	1.5	35	22	9.5	9.4	12	3.8	0.5	0.2	65	−	−	5	−	−
− 55				55	42		11.5		7.5			85					
− 80				80	67		14.1		11.9	0.7		110	5	7	8.6	39.4	74.6
−110				110	97		17.2		16.6	0.9		140					104.6
CS12− 5− 35	5	8	1.5	35	22	9.5	10.4	15	3.0	0.5	0.2	65	−	−	6	−	−
− 55				55	42		12.5		6.0	0.6		85	6		8.6	49.3	
− 80				80	67		15.1		9.7	0.8		110					
−110				110	97		18.2		13.6	1.0		140				69.3	
CS12− 6− 35	6	9	1.5	35	22	9.5	11.4	18	2.4	0.5	0.2	65	−	−	7	−	−
− 55				55	42		13.5		4.9	0.7		85	7		8.6	49.6	
− 80				80	67		16.1		8.0	0.8		110					
−110				110	97		19.2		11.4	1.0		140				69.6	
CS12− 7− 35	7	10	1.5	35	22	9.5	12.4	20	2.0	0.6	0.2	65	−	−	8.6	−	−
− 55				55	42		14.5		4.1	0.7		85					
− 80				80	67		17.1		6.8	0.9		110					
−110				110	97		20.2		9.7	1.2	0.3	140					
CS12− 8− 35	8	11	1.5	35	22	9.5	13.4	25	1.6	0.6	0.2	65	−	−	8.6	−	−
− 55				55	42		15.5		3.4	0.7		85					
− 80				80	67		18.1		5.6	0.9		110					
−110				110	97		21.2		8.2	1.2	0.3	140					
CS12− 9− 35	9	12	1.5	35	22	9.5	14.4	30	1.4	0.7	0.2	60	−	−	9.6	−	−
− 55				55	42		16.5		2.9	0.9							
− 80				80	67		19.1		4.8	1.1							
−110				110	97		22.2		7.1	1.3	0.3						
CS12−10− 35	10	13	1.5	35	22	9.5	15.4	30	1.3	0.8	0.2	60	−	−	10.6	−	−
− 55				55	42		17.5		2.5	0.9							
− 80				80	67		20.1		4.3	1.1							
−110				110	97		23.2		6.2	1.4	0.3						
CS12−11− 35	11	14	1.5	35	22	9.5	16.4	30	1.1	0.9	0.2	60	−	−	11.6	−	−
− 55				55	42		18.5		2.3	1.0							
− 80				80	67		21.1		3.8	1.3							
−110				110	97		24.2		5.6	1.5	0.3						
CS12−12− 35	12	15	1.5	35	22	9.5	17.4	30	1.0	1.0	0.2	60	−	−	12.6	−	−
− 55				55	42		19.5		2.1	1.1							
− 80				80	67		22.1		3.5	1.4							
−110				110	−	−	−		5.0	1.3	0.3						

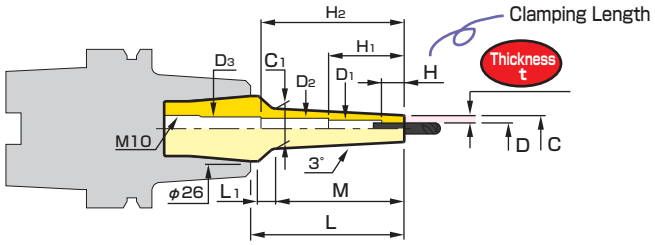
CR12 (Regular type) — Metric

Thickness=2.25 ～ 4



Rigidity Value(μm/kgf)※ (reference) P.159

Balance Value(g・mm) (reference) P.158

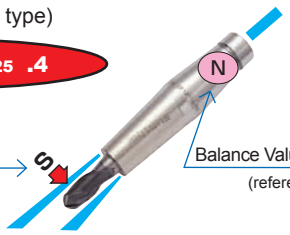


※The values below are given for the BT40-SLK12-45.
(The values below are comparable for any shank combination.)

CODE	φD	φC	Thickness t	L	M	L1	φC1	H	S	N	Kg	Max. insertion length	φD1	φD2	φD3	H1	H2
CR12− 3−35	3	7.5		35	22	9.5	9.9	10	2.9	0.5	0.2	65	−	−	4	−	−
−55			2.25	55	42		12		5.5			85					
−80				80	67		14.6		8.9	0.7		110	4	6	8.6	39.4	74.3
CR12− 4−35	4	10		35	22	9.5	12.4	12	1.7	0.5	0.2	65	−	−	5	−	−
−55			3	55	42		14.5		3.1	0.6		85					
−80				80	67		17.1		5.1	0.8		110	5	7	8.6	39.4	74.6
CR12− 6−35	6	12		35	22	9.5	14.4	18	1.3	0.6	0.2	65	−	−	7	−	−
−55			3	55	42		16.5		2.4	0.7		85	7		8.6	49.6	
−80				80	67		19.1		3.9	0.9		110					
CR12− 8−35	8	14		35	22	9.5	16.4	25	1.1	0.6	0.2	65	−	−	8.6	−	−
−55			3	55	42		18.5		1.9	0.8		85					
−80				80	67		21.1		3.1	1	0.3	110					
CR12−10−35	10	16		35	22	9.5	18.4	30	0.9	0.7	0.2	60	−	−	10.6	−	−
−55			3	55	42		20.5		1.6	0.9							
−80				80	67		23.1		2.6	1.1	0.3						
CR12−12−35	12	20		35	22	9.5	22.4	30	0.7	0.9	0.2	60	−	−	12.6	−	−
−55			4	55	42		24.5		1.1	1.1							
−80				80	−	−	25.5		1.9	1	0.3						

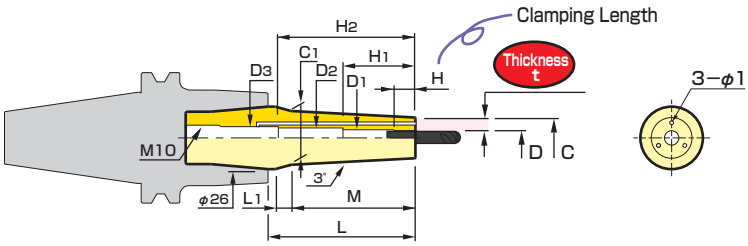
CF12 (Flush type) — Metric

Thickness = 3.25 .4



Rigidity Value(μm/kgf)※ (reference) P.159

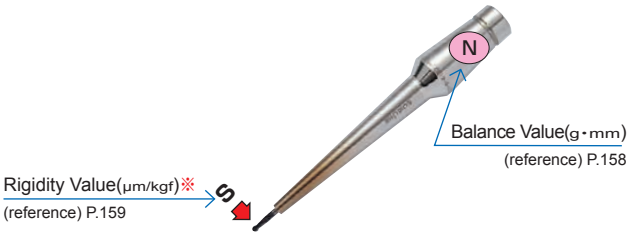
Balance Value(g・mm) (reference) P.158

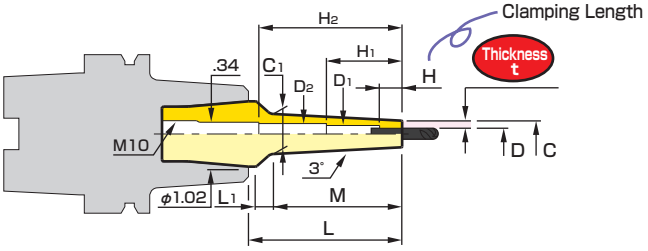


※The values below are given for the BT40-SLK12-45.
(The values below are comparable for any shank combination.)

CODE	φD	φC	Thickness t	L	M	L1	φC1	H	S	N	Kg	Max. insertion length	φD1	φD2	φD3	H1	H2
CF12− 3−35	3	9.5		35	22	9.5	11.9	10	1.9	0.5	0.2	65	−	−	4	−	−
−55			3.25	55	42		14		3.3	0.6		85					
−80				80	67		16.6		5.3	0.8		110	4	6	8.6	44.4	74.3
CF12− 4−35	4	12		35	22	9.5	14.4	12	1.3	0.6	0.2	65	−	−	5	−	−
−55			4	55	42		16.5		2.2	0.8		85					
−80				80	67		19.1		3.4	0.9		110	5	7	8.6	39.4	74.6
CF12− 6−35	6	14		35	22	9.5	16.4	18	1.0	0.7	0.2	65	−	−	7	−	−
−55			4	55	42		18.5		1.7	0.9		85	7		8.6	49.6	
−80				80	67		21.1		2.7		0.3	110					
CF12− 8−35	8	16		35	22	9.5	18.4	25	0.9	0.8	0.2	65	−	−	8.6	−	−
−55			4	55	42		20.5		1.4	1		85					
−80				80	67		23.1		2.3	1.2	0.3	110					
CF12−10−35	10	18		35	22	9.5	20.4	30	0.7	0.9	0.2	60	−	−	10.6	−	−
−55			4	55	42		22.5		1.1	1.1							
−80				80	−	−	−		1.9	1	0.3						
CF12−12−35	12	20		35	22	9.5	22.4	30	0.7	1	0.2	60	−	−	12.6	−	−
−55			4	55	42		24.5		1.1	1.2							
−80				80	−	−	−		1.9	1.1	0.3						

Inch





※The values below are given for the CT40-SLK12-45.
(The values below are comparable for any shank combination.)

CODE	φD	φC	Thickness t	L	M	L1	φC1	H	S	N	lbs	Max. insertion length	φD1	φD2	H1	H2
CS12−1/ 8− 80	.1250	.24	.059	3.15	2.64	.37	.52	.38	14.0	0.7	0.40	4.33	.16	.24	1.57	2.95
−110				4.33	3.82		.64		19.3	0.9	0.48	5.51				4.13
−3/16− 80	.1875	.31		3.15	2.64		.58	.58	10.3	0.8	0.41	4.33	.24	–	1.97	–
−110				4.33	3.82		.71		14.2	1.0	0.51	5.51			2.76	
−1/ 4− 80	.2500	.37		3.15	2.64		.64	.70	7.4	0.9	0.44	4.33	.28		1.97	
−110				4.33	3.82		.77		10.5	1.1	0.56	5.51			2.76	
−5/16− 80	.3125	.43		3.15	2.64		.71	.98	5.6	1.0	0.47	4.33	–		–	
−110				4.33	3.82		.83		8.1	1.2	0.61	5.51				
−3/ 8− 80	.3750	.49		3.15	2.64		.77	1.18	4.4	1.0	0.50	2.36	.41		2.4	
−110				4.33	3.82		.89		6.4	1.3	0.66					
−1/ 2− 80	.5000	.62		3.15	2.64	–			3.1		0.55		.54			
−110				4.33	3.82		–		4.8	1.7	0.77					
CR12−1/ 8− 55	.1250	.36	.089	2.17	1.65	.37	.53	.38	3.5	0.6	0.41	3.35	.16	–	2.36	–
−3/16− 55	.1875	.42	.119				.60	.46	2.7	0.7	0.42		.24		1.97	
−1/ 4− 55	.2500	.49					.66	.70	2.2	0.8	0.44		.28			
−5/16− 55	.3125	.55					.72	.98	1.9		0.45		–		–	
−3/ 8− 55	.3750	.61			1.65		.78	1.18	1.6	0.9	0.47	2.36	.41		2.4	
−1/ 2− 35	.5000	.81	.157	1.38	.87		.91		0.6	1.0	0.40		.54			
− 55				2.17	1.99		–		1.1	0.9	0.54					
CF12−1/ 8− 55	.1250	.38	.128	2.17	1.65	.14	.55	.39	3.1	0.7	0.42	3.35	.16	–	2.64	–
−3/16− 55	.1875	.50	.157				.68	.55	1.9	0.8	0.46		.24			
−1/ 4− 55	.2500	.56					.74	.71	1.6	0.9	0.47		.28		1.97	
−3/ 8− 55	.3750	.69					.86	1.18	1.3	1.1	0.51		.54		2.4	
−1/ 2− 55	.5000	.81			1.99	–	–		1.1	1.0	0.54		.52			

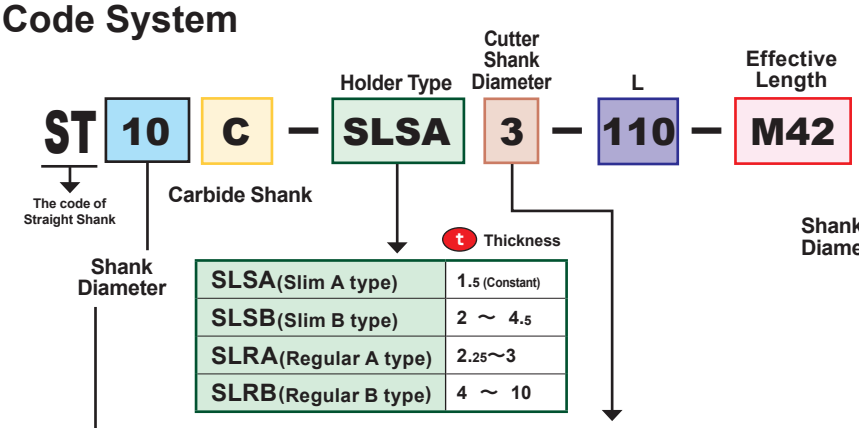
SHRINK-FIT HOLDER

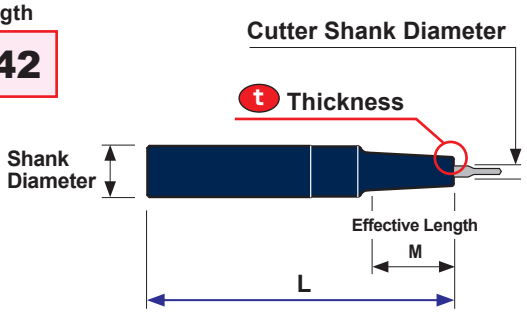
SLIMLINE

Straight Shank

STRAIGHT arbor

Code System





Shank Diameter	3	3.175	4	5	6	7	8	9	10	11	12	16	20	25	1/8	3/16	1/4	3/8	1/2
10	●	●	●	●															
12					●														
16	●		●		●		●												
19.05															●	●	●		
20	●		●	●	●		●		●		●								
25	●		●	●	●	●	●	●	●	●	●	●							
25.4																		●	●
32					●		●		●		●	●	●						
42									●		●	●	●	●					

Metric

Fig.1

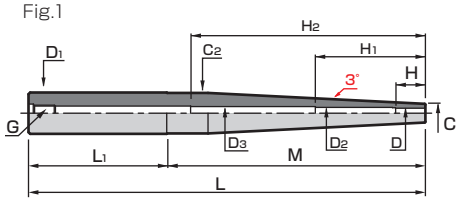


Fig.2

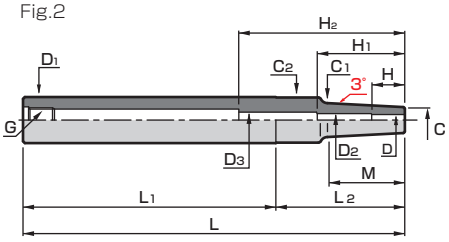
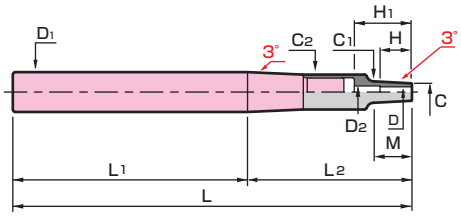


Fig.3

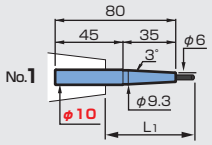


CODE	Fig.	φD	φC	L	M	φD1	H	L1	L2	φC1	φC2	G	Max. insertion length	Kg	φD2	φD3	H1	H2	Scale model
ST10 –SLSA 3– 80–M 35	1	3	6	80	35	10	9	45	35	–	9.3	M 6	64	0.03	4	–	40	–	1
ST16 –SLRA 3– 90–M 22	2		7.5	90	22	16		60	30	9.8	15.5	M10	62	0.09			31.5		2
–SLSA 3–115–M 42			6	115	42				55	10.4			87				51.5		3
–SLRA 3–115–M 42			7.5					65	50	11.9				0.1		8.6		60	4
–SLSA 3–140–M 67			6	140	67			60	80	13			112			6	52.5	82.5	5
–SLRA 3–140–M 67			7.5					65	75	14.5									6
ST10C –SLSA 3–160	3		6	160	12	10		120	40	7.3	10	–	19	0.2		–	15.5	–	7
ST20 –SLRA 3–175–M 97	2		7.5	175	97	20		70	105	17.7	19.5	M10	147			6	51.5	107.5	8
–SLSA 3–200–M 97			6	200				90	110	16.2			172	0.3			52.5	102.5	9
ST25 –SLSA 3–245–M 97				245		25		120	125		24.5		217	0.6		5	47.5	99.5	10
–SLRA 3–245–M 97			7.5							17.7									11
ST16C –SLSA 3–280	3		6	280	12	16		182	98	7.3	10	–	19	0.7		–	15.5	–	12
ST25 –SLSA 3–315–M195	1			315	195	25		120	195	–	24.5	M10	287			5	51.5	104.5	13
–SLRA 3–315–M 67	2		7.5		67			220	95	14.5				0.9			47.5	69.5	14
ST10 –SLSA3.175 – 80–M35	1	3.175	6	80	35	10	10	45	35	–	9.3	M 6	64	0.03	4	–	40	–	15
ST10 –SLSA 4– 80–M 35	1	4	7	80	35	10	12	45	35	–	9.5	M 6	64	0.03	5	–	40	–	16
ST16 –SLRA 4– 90–M 22	2		10	90	22	16		60	30	12.3	15.5	M10	62	0.09			32.5		17
–SLSA 4–115–M 42			7	115	42				55	11.4			87	0.1			60		18
–SLRA 4–115–M 42			10					65	50	14.4						8.6	52.5	60	19
–140–M 60	1			140	60			80	–	–			112				62.5	85	20
–SLSA 4–140–M 67	2		7		67			60	80	14						6		82.5	21
ST10C –SLSA 4–160	3			160	12	10		120	40	8.3	10	–	19	0.2		–	15.5	–	22
ST20 –SLRA 4–175–M 95	1		10	175	95	20		80	–	–	19.5	M10	147	0.3		6	51.5	97.5	23
–SLSA 4–200–M 97	2		7	200	97			90	110	17.2			172			7	37.5	102.5	24
ST25 –SLSA 4–245–M 97				245		25		120	125		24.5		217	0.6		6	50.5	100.5	25
–SLRA 4–245–M 97			10							20.2									26
ST16C –SLSA 4–280	3		7	280	12	16		182	98	8.3	10	–	19	0.7		–	15.5	–	27
ST25 –SLRA 4–315–M 67	2		10	315	67	25		220	95	17	24.5	M10	287	0.9		6	50.5	70.5	28
–SLSA 4–315–M195	1		7		195			120	–	–				0.7				110.5	29
ST10 –SLSA 5– 80–M 35	1	5	8	80	35	10	15	45	–	–	9.5	M 6	70	0.03	6	–	61.5	–	30
ST20 –SLSA 5–200–M110				200	110	20		90			19.2	M10	182	0.3		8.6	69.2	161.5	31
ST25 –SLSA 5–290–M 97	2			290	97	25		180	97	18.2	24.5		272	0.8				241.5	32
ST12 –SLSA 6– 80–M 35	1	6	9	80	35	12	18	45	–	–	11.5	M 8	52	0.04	7	–	40	–	33
ST16 –SLSA 6–115–M 42	2			115	42	16		60	55	13.4	15.5	M10	87	0.1			60		34
–SLSB 6–115–M 42			10					65	50	14.4						8.6	52.5	60	35
ST20 –SLRB 6–120–M 42			14	120		20		70		18.4	19.5		92	0.2					36
ST16 –SLSB 6–140–M 60	1		10	140	60	16		80	–	–	15.5		112	0.1			62.5	85	37
–SLSA 6–140–M 70			9		70			70									72.5		38
ST20 –SLSA 6–175–M105				175	105	20					19.5		147	0.3			107.5	115	39
–SLSB 6–175–M 95			10		95			80									97.5		40
–SLRB 6–175–M 60			14		60			115									62.5		41
ST12C –SLSB 6–175	3		10		12	12		125	50		12	–	27			–	23.5	–	42
ST25 –SLSB 6–205–M127	2			205	127	25		70	135	23.3	24.5	M10	177	0.5		8.6	102.5	135	43
ST16C –SLSB 6–225	3			225	22	16		165	60	12.3	16	–	32	0.6		–	26.5	–	44
ST25 –SLSA 6–230–M 97	2		9	230	97	25		120	110	19.2	24.5	M10	202	0.5		8.6	92.5	160	45
–SLRB 6–240–M 42			14	240	42			170	70	18.4			212	0.7			45.5	50	46
ST32 –SLSB 6–255–M157			10	255	157	32		70	185	26.5	31.5	M16	227	0.8		8	72.5	163.5	47
ST25 –SLSA 6–305–M185	1		9	305	185	25		120	–	–	24.5	M10	277				75.5	160.5	48
ST20C –SLSB 6–320	3		10	320	22	20		221	99	12.3	16	–	32	1.3			26.5	–	49
ST32 –SLRB 6–345–M 67	2		14	345	67	32		250	95	21	31.5	M16	317	1.6			50.5	73.5	50
ST25C –SLSB 6–360	3		10	360	22	25		242	118	12.3	20	–	38	2.2			31.5	–	51
ST32 –SLSB 6–375–M157	2			375	157	32		190	185	26.5	31.5	M16	347	1.4			72.5	163.5	52

CODE	Fig.	φD	φC	L	M	φD1	H	L1	L2	φC1	φC2	G	Max. insertion length	Kg	φD2	φD3	H1	H2	Scale model
ST25 -SLSA 7-230-M 97	2	7	10	230	97	25	20	120	110	20.2	24.5	M10	212	0.5	8	8.6	69.8	181.5	53
-320-M 97				320				210					302	0.9				271.5	54
ST20 -SLRB 8-100-M 30	1	8	18	100	30	20	24	70	–	–	19.5	M10	72	0.2	8.6	–	40	–	55
ST16 -SLSA 8-115-M 50			11	115	50	16		65			15.5		87	0.1			60		56
ST20 -SLSB 8-145-M 70			13	145	70	20		75			19.5		117	0.2			85		57
ST25 -SLRB 8-160-M 42	2		18	160	42	25		110	50	22.4	24.5		132	0.5			90		58
ST20 -SLSA 8-175-M 85	1		11	175	85	20		90	–	–	19.5		147	0.3			115		59
ST25 -SLSB 8-175-M 97	2		13		97	25		70	105	23.2	24.5			0.4			105		60
-SLRB 8-210-M 90	1		18	210	90			120	–	–			182	0.6			70		61
ST16C-SLSB 8-225	3		13	225	22	16		165	60	15.3	16	—	32				27.5		62
ST25 -SLSA 8-230-M 97	2		11	230	97	25		120	110	21.2	24.5	M10	202				160		63
-SLSB 8-260-M140	1		13	260	140				–	–			232	0.7			120		64
ST20C-SLSB 8-270	3			270	22	20		200	70	15.3	20	—	38	1.1			31.5		65
ST25 -SLSA 8-280-M160	1		11	280	160	25		120	–	–	24.5	M10	252	0.7			140		66
ST32 -SLRB 8-285-M 67	2		18	285	67	32		190	95	25	31.5	M16	257	1.3			73.5		67
ST25C-SLSB 8-360	3		13	360	22	25		242	118	15.3	20	—	38	2.2			31.5		68
ST32 -SLSB 8-375-M157	2			375	157	32		190	185	29.5	31.5	M16	347	1.5		12	72.5	164.5	69
ST25 -SLSA 9-230-M 97	2	9	12	230	97	25	30	120	110	22.2	24.5	M10	60	0.6	9.6	–	181.5	–	70
-320-M 97				320				210						0.9			271.5		71
ST25 -SLRB10-120-M 35	1	10	22	120	35	25	30	85	–	–	24.5	M10	60	0.4	10.6	–	50	–	72
ST20 -SLSB10-120-M 50			16		50	20		70			19.5			0.2			60		73
ST25 -SLSB10-145-M 67	2			145	67	25			75	23	24.5			0.4			75		74
ST20 -SLSA10-145-M 70	1		13		70	20		75	–	–	19.5			0.2			85		75
ST25 -SLSB10-175-M105			16	175	105	25		70			24.5			0.5					76
-SLRB10-210-M 90			22	210	90			120						0.7			70		77
ST32 -SLSB10-240-M170			16	240	170	32		70			31.5	M16	212	0.9		12	59.5	149.5	78
ST25 -SLSA10-255-M135			13	255	135	25		120			24.5	M10	60	0.7		–	115	–	79
ST20C-SLSB10-270	3		16	270	22	20		200	70	18.3	20	—	38	1.1	11		33.5		80
ST25 -SLSB10-275-M105	1			275	105	25		170	–	–	24.5	M10	60	0.8	10.6		85		81
ST32 -SLRB10-285-M 67	2		22	285	67	32		190	95	29	31.5	M16	257	1.4		12	59.5	74.5	82
-SLSA10-340-M210	1		13	340	210			130	–	–			312	1.3				167.5	83
ST25C-SLSB10-360	3		16	360	22	25		242	118	18.3	20	—	38	2.2	11	–	33.5	–	84
ST32 -SLSB10-360-M170	1				170	32		190	–	–	31.5	M16	332	1.5	10.6	12	59.5	149.5	85
ST42 -SLSB10-445-M157	2			445	157	42		260	185	32.5	41.5	M24	417	2.7				162.5	86
ST25 -SLSA11-230-M110	1	11	14	230	110	25	30	120	–	–	24.5	M10	60	0.6	11.6	–	181.5	–	87
-320-M110				320				210						0.9			271.5		88
ST25 -SLSB12-120-M 42	2	12	19	120	42	25	30	70	50	23.4	24.5	M10	60	0.3	12.6	–	50	–	89
ST20 -SLSA12-120-M 50	1		15		50	20			–	–	19.5			0.2			60		90
ST32 -SLRB12-140-M 60			26	140	60	32		80			31.5	M16	112	0.7	13		70		91
ST25 -SLSB12-150-M 80			19	150	80	25		70			24.5	M10	60	0.4	12.6		60		92
ST32 -SLSB12-220-M150				220	150	32					31.5	M16	192	0.9	13		130		93
ST25 -SLSA12-230-M110			15	230	110	25		120			24.5	M10	60	0.6	12.6		160		94
-SLSB12-250-M 80			19	250	80			170						0.8			60		95
ST32 -SLRB12-260-M 70			26	260	70	32		190			31.5	M16	232	1.3	13		190		96
-SLSA12-315-M185			15	315	185			130					287	1.2			165		97
-SLSB12-340-M150			19	340	150			190					312	1.5			130		98
ST42 -SLSB12-445-M157	2			445	157	42		260	185	35.5	41.5	M24	417	2.8	12.6	14	59.5	162.5	99
ST32 -SLRB16-175-M 45	1	16	32	175	45	32	32	130	–	–	–	M16	80	0.8	16.6	–	105	–	100
ST25 -SLSB16-175-M 50			24		50	25		125				M10		0.5					101
ST32 -SLSB16-290-M100				290	100	32		190			31.5	M16		1.4			80		102
ST42 -SLRB16-355-M 67	2		32	355	67	42		260	95	39	41.5	M24	327	2.7	17		73.5		103
-SLSB16-445-M157	1		24	445	157				–	40.5			417	3.0		20	142.5	163.5	104
ST42 -SLRB20-170-M 70	1	20	38	170	70	42	40	100	–	–	41.5	M24	142	1.3	21.6	–	49.5	–	105
ST32 -SLSB20-175-M 50			29	175	50	32		125			31.5	M16	80	0.8			103.5		106
ST42 -SLSB20-255-M155				255	155	42		100			41.5	M24	227	1.7		22	69.5	135	107
-SLRB20-330-M 70			38	330	70			260					302	2.6		–	49.5	–	108
-SLSB20-415-M155			29	415	155								387	2.9		22	69.5	135	109
ST42 -SLRB25-170-M 42	2	25	45	170	42	42	45	100	70	49.4	50	M24	80	1.5	25.6	–	50	–	110
-SLRB25-250-M 42				250				180						2.1					111

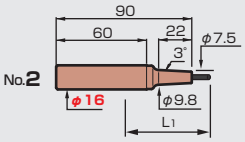
φ3

ST10–SLSA3–80–M35



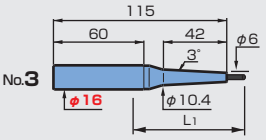
L1	49
↓	8.3

ST16–SLRA3–90–M22



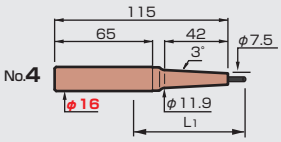
L1	41
↓	3.0

ST16–SLSA3–115–M42



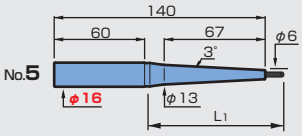
L1	73
↓	11.0

ST16–SLRA3–115–M42



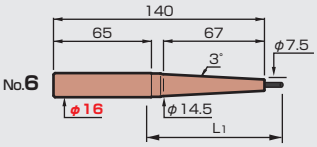
L1	73
↓	6.5

ST16–SLSA3–140–M67



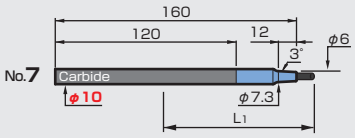
L1	89
↓	16.3

ST16–SLRA3–140–M67



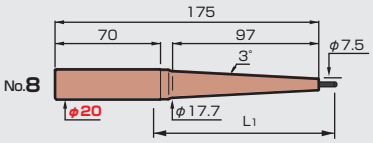
L1	89
↓	9.8

ST10C–SLSA3–160



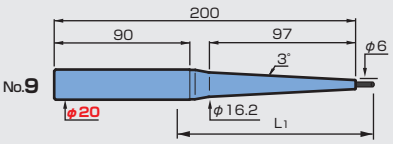
L1	59	79	99
↓	8.6	11.9	17.4

ST20–SLRA3–175–M97



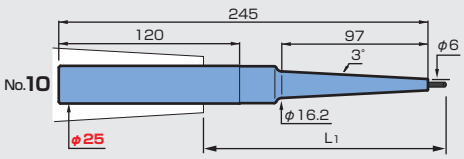
L1	114
↓	12.7

ST20–SLSA3–200–M97



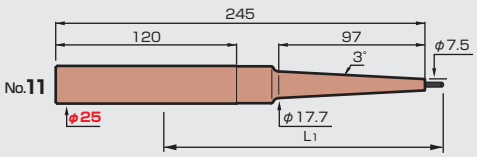
L1	129
↓	22.4

ST25–SLSA3–245–M97



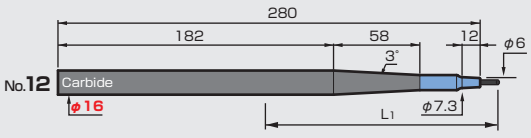
L1	134	184
↓	21.1	24.3

ST25–SLRA3–245–M97



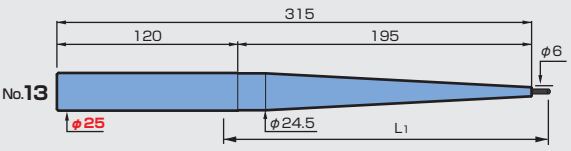
L1	134	184
↓	13.3	16.5

ST16C–SLSA3–280



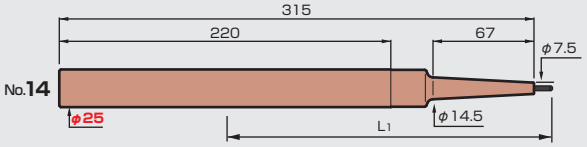
L1	121	153
↓	12.8	16.0

ST25–SLSA3–315–M195



L1	209
↓	32.3

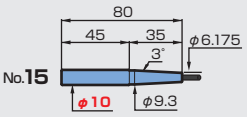
ST25–SLRA3–315–M67



L1	109	159	209
↓	9.3	11.6	15.9

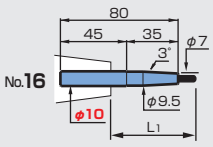
φ3.175

ST10–SLSA3.175–80–M35



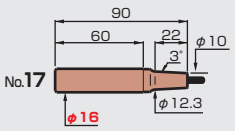
φ4

ST10–SLSA4–80–M35



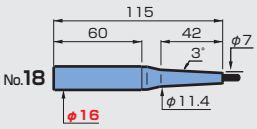
L1	52
↓	7.4

ST16–SLRA4–90–M22



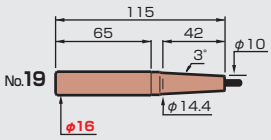
L1	44
↓	1.8

ST16–SLSA4–115–M42



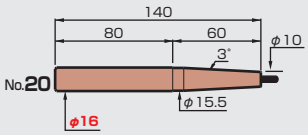
L1	76
↓	8.9

ST16–SLRA4–115–M42



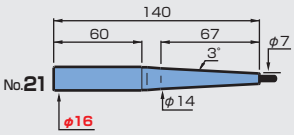
L1	76
↓	4.3

ST16–SLRA4–140–M60



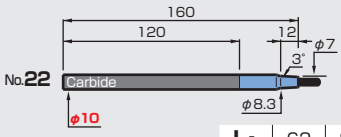
L1	76
↓	4.4

ST16–SLSA4–140–M67



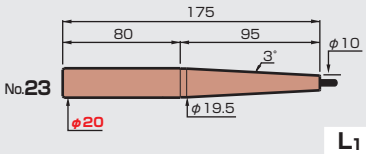
L1	92
↓	13.0

ST10C–SLSA4–160



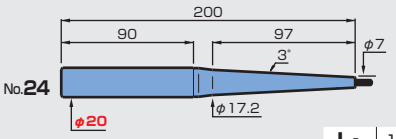
L1	62	82	102
↓	9.6	13.2	19.1

ST20–SLRA4–175–M95



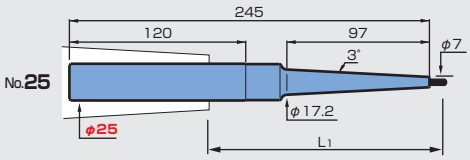
L1	112
↓	7.0

ST20–SLSA4–200–M97



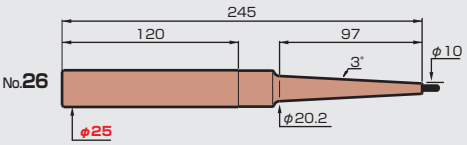
L1	132
↓	18.6

ST25–SLSA4–245–M97



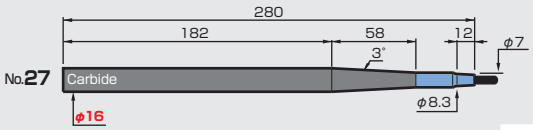
L1	137	187
↓	17.1	20.4

ST25–SLRA4–245–M97



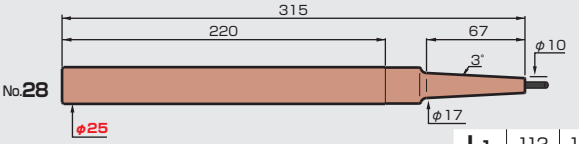
L1	137	187
↓	8.0	11.3

ST16C–SLSA4–280



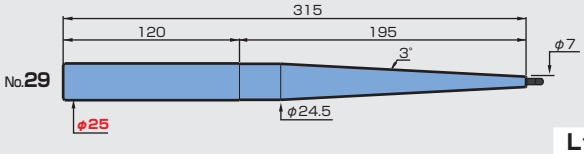
L1	124	156
↓	14.2	17.5

ST25–SLRA4–315–M67



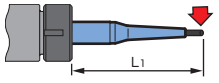
L1	112	162	212
↓	5.5	7.9	12.3

ST25–SLSA4–315–M195



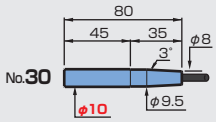
L1	212
↓	26.8

Rigidity Value(μm/kgf)
(Reference) P.159

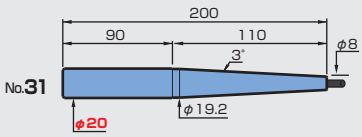


φ5

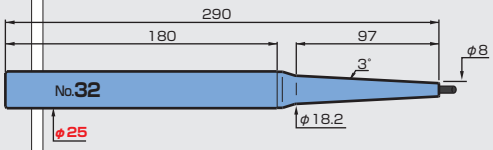
ST10–SLSA5–80–M35



ST20–SLSA5–200–M110

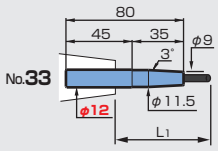


ST25–SLSA5–290–M97



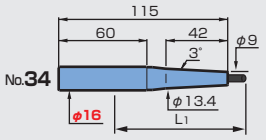
φ6

ST12–SLSA6–80–M35



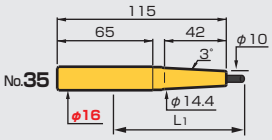
L1	54
↓	4.0

ST16–SLSA6–115–M42



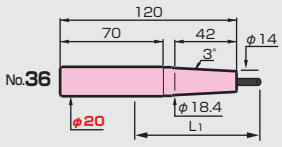
L1	82
↓	6.5

ST16–SLSB6–115–M42



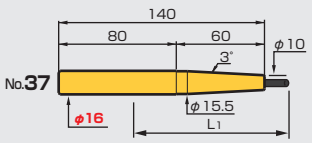
L1	82
↓	5.1

ST20–SLRB6–120– M42



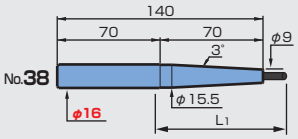
L1	78
↓	2.0

ST16–SLSB6–140–M60



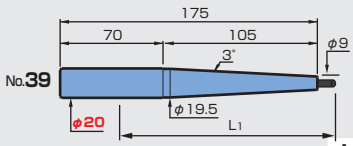
L1	82
↓	5.3

ST16–SLSA6–140–M70



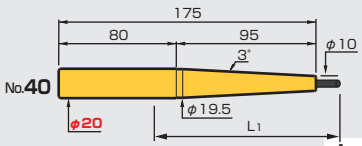
L1	98
↓	9.1

ST20–SLSA6–175–M105



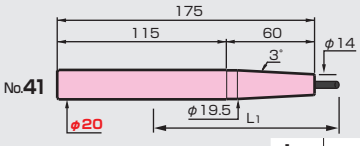
L1	138
↓	12.8

ST20–SLSB6–175–M95



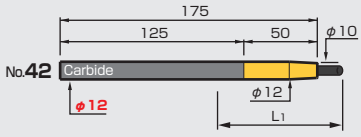
L1	118
↓	8.2

ST20–SLRB6–175–M60



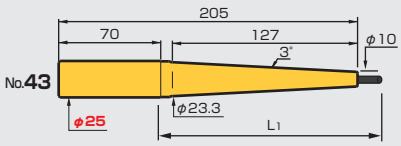
L1	78	118
↓	2.0	4.5

ST12C–SLSB6–175



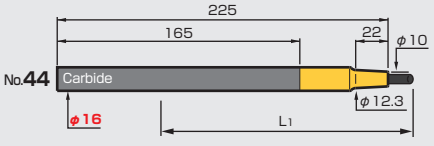
L1	78	102	126
↓	6.9	10.2	15.4

ST25–SLSB6–205–M127



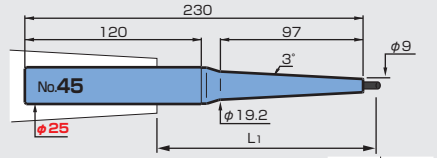
L1	153
↓	10.7

ST16C–SLSB6–225



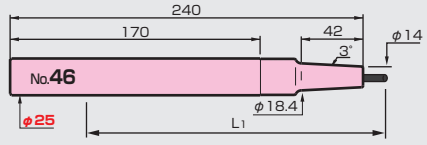
L1	98	130	162
↓	4.6	6.8	10.4

ST25–SLSA6–230–M97



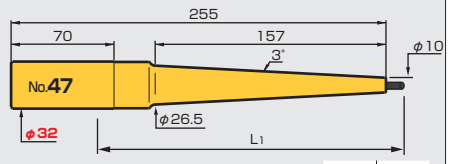
L1	143
↓	11.9

ST25–SLRB6–240–M42



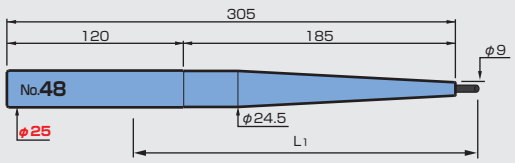
L1	93	143	193
↓	2.0	3.7	7.3

ST32–SLSB6–255–M157



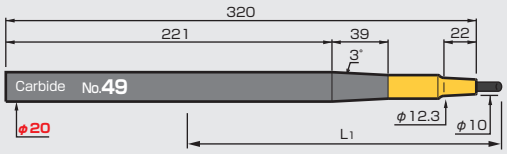
L1	203
↓	13.3

ST25−SLSA6−305−M185



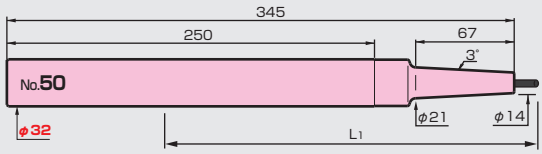
L1	218
⇩	20.0

ST20C−SLSB6−320



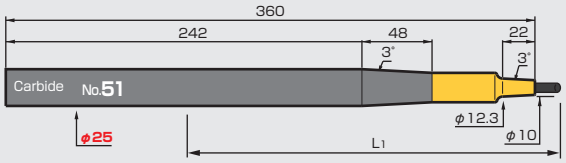
L1	118	158	198
⇩	5.0	6.7	9.4

ST32−SLRB6−345−M67



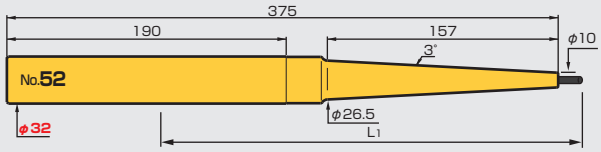
L1	114	178	242
⇩	2.6	4.0	6.7

ST25C−SLSB6−360



L1	143	193	243
⇩	3.9	5.1	7.2

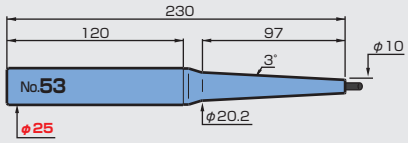
ST32−SLSB6−375−M157



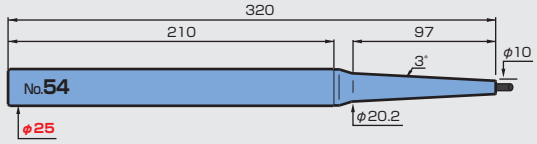
L1	210	274
⇩	13.6	17.3

φ7

ST25−SLSA7−230−M97

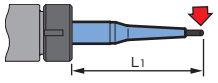


ST25−SLSA7−320−M97



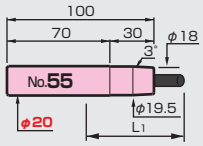
Rigidity Value(μm/kgf)

(Reference) P.159



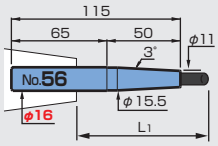
φ8

ST20-SLRB8-100-M30



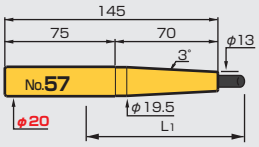
L1	64
↓	1.0

ST16-SLSA8-115-M50



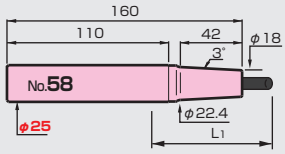
L1	88
↓	5.1

ST20-SLSB8-145-M70



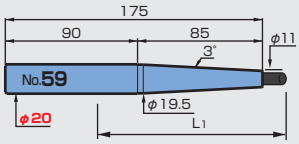
L1	104
↓	4.0

ST25-SLRB8-160-M42



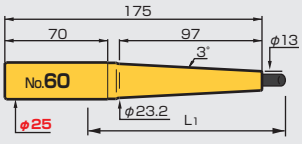
L1	74
↓	1.0

ST20-SLSA8-175-M85



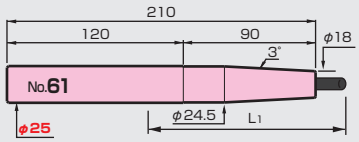
L1	124
↓	7.7

ST25-SLSB8-175-M97



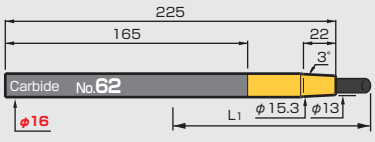
L1	129
↓	5.1

ST25-SLRB8-210-M90



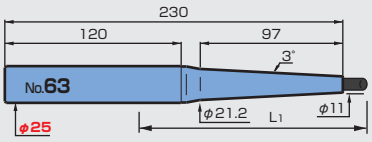
L1	124
↓	2.4

ST16C-SLSB8-225



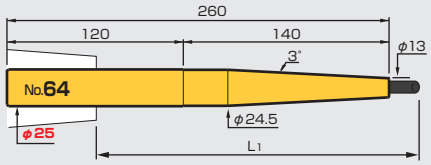
L1	104	136	168
↓	4.4	6.8	10.7

ST25-SLSA8-230-M97



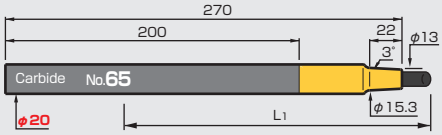
L1	149
↓	8.8

ST25-SLSB8-260-M140



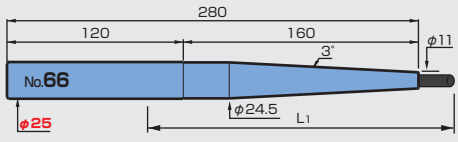
L1	174
↓	7.9

ST20C-SLSB8-270



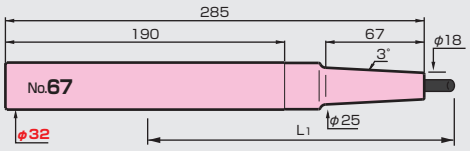
L1	124	164	204
↓	3.2	5.0	7.9

ST25-SLSA8-280-M160



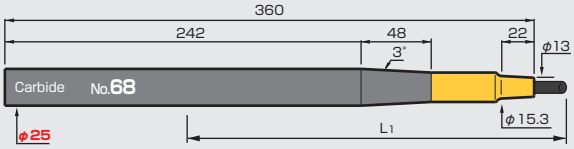
L1	199
↓	13.3

ST32-SLRB8-285-M67



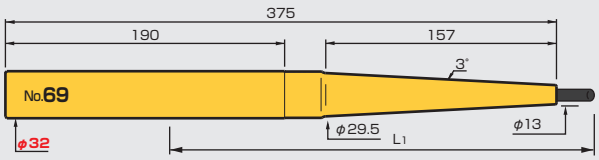
L1	120	184
↓	1.7	3.2

ST25C-SLSB8-360



L1	149	199	249
↓	3.5	4.8	7.0

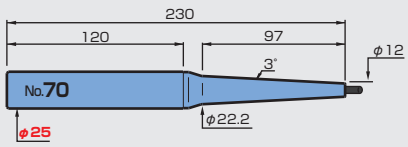
ST32-SLSB8-375-M157



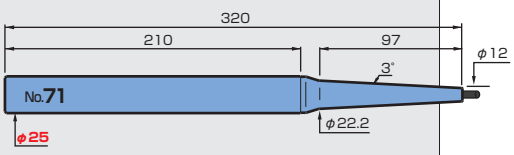
L1	216	280
↓	9.2	13.0

φ9

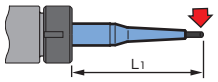
ST25−SLSA9−230−M97



ST25−SLSA9−320−M97

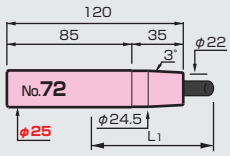


Rigidity Value(μm/kgf)
(Reference) P.159



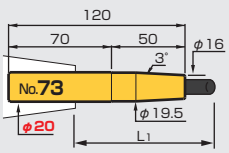
φ10

ST25−SLRB10−120−M35



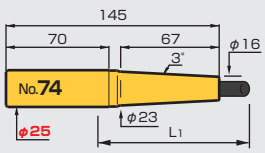
L1	80
↓	0.8

ST20−SLSB10−120−M50



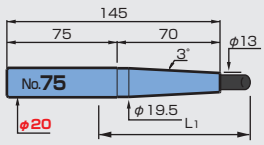
L1	90
↓	2.0

ST25−SLSB10−145−M67



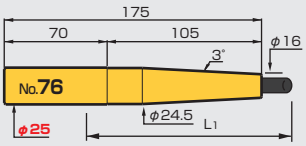
L1	105
↓	2.3

ST20−SLSA10−145−M70



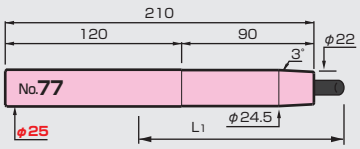
L1	110
↓	4.5

ST25−SLSB10−175−M105



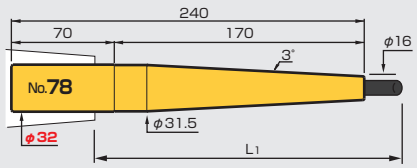
L1	135
↓	3.5

ST25−SLRB10−210−M90



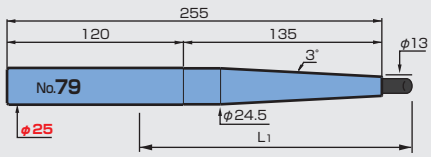
L1	130
↓	2.3

ST32−SLSB10−240−M170



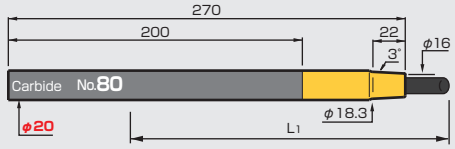
L1	200
↓	5.6

ST25−SLSA10−255−M135



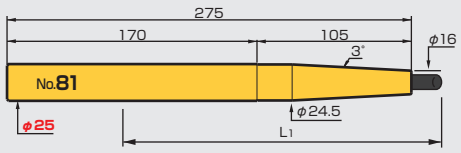
L1	180
↓	8.8

ST20C−SLSB10−270



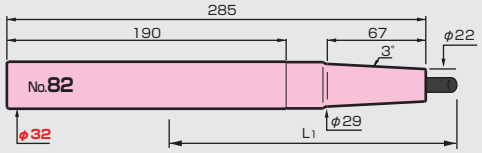
L1	130	170	210
↓	3.2	5.1	8.3

ST25−SLSB10−275−M105



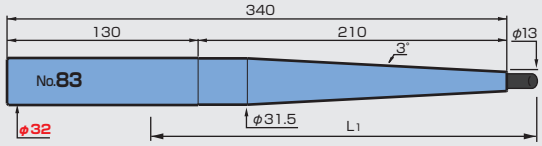
L1	155	205
↓	4.6	8.7

ST32−SLRB10−285−M67



L1	126	190
↓	1.3	2.8

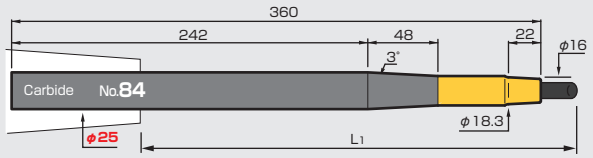
ST32−SLSA10−340−M210



L1	254
↓	12.1

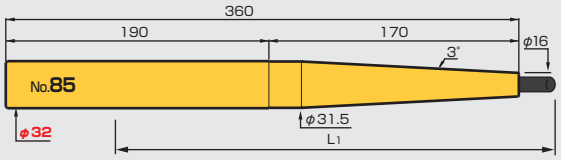
Scale Model S=1:5

ST25C–SLSB10–360



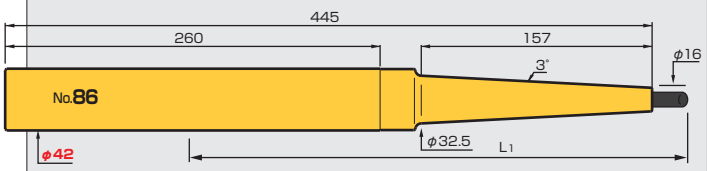
L1	155	205	255
↓	3.5	4.9	7.3

ST32–SLSB10–360–M170



L1	222	286
↓	6.6	10.5

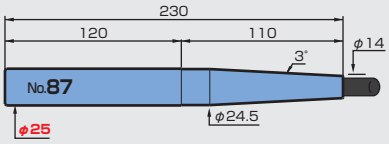
ST42–SLSB10–445–M157



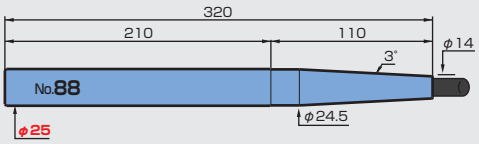
L1	240	324
↓	6.0	8.3

φ11

ST25–SLSA11–230–M110

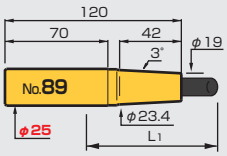


ST25–SLSA11–320–M110



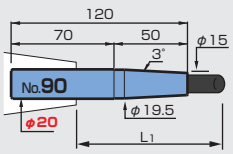
φ12

ST25–SLSB12–120–M42



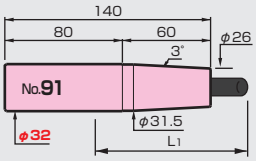
L1	86
↓	1.0

ST20–SLSA12–120–M50



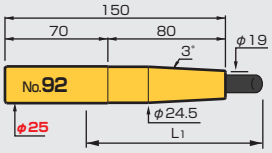
L1	96
↓	2.6

ST32–SLRB12–140–M60



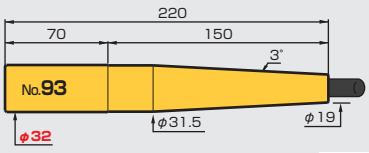
L1	100
↓	0.6

ST25–SLSB12–150–M80



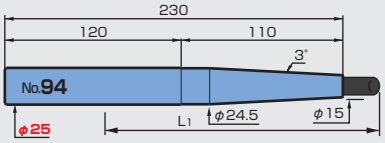
L1	116
↓	1.9

ST32–SLSB12–220–M150



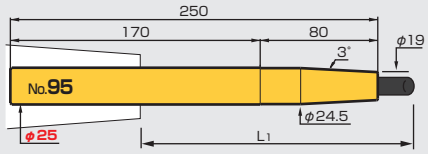
L1	186
↓	3.6

ST25–SLSA12–230–M110



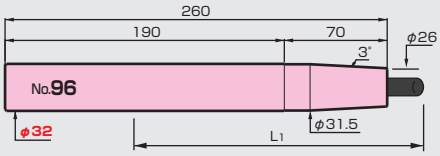
L1	161
↓	5.7

ST25–SLSB12–250–M80



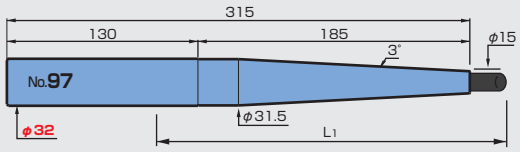
L1	136	186
	2.7	6.0

ST32–SLRB12–260–M70



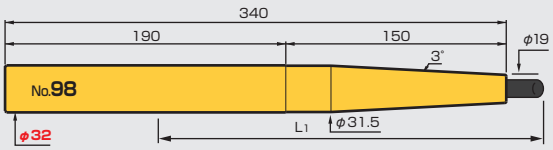
L1	132	196
	1.1	2.8

ST32–SLSA12–315–M185



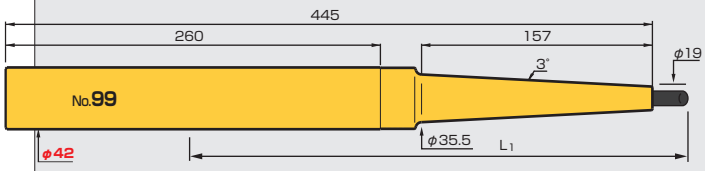
L1	228
	8.4

ST32–SLSB12–340–M150



L1	196	260
	4.0	7.2

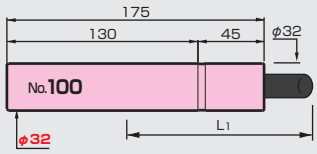
ST42–SLSB12–445–M157



L1	246	330
	4.6	6.9

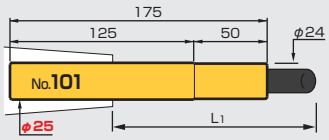
φ16

ST32–SLRB16–175–M45



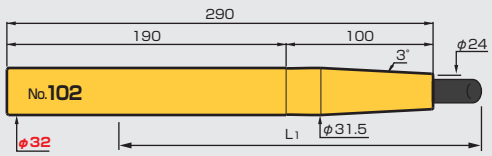
L1	112
	0.6

ST25–SLSB16–175–M50



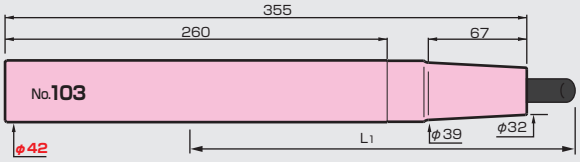
L1	98	148
	1.0	3.2

ST32–SLSB16–290–M100



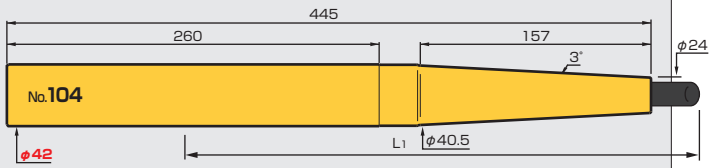
L1	176	240
	2.3	5.0

ST42–SLRB16–355–M67



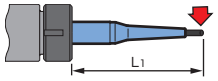
L1	174	258
	0.9	2.2

ST42–SLSB16–445–M157



L1	258	342
	3.4	5.9

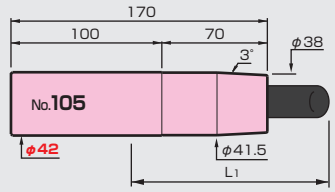
Rigidity Value(μm/kgf)
(Reference) P.159



Scale Model S=1:5

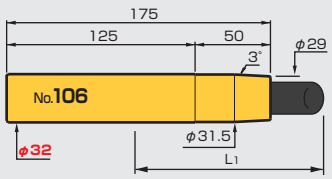
φ20

ST42–SLRB20–170–M70



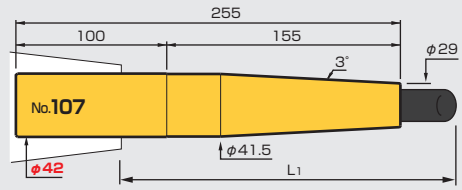
L1	130
↓	0.4

ST32–SLSB20–175–M50



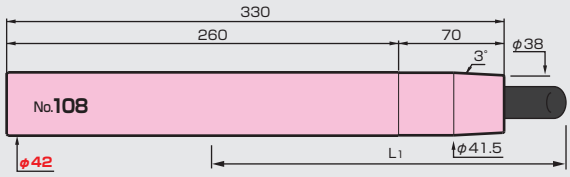
L1	124
↓	0.7

ST42–SLSB20–255–M155



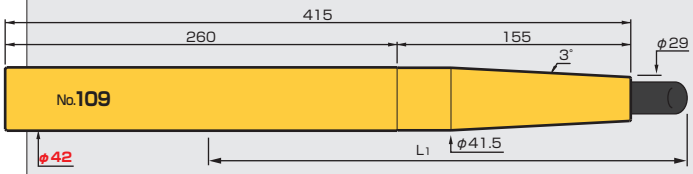
L1	215
↓	1.7

ST42–SLRB20–330–M70



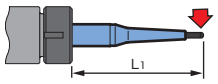
L1	144	228
↓	0.5	1.5

ST42–SLSB20–415–M155



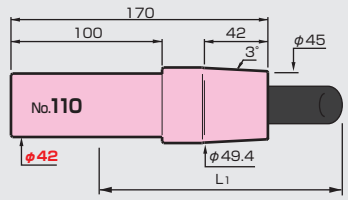
L1	228	312
↓	1.9	4.0

Rigidity Value(μm/kgf)
(Reference) P.159



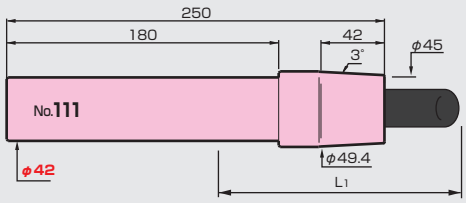
φ25

ST42–SLRB25–170–M42



L1	159
↓	0.4

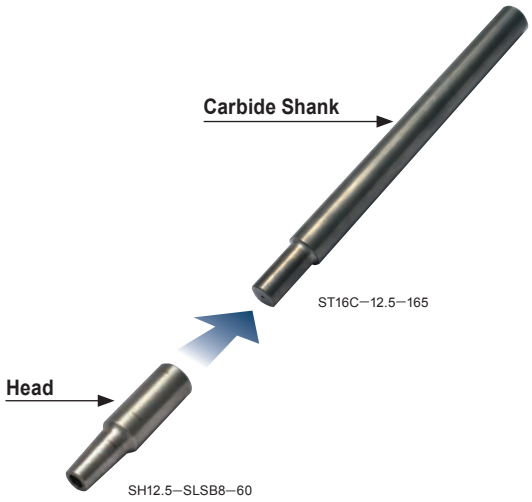
ST42–SLRB25–250–M42



L1	159
↓	0.4

The Parts Code List for Carbide Straight Arbor

SET-CODE	CARBIDE SHANK	HEAD
ST10C—SLSA 3—160	ST10C— 7 —120	SH 7 —SLSA 3—40
—SLSA 4—160		—SLSA 4—40
ST12C—SLSB 6—175	ST12C— 9 —125	SH 9 —SLSB 6—50
ST16C—SLSA 3—280	ST16C— 7 —240	SH 7 —SLSA 3—40
—SLSA 4—280		—SLSA 4—40
—SLSB 6—225	—12.5—165	SH12.5—SLSB 6—60
—SLSB 8—225		—SLSB 8—60
ST20C—SLSB 6—320	ST20C—12.5—260	SH12.5—SLSB 6—60
—SLSB 8—270	—16 —200	SH16 —SLSB 8—70
—SLSB10—270		—SLSB10—70
ST25C—SLSB 6—360	ST25C—16 —290	SH16 —SLSB 6—70
—SLSB 8—360		—SLSB 8—70
—SLSB10—360		—SLSB10—70



Inch

Fig.1

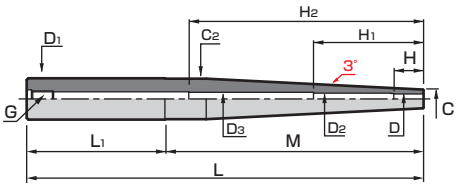
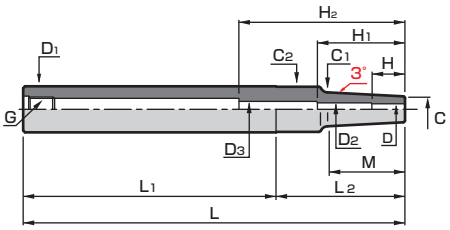


Fig.2



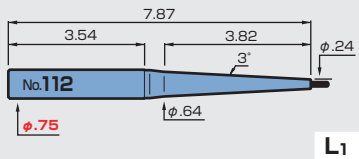
CODE	Fig.	φD	φC	Thickness t	L	M	φD1	H	L1	L2	φC1	φC2	G	Max. insertion length	lbs	φD2	φD3	H1	H2	Scale model
ST19.05–SLS1/ 8–200	2	.1250	.24	.059	7.87	3.82	.750	.38	3.54	4.33	.64	.728	M10	7.20	0.62	.16	.24	2.16	4.13	112
–SLS3/16–200	1	.1850	.31			4.33		.59		–	–				0.55	.24	–	2.76	–	113
–SLS1/ 4–200		.2500	.37			3.94		.71	3.94	3.94						.28				114
ST25.4 –SLS3/ 8–230	2	.3750	.49		9.06	3.82	1.000	1.18	4.72	4.33	.89	.965		2.36	1.43	.40		2.40		115
–SLS1/ 2–230	1	.5000	.62			4.33					–				1.33	.52				116

Scale Model

S=1:5

φ1/8

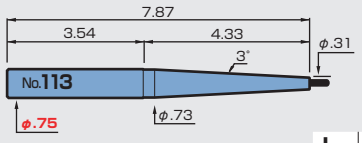
ST19.05–SLS1/8–200



L1	5.10
⬇	21.8

φ3/16

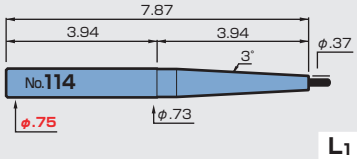
ST19.05–SLS3/16–200



L1	5.29
⬇	16.5

φ1/4

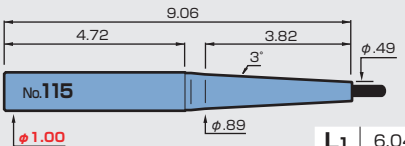
ST19.05–SLS1/4–200



L1	5.47
⬇	12.8

φ3/8

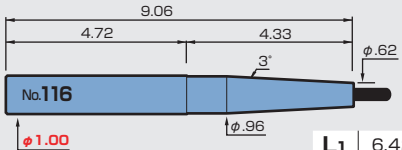
ST25.4–SLS3/8–230



L1	6.04
⬇	7.1

φ1/2

ST25.4–SLS1/2–230



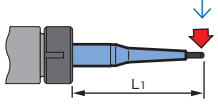
L1	6.42
⬇	6.0

"L1" represents the overhang length of the straight arbor from the base holder.

⬇ shows the rigidity of the straight arbor body at that length. The base deflection is not considered when determining rigidity values.

Rigidity Value(μm/kgf)

(Reference) P.159



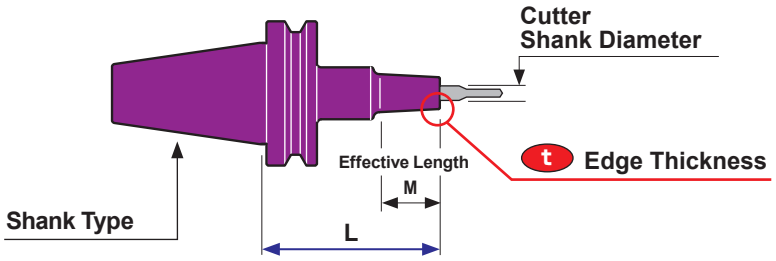
SHRINK-FIT HOLDER

SLIMLINE

Mono Block Series

MONO series

Code System



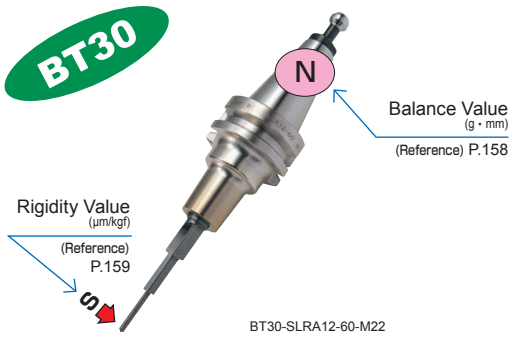
Shank Type	Holder Type	Cutter Shank Diameter	L	Effective Length
BT50	SLSA	3	110	M42

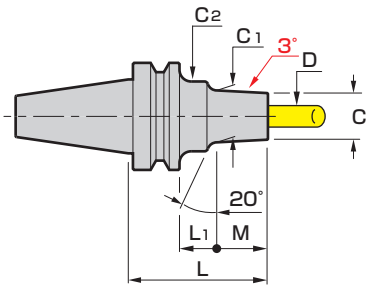
		PAGE	3	3.175	4	5	6	8	10	12	16	20	25
BT (MAS standard)	BT30	P. 32	●	●	●		●	●	●	●	●	●	
	BT40	P. 34	●		●		●	●	●	●	●	●	●
	BT50	P. 56	●		●		●	●	●	●	●	●	●
	A40	P. 78	●	●	●	●	●	●	●	●	●	●	
	A50	P. 80	●		●	●	●	●	●	●	●	●	
	A63	P. 84	●		●	●	●	●	●	●	●	●	●
	A100	P.106	●		●	●	●	●	●	●	●	●	●
HSK (DIN standard)	E25	P.128	●	●	●	●	●						
	E32	P.130	●	●	●	●	●	●	●	●	●		
	E40	P.132	●	●	●	●	●	●	●	●	●	●	
	E50	P.135	●		●	●	●	●	●	●	●	●	
	F63	P.140	●		●		●	●	●	●	●	●	●
Special Shank	15T	P.143	●	●	●	●	●	●	●				
	RS20	P.144	●	●	●	●	●	●	●				
	HT20	P.145	●		●		●	●	●				
	S20T	P.146	●	●	●	●	●	●	●	●			

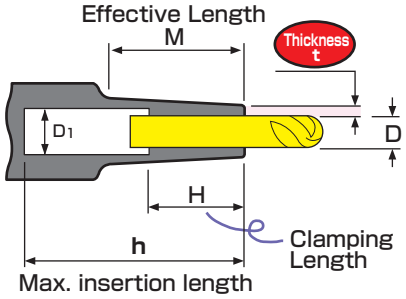
t Thickness

SLSA (Slim A type)	1.5 (Constant)
SLSB (Slim B type)	2 ~ 4.5
SLRA (Regular A type)	2.25 ~ 3
SLRB (Regular B type)	4 ~ 10
SLFB (Flush B type)	3.25 ~ 10

BT30 Code Table





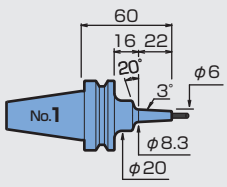


CODE	φD	φC	Thickness t	L	M	L1	φC1	φC2	φD1	H	h	Kg	N	S	Scale model
BT30–SLSA 3– 60–M22	3	6	1.5	60	22	16	8.3	20	4	9	80	0.4	0.8	4.7	1
– 80–M42				80	42		10.4				100			9.4	2
–120–M67				120	67	31	13	25			140	0.5	1.6	15.2	3
–SLRA 3– 75–M22		7.5	2.25	75	22		9.8				95			2.9	4
BT30–SLSA3.175– 60–M22	3.175	6.175	1.5	60	22	16	8.5	20	4	9	80	0.4	0.8	4.5	5
– 80–M42				80	42		10.6				100			0.9	6
BT30–SLSA 4– 60–M22	4	7	1.5	60	22	16	9.3	20	5	12	80	0.4	0.8	3.7	7
– 80–M42				80	42		11.4				100			7.4	8
–120–M67				120	67	31	14	25			140	0.5	1.6	12.2	9
–SLRA 4– 75–M22		10	3	75	22		12.3				95			1.8	10
BT30–SLSA 6– 60–M22	6	9	1.5	60	22	16	11.3	20	7	18	80	0.4	0.9	2.4	11
– 80–M42				80	42		13.4				100			5.0	12
–120–M67				120	67	31	16	25			140	0.5	1.7	8.3	13
–SLRA 6– 60–M22		12	3	60	22	16	14.3	26			80	0.4	0.9	1.3	14
BT30–SLRA 8– 60–M22	8	14	3	60	22	16	16.3	26	8.6	24	80	0.4	0.9	1.0	15
BT30–SLRA10– 60–M22	10	16	3	60	22	16	18.3	26	10.6	30	80	0.4	1.0	0.8	16
BT30–SLRA12– 60–M22	12	20	4	60	22	16	22.3	30	12.6	30	60	0.5	1.2	0.6	17
BT30–SLRA16– 60–M22	16	26	5	60	22	16	28.3	34	16.6	32	60	0.5	1.6	0.5	18
BT30–SLRA20– 65–M22	20	32	6	65	22	21	34.3	40	20.6	38	60	0.6	2.1	0.4	19

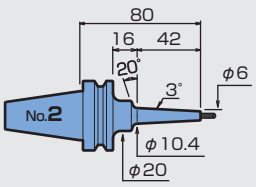
BT30 Scale Model S=1:4

φ3

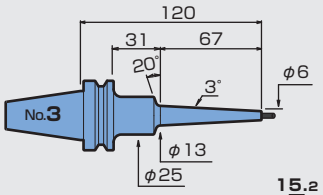
BT30–SLSA3–60–M22



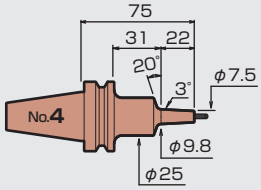
BT30–SLSA3–80–M42



BT30–SLSA3–120–M67

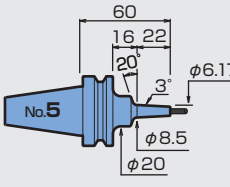


BT30–SLRA3–75–M22

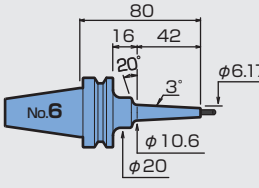


φ3.175

BT30–SLSA3.175–60–M22

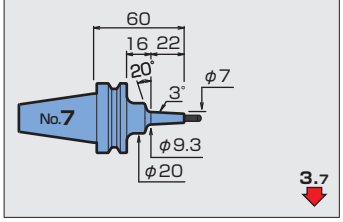


BT30–SLSA3.175–80–M42

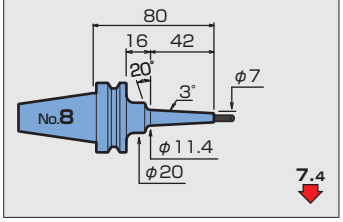


φ4

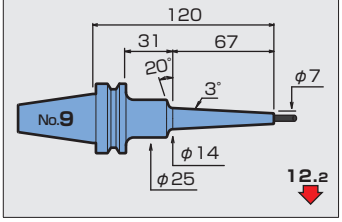
BT30—SLSA4—60—M22



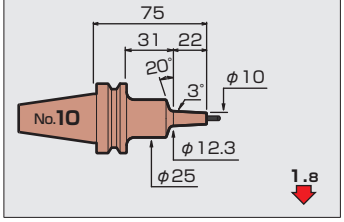
BT30—SLSA4—80—M42



BT30—SLSA4—120—M67

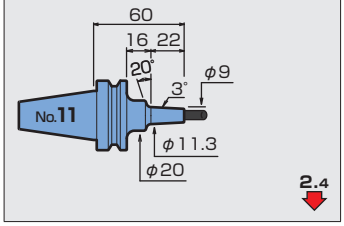


BT30—SLRA4—75—M22

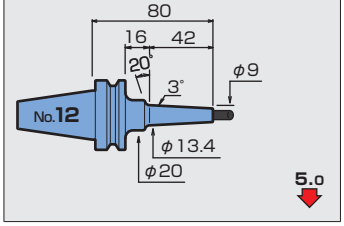


φ6

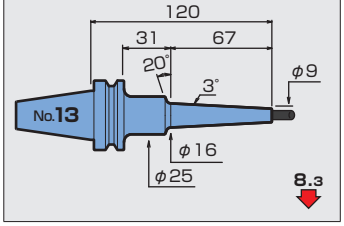
BT30—SLSA6—60—M22



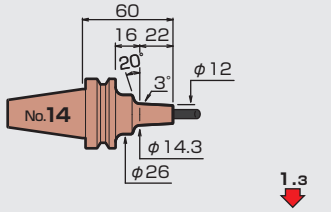
BT30—SLSA6—80—M42



BT30—SLSA6—120—M67

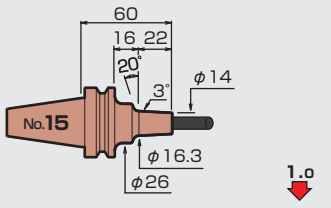


BT30—SLRA6—60—M22



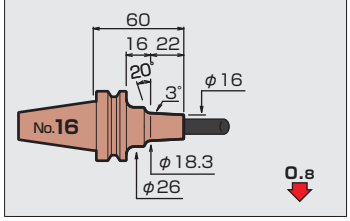
φ8

BT30—SLRA8—60—M22



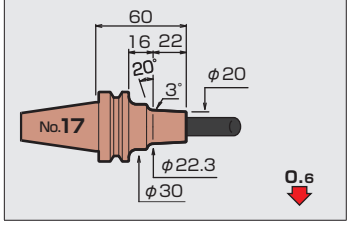
φ10

BT30—SLRA10—60—M22



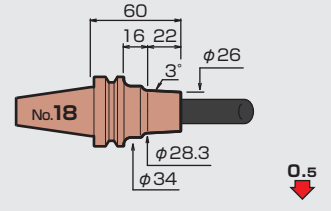
φ12

BT30—SLRA12—60—M22



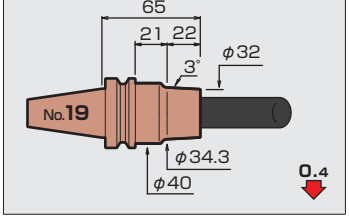
φ16

BT30—SLRA16—60—M22

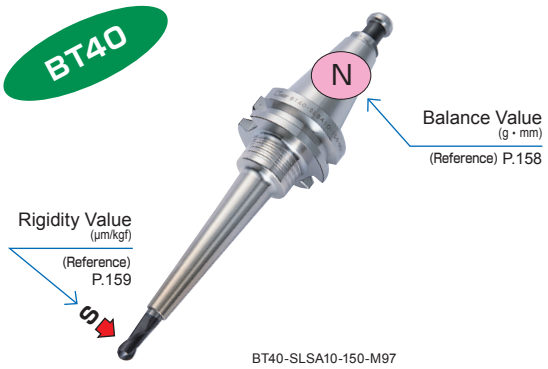


φ20

BT30—SLRA20—65—M22



BT40 Code Table



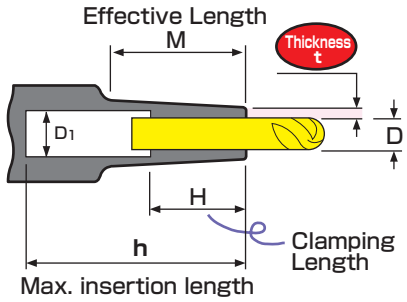


Fig.1

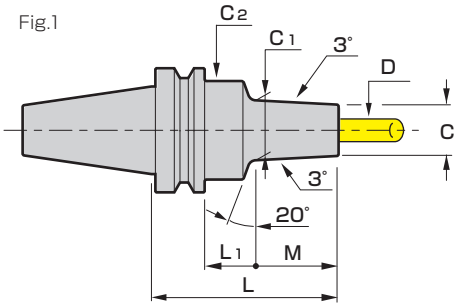
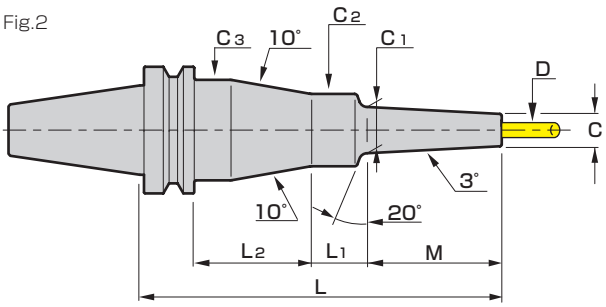


Fig.2



CODE	Fig.	φD	φC	Thickness t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	φ D_1	H	h	Kg	N	S	Scale model
BT40－SLSA 3－ 95－M 42	1	3	6		95	42	26	—	10.4	26	—	4	9	130	1.0	2.3	9.3	1
－120－M 67					120	67			13					155		3.1	14.9	4
－125－M 42					125	42	56		10.4					160	1.1	2.5	9.9	2
－150－M 67					150	67			13					185		3.2	15.8	5
－M 97				1.5		97	26		16.2							4.0	20.7	7
－155－M 42	2				155	42	33	53	10.4		40			190	1.4	2.7	9.9	3
－180－M 67					180	67			13					215		3.4	15.8	6
－M 97	1					97	56	—	16.2		—				1.2	4.1	22.2	8
－210－M 97	2				210		33	53			40			245	1.4	4.3	22.1	9
－SLRA 3－ 75－M 22	1	3	7.5		75	22	26	—	9.8	26	—	5	9	110	1.0	2.6	2.8	10
－ 95－M 42					95	42			11.9					130		2.9	5.4	13
－105－M 22					105	22	56		9.8					140	1.1	2.7	3.2	11
－120－M 67					120	67	26		14.5					155	1.0	3.4	8.9	16
－125－M 42					125	42	56		11.9					160	1.1	3.0	5.9	14
－135－M 22	2				135	22	33	53	9.8		40			170	1.4	2.9	3.2	12
－150－M 67	1				150	67	56	—	14.5		—			185	1.1	3.5	9.8	17
－M 97				2.25		97	26		17.7							4.1	12.9	19
－155－M 42	2				155	42	33	53	11.9		40			190	1.4	3.2	6.0	15
－180－M 67					180	67			14.5					215		3.7	9.8	18
－M 97	1					97	56	—	17.7		—				1.2	4.2	14.3	20
－M127						127	26		20.8	36					1.1	5.4	15.7	22
－210－M 97	2				210	97	33	53	17.7	26	40			245	1.5	4.4	14.3	21
－M127	1					127	56	—	20.8	36	—				1.3	5.5	16.2	23
－240－M127	2				240		28	58			50			275	1.8	5.8	16.3	24
－SLFB 3－ 75－M 22	1	3	9.5		75	22	26	—	11.8	26	—	5	9	110	1.0	2.4	1.9	25
－ 95－M 42					95	42			13.9					130		2.7	3.2	28
－105－M 22					105	22	56		11.8					140	1.1	2.5	2.2	26
－120－M 67					120	67	26		16.5					155		3.4	5.3	31
－125－M 42				3.25	125	42	56		13.9					160		2.8	3.8	29
－135－M 22	2				135	22	33	53	11.8		40			170	1.4	2.7	2.3	27
－150－M 67	1				150	67	56	—	16.5		—			185	1.2	3.6	6.3	32
－155－M 42	2				155	42	33	53	13.9		40			190	1.4	3.0	3.8	30
－180－M 67					180	67			16.5					215		3.8	6.3	33

BT40

CODE	Fig.	φD	φC	Thickness t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Scale model
BT40－SLSA 4－ 95－M 42	1	4	7		95	42	26	—	11.4	26	—	5	12	130	1.0	3.1	7.3	34
－120－M 67					120	67			14					155			11.8	37
－125－M 42					125	42	56		11.4					160	1.1	3.3	7.9	35
－150－M 67					150	67			14					185			12.8	38
－M 97				1.5		97	26		17.2							4.1	16.7	40
－155－M 42	2				155	42	33	53	11.4		40			190	1.4	3.5	7.9	36
－180－M 67					180	67			14					215			12.8	39
－M 97	1					97	56	—	17.2		—				1.2	4.2	18.2	41
－210－M 97	2				210		33	53			40			245	1.5	4.4		42
－SLRA 4－ 75－M 22	1	4	10		75	22	26	—	12.3	26	—	6	12	110	1.0	2.7	1.7	43
－ 95－M 42					95	42			14.4					130		3.1	3.1	46
－105－M 22					105	22	56		12.3					140	1.1	2.8	2.1	44
－120－M 67					120	67	26		17					155		3.9	5.1	49
－125－M 42					125	42	56		14.4					160		3.3	3.7	47
－135－M 22	2				135	22	33	53	12.3		40			170	1.4	3.0	2.1	45
－150－M 67	1				150	67	56	—	17		—			185	1.2	4.0	6.1	50
－M 97				3		97	26		20.2						1.1	4.8	7.7	52
－155－M 42	2				155	42	33	53	14.4		40			190	1.4	3.5	3.7	48
－180－M 67					180	67			17					215		4.2	6.1	51
－M 97	1					97	56	—	20.2		—				1.2	4.9	9.2	53
－M127						127	26		23.3	36					1.3	6.8	9.3	55
－210－M 97	2				210	97	33	53	20.2	26	40			245	1.5	5.1	9.1	54
－M127	1					127	56	—	23.3	36	—					7.0	9.9	56
－240－M127	2				240		28	58			50			275	2.0	7.3		57
－SLFB 4－ 75－M 22	1	4	12		75	22	26	—	14.3	26	—	6	12	110	1.0	2.5	1.3	58
－ 95－M 42					95	42			16.4					130	1.1	3.0	2.2	61
－105－M 22					105	22	56		14.3					140		2.7	1.7	59
－120－M 67					120	67	26		19					155		3.8	3.5	64
－125－M 42				4	125	42	56		16.4					160	1.2	3.1	2.8	62
－135－M 22	2				135	22	33	53	14.3		40			170	1.4	2.9	1.8	60
－150－M 67	1				150	67	56	—	19		—			185	1.2	4.0	4.5	65
－155－M 42	2				155	42	33	53	16.4		40			190	1.4	3.3	2.8	63
－180－M 67					180	67			19					215	1.5	4.2	4.5	66
BT40－SLSA 6－ 95－M 42	1	6	9		95	42	26	—	13.4	26	—	7	18	130	1.0	3.3	4.8	67
－120－M 67					120	67			16					155	1.1	4.4	8.0	70
－125－M 42					125	42	56		13.4					160		3.5	5.5	68
－150－M 67					150	67			16					185	1.2	4.5	9.0	71
－M 97				1.5		97	26		19.2	36						5.9	11.0	73
－155－M 42	2				155	42	33	53	13.4	26	40			190	1.4	3.7	5.5	69
－180－M 67					180	67			16					215		4.7	9.0	72
－M 97	1					97	56	—	19.2	36	—					6.1	11.4	74
－210－M 97	2				210		28	58			50			245	1.9	6.4	11.5	75
－SLSB 6－ 95－M 42	1	6	10		95	42	26	—	14.4	26	—	8	18	130	1.0	4.0	3.8	76
－120－M 67					120	67			17					155	1.1	5.4	6.3	79
－125－M 42					125	42	56		14.4					160		4.1	4.5	77
－150－M 67					150	67			17					185	1.2	5.5	7.4	80
－M 97						97	26		20.2	36						7.2	8.9	82
－155－M 42	2				155	42	33	53	14.4	26	40			190	1.4	4.3	4.5	78
－180－M 67					180	67			17					215		5.7	7.4	81
－M 97	1			2		97	56	—	20.2	36	—					7.4	9.3	83
－M127						127	26		23.3						1.3	8.9	11.4	85
－210－M 97	2				210	97	28	58	20.2		50			245	1.9	7.7	9.4	84
－M127	1					127	56	—	23.3		—				1.5	9.1	12.1	86
－M157						157	26		26.5						1.4	10.6	13.7	88
－240－M127	2				240	127	28	58	23.3		50			275	2.0	9.4	12.1	87
－M157	1					157	56	—	26.5		—				1.7	10.8	14.5	89
－270－M157	2				270		28	58			50			305	2.1	11.0	14.6	90

BT40 Code Table

CODE	Fig.	φD	φC	Thickness t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Scale model
BT40－SLRB 6－ 75－M 22	1	6	14		75	22	26	—	16.3	36	—	8	18	110	1.1	3.2	0.9	91
－ 95－M 42					95	42			18.4					130		4.3	1.6	94
－105－M 22					105	22	56		16.3					140	1.3	3.3	1.1	92
－120－M 67					120	67	26		21					155	1.2	5.6	2.5	97
－125－M 42				4	125	42	56		18.4					160	1.3	4.4	1.8	95
－135－M 22	2				135	22	28	58	16.3		50			170	1.8	3.6	1.1	93
－150－M 67	1				150	67	56	—	21		—			185	1.4	5.8	2.8	98
－155－M 42	2				155	42	28	58	18.4		50			190	1.8	4.7	1.8	96
－180－M 67					180	67			21					215	1.9	6.1	2.9	99
－SLFB 6－ 75－M 22	1	6	14		75	22	26	—	16.3	36	—	8	18	110	1.1	3.2	0.9	100
－ 95－M 42					95	42			18.4					130		4.3	1.6	103
－105－M 22					105	22	56		16.3					140	1.3	3.3	1.1	101
－120－M 67					120	67	26		21					155	1.2	5.6	2.5	106
－125－M 42				4	125	42	56		18.4					160	1.3	4.4	1.8	104
－135－M 22	2				135	22	28	58	16.3		50			170	1.8	3.6	1.1	102
－150－M 67	1				150	67	56	—	21		—			185	1.4	5.8	2.8	107
－155－M 42	2				155	42	28	58	18.4		50			190	1.8	4.7	1.8	105
－180－M 67					180	67			21					215	1.9	6.1	2.9	108
BT40－SLSA 8－ 95－M 42	1	8	11		95	42	26	—	15.4	36	—	9	24	130	1.1	4.6	3.2	109
－120－M 67					120	67			18					155		6.3	5.4	112
－125－M 42					125	42	56		15.4					160	1.3	4.7	3.4	110
－150－M 67					150	67			18					185		6.5	5.7	113
－M 97				1.5		97	26		21.2						1.2	8.4	7.8	115
－155－M 42	2				155	42	28	58	15.4		50			190	1.8	5.0	3.4	111
－180－M 67					180	67			18					215		6.7	5.7	114
－M 97	1					97	56	—	21.2		—				1.4	8.6	8.3	116
－210－M 97	2				210		28	58			50			245	1.9	8.8	8.4	117
－SLSB 8－ 95－M 42	1	8	13		95	42	26	—	17.4	36	—	10	24	130	1.1	5.3	2.1	118
－120－M 67					120	67			20					155		7.4	3.5	121
－125－M 42					125	42	56		17.4					160	1.3	5.5	2.3	119
－150－M 67					150	67			20					185	1.4	7.6	3.9	122
－M 97						97	26		23.2						1.2	10.0	5.2	124
－155－M 42	2				155	42	28	58	17.4		50			190	1.8	5.7	2.4	120
－180－M 67					180	67			20					215		7.9	3.9	123
－M 97	1			2.5		97	56	—	23.2		—				1.4	10.2	5.7	125
－M127						127	26		26.3						1.3	12.6	7.0	127
－210－M 97	2				210	97	28	58	23.2		50			245	1.9	10.4	5.8	126
－M127	1					127	56	—	26.3		—				1.5	12.7	7.7	128
－M157						157	26		29.5						1.4	15.1	8.5	130
－240－M127	2				240	127	28	58	26.3		50			275	2.0	13.0	7.7	129
－M157	1					157	56	—	29.5		—				1.7	15.3	9.4	131
－270－M157	2				270		28	58			50			305	2.1	15.6	9.5	132
－SLRB 8－ 75－M 22	1	8	18		75	22	26	—	20.3	36	—	10	24	110	1.1	3.6	0.7	133
－ 95－M 42					95	42			22.4					130	1.2	5.3	1.0	136
－105－M 22					105	22	56		20.3					140	1.3	3.8	0.8	134
－120－M 67					120	67	26		25					155	1.2	7.5	1.6	139
－125－M 42				5	125	42	56		22.4					160	1.4	5.5	1.2	137
－135－M 22	2				135	22	28	58	20.3		50			170	1.8	4.1	0.9	135
－150－M 67	1				150	67	56	—	25		—			185	1.5	7.6	1.9	140
－155－M 42	2				155	42	28	58	22.4		50			190	1.9	5.8	1.3	138
－180－M 67					180	67			25					215		7.9	2.0	141
－SLFB 8－ 75－M 22	1	8	18		75	22	26	—	20.3	36	—	10	24	110	1.1	3.6	0.7	142
－ 95－M 42					95	42			22.4					130	1.2	5.3	1.0	145
－105－M 22					105	22	56		20.3					140	1.3	3.8	0.8	143
－120－M 67					120	67	26		25					155	1.2	7.5	1.6	148
－125－M 42				5	125	42	56		22.4					160	1.4	5.5	1.2	146
－135－M 22	2				135	22	28	58	20.3		50			170	1.8	4.1	0.9	144
－150－M 67	1				150	67	56	—	25		—			185	1.5	7.6	1.9	149
－155－M 42	2				155	42	28	58	22.4		50			190	1.9	5.8	1.3	147
－180－M 67					180	67			25					215		7.9	2.0	150

BT40

BT40

CODE	Fig.	φD	φC	Thickness t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Scale model
BT40 – SLSA10 – 95 – M 42	1	10	13		95	42	26	—	17.4	36	—	11	30	130	1.1	5.5	2.3	151
– 120 – M 67					120	67			20					155		8.1	4.0	154
– 125 – M 42					125	42	56		17.4					160	1.3	5.7	2.5	152
– 150 – M 67					150	67			20					185	1.4	8.2	4.3	155
– M 97				1.5		97	26		23.2						1.2		5.9	157
– 155 – M 42	2				155	42	28	58	17.4		50			190	1.8	5.9	2.5	153
– 180 – M 67					180	67			20					215		8.5	4.4	156
– M 97	1					97	56	—	23.2		—				1.5		6.4	158
– 210 – M 97	2				210		28	58			50			245	1.9		6.5	159
– SLSB10 – 95 – M 42	1	10	16		95	42	26	—	20.4	36	—	12	30	130	1.1	6.3	1.4	160
– 120 – M 67					120	67			23					155	1.2	9.3	2.4	163
– 125 – M 42					125	42	56		20.4					160	1.3	6.4	1.6	161
– 150 – M 67					150	67			23					185	1.4	9.5	2.7	164
– M 97						97	26		26.2						1.3	13.0	3.6	166
– 155 – M 42	2				155	42	28	58	20.4		50			190	1.8	6.7	1.7	162
– 180 – M 67					180	67			23					215	1.9	9.8	2.8	165
– M 97	1			3		97	56	—	26.2		—				1.4	13.2	4.1	167
– M127						127	26		29.3	50				190	1.5	17.4	4.5	169
– 210 – M 97	2				210	97	28	58	26.2	36	50			245	1.9	13.5	4.1	168
– M127	1					127	56	—	29.3	50	—			220	1.8	17.9	4.7	170
– M157						157	26		32.5						1.6	21.1	5.5	172
– 240 – M127					240	127	86		29.3					250	2.1	18.5	5.0	171
– M157						157	56		32.5						1.8	21.7	5.8	173
– 270 – M157					270		86							305	2.1	22.2	6.2	174
– SLRB10 – 75 – M 22	1	10	22		75	22	26	—	24.3	36	—	12	30	110	1.1	3.8	0.5	175
– 95 – M 42					95	42			26.4					130	1.2	6.3	0.8	178
– 105 – M 22					105	22	56		24.3					140	1.3	4.0	0.7	176
– 120 – M 67					120	67	26		29					155		9.4	1.2	181
– 125 – M 42				6	125	42	56		26.4					160	1.4	6.5	1.0	179
– 135 – M 22	2				135	22	28	58	24.3		50			170	1.8	4.3	0.7	177
– 150 – M 67	1				150	67	56	—	29		—			185	1.5	9.6	1.5	182
– 155 – M 42	2				155	42	28	58	26.4		50			190	1.9	6.8	1.1	180
– 180 – M 67					180	67			29					215	2.0	9.8	1.6	183
– SLFB10 – 75 – M 22	1	10	22		75	22	26	—	24.3	36	—	12	30	110	1.1	3.8	0.5	184
– 95 – M 42					95	42			26.4					130	1.2	6.3	0.8	187
– 105 – M 22					105	22	56		24.3					140	1.3	4.0	0.7	185
– 120 – M 67					120	67	26		29					155		9.4	1.2	190
– 125 – M 42				6	125	42	56		26.4					160	1.4	6.5	1.0	188
– 135 – M 22	2				135	22	28	58	24.3		50			170	1.8	4.3	0.7	186
– 150 – M 67	1				150	67	56	—	29		—			185	1.5	9.6	1.5	191
– 155 – M 42	2				155	42	28	58	26.4		50			190	1.9	6.8	1.1	189
– 180 – M 67					180	67			29					215	2.0	9.8	1.6	192
BT40 – SLSA12 – 95 – M 42	1	12	15		95	42	26	—	19.4	36	—	13	30	130	1.1	7.1	1.8	193
– 120 – M 67					120	67			22					155		10.7	3.2	196
– 125 – M 42					125	42	56		19.4					160	1.3	7.3	2.1	194
– 150 – M 67					150	67			22					185	1.4	10.9	3.6	197
– M 97				1.5		97	26		25.2						1.2	15.3	4.8	199
– 155 – M 42	2				155	42	28	58	19.4		50			190	1.8	7.5	2.1	195
– 180 – M 67					180	67			22					215		11.2	3.6	198
– M 97	1					97	56	—	25.2		—				1.4	15.5	5.3	200
– 210 – M 97	2				210		28	58			50			245	1.9	15.8	5.4	201

BT40 Code Table

BT40

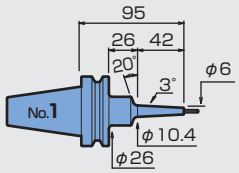
CODE	Fig.	φD	φC	Thickness t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Scale model
BT40 – SLSB12 – 95 – M 42	1	12	19		95	42	26	—	23.4	36	—	14	30	130	1.1	8.0	1.1	202
– 120 – M 67					120	67			26					155	1.2	12.2	1.8	205
– 125 – M 42					125	42	56		23.4					160	1.4	8.2	1.3	203
– 150 – M 67					150	67			26					185		12.4	2.1	206
– M 97						97	26		29.2	50				160		17.9	2.4	208
– 155 – M 42	2				155	42	28	58	23.4	36	50			190	1.8	8.4	1.4	204
– 180 – M 67					180	67			26					215	1.9	12.6	2.2	207
– M 97	1			3.5		97	56	—	29.2	50	—			190	1.7	18.4	2.6	209
– M127						127	26		32.3						1.5	22.9	3.2	211
– 210 – M 97					210	97	86		29.2					220	2.1	19.0	2.9	210
– M127						127	56		32.3						1.9	23.5	3.5	212
– M157						157	26		35.5						1.7	27.9	4.0	214
– 240 – M127					240	127	86		32.3					250	2.2	24.0	3.8	213
– M157						157	56		35.5						2.0	28.5	4.4	215
– 270 – M157					270		86							280	2.4	29.1	4.8	216
– SLRB12 – 75 – M 22	1	12	26		75	22	26	—	28.3	50	—	14	30	85	1.1	6.9	0.4	217
– 95 – M 42					95	42			30.4					105	1.3	8.7	0.6	220
– 105 – M 22					105	22	56		28.3					115	1.4	7.5	0.5	218
– 120 – M 67					120	67	26		33					130		12.9	0.8	223
– 125 – M 42				7	125	42	56		30.4					135	1.6	9.3	0.6	221
– 135 – M 22					135	22	86		28.3					145	1.8	8.1		219
– 150 – M 67					150	67	56		33					160	1.7	13.5	0.9	224
– 155 – M 42					155	42	86		30.4					165	2.0	9.9	0.8	222
– 180 – M 67					180	67			33					190	2.1	14.1	1.1	225
– SLFB12 – 75 – M 22	1	12	26		75	22	26	—	28.3	50	—	14	30	85	1.1	6.9	0.4	226
– 95 – M 42					95	42			30.4					105	1.3	8.7	0.6	229
– 105 – M 22					105	22	56		28.3					115	1.4	7.5	0.5	227
– 120 – M 67					120	67	26		33					130		12.9	0.8	232
– 125 – M 42				7	125	42	56		30.4					135	1.6	9.3	0.6	230
– 135 – M 22					135	22	86		28.3					145	1.8	8.1		228
– 150 – M 67					150	67	56		33					160	1.7	13.5	0.9	233
– 155 – M 42					155	42	86		30.4					165	2.0	9.9	0.8	231
– 180 – M 67					180	67			33					190	2.1	14.1	1.1	234
BT40 – SLSB16 – 95 – M 42	1	16	24		95	42	26	—	28.4	50	—	18	32	105	1.2	12.4	0.7	235
– 120 – M 67					120	67			31					130	1.3	19.3	1.1	238
– 125 – M 42					125	42	56		28.4					135	1.6	13.0	0.8	236
– 150 – M 67					150	67			31					160		19.8	1.3	239
– M 97						97	26		34.2						1.5	27.6	1.6	241
– 155 – M 42					155	42	86		28.2					165	1.9	13.5	0.9	237
– 180 – M 67					180	67			31					190	2.0	20.4	1.5	240
– M 97				4		97	56		34.2						1.8	28.1	1.9	242
– M127						127	26		37.3						1.6	35.8	2.2	244
– 210 – M 97					210	97	86		34.2					220	2.1	28.7	2.1	243
– M127						127	56		37.3						2.0	36.4	2.5	245
– M157						157	26		40.5						1.9	44.1	2.8	247
– 240 – M127					240	127	86		37.3					250	2.3	37.0		246
– M157						157	56		40.5						2.2	44.7	3.1	248
– 270 – M157					270		86							280	2.5	45.3	3.5	249
– SLRB16 – 75 – M 22	1	16	32		75	22	26	—	34.3	50	—	18	32	85	1.2	6.9	0.3	250
– 95 – M 42					95	42			36.4					105	1.4	12.5	0.4	253
– 105 – M 22					105	22	56		34.3					115	1.6	7.5		251
– 120 – M 67					120	67	26		39					130	1.5	19.4	0.6	256
– 125 – M 42				8	125	42	56		36.4					135	1.7	13.0	0.5	254
– 135 – M 22					135	22	86		34.3					145	1.9	8.1		252
– 150 – M 67					150	67	56		39					160		20.0	0.8	257
– 155 – M 42					155	42	86		36.4					165	2.0	13.6	0.7	255
– 180 – M 67					180	67			39					190	2.2	20.5	1.0	258

BT40

CODE	Fig.	φD	φC	Thickness t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Scale model
BT40 – SLFB16 – 75 – M 22	1	16	32	8	75	22	26	—	34.3	50	—	18	32	85	1.2	6.9	0.3	259
– 95 – M 42					95	42			36.4					105	1.4	12.5	0.4	262
– 105 – M 22					105	22	56		34.3					115	1.6	7.5		260
– 120 – M 67					120	67	26		39					130	1.5	19.4	0.6	265
– 125 – M 42					125	42	56		36.4					135	1.7	13.0	0.5	263
– 135 – M 22					135	22	86		34.3					145	1.9	8.1		261
– 150 – M 67					150	67	56		39					160		20.0	0.8	266
– 155 – M 42					155	42	86		36.4					165	2.0	13.6	0.7	264
– 180 – M 67					180	67			39					190	2.2	20.5	1.0	267
BT40 – SLSB20 – 95 – M 42	1	20	29	4.5	95	42	26	—	33.4	50	—	22	40	105	1.2	14.2	0.5	268
– 120 – M 67					120	67			36					130	1.4	24.5	0.8	271
– 125 – M 42					125	42	56		33.4					135	1.6	14.8	0.6	269
– 150 – M 67					150	67			36					160	1.7	25.0	1.0	272
– M 97						97	26		39.2						1.5	36.8	1.2	274
– 155 – M 42					155	42	86		33.4					165	1.9	15.3	0.8	270
– 180 – M 67					180	67			36					190	2.0	25.6	1.2	273
– M 97						97	56		39.2						1.9	37.4	1.4	275
– M127						127	26		42.3						1.8	50.0	1.6	277
– 210 – M 97					210	97	86		39.2					220	2.2	38.0	1.7	276
– M127						127	56		42.3						2.1	50.5	1.9	278
– M157						157	26		45.5						2.0	62.3	2.1	280
– 240 – M127					240	127	86		42.3					250	2.4	51.1	2.3	279
– M157						157	56		45.5							62.9	2.4	281
– 270 – M157					270		86							280	2.7	63.5	2.9	282
– SLRB20 – 95 – M 42	1	20	38	9	95	42	26	—	42.4	50	—	22	40	105	1.4	14.3	0.4	283
– 120 – M 67					120	67			45					130	1.7	24.6	0.5	286
– 125 – M 42					125	42	56		42.4					135	1.8	14.9		284
– 150 – M 67					150	67			45					160	2.0	25.2	0.7	287
– 155 – M 42					155	42	86		42.4					165	2.1	15.4		285
– 180 – M 67					180	67			45					190	2.3	25.7	0.9	288
– SLFB20 – 95 – M 42	1	20	38	9	95	42	26	—	42.4	50	—	22	40	105	1.4	14.3	0.4	289
– 120 – M 67					120	67			45					130	1.7	24.6	0.5	292
– 125 – M 42					125	42	56		42.4					135	1.8	14.9		290
– 150 – M 67					150	67			45					160	2.0	25.2	0.7	293
– 155 – M 42					155	42	86		42.4					165	2.1	15.4		291
– 180 – M 67					180	67			45					190	2.3	25.7	0.9	294
BT40 – SLRB25 – 95 – M 42	1	25	45	10	95	42	26	—	49.7	50	—	26	45	105	1.5	16.4	0.3	295
– 125 – M 42					125		56							135	1.9	17.0	0.5	296
– 155 – M 42					155		86							165	2.2	17.5	0.7	297
– SLFB25 – 95 – M 42	1	25	45	10	95	42	26	—	49.7	50	—	26	45	105	1.5	16.4	0.3	298
– 125 – M 42					125		56							135	1.9	17.0	0.5	299
– 155 – M 42					155		86							165	2.2	17.5	0.7	300

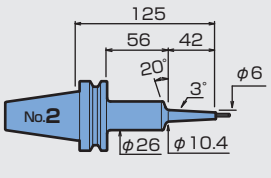
φ3 SLSA t=1.5

BT40−SLSA3−95−M42



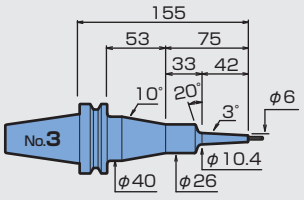
9.3

BT40−SLSA3−125−M42



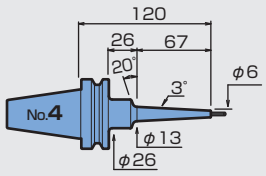
9.9

BT40−SLSA3−155−M42



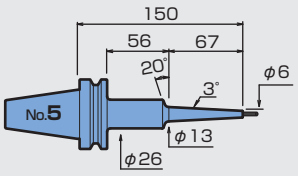
9.9

BT40−SLSA3−120−M67



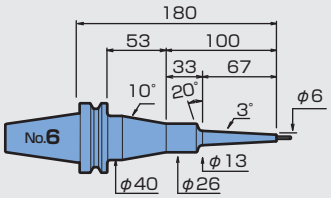
14.9

BT40−SLSA3−150−M67



15.8

BT40−SLSA3−180−M67



15.8

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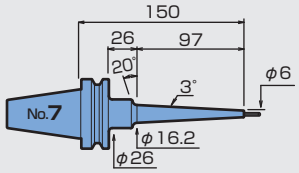
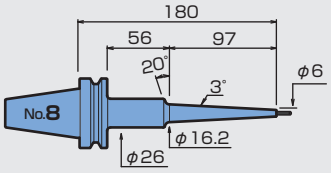


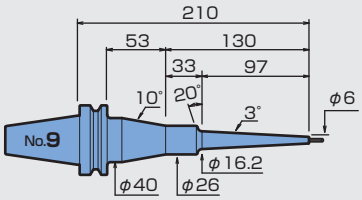
20.7

BT40−SLSA3−180−M97



22.2

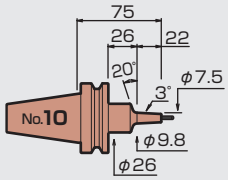
BT40−SLSA3−210−M97



22.1

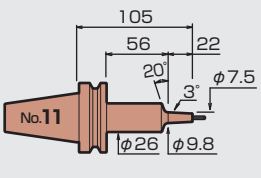
φ3 SLRA t=2.25

BT40−SLRA3−75−M22



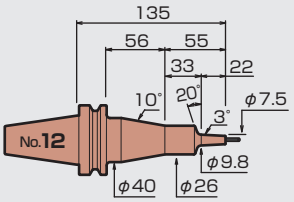
2.8

BT40−SLRA3−105−M22



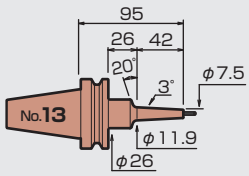
3.2

BT40−SLRA3−135−M22



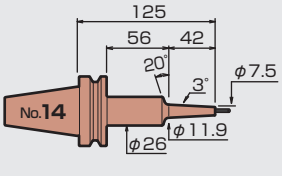
3.2

BT40−SLRA3−95−M42



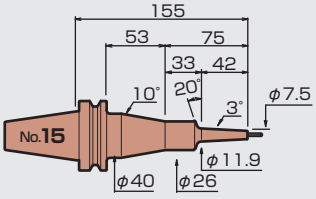
5.4

BT40−SLRA3−125−M42



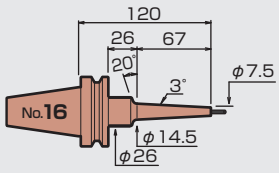
5.9

BT40−SLRA3−155−M42



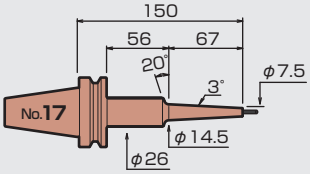
6.0

BT40−SLRA3−120−M67



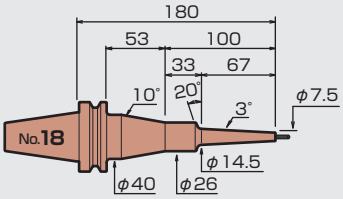
8.9

BT40−SLRA3−150−M67



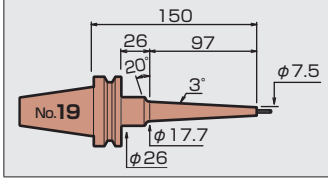
9.8

BT40−SLRA3−180−M67



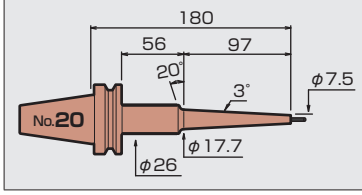
9.8

BT40−SLRA3−150−M97



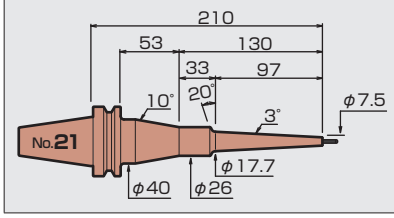
12.9

BT40−SLRA3−180−M97



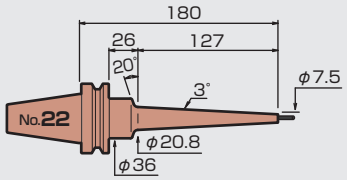
14.3

BT40−SLRA3−210−M97



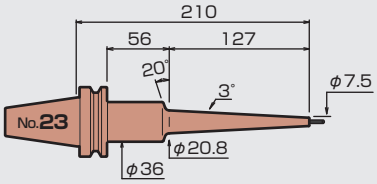
14.3

BT40−SLRA3−180−M127



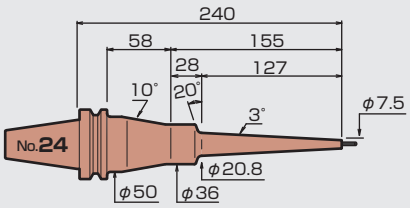
15.7

BT40−SLRA3−210−M127



16.2

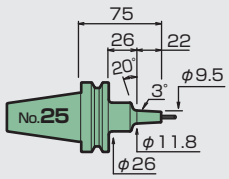
BT40−SLRA3−240−M127



16.3

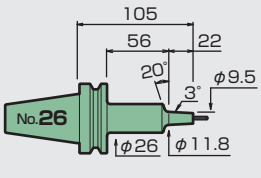
φ3 SLFB t=3.25

BT40−SLFB3−75−M22



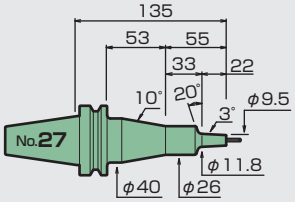
1.9

BT40−SLFB3−105−M22



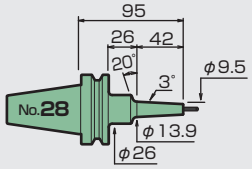
2.2

BT40−SLFB3−135−M22



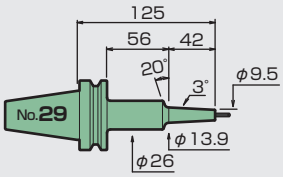
2.3

BT40−SLFB3−95−M42



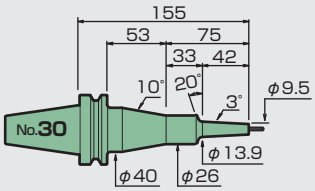
3.2

BT40−SLFB3−125−M42



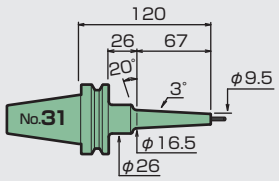
3.8

BT40−SLFB3−155−M42



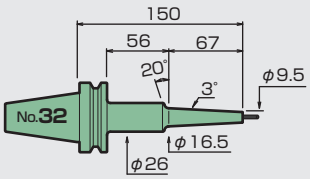
3.8

BT40−SLFB3−120−M67



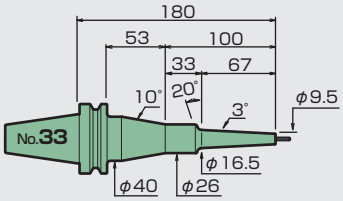
5.3

BT40−SLFB3−150−M67



6.3

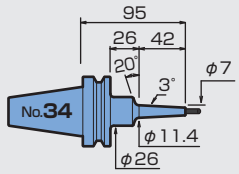
BT40−SLFB3−180−M67



6.3

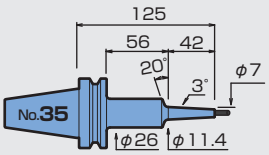
φ4 SLSA t=1.5

BT40−SLSA4−95−M42



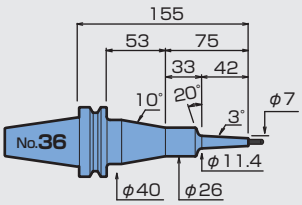
7.3

BT40−SLSA4−125−M42



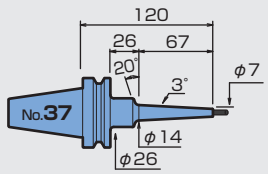
7.9

BT40−SLSA4−155−M42



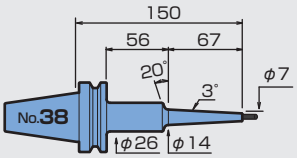
7.9

BT40−SLSA4−120−M67



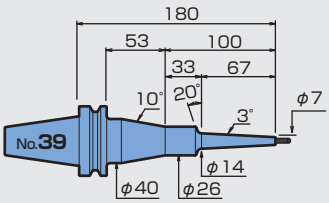
11.8

BT40−SLSA4−150−M67



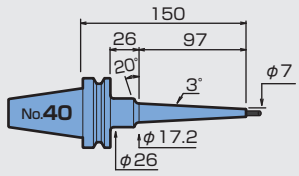
12.8

BT40−SLSA4−180−M67



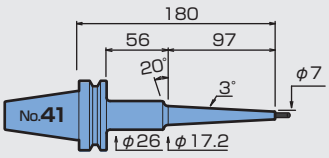
12.8

BT40−SLSA4−150−M97



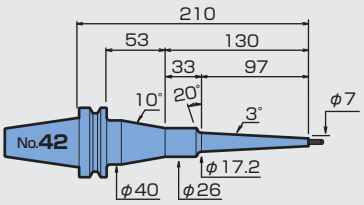
16.7

BT40−SLSA4−180−M97



18.2

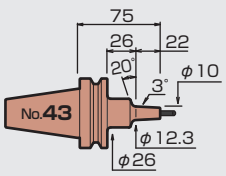
BT40−SLSA4−210−M97



18.2

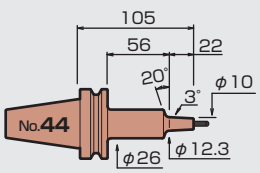
φ4 SLRA t=3

BT40−SLRA4−75−M22



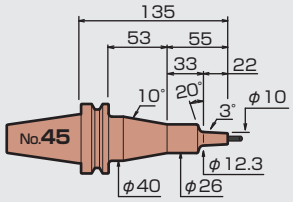
1.7

BT40−SLRA4−105−M22



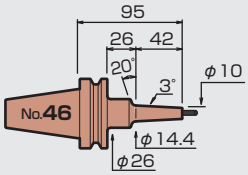
2.1

BT40−SLRA4−135−M22



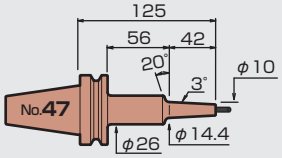
2.1

BT40−SLRA4−95−M42



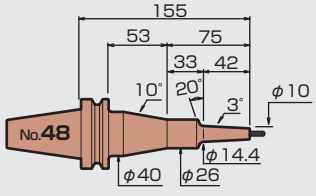
3.1

BT40−SLRA4−125−M42



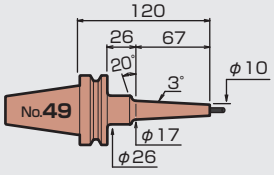
3.7

BT40−SLRA4−155−M42



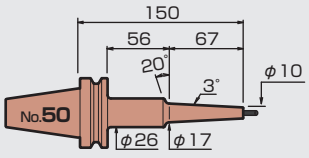
3.7

BT40−SLRA4−120−M67



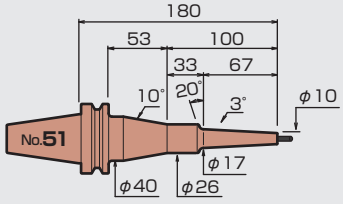
5.1

BT40−SLRA4−150−M67



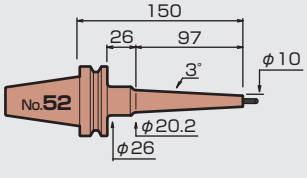
6.1

BT40−SLRA4−180−M67



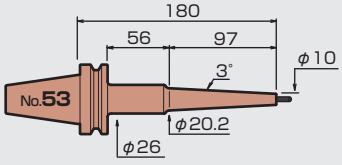
6.1

BT40−SLRA4−150−M97



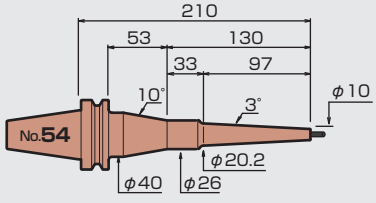
7.7

BT40−SLRA4−180−M97



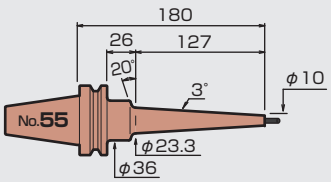
9.2

BT40−SLRA4−210−M97



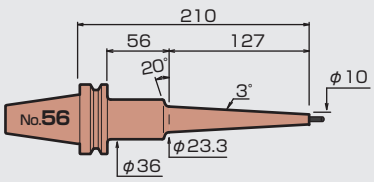
9.1

BT40−SLRA4−180−M127



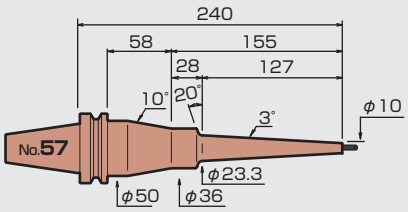
9.3

BT40−SLRA4−210−M127



9.9

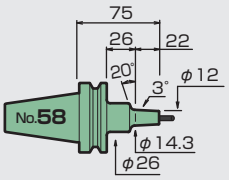
BT40−SLRA4−240−M127



9.9

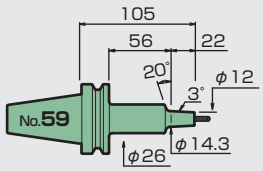
φ4 SLFB t=4

BT40−SLFB4−75−M22



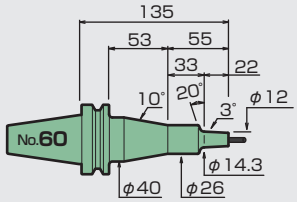
1.3

BT40−SLFB4−105−M22



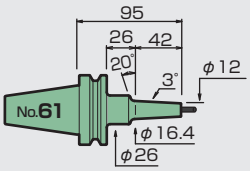
1.7

BT40−SLFB4−135−M22



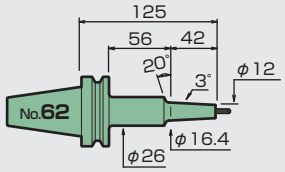
1.8

BT40−SLFB4−95−M42



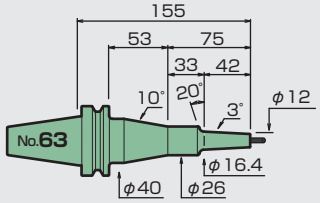
2.2

BT40−SLFB4−125−M42



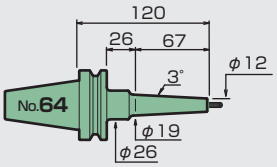
2.8

BT40−SLFB4−155−M42



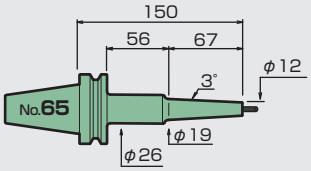
2.8

BT40−SLFB4−120−M67



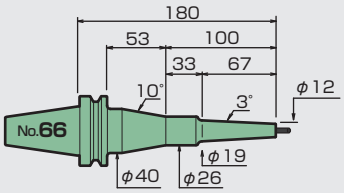
3.5

BT40−SLFB4−150−M67



4.5

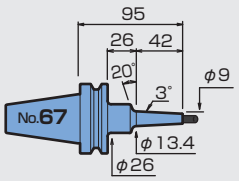
BT40−SLFB4−180−M67



4.5

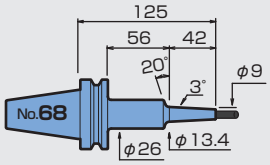
φ6 SLSA t=1.5

BT40−SLSA6−95−M42



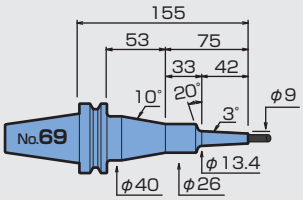
4.8

BT40−SLSA6−125−M42



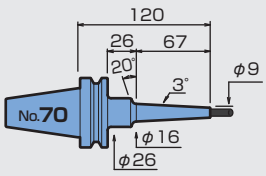
5.5

BT40−SLSA6−155−M42



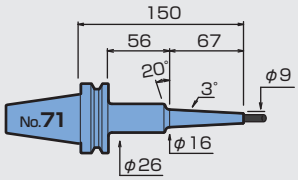
5.5

BT40−SLSA6−120−M67



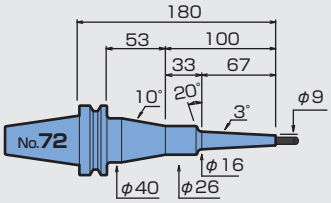
8.0

BT40−SLSA6−150−M67



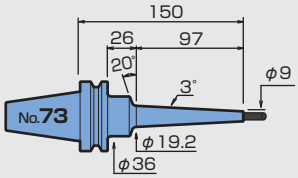
9.0

BT40−SLSA6−180−M67



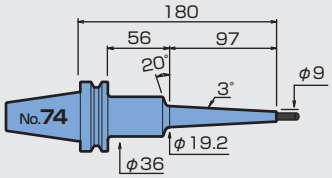
9.0

BT40−SLSA6−150−M97



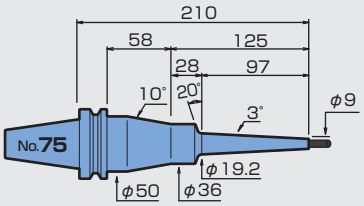
11.0

BT40−SLSA6−180−M97



11.4

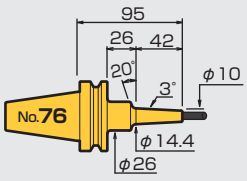
BT40−SLSA6−210−M97



11.5

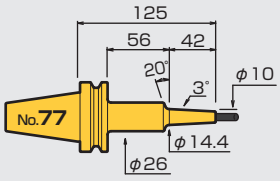
φ6 SLSB t=2

BT40−SLSB6−95−M42



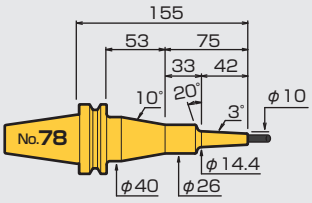
3.8

BT40−SLSB6−125−M42



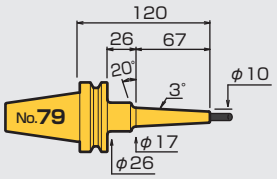
4.5

BT40−SLSB6−155−M42



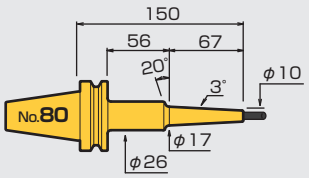
4.5

BT40−SLSB6−120−M67



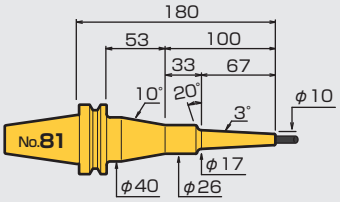
6.3

BT40−SLSB6−150−M67



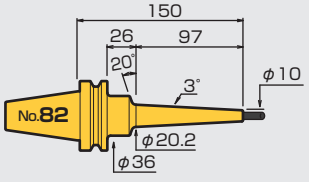
7.4

BT40−SLSB6−180−M67



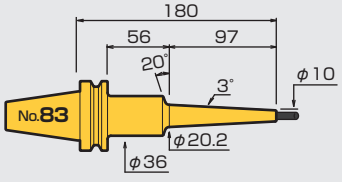
7.4

BT40−SLSB6−150−M97



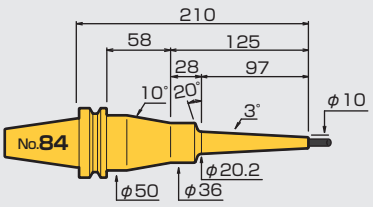
8.9

BT40−SLSB6−180−M97



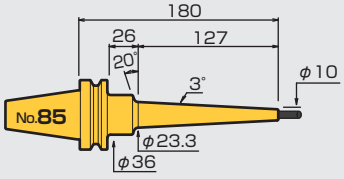
9.3

BT40−SLSB6−210−M97



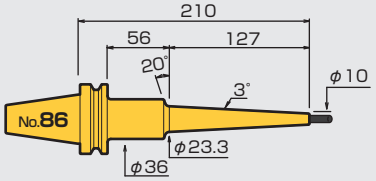
9.4

BT40−SLSB6−180−M127



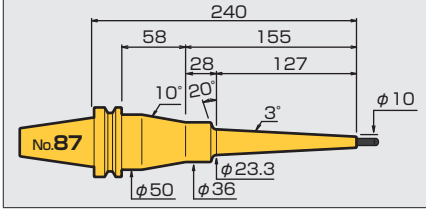
11.4

BT40−SLSB6−210−M127



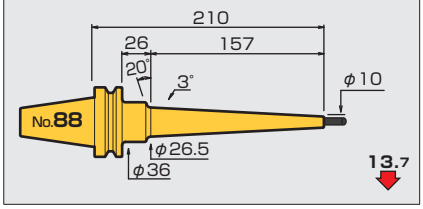
12.1

BT40−SLSB6−240−M127

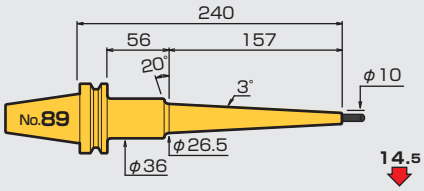


12.1

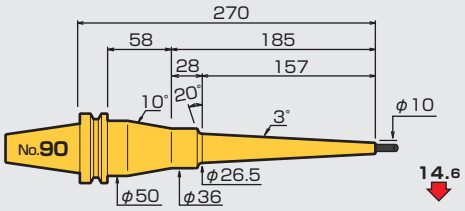
BT40−SLSB6−210−M157



BT40−SLSB6−240−M157

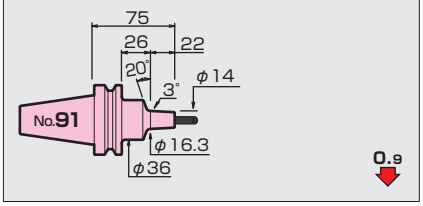


BT40−SLSB6−270−M157

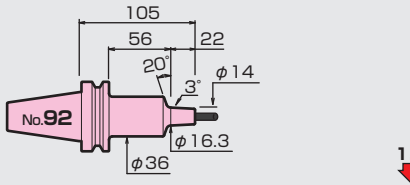


φ6 SLRB t=4

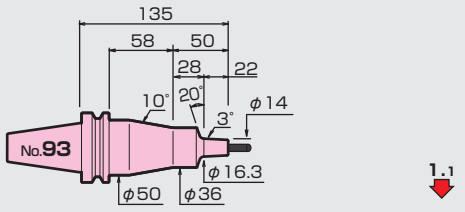
BT40−SLRB6−75−M22



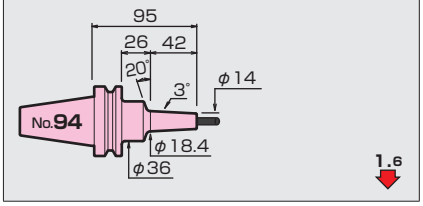
BT40−SLRB6−105−M22



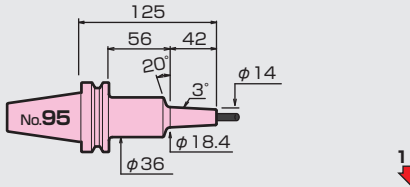
BT40−SLRB6−135−M22



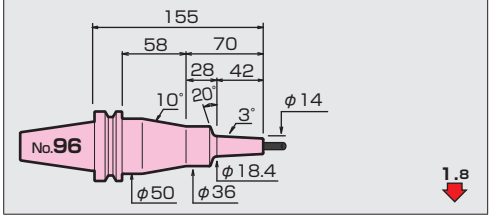
BT40−SLRB6−95−M42



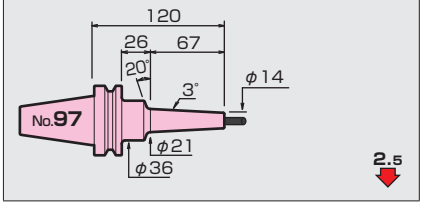
BT40−SLRB6−125−M42



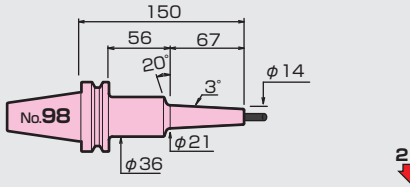
BT40−SLRB6−155−M42



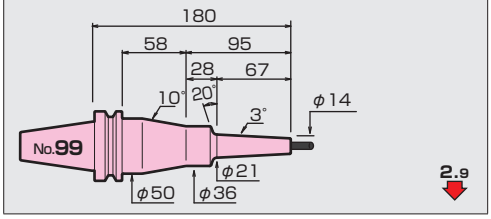
BT40−SLRB6−120−M67



BT40−SLRB6−150−M67

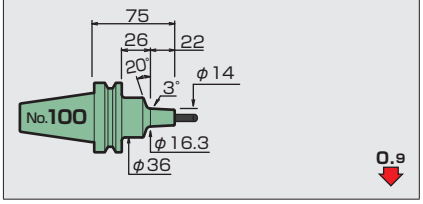


BT40−SLRB6−180−M67

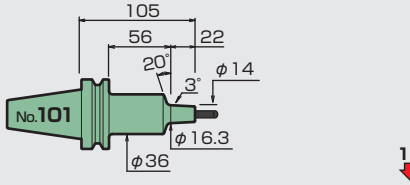


φ6 SLFB t=4

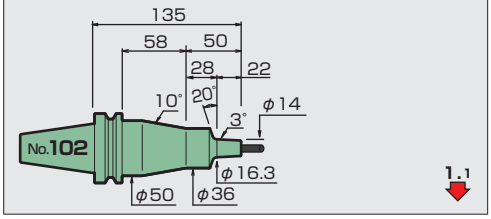
BT40−SLFB6−75−M22



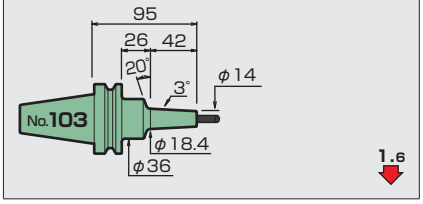
BT40−SLFB6−105−M22



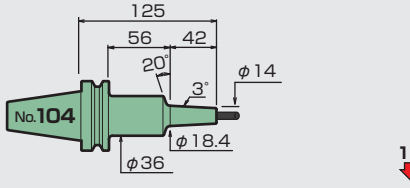
BT40−SLFB6−135−M22



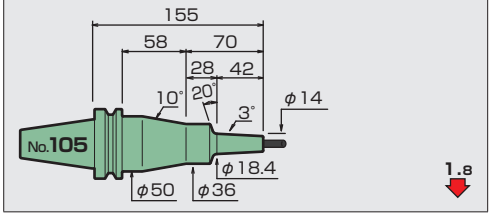
BT40−SLFB6−95−M42



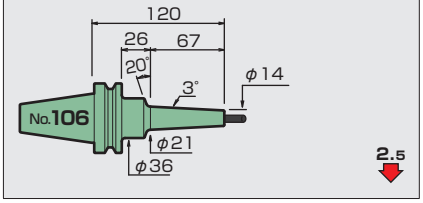
BT40−SLFB6−125−M42



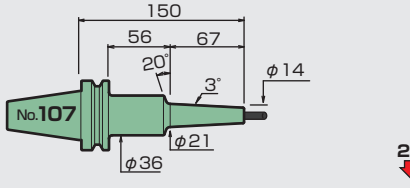
BT40−SLFB6−155−M42



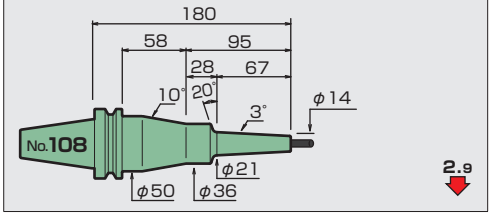
BT40−SLFB6−120−M67



BT40−SLFB6−150−M67

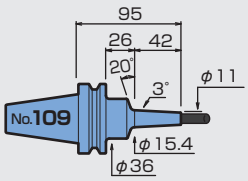


BT40−SLFB6−180−M67



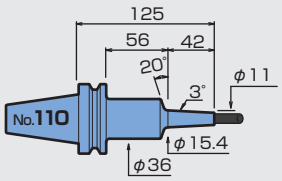
φ8 SLSA t=1.5

BT40−SLSA8−95−M42



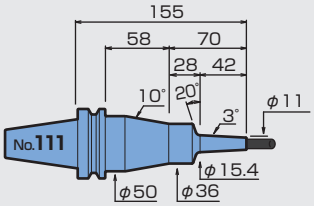
3.2

BT40−SLSA8−125−M42



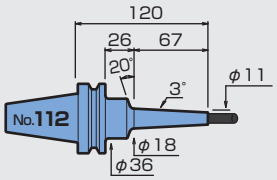
3.4

BT40−SLSA8−155−M42



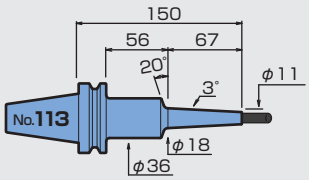
3.4

BT40−SLSA8−120−M67



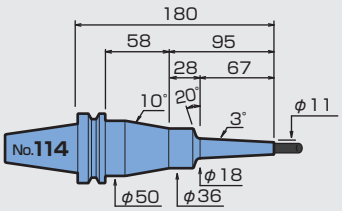
5.4

BT40−SLSA8−150−M67



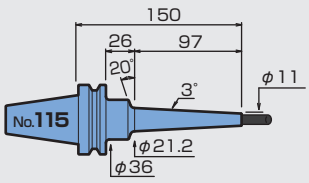
5.7

BT40−SLSA8−180−M67



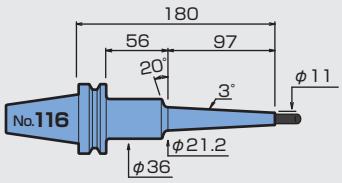
5.7

BT40−SLSA8−150−M97



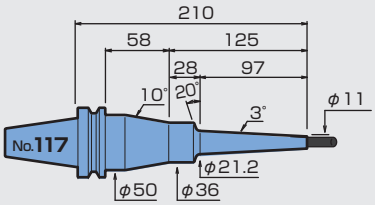
7.8

BT40−SLSA8−180−M97



8.3

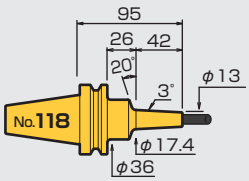
BT40−SLSA8−210−M97



8.4

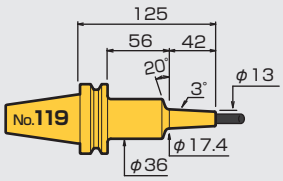
φ8 SLSB t=2.5

BT40−SLSB8−95−M42



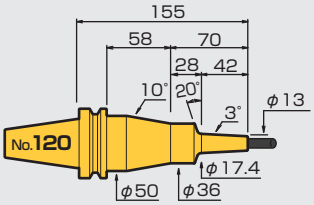
2.1

BT40−SLSB8−125−M42



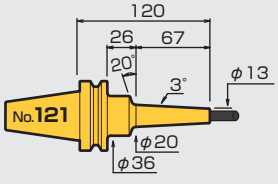
2.3

BT40−SLSB8−155−M42



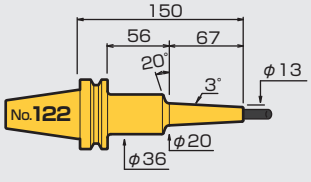
2.4

BT40−SLSB8−120−M67



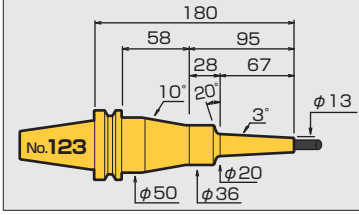
3.5

BT40−SLSB8−150−M67



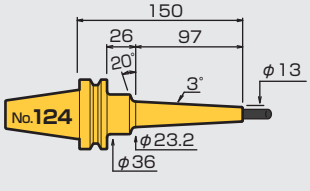
3.9

BT40−SLSB8−180−M67



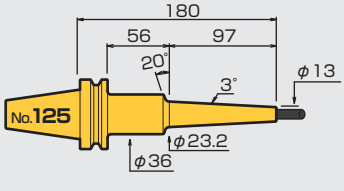
3.9

BT40−SLSB8−150−M97



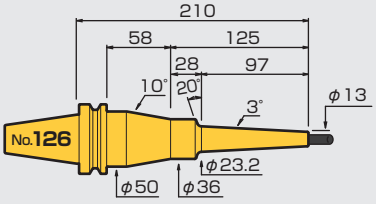
5.2

BT40−SLSB8−180−M97



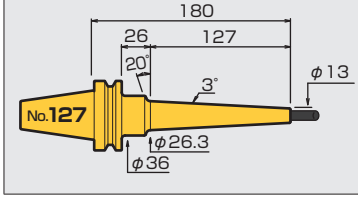
5.7

BT40−SLSB8−210−M97



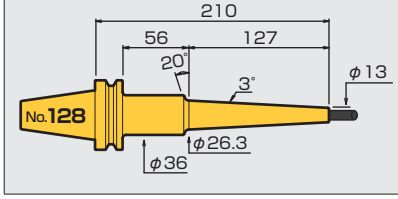
5.8

BT40−SLSB8−180−M127



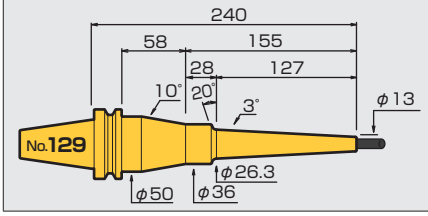
7.0

BT40−SLSB8−210−M127



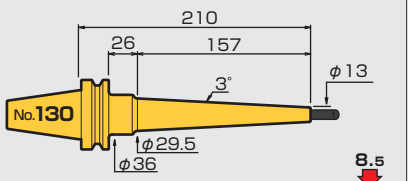
7.7

BT40−SLSB8−240−M127

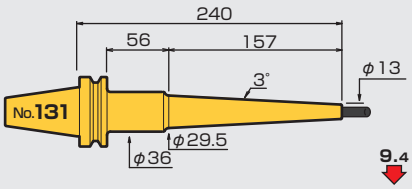


7.7

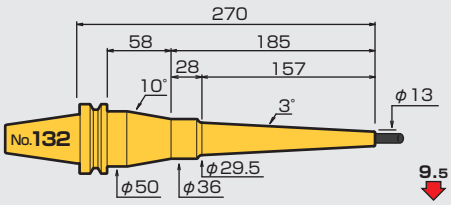
BT40−SLSB8−210−M157



BT40−SLSB8−240−M157

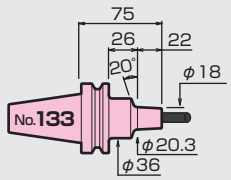


BT40−SLSB8−270−M157

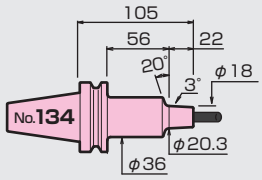


φ8 SLRB t=5

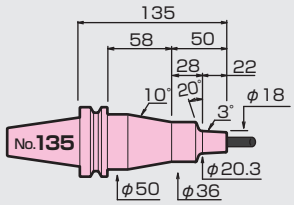
BT40−SLRB8−75−M22



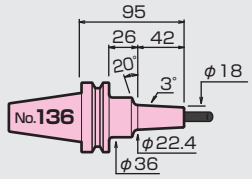
BT40−SLRB8−105−M22



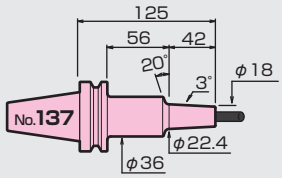
BT40−SLRB8−135−M22



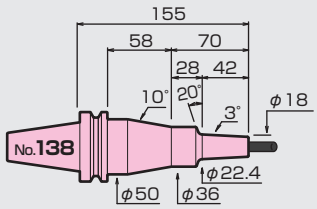
BT40−SLRB8−95−M42



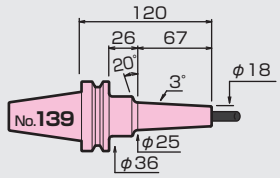
BT40−SLRB8−125−M42



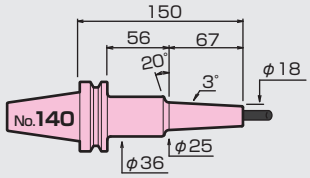
BT40−SLRB8−155−M42



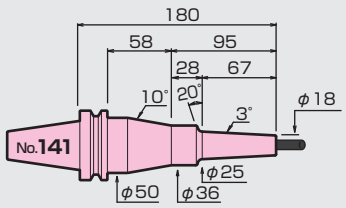
BT40−SLRB8−120−M67



BT40−SLRB8−150−M67

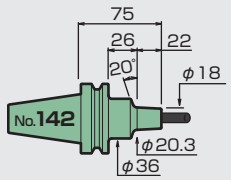


BT40−SLRB8−180−M67

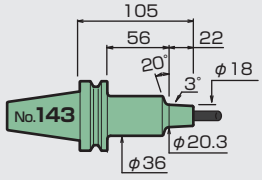


φ8 SLFB t=5

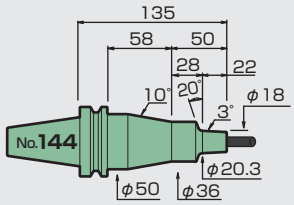
BT40−SLFB8−75−M22



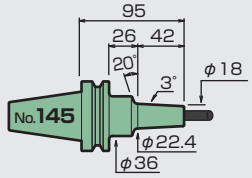
BT40−SLFB8−105−M22



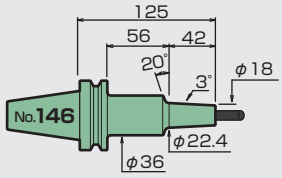
BT40−SLFB8−135−M22



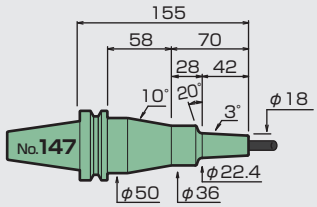
BT40−SLFB8−95−M42



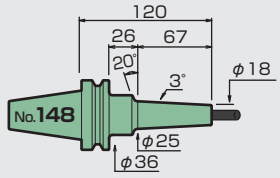
BT40−SLFB8−125−M42



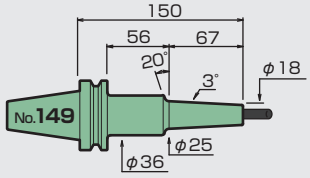
BT40−SLFB8−155−M42



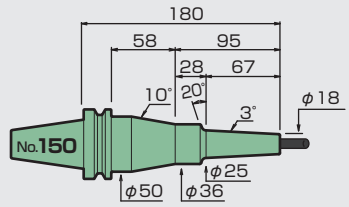
BT40−SLFB8−120−M67



BT40−SLFB8−150−M67

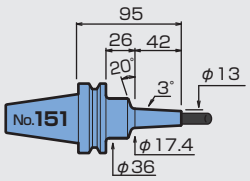


BT40−SLFB8−180−M67



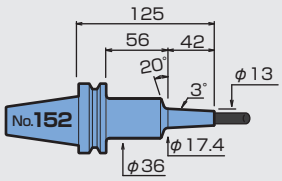
φ10 SLSA t=1.5

BT40−SLSA10−95−M42



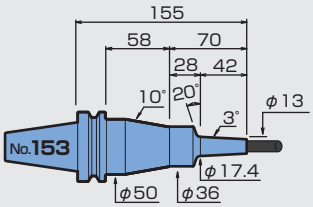
2.3

BT40−SLSA10−125−M42



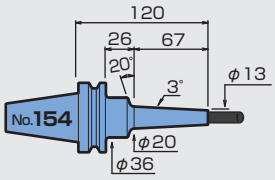
2.5

BT40−SLSA10−155−M42



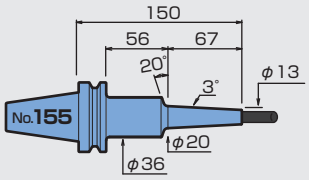
2.5

BT40−SLSA10−120−M67



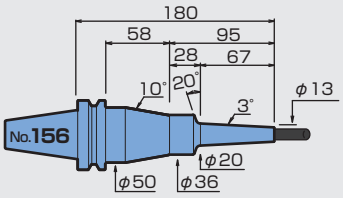
4.0

BT40−SLSA10−150−M67



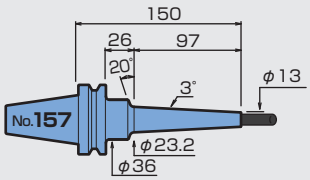
4.3

BT40−SLSA10−180−M67



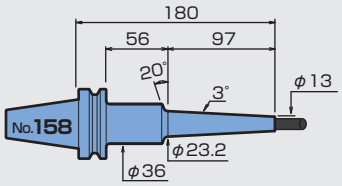
4.4

BT40−SLSA10−150−M97



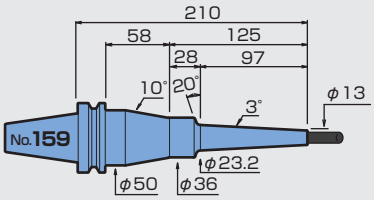
5.9

BT40−SLSA10−180−M97



6.4

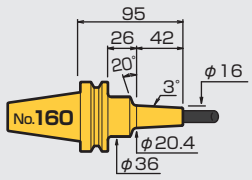
BT40−SLSA10−210−M97



6.5

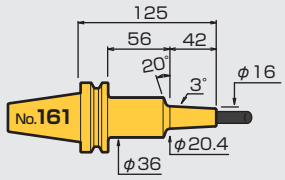
φ10 SLSB t=3

BT40−SLSB10−95−M42



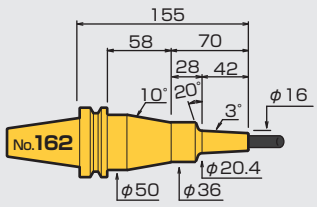
1.4

BT40−SLSB10−125−M42



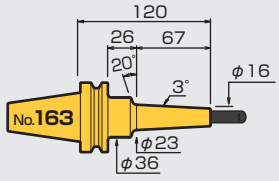
1.6

BT40−SLSB10−155−M42



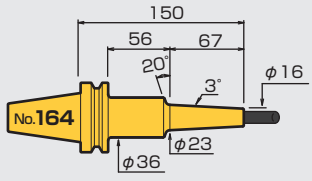
1.7

BT40−SLSB10−120−M67



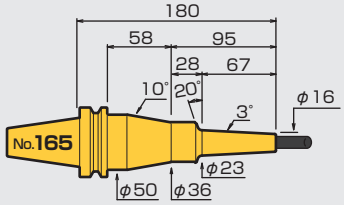
2.4

BT40−SLSB10−150−M67



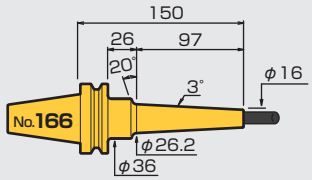
2.7

BT40−SLSB10−180−M67



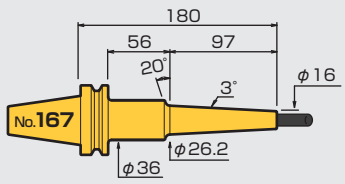
2.8

BT40−SLSB10−150−M97



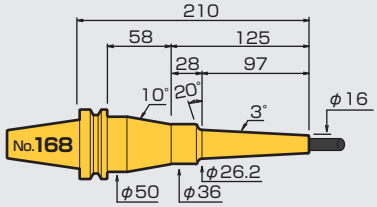
3.6

BT40−SLSB10−180−M97



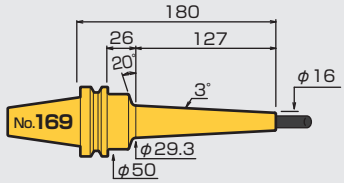
4.1

BT40−SLSB10−210−M97



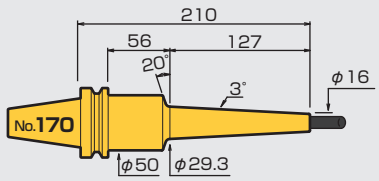
4.1

BT40−SLSB10−180−M127



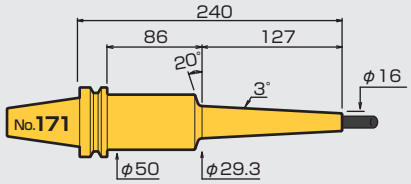
4.5

BT40−SLSB10−210−M127



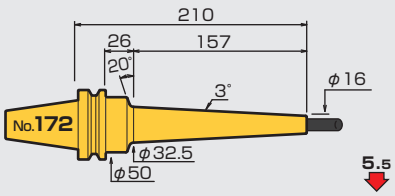
4.7

BT40−SLSB10−240−M127



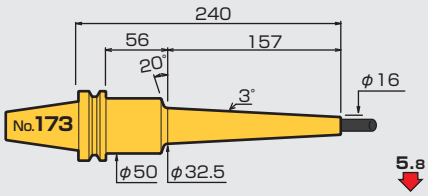
5.0

BT40−SLSB10−210−M157



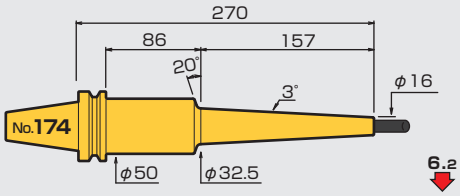
5.5

BT40−SLSB10−240−M157



5.8

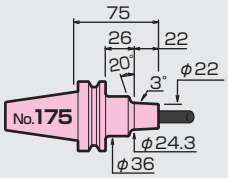
BT40−SLSB10−270−M157



6.2

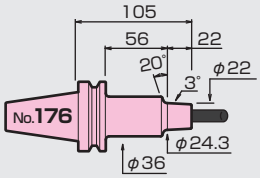
φ10 SLRB t=6

BT40−SLRB10−75−M22



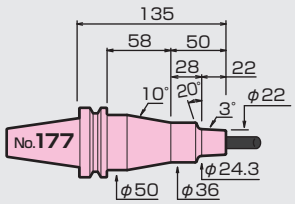
0.5

BT40−SLRB10−105−M22



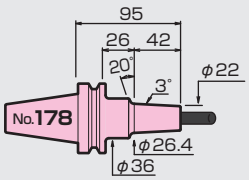
0.7

BT40−SLRB10−135−M22



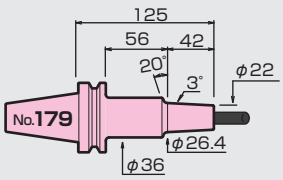
0.7

BT40−SLRB10−95−M42



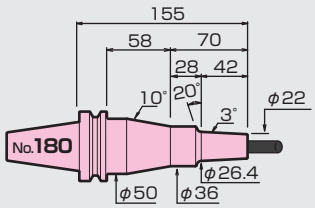
0.8

BT40−SLRB10−125−M42



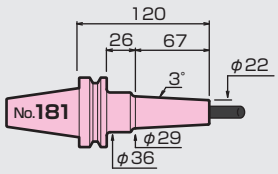
1.0

BT40−SLRB10−155−M42



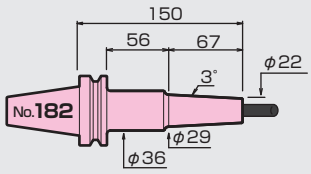
1.1

BT40−SLRB10−120−M67



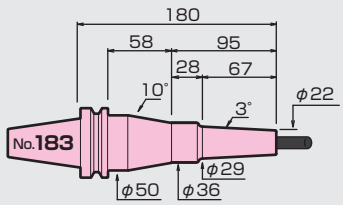
1.2

BT40−SLRB10−150−M67



1.5

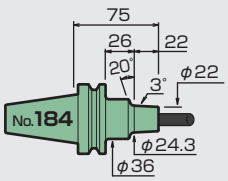
BT40−SLRB10−180−M67



1.6

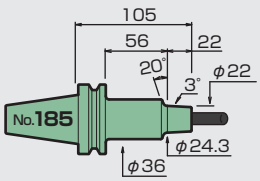
φ10 SLFB t=6

BT40−SLFB10−75−M22



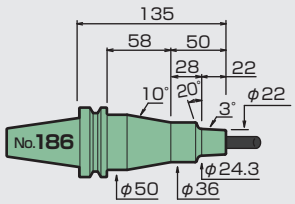
0.5

BT40−SLFB10−105−M22



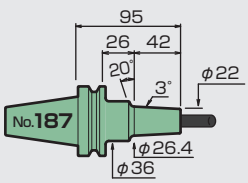
0.7

BT40−SLFB10−135−M22



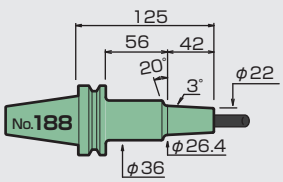
0.7

BT40−SLFB10−95−M42



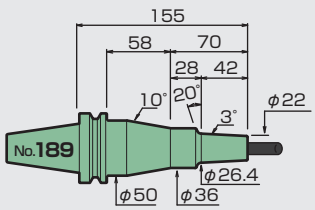
0.8

BT40−SLFB10−125−M42



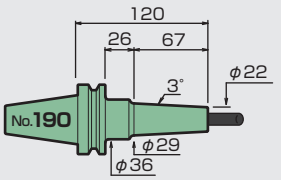
1.0

BT40−SLFB10−155−M42



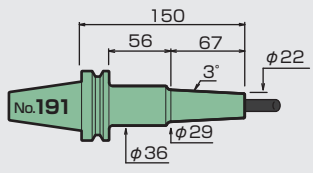
1.1

BT40−SLFB10−120−M67



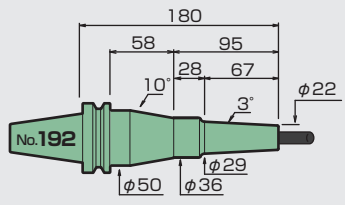
1.2

BT40−SLFB10−150−M67



1.5

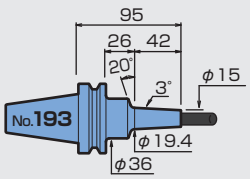
BT40−SLFB10−180−M67



1.6

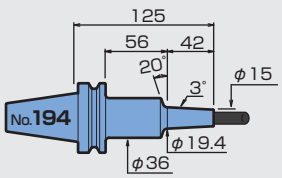
φ12 SLSA t=1.5

BT40−SLSA12−95−M42



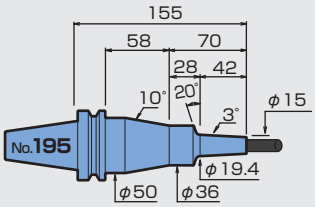
1.8

BT40−SLSA12−125−M42



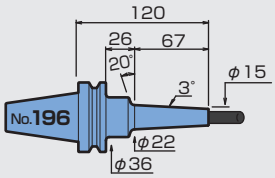
2.1

BT40−SLSA12−155−M42



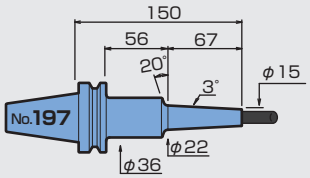
2.1

BT40−SLSA12−120−M67



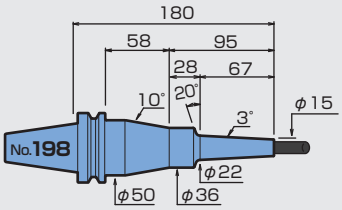
3.2

BT40−SLSA12−150−M67



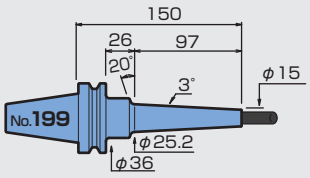
3.6

BT40−SLSA12−180−M67



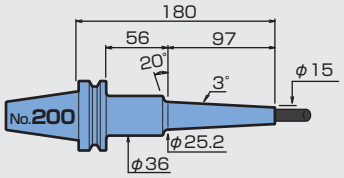
3.6

BT40−SLSA12−150−M97



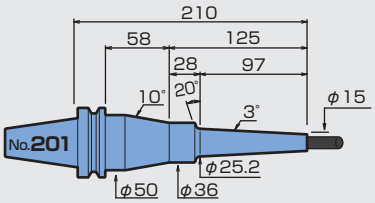
4.8

BT40−SLSA12−180−M97



5.3

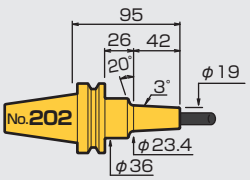
BT40−SLSA12−210−M97



5.4

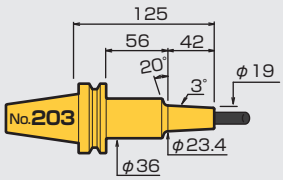
φ12 SLSB t=3.5

BT40−SLSB12−95−M42



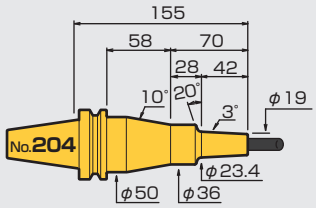
1.1

BT40−SLSB12−125−M42



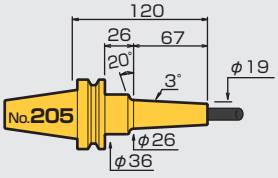
1.3

BT40−SLSB12−155−M42



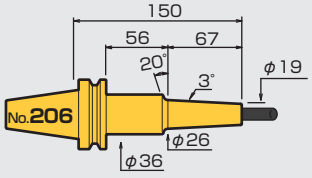
1.4

BT40−SLSB12−120−M67



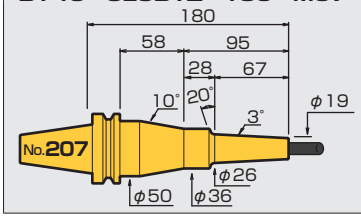
1.8

BT40−SLSB12−150−M67



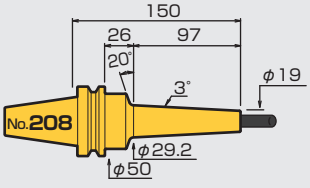
2.1

BT40−SLSB12−180−M67



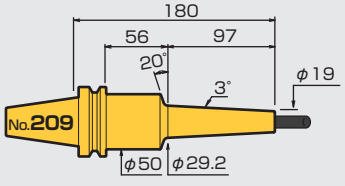
2.2

BT40−SLSB12−150−M97



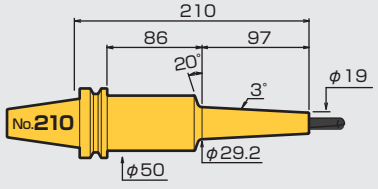
2.4

BT40−SLSB12−180−M97



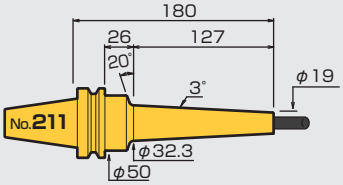
2.6

BT40−SLSB12−210−M97



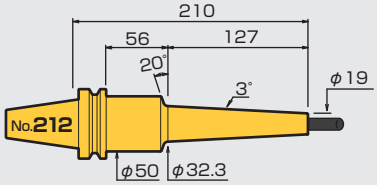
2.9

BT40−SLSB12−180−M127



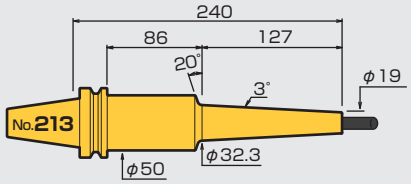
3.2

BT40−SLSB12−210−M127



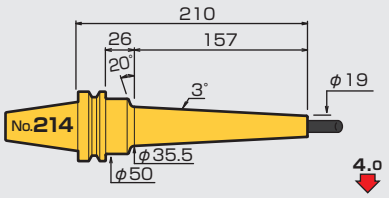
3.5

BT40−SLSB12−240−M127

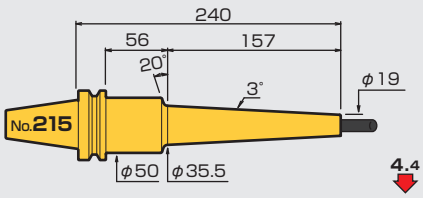


3.8

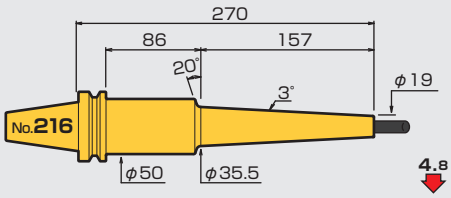
BT40-SLSB12-210-M157



BT40-SLSB12-240-M157

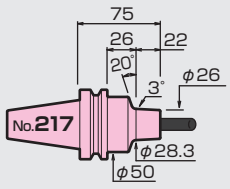


BT40-SLSB12-270-M157

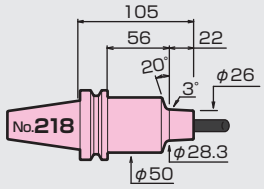


φ12 SLRB t=7

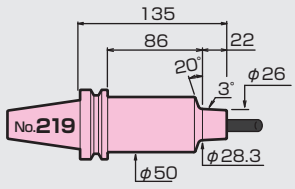
BT40-SLRB12-75-M22



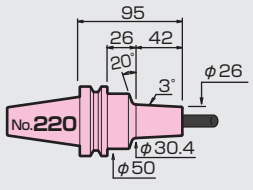
BT40-SLRB12-105-M22



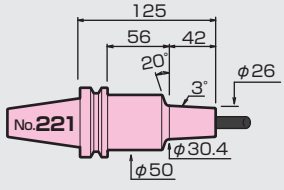
BT40-SLRB12-135-M22



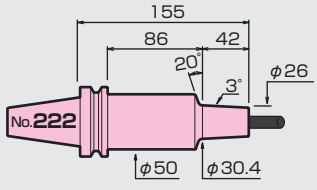
BT40-SLRB12-95-M42



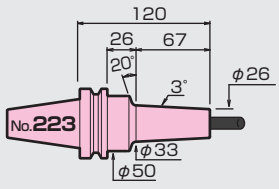
BT40-SLRB12-125-M42



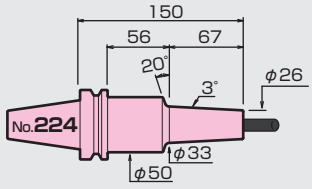
BT40-SLRB12-155-M42



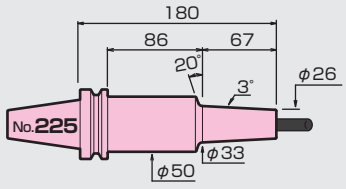
BT40-SLRB12-120-M67



BT40-SLRB12-150-M67

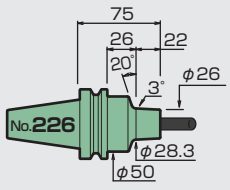


BT40-SLRB12-180-M67

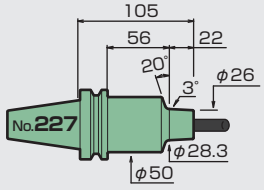


φ12 SLFB t=7

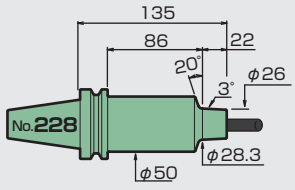
BT40-SLFB12-75-M22



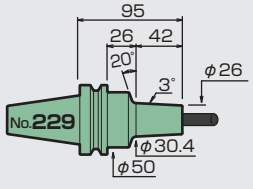
BT40-SLFB12-105-M22



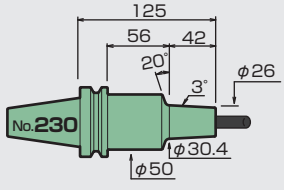
BT40-SLFB12-135-M22



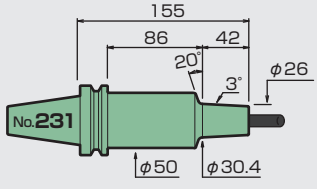
BT40-SLFB12-95-M42



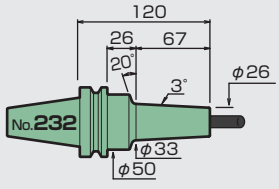
BT40-SLFB12-125-M42



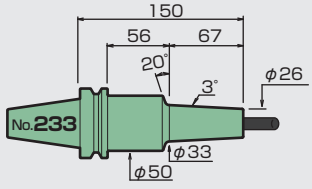
BT40-SLFB12-155-M42



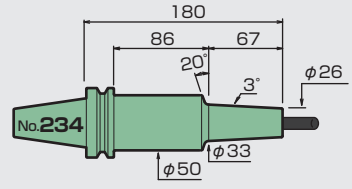
BT40-SLFB12-120-M67



BT40-SLFB12-150-M67

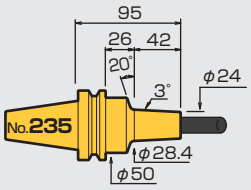


BT40-SLFB12-180-M67



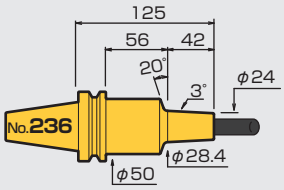
φ16 SLSB t=4

BT40−SLSB16−95−M42



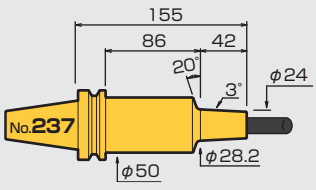
0.7

BT40−SLSB16−125−M42



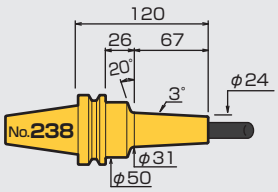
0.8

BT40−SLSB16−155−M42



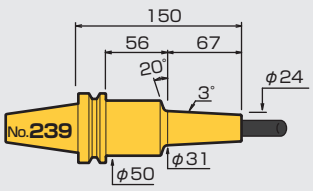
0.9

BT40−SLSB16−120−M67



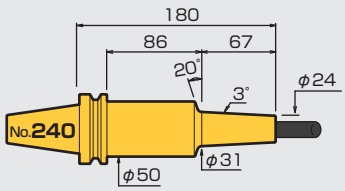
1.1

BT40−SLSB16−150−M67



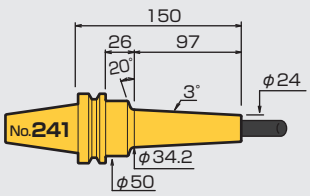
1.3

BT40−SLSB16−180−M67



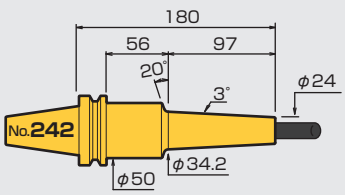
1.5

BT40−SLSB16−150−M97



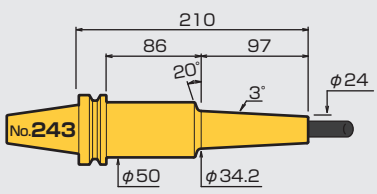
1.6

BT40−SLSB16−180−M97



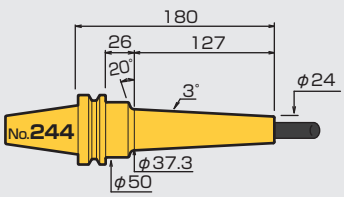
1.9

BT40−SLSB16−210−M97



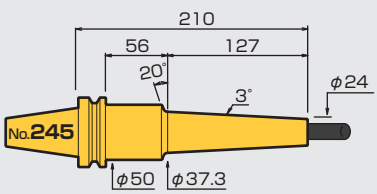
2.1

BT40−SLSB16−180−M127



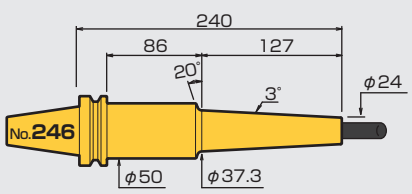
2.2

BT40−SLSB16−210−M127



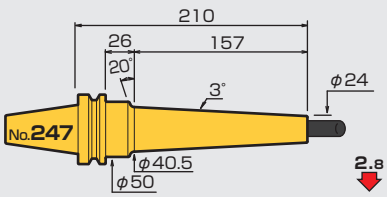
2.5

BT40−SLSB16−240−M127



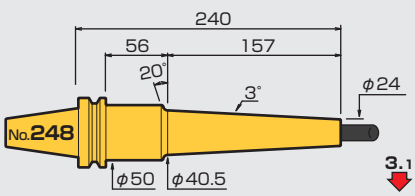
2.8

BT40−SLSB16−210−M157



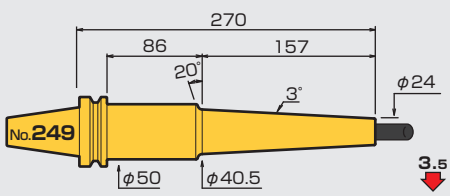
2.8

BT40−SLSB16−240−M157



3.1

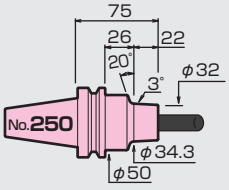
BT40−SLSB16−270−M157



3.5

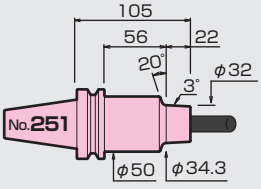
φ16 SLRB t=8

BT40−SLRB16−75−M22



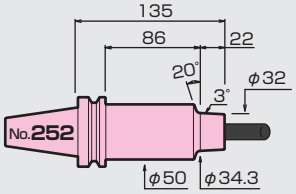
0.3

BT40−SLRB16−105−M22



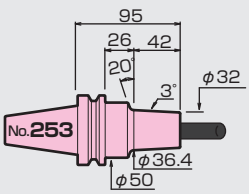
0.4

BT40−SLRB16−135−M22



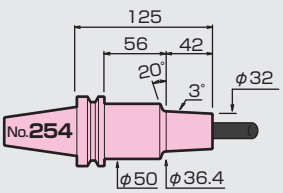
0.5

BT40−SLRB16−95−M42



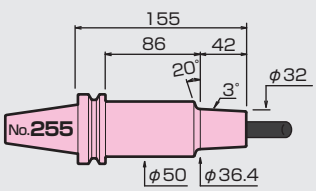
0.4

BT40−SLRB16−125−M42



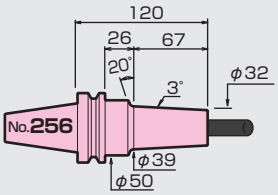
0.5

BT40−SLRB16−155−M42



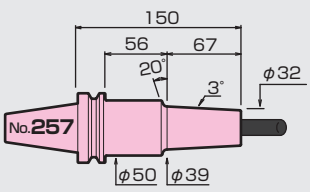
0.7

BT40−SLRB16−120−M67



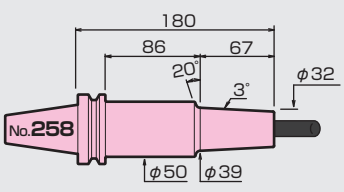
0.6

BT40−SLRB16−150−M67



0.8

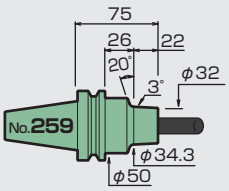
BT40−SLRB16−180−M67



1.0

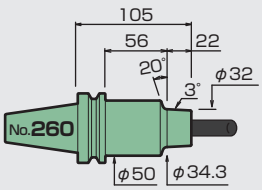
φ16 SLFB t=8

BT40−SLFB16−75−M22



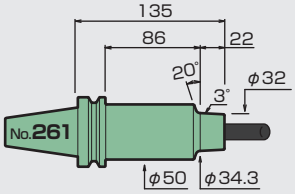
0.3

BT40−SLFB16−105−M22



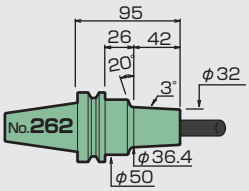
0.4

BT40−SLFB16−135−M22



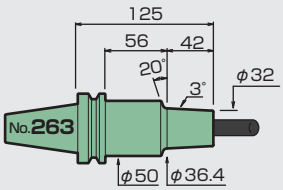
0.5

BT40−SLFB16−95−M42



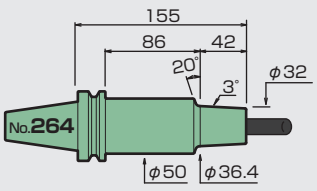
0.4

BT40−SLFB16−125−M42



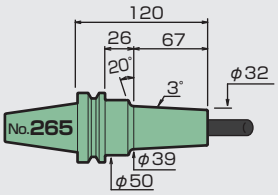
0.5

BT40−SLFB16−155−M42



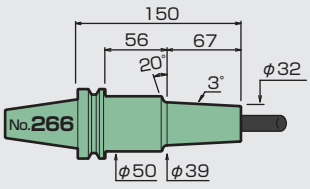
0.7

BT40−SLFB16−120−M67



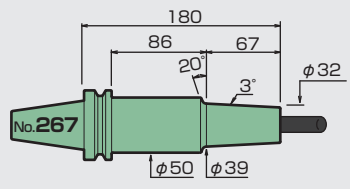
0.6

BT40−SLFB16−150−M67



0.8

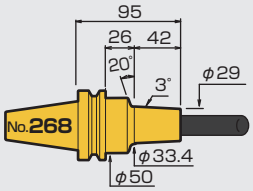
BT40−SLFB16−180−M67



1.0

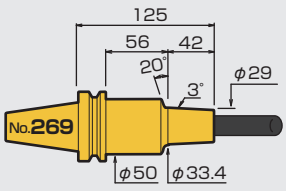
φ20 SLSB t=4.5

BT40−SLSB20−95−M42



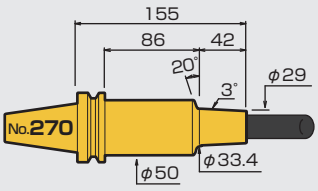
0.5

BT40−SLSB20−125−M42



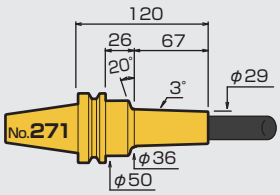
0.6

BT40−SLSB20−155−M42



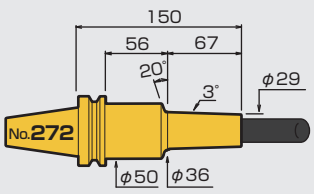
0.8

BT40−SLSB20−120−M67



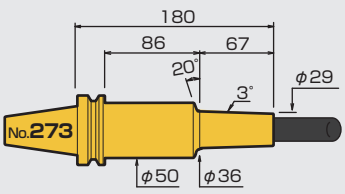
0.8

BT40−SLSB20−150−M67



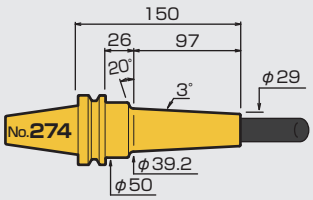
1.0

BT40−SLSB20−180−M67



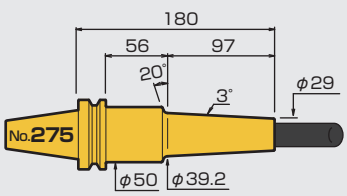
1.2

BT40−SLSB20−150−M97



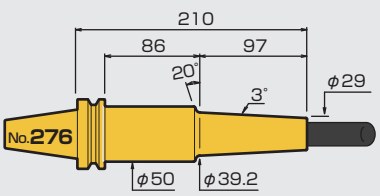
1.2

BT40−SLSB20−180−M97



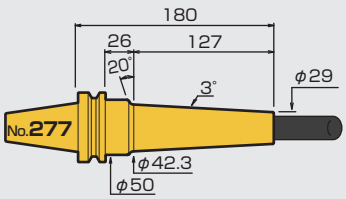
1.4

BT40−SLSB20−210−M97



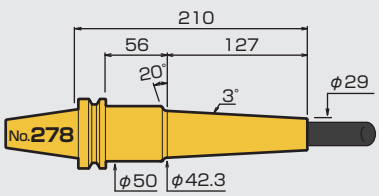
1.7

BT40−SLSB20−180−M127



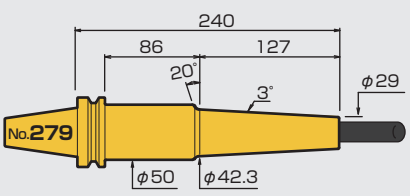
1.6

BT40−SLSB20−210−M127



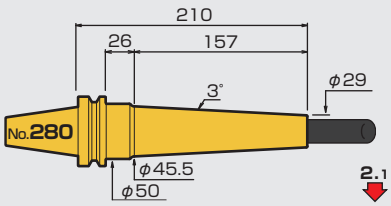
1.9

BT40−SLSB20−240−M127



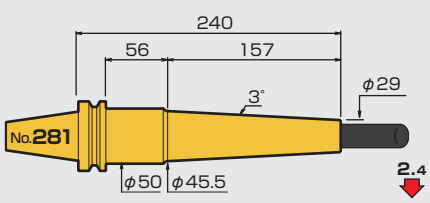
2.3

BT40−SLSB20−210−M157



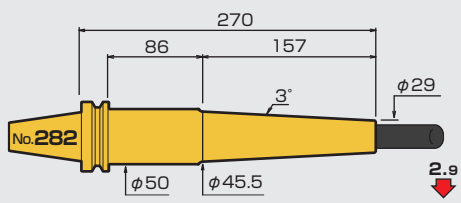
2.1

BT40−SLSB20−240−M157



2.4

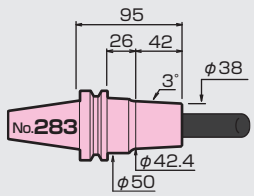
BT40−SLSB20−270−M157



2.9

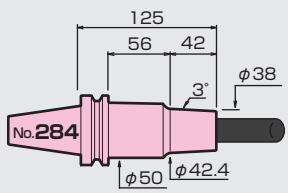
φ20 SLRB t=9

BT40−SLRB20−95−M42



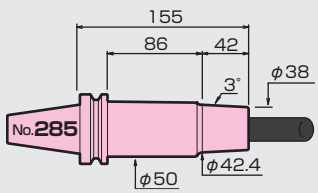
0.4

BT40−SLRB20−125−M42



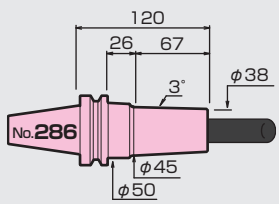
0.5

BT40−SLRB20−155−M42



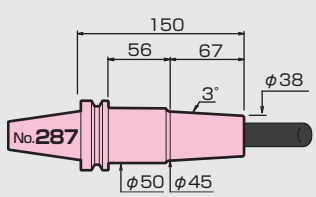
0.7

BT40−SLRB20−120−M67



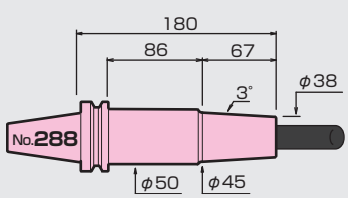
0.5

BT40−SLRB20−150−M67



0.7

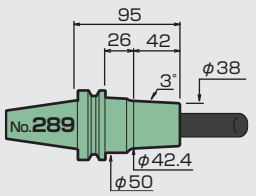
BT40−SLRB20−180−M67



0.9

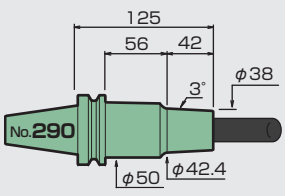
φ20 SLFB t=9

BT40−SLFB20−95−M42



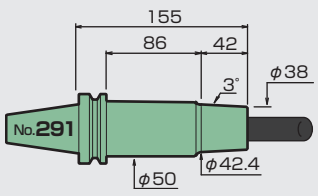
0.4

BT40−SLFB20−125−M42



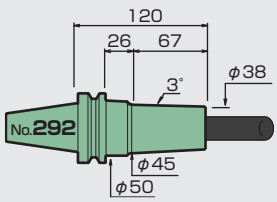
0.5

BT40−SLFB20−155−M42



0.7

BT40−SLFB20−120−M67



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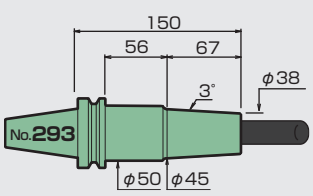
BT40−SLFB20−150−M67



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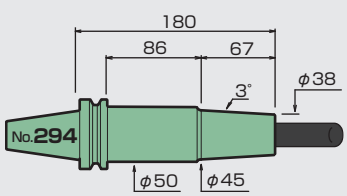
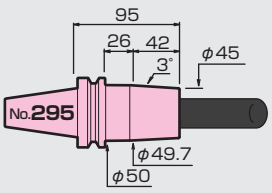


0.9

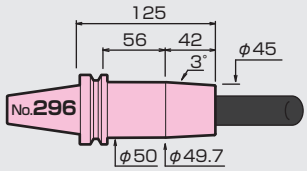
φ25 SLRB t=10

BT40−SLRB25−95−M42



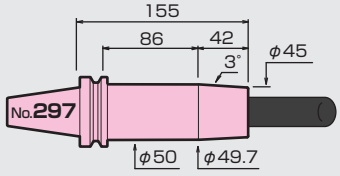
0.3

BT40−SLRB25−125−M42



0.5

BT40−SLRB25−155−M42



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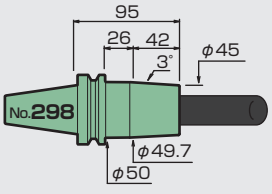
φ25 SLFB t=10

BT40−SLFB25−95−M42



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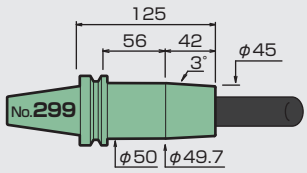
BT40−SLFB25−125−M42



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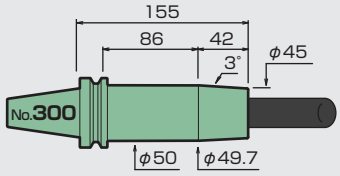
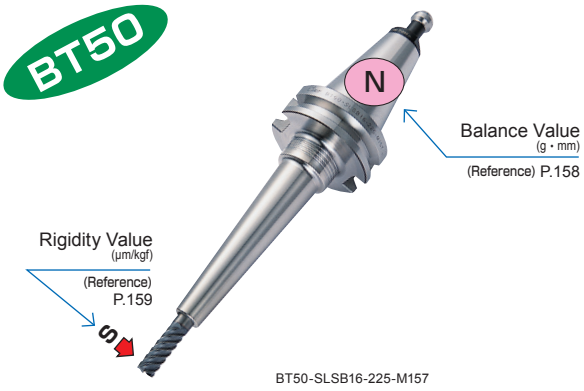
BT40−SLFB25−155−M42



0.7

BT50 Code Table



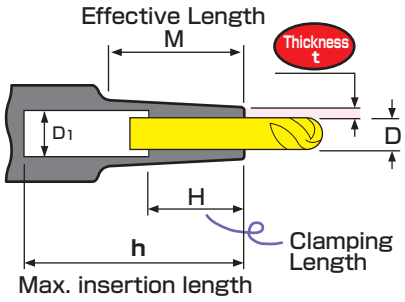


Fig.1

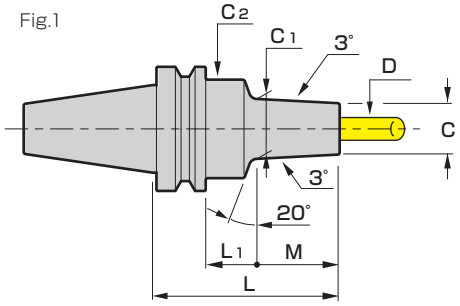
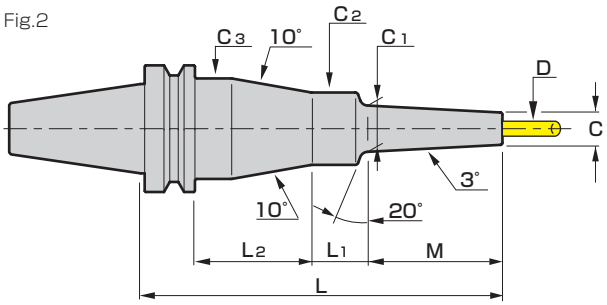


Fig.2



CODE	Fig.	φD	φC	Thickness t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	φ D_1	H	h	Kg	N	S	Scale model
BT50−SLSA 3−110−M 42	1	3	6		110	42	30	—	10.4	26	—	4	9	165	3.6	4.4	9.4	1
−135−M 67					135	67			13					190	3.7	5.1	15.0	4
−140−M 42					140	42	60		10.4					195	3.8	4.4	10.0	2
−165−M 67					165	67			13					220		5.2	16.0	5
−M 97				1.5		97	30		16.2						3.7	6.0	20.8	7
−170−M 42	2				170	42	33	57	10.4		40			225	4.1	4.6	9.9	3
−195−M 67					195	67			13					250		5.4	15.8	6
−M 97	1					97	60	—	16.2		—				3.8	6.1	22.3	8
−225−M 97	2				225		33	57			40			280	4.1	6.2	22.1	9
−SLRA 3− 90−M 22	1	3	7.5		90	22	30	—	9.8	26	—	5	9	145	3.6	4.6	2.8	10
−110−M 42					110	42			11.9					165	3.7	4.9	5.4	13
−120−M 22					120	22	60		9.8					175		4.7	3.2	11
−135−M 67					135	67	30		14.5					190		5.4	9.0	16
−140−M 42					140	42	60		11.9					195	3.8	5.0	6.0	14
−150−M 22	2				150	22	33	57	9.8		40			205	4.1	4.9	3.2	12
−165−M 67	1				165	67	60	—	14.5		—			220	3.8	5.5	9.9	17
−M 97				2.25		97	30		17.7						3.7	6.1	13.0	19
−170−M 42	2				170	42	33	57	11.9		40			225	4.1	5.1	6.0	15
−195−M 67					195	67			14.5					250		5.7	9.8	18
−M 97	1					97	60	—	17.7		—				3.8	6.2	14.5	20
−M127						127	30		20.8	36						7.7	15.7	22
−225−M 97	2				225	97	33	57	17.7	26	40			280	4.1	6.3	14.3	21
−M127	1					127	60	—	20.8	36	—					7.7	16.3	23
−255−M127	2				255		28	62			50			310	4.6	8.0	16.2	24
− SLFB 3 − 90 − M 22	1	3	9.5		90	22	30	—	11.8	26	—	5	9	145	3.6	4.4	1.9	25
− 110 − M 42					110	42			13.9					165	3.7	4.7	3.3	28
− 120 − M 22					120	22	60		11.8					175	3.8	4.5	2.3	26
− 135 − M 67					135	67	30		16.5					190	3.7	5.4	5.4	31
− 140 − M 42				3.25	140	42	60		13.9					195	3.8	4.8	3.9	29
− 150 − M 22	2				150	22	33	57	11.8		40			205	4.1	4.6	2.3	27
− 165 − M 67	1				165	67	60	—	16.5		—			220	3.8	5.5	6.4	32
− 170 − M 42	2				170	42	33	57	13.9		40			225	4.1	4.9	3.8	30
− 195 − M 67					195	67			16.5					250		5.7	6.3	33

CODE	Fig.	φD	φC	Thickness t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Scale model
BT50-SLSA 4-110-M 42	1	4	7		110	42	30	—	11.4	26	—	5	12	165	3.7	5.1	7.3	34
-135-M 67					135	67			14					190		5.2	11.9	37
-140-M 42					140	42	60		11.4					195	3.8		8.0	35
-165-M 67					165	67			14					220			12.9	38
-M 97				1.5		97	30		17.2						3.7	6.1	16.8	40
-170-M 42	2				170	42	33	57	11.4		40			225	4.1	5.4	7.9	36
-195-M 67					195	67			14					250			12.8	39
-M 97	1					97	60	—	17.2		—				3.8	6.2	18.4	41
-225-M 97	2				225		33	57			40			280	4.1	6.3	18.1	42
-SLRA 4- 90-M 22	1	4	10		90	22	30	—	12.3	26	—	6	12	145	3.6	4.7	1.7	43
-110-M 42					110	42			14.4					165	3.7	5.1	3.1	46
-120-M 22					120	22	60		12.3					175	3.8	4.8	2.1	44
-135-M 67					135	67	30		17					190	3.7	5.9	5.2	49
-140-M 42					140	42	60		14.4					195	3.8	5.2	3.8	47
-150-M 22	2				150	22	33	57	12.3		40			205	4.1	5.0	2.1	45
-165-M 67	1				165	67	60	—	17		—			220	3.8	5.9	6.2	50
-M 97				3		97	30		20.2							6.8	7.8	52
-170-M 42	2				170	42	33	57	14.4		40			225	4.1	5.4	3.7	48
-195-M 67					195	67			17					250		6.1	6.1	51
-M 97	1					97	60	—	20.2		—				3.9	6.9	9.4	53
-M127						127	30		23.3	36					3.8	9.2	9.3	55
-225-M 97	2				225	97	33	57	20.2	26	40			280	4.2	7.1	9.1	54
-M127	1					127	60	—	23.3	36	—				4.1	9.2	9.9	56
-255-M127	2				255		28	62			50			310	4.6	9.5	9.8	57
-SLFB 4- 90-M 22	1	4	12		90	22	30	—	14.3	26	—	6	12	145	3.7	4.6	1.4	58
-110-M 42					110	42			16.4					165		5.0	2.2	61
-120-M 22					120	22	60		14.3					175	3.8	4.6	1.8	59
-135-M 67					135	67	30		19					190	3.7	5.8	3.6	64
-140-M 42				4	140	42	60		16.4					195	3.8	5.1	2.9	62
-150-M 22	2				150	22	33	57	14.3		40			205	4.1	4.8	1.7	60
-165-M 67	1				165	67	60	—	19		—			220	3.8	5.9	4.6	65
-170-M 42	2				170	42	33	57	16.4		40			225	4.1	5.3	2.8	63
-195-M 67					195	67			19					250	4.2	6.1	4.5	66
BT50-SLSA 6-110-M 42	1	6	9		110	42	30	—	13.4	26	—	7	18	165	3.7	5.4	4.9	67
-135-M 67					135	67			16					190		6.4	8.0	70
-140-M 42					140	42	60		13.4					195	3.8	5.4	5.6	68
-165-M 67					165	67			16					220		6.5	9.2	71
-M 97				1.5		97	30		19.2	36					3.7	8.3	11.0	73
-170-M 42	2				170	42	33	57	13.4	26	40			225	4.1	5.6	5.5	69
-195-M 67					195	67			16					250		6.6	9.0	72
-M 97	1					97	60	—	19.2	36	—				4.0	8.2	11.4	74
-225-M 97	2				225		28	62			50			280	4.5	8.5		75
-SLSB 6-110-M 42	1	6	10		110	42	30	—	14.4	26	—	8	18	165	3.7	6.0	3.9	76
-135-M 67					135	67			17					190		7.4	6.4	79
-140-M 42					140	42	60		14.4					195	3.8	6.1	4.6	77
-165-M 67					165	67			17					220		7.4	7.5	80
-M 97						97	30		20.2	36					3.7	9.6	8.9	82
-170-M 42	2				170	42	33	57	14.4	26	40			225	4.1	6.2	4.5	78
-195-M 67					195	67			17					250		7.6	7.4	81
-M 97	1			2		97	60	—	20.2	36	—				4.0	9.6	9.3	83
-M127						127	30		23.3						3.8	11.3	11.4	85
-225-M 97	2				225	97	28	62	20.2		50			280	4.5	9.9	9.3	84
-M127	1					127	60	—	23.3		—				4.1	11.2	12.1	86
-M157						157	30		26.5						3.9	13.0	13.7	88
-255-M127	2				255	127	28	62	23.3		50			310	4.6	11.5	12.0	87
-M157	1					157	60	—	26.5		—				4.2	12.9	14.5	89
-285-M157	2				285		28	62			50			340	4.7	13.2		90

BT50

BT50 Code Table

CODE	Fig.	φD	φC	Thickness t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Scale model
BT50−SLRB 6− 90−M 22	1	6	14		90	22	30	—	16.3	36	—	8	18	145	3.6	5.5	0.9	91
−110−M 42					110	42			18.4					165	3.7	6.6	1.6	94
−120−M 22					120	22	60		16.3					175	3.9	5.5	1.1	92
−135−M 67					135	67	30		21					190	3.7	8.0	2.5	97
−140−M 42				4	140	42	60		18.4					195	4.0	6.6	1.8	95
−150−M 22	2				150	22	28	62	16.3		50			205	4.4	5.8	1.1	93
−165−M 67	1				165	67	60	—	21		—			220	4.0	8.0	2.8	98
−170−M 42	2				170	42	28	62	18.4		50			225	4.5	6.9	1.8	96
−195−M 67					195	67			21					250		8.3	2.8	99
−SLFB 6− 90−M 22	1	6	14		90	22	30	—	16.3	36	—	8	18	145	3.6	5.5	0.9	100
−110−M 42					110	42			18.4					165	3.7	6.6	1.6	103
−120−M 22					120	22	60		16.3					175	3.9	5.5	1.1	101
−135−M 67					135	67	30		21					190	3.7	8.0	2.5	106
−140−M 42				4	140	42	60		18.4					195	4.0	6.6	1.8	104
−150−M 22	2				150	22	28	62	16.3		50			205	4.4	5.8	1.1	102
−165−M 67	1				165	67	60	—	21		—			220	4.0	8.0	2.8	107
−170−M 42	2				170	42	28	62	18.4		50			225	4.5	6.9	1.8	105
−195−M 67					195	67			21					250		8.3	2.8	108
BT50−SLSA 8−110−M 42	1	8	11		110	42	30	—	15.4	36	—	9	24	165	3.6	6.9	3.2	109
−135−M 67					135	67			18					190	3.7	8.7	5.4	112
−140−M 42					140	42	60		15.4					195	3.9	6.9	3.4	110
−165−M 67					165	67			18					220	4.0	8.6	5.7	113
−M 97				1.5		97	30		21.2						3.7	10.8	7.8	115
−170−M 42	2				170	42	28	62	15.4		50			225	4.4	7.2	3.4	111
−195−M 67					195	67			18					250	4.5	8.9	5.7	114
−M 97	1					97	60	—	21.2		—				4.0	10.7	8.3	116
−225−M 97	2				225		28	62			50			280	4.5	11.0		117
−SLSB 8−110−M 42	1	8	13		110	42	30	—	17.4	36	—	10	24	165	3.7	7.7	2.1	118
−135−M 67					135	67			20					190	3.7	9.8	3.5	121
−140−M 42					140	42	60		17.4					195	3.9	7.6	2.3	119
−165−M 67					165	67			20					220	4.0	9.8	3.9	122
−M 97						97	30		23.2						3.8	12.4	5.2	124
−170−M 42	2				170	42	28	62	17.4		50			225	4.4	7.9	2.3	120
−195−M 67					195	67			20					250	4.5	10.1	3.9	123
−M 97	1			2.5		97	60	—	23.2		—				4.0	12.3	5.7	125
−M127						127	30		26.3						3.9	14.9	7.0	127
−225−M 97	2				225	97	28	62	23.2		50			280	4.6	12.6	5.7	126
−M127	1					127	60	—	26.3		—				4.1	14.9	7.7	128
−M157						157	30		29.5						4.0	17.5	8.6	130
−255−M127	2				255	127	28	62	26.3		50			310	4.7	15.2	7.6	129
−M157	1					157	60	—	29.5		—				4.3	17.5	9.5	131
−285−M157	2				285		28	62			50			340	4.8	17.8	9.4	132
−SLRB 8− 90−M 22	1	8	18		90	22	30	—	20.3	36	—	10	24	145	3.7	6.0	0.7	133
−110−M 42					110	42			22.4					165		7.7	1.0	136
−120−M 22					120	22	60		20.3					175	3.9	5.9	0.8	134
−135−M 67					135	67	30		25					190	3.8	9.8	1.6	139
−140−M 42				5	140	42	60		22.4					195	4.0	7.7	1.3	137
−150−M 22	2				150	22	28	62	20.3		50			205	4.4	6.2	0.8	135
−165−M 67	1				165	67	60	—	25		—			220	4.1	9.8	1.9	140
−170−M 42	2				170	42	28	62	22.4		50			225	4.5	8.0	1.3	138
−195−M 67					195	67			25					250	4.6	10.1	1.9	141
−SLFB 8− 90−M 22	1	8	18		90	22	30	—	20.3	36	—	10	24	145	3.7	6.0	0.7	142
−110−M 42					110	42			22.4					165		7.7	1.0	145
−120−M 22					120	22	60		20.3					175	3.9	5.9	0.8	143
−135−M 67					135	67	30		25					190	3.8	9.8	1.6	148
−140−M 42				5	140	42	60		22.4					195	4.0	7.7	1.3	146
−150−M 22	2				150	22	28	62	20.3		50			205	4.4	6.2	0.8	144
−165−M 67	1				165	67	60	—	25		—			220	4.1	9.8	1.9	149
−170−M 42	2				170	42	28	62	22.4		50			225	4.5	8.0	1.3	147
−195−M 67					195	67			25					250	4.6	10.1	1.9	150

BT50

CODE	Fig.	φD	φC	Thickness t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Scale model
BT50-SLSA10-110-M 42	1	10	13		110	42	30	—	17.4	36	—	11	30	165	3.6	7.9	2.3	151
-135-M 67					135	67			20					190	3.7	10.4	4.0	154
-140-M 42					140	42	60		17.4					195	3.9	7.8	2.5	152
-165-M 67					165	67			20					220	4.0	10.4	4.3	155
-M 97				1.5		97	30		23.2						3.8	13.6	5.9	157
-170-M 42	2				170	42	28	62	17.4		50			225	4.4	8.1	2.5	153
-195-M 67					195	67			20					250	4.5	10.7	4.3	156
-M 97	1					97	60	—	23.2		—				4.1	13.5	6.4	158
-225-M 97	2				225		28	62			50			280	4.6	13.8		159
-SLSB10-110-M 42	1	10	16		110	42	30	—	20.4	36	—	12	30	165	3.7	8.6	1.4	160
-135-M 67					135	67			23					190		11.7	2.4	163
-140-M 42					140	42	60		20.4					195	3.9	8.6	1.7	161
-165-M 67					165	67			23					220	4.0	11.7	2.7	164
-M 97						97	30		26.2						3.8	15.4	3.6	166
-170-M 42	2				170	42	28	62	20.4		50			225	4.5	8.9	1.7	162
- 95-M 67					195	67			23					250		12.0	2.7	165
-M 97	1			3		97	60	—	26.2		—				4.1	15.3	4.1	167
-M127						127	30		29.3	50					3.9	20.0	4.4	169
-225-M 97	2				225	97	28	62	26.2	36	50			280	4.6	15.6	4.1	168
-M127	1					127	60	—	29.3	50	—				4.3	20.6	4.6	170
-M157						157	30		32.5						4.1	23.7	5.4	172
-255-M127					255	127	90		29.3					310	4.6	21.1	4.9	171
-M157						157	60		32.5						4.4	24.3	5.7	173
-285-M157					285		90							340	4.8	24.8	6.1	174
-SLRB10- 90-M 22	1	10	22		90	22	30	—	24.3	36	—	12	30	145	3.7	6.2	0.5	175
-110-M 42					110	42			26.4					165		8.7	0.8	178
-120-M 22					120	22	60		24.3					175	4.0	6.2	0.7	176
-135-M 67					135	67	30		29					190	3.8	11.8	1.2	181
-140-M 42				6	140	42	60		26.4					195	4.0	8.6	1.0	179
-150-M 22	2				150	22	28	62	24.3		50			205	4.5	6.5	0.7	177
-165-M 67	1				165	67	60	—	29		—			220	4.1	11.7	1.5	182
-170-M 42	2				170	42	28	62	26.4		50			225	4.5	8.9	1.0	180
-195-M 67					195	67			29					250	4.6	12.0	1.5	183
- SLFB10- 90-M 22	1	10	22		90	22	30	—	24.3	36	—	12	30	145	3.7	6.2	0.5	184
-110-M 42					110	42			26.4					165		8.7	0.8	187
-120-M 22					120	22	60		24.3					175	4.0	6.2	0.7	185
-135-M 67					135	67	30		29					190	3.8	11.8	1.2	190
-140-M 42				6	140	42	60		26.4					195	4.0	8.6	1.0	188
-150-M 22	2				150	22	28	62	24.3		50			205	4.5	6.5	0.7	186
-165-M 67	1				165	67	60	—	29		—			220	4.1	11.7	1.5	191
-170-M 42	2				170	42	28	62	26.4		50			225	4.5	8.9	1.0	189
-195-M 67					195	67			29					250	4.6	12	1.5	192
BT50-SLSA12-110-M 42	1	12	15		110	42	30	—	19.4	36	—	13	30	165	3.6	9.5	1.8	193
-135-M 67					135	67			22					190	3.7	13.1	3.2	196
-140-M 42					140	42	60		19.4					195	3.9	9.4	2.1	194
-165-M 67					165	67			22					220	4.0	13.0	3.6	197
-M 97				1.5		97	30		25.2						3.9	17.7	4.8	199
-170-M 42	2				170	42	28	62	19.4		50			225	4.4	9.7	2.1	195
-195-M 67					195	67			22					250	4.5	13.3	3.6	198
-M 97	1					97	60	—	25.2		—				4.2	17.7	5.3	200
-225-M 97	2				225		28	62			50			280	4.7	18.0		201

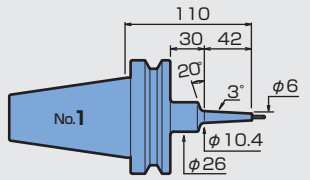
CODE	Fig.	φD	φC	Thickness t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Scale model
BT50−SLSB12−110−M 42	1	12	19		110	42	30	—	23.4	36	—	14	30	165	3.7	10.4	1.1	202
−135−M 67					135	67			26					190	3.8	14.6	1.8	205
−140−M 42					140	42	60		23.4					195	4.0	10.3	1.3	203
−165−M 67					165	67			26					220		14.5	2.2	206
−M 97						97	30		29.2	50					3.9	20.5	2.4	208
−170−M 42	2				170	42	28	62	23.4	36	50			225	4.5	10.6	1.3	204
−195−M 67					195	67			26					250		14.8	2.1	207
−M 97	1			3.5		97	60	—	29.2	50	—				4.2	21.1	2.6	209
−M127						127	30		32.3						4.0	25.5	3.2	211
−225−M 97					225	97	90		29.2					280	4.6	21.6	2.8	210
−M127						127	60		32.3						4.4	26.1	3.4	212
−M157						157	30		35.5						4.2	30.6	4.0	214
−255−M127					255	127	90		32.3					310	4.7	26.7	3.7	213
−M157						157	60		35.5						4.6	31.1	4.3	215
−285−M157					285		90							340	4.9	31.7	4.6	216
−SLRB12− 90−M 22	1	12	26		90	22	30	—	28.3	50	—	14	30	145	3.7	9.5	0.4	217
−110−M 42					110	42			30.4					165	3.8	11.4	0.5	220
−120−M 22					120	22	60		28.3					175	4.0	10.1	0.4	218
−135−M 67					135	67	30		33					190	3.9	15.5	0.8	223
−140−M 42				7	140	42	60		30.4					195	4.1	11.9	0.6	221
−150−M 22					150	22	90		28.3					205	4.4	10.7	0.5	219
−165−M 67					165	67	60		33					220	4.2	16.1	0.9	224
−170−M 42					170	42	90		30.4					225	4.5	12.5	0.7	222
−195−M 67					195	67			33					250	4.6	16.7	1.0	225
−SLFB12− 90−M 22	1	12	26		90	22	30	—	28.3	50	—	14	30	145	3.7	9.5	0.4	226
−110−M 42					110	42			30.4					165	3.8	11.4	0.5	229
−120−M 22					120	22	60		28.3					175	4.0	10.1	0.4	227
−135−M 67					135	67	30		33					190	3.9	15.5	0.8	232
−140−M 42				7	140	42	60		30.4					195	4.1	11.9	0.6	230
−150−M 22					150	22	90		28.3					205	4.4	10.7	0.5	228
−165−M 67					165	67	60		33					220	4.2	16.1	0.9	233
−170−M 42					170	42	90		30.4					225	4.5	12.5	0.7	231
−195−M 67					195	67			33					250	4.6	16.7	1.0	234
BT50−SLSB16−110−M 42	1	16	24		110	42	30	—	28.4	50	—	18	32	165	3.7	15.0	0.7	235
−135−M 67					135	67			31					190	3.8	21.9	1.1	238
−140−M 42					140	42	60		28.4					195	4.1	15.6	0.8	236
−165−M 67					165	67			31					220	4.2	22.5	1.2	239
−M 97						97	30		34.2						4.0	30.2	1.6	241
−170−M 42					170	42	90		28.4					225	4.4	16.2	0.9	237
−195−M 67					195	67			31					250	4.5	23.0	1.4	240
−M 97				4		97	60		34.2						4.3	30.7	1.8	242
−M127						127	30		37.3						4.2	38.5	2.1	244
−225−M 97					225	97	90		34.2					280	4.6	31.3	2.0	243
−M127						127	60		37.3						4.5	39.0	2.4	245
−M157						157	30		40.5						4.4	46.8	2.7	247
−255−M127					255	127	90		37.3					310	4.8	39.6		246
−M157						157	60		40.5						4.7	47.3	3.0	248
−285−M157					285		90							340	5.0	47.9	3.4	249
−SLRB16− 90−M 22	1	16	32		90	22	30	—	34.3	50	—	18	32	145	3.7	9.6	0.3	250
−110−M 42					110	42			36.4					165	3.9	15.1	0.4	253
−120−M 22					120	22	60		34.3					175	4.1	10.1		251
−135−M 67					135	67	30		39					190	4.0	22.0	0.6	256
−140−M 42				8	140	42	60		36.4					195	4.2	15.7	0.5	254
−150−M 22					150	22	90		34.3					205	4.4	10.7		252
−165−M 67					165	67	60		39					220		22.6	0.7	257
−170−M 42					170	42	90		36.4					225	4.5	16.2	0.6	255
−195−M 67					195	67			39					250	4.7	23.2	0.9	258

CODE	Fig.	φD	φC	Thickness t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Scale model
BT50−SLFB16− 90−M 22	1	16	32		90	22	30	—	34.3	50	—	18	32	145	3.7	9.6	0.3	259
−110−M 42					110	42			36.4					165	3.9	15.1	0.4	262
−120−M 22					120	22	60		34.3					175	4.1	10.1		260
−135−M 67					135	67	30		39					190	4.0	22.0	0.6	265
−140−M 42				8	140	42	60		36.4					195	4.2	15.7	0.5	263
−150−M 22					150	22	90		34.3					205	4.4	10.7		261
−165−M 67					165	67	60		39					220		22.6	0.7	266
−170−M 42					170	42	90		36.4					225	4.5	16.2	0.6	264
−195−M 67					195	67			39					250	4.7	23.2	0.9	267
BT50−SLSB20−110−M 42	1	20	29		110	42	30	—	33.4	50	—	22	40	165	3.8	16.8	0.5	268
−135−M 67					135	67			36					190	3.9	27.1	0.8	271
−140−M 42					140	42	60		33.4					195	4.1	17.4	0.6	269
−165−M 67					165	67			36					220	4.2	27.7	0.9	272
−M 97						97	30		39.2						4.1	39.4	1.2	274
−170−M 42					170	42	90		33.4					225	4.4	18.0	0.8	270
−195−M 67					195	67			36					250	4.5	28.2	1.1	273
−M 97				4.5		97	60		39.2						4.4	40.0	1.4	275
−M127						127	30		42.3						4.3	52.6	1.6	277
−225−M 97					225	97	90		39.2					280	4.7	40.6	1.7	276
−M127						127	60		42.3						4.6	53.2	1.8	278
−M157						157	30		45.5						4.5	65.0	2.0	280
−255−M127					255	127	90		42.3					310	5.0	53.7	2.2	279
−M157						157	60		45.5						4.9	65.5	2.3	281
−285−M157					285		90							340	5.2	66.1	2.8	282
−SLRB20−110−M 42	1	20	38		110	42	30	—	42.4	50	—	22	40	165	3.9	16.9	0.3	283
−135−M 67					135	67			45					190	4.2	27.2	0.5	286
−140−M 42				9	140	42	60		42.4					195	4.3	17.5		284
−165−M 67					165	67			45					220	4.5	27.8	0.6	287
−170−M 42					170	42	90		42.4					225	4.6	18.1		285
−195−M 67					195	67			45					250	4.8	28.4	0.8	288
−SLFB20−110−M 42	1	20	38		110	42	30	—	42.4	50	—	22	40	165	3.9	16.9	0.3	289
−135−M 67					135	67			45					190	4.2	27.2	0.5	292
−140−M 42				9	140	42	60		42.4					195	4.3	17.5		290
−165−M 67					165	67			45					220	4.5	27.8	0.6	293
−170−M 42					170	42	90		42.4					225	4.6	18.1		291
−195−M 67					195	67			45					250	4.8	28.4	0.8	294
BT50−SLRB25−110−M 42	1	25	45		110	42	30	—	49.7	50	—	26	45	165	4.0	19.0	0.3	295
−140−M 42				10	140		60							195	4.4	19.6	0.4	296
−170−M 42					170		90							225	4.7	20.2	0.6	297
−SLFB25−110−M 42	1	25	45		110	42	30	—	49.7	50	—	26	45	165	4.0	19.0	0.3	298
−140−M 42				10	140		60							195	4.4	19.6	0.4	299
−170−M 42					170		90							225	4.7	20.2	0.6	300

BT50

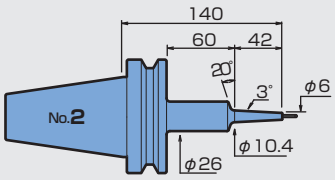
φ3 SLSA t=1.5

BT50-SLSA3-110-M42



9.4

BT50-SLSA3-140-M42



10.0

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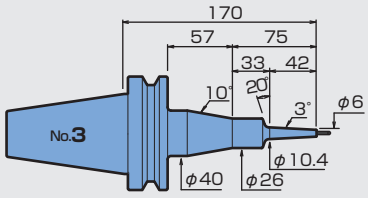

9.9

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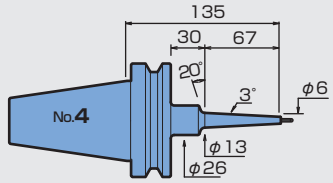

15.0

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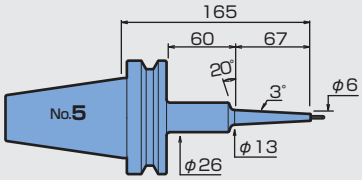

16.0

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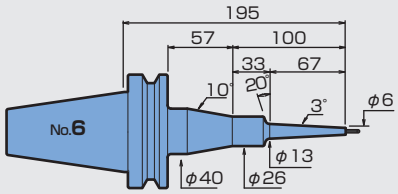
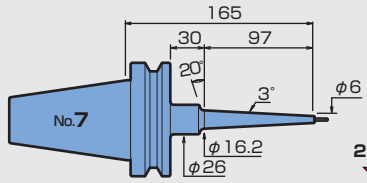


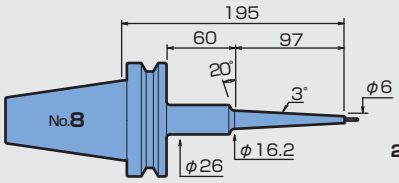
15.8

BT50-SLSA3-165-M97



20.8

BT50-SLSA3-195-M97



22.3

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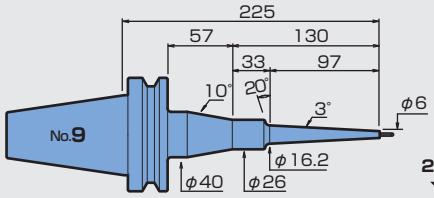
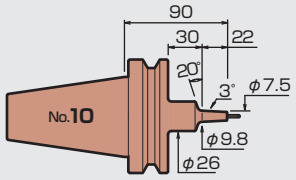


22.1

φ3 SLRA t=2.25

BT50-SLRA3-90-M22



2.8

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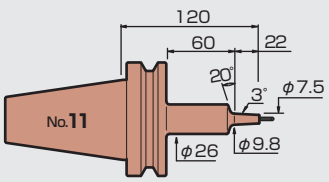
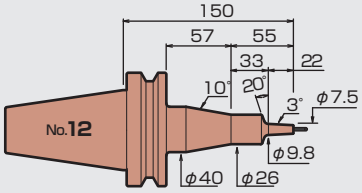


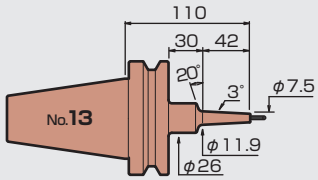
3.2

BT50-SLRA3-150-M22



3.2

BT50-SLRA3-110-M42



5.4

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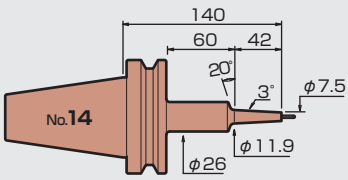

6.0

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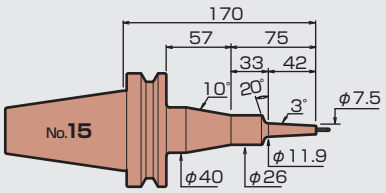
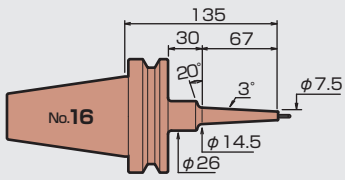


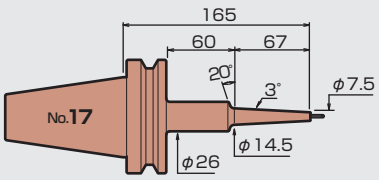
6.0

BT50-SLRA3-135-M67



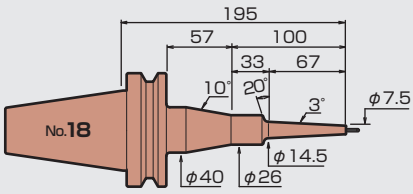
9.0

BT50-SLRA3-165-M67



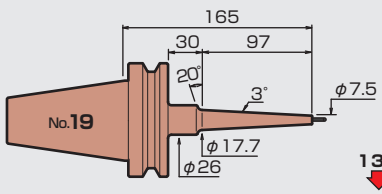
9.9

BT50-SLRA3-195-M67



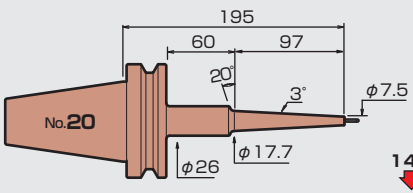
9.8

BT50-SLRA3-165-M97



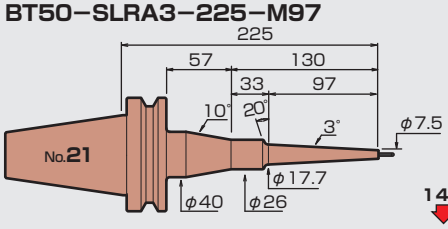
13.0

BT50-SLRA3-195-M97



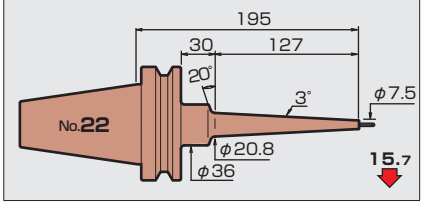
14.5

BT50-SLRA3-225-M97

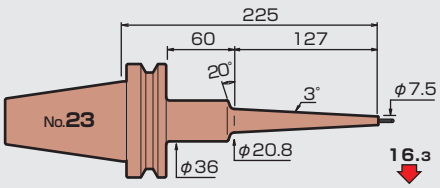


14.3

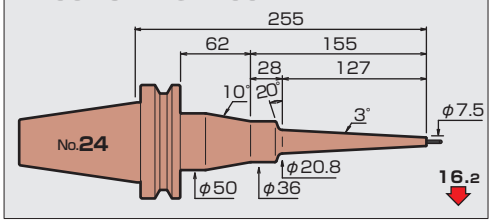
BT50−SLRA3−195−M127



BT50−SLRA3−225−M127

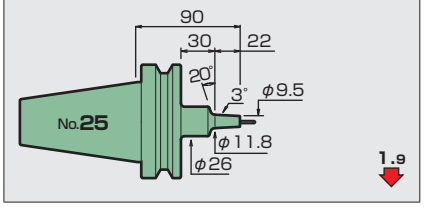


BT50−SLRA3−255−M127

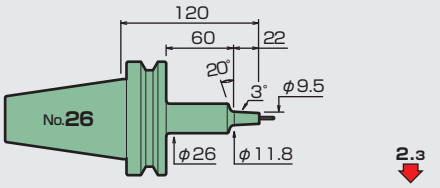


φ3 SLFB t=3.25

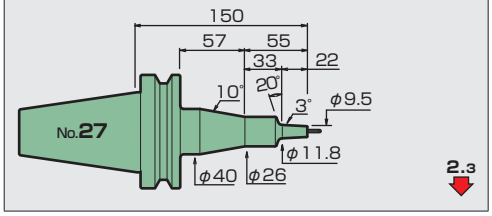
BT50−SLFB3−90−M22



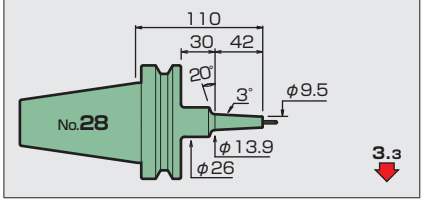
BT50−SLFB3−120−M22



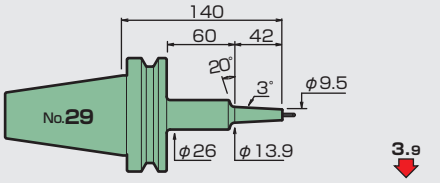
BT50−SLFB3−150−M22



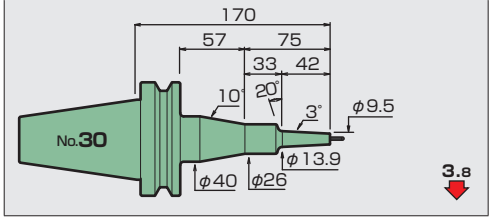
BT50−SLFB3−110−M42



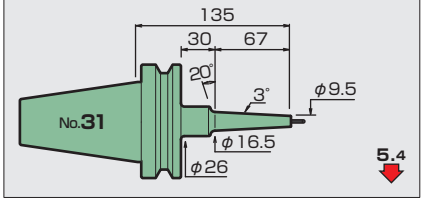
BT50−SLFB3−140−M42



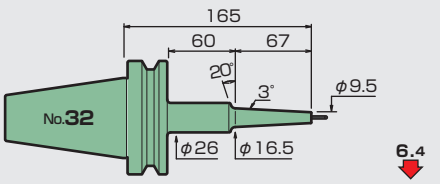
BT50−SLFB3−170−M42



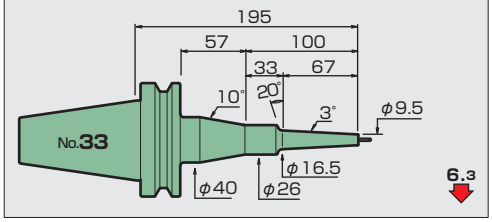
BT50−SLFB3−135−M67



BT50−SLFB3−165−M67

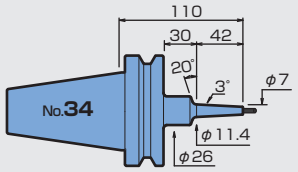


BT50−SLFB3−195−M67

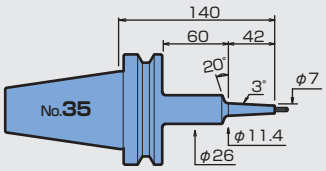


φ4 SLSA t=1.5

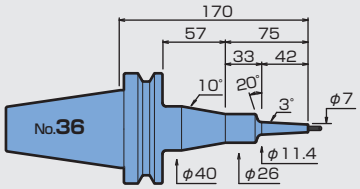
BT50-SLSA4-110-M42



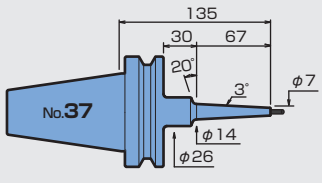
BT50-SLSA4-140-M42



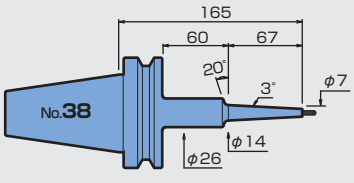
BT50-SLSA4-170-M42



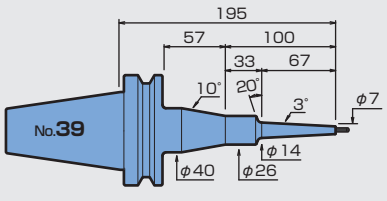
BT50-SLSA4-135-M67



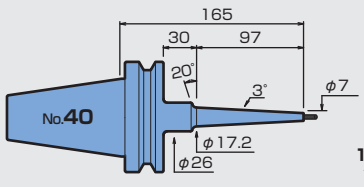
BT50-SLSA4-165-M67



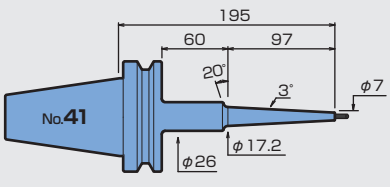
BT50-SLSA4-195-M67



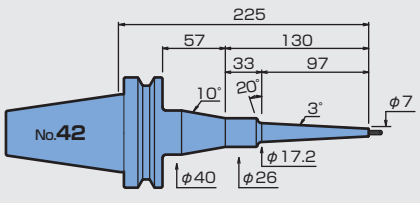
BT50-SLSA4-165-M97



BT50-SLSA4-195-M97

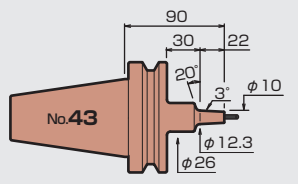


BT50-SLSA4-225-M97

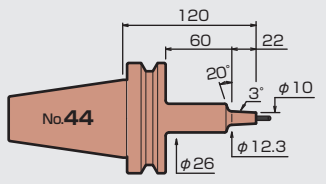


φ4 SLRA t=3

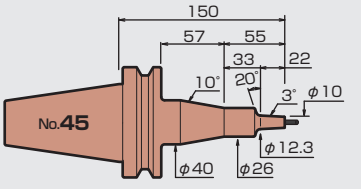
BT50-SLRA4-90-M22



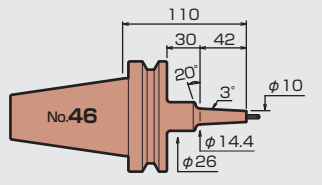
BT50-SLRA4-120-M22



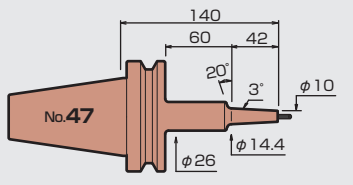
BT50-SLRA4-150-M22



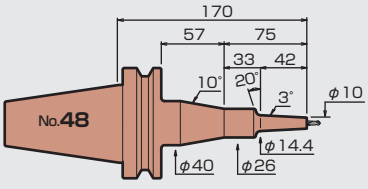
BT50-SLRA4-110-M42



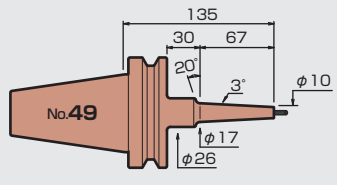
BT50-SLRA4-140-M42



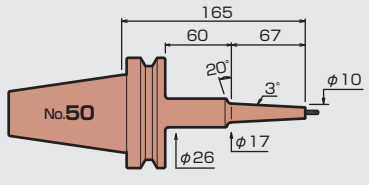
BT50-SLRA4-170-M42



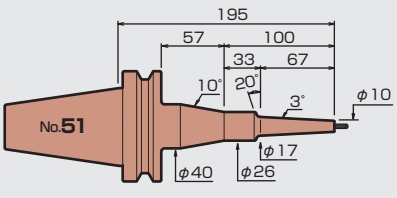
BT50-SLRA4-135-M67



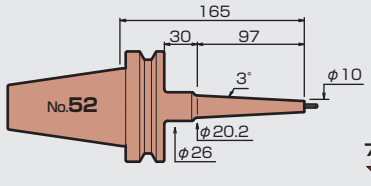
BT50-SLRA4-165-M67



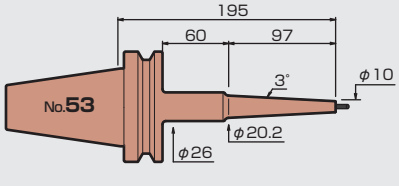
BT50-SLRA4-195-M67



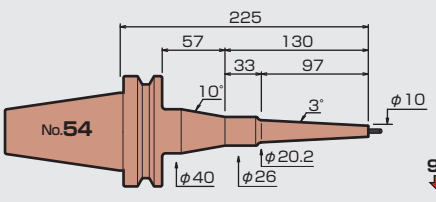
BT50-SLRA4-165-M97



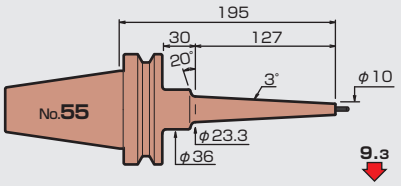
BT50-SLRA4-195-M97



BT50-SLRA4-225-M97

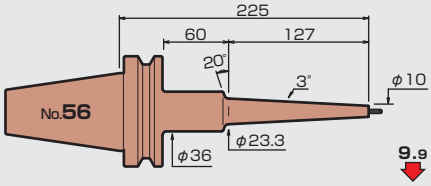


BT50−SLRA4−195−M127



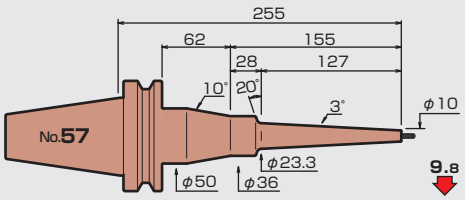
9.3

BT50−SLRA4−225−M127



9.9

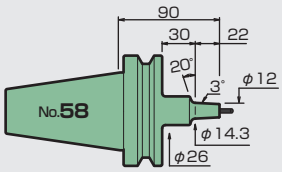
BT50−SLRA4−255−M127



9.8

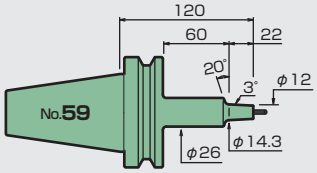
φ4 SLFB t=4

BT50−SLFB4−90−M22



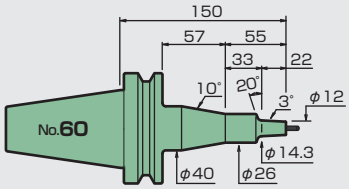
1.4

BT50−SLFB4−120−M22



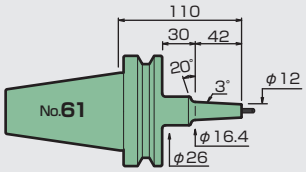
1.8

BT50−SLFB4−150−M22



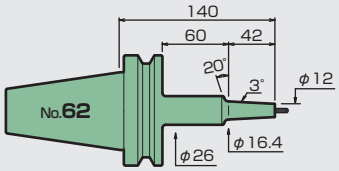
1.7

BT50−SLFB4−110−M42



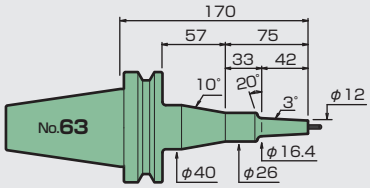
2.2

BT50−SLFB4−140−M42



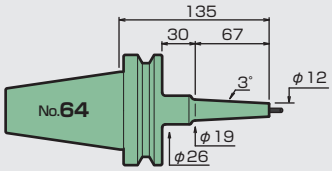
2.9

BT50−SLFB4−170−M42



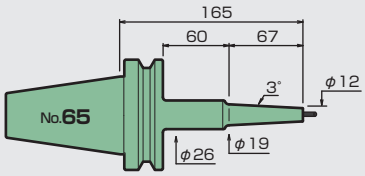
2.8

BT50−SLFB4−135−M67



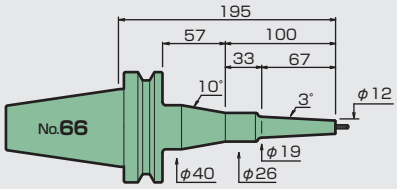
3.6

BT50−SLFB4−165−M67



4.6

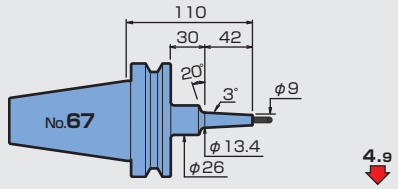
BT50−SLFB4−195−M67



4.5

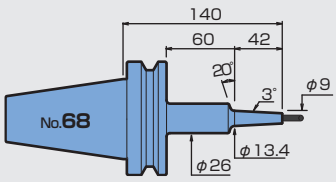
φ6 SLSA t=1.5

BT50−SLSA6−110−M42



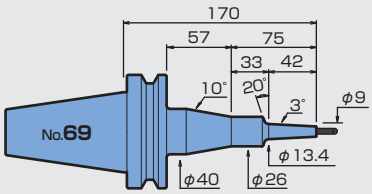
4.9

BT50−SLSA6−140−M42



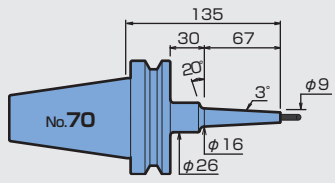
5.6

BT50−SLSA6−170−M42



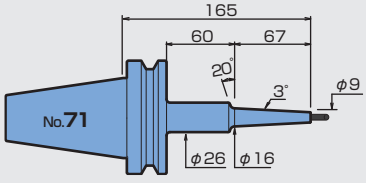
5.5

BT50−SLSA6−135−M67



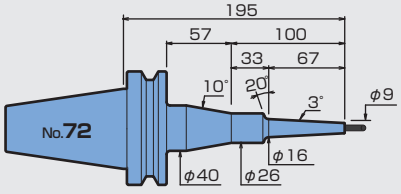
8.0

BT50−SLSA6−165−M67



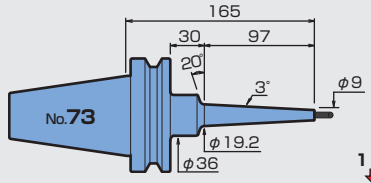
9.2

BT50−SLSA6−195−M67



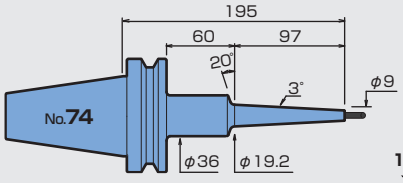
9.0

BT50−SLSA6−165−M97



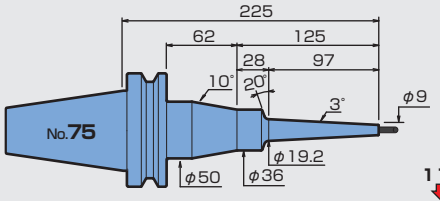
11.0

BT50−SLSA6−195−M97



11.4

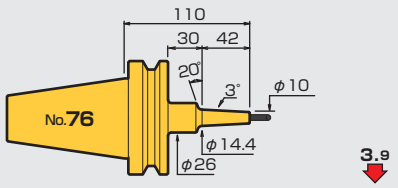
BT50−SLSA6−225−M97



11.4

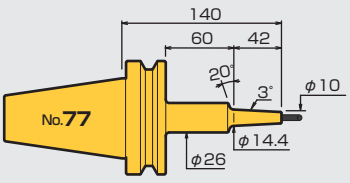
φ6 SLSB t=2

BT50−SLSB6−110−M42



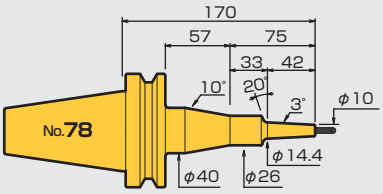
3.9

BT50−SLSB6−140−M42



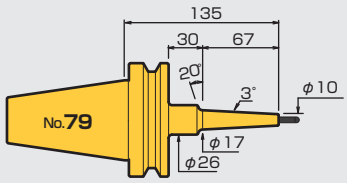
4.6

BT50−SLSB6−170−M42



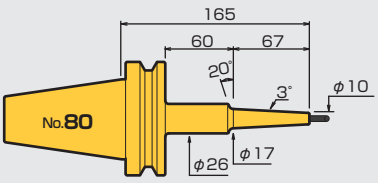
4.5

BT50−SLSB6−135−M67



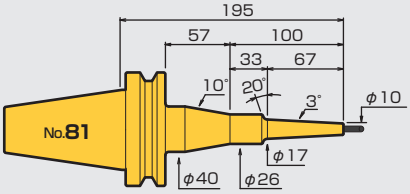
6.4

BT50−SLSB6−165−M67



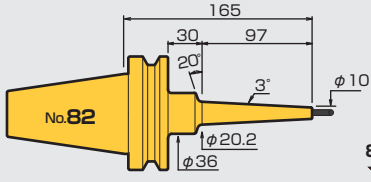
7.5

BT50−SLSB6−195−M67



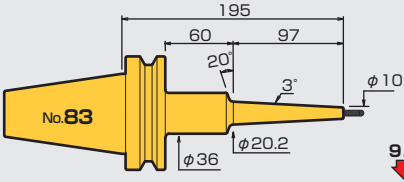
7.4

BT50−SLSB6−165−M97



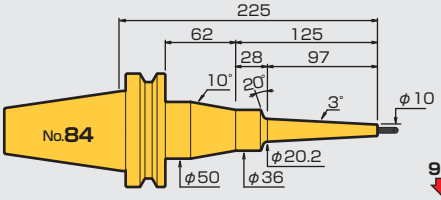
8.9

BT50−SLSB6−195−M97



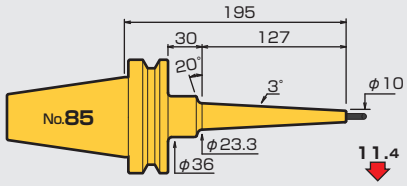
9.3

BT50−SLSB6−225−M97



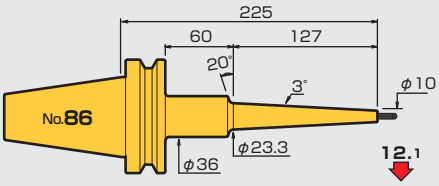
9.3

BT50−SLSB6−195−M127



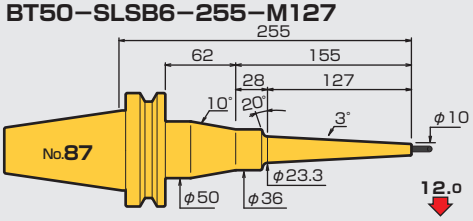
11.4

BT50−SLSB6−225−M127



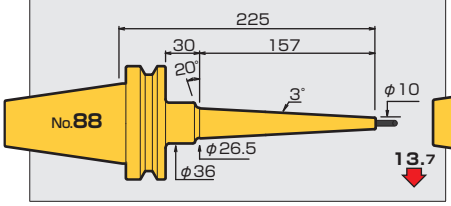
12.1

BT50−SLSB6−255−M127

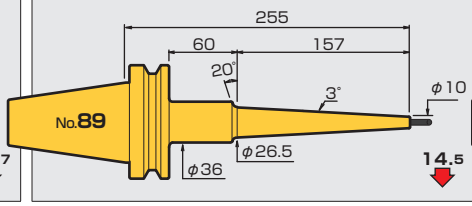


12.0

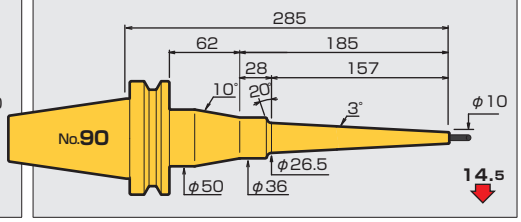
BT50-SLSB6-225-M157



BT50-SLSB6-255-M157

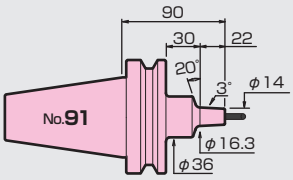


BT50-SLSB6-285-M157

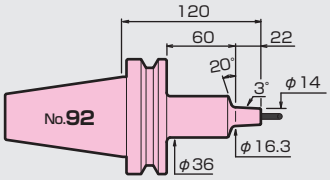


φ6 SLRB t=4

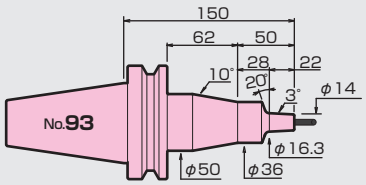
BT50-SLRB6-90-M22



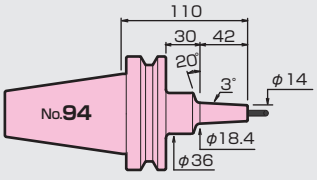
BT50-SLRB6-120-M22



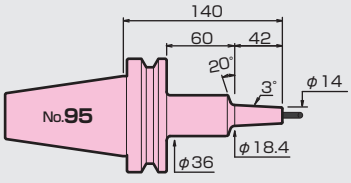
BT50-SLRB6-150-M22



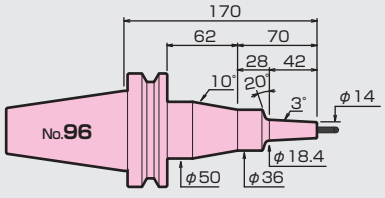
BT50-SLRB6-110-M42



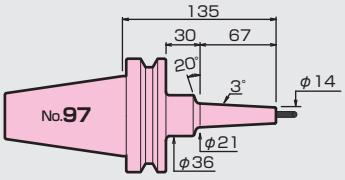
BT50-SLRB6-140-M42



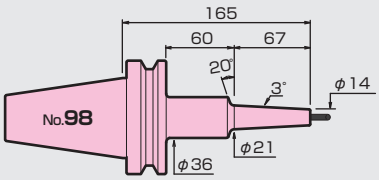
BT50-SLRB6-170-M42



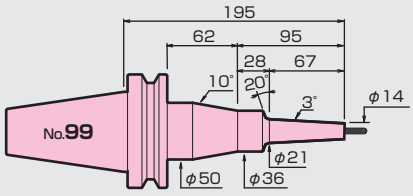
BT50-SLRB6-135-M67



BT50-SLRB6-165-M67

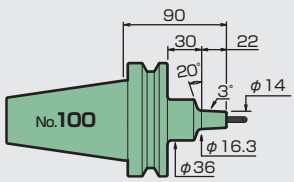


BT50-SLRB6-195-M67

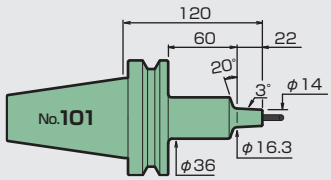


φ6 SLFB t=4

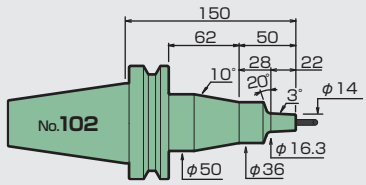
BT50-SLFB6-90-M22



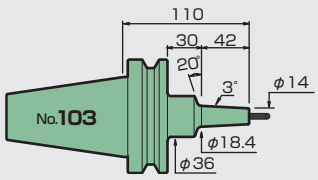
BT50-SLFB6-120-M22



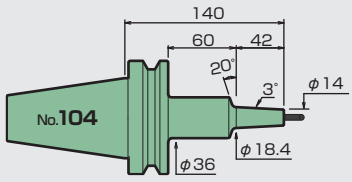
BT50-SLFB6-150-M22



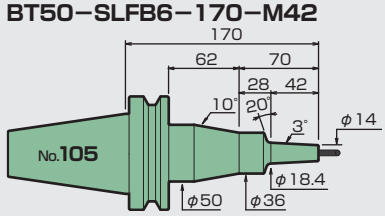
BT50-SLFB6-110-M42



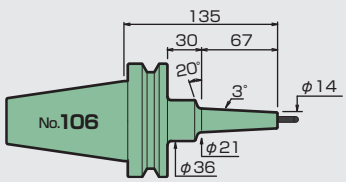
BT50-SLFB6-140-M42



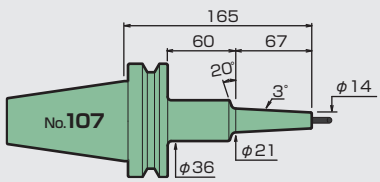
BT50-SLFB6-170-M42



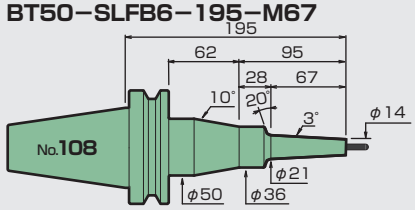
BT50-SLFB6-135-M67



BT50-SLFB6-165-M67

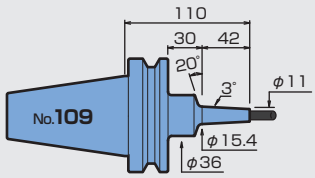


BT50-SLFB6-195-M67

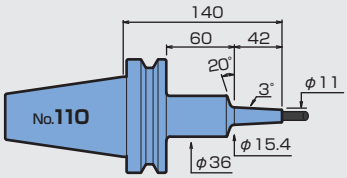


φ8 SLSA t=1.5

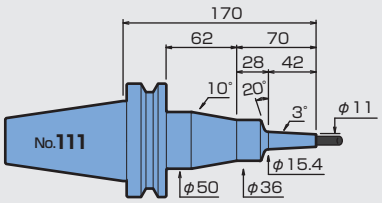
BT50−SLSA8−110−M42



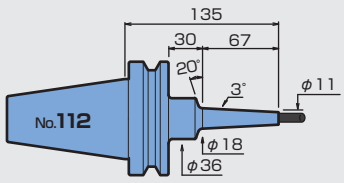
BT50−SLSA8−140−M42



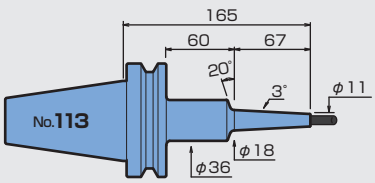
BT50−SLSA8−170−M42



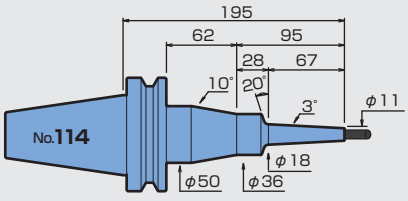
BT50−SLSA8−135−M67



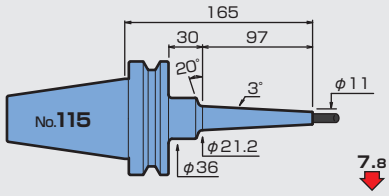
BT50−SLSA8−165−M67



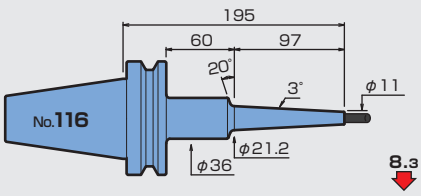
BT50−SLSA8−195−M67



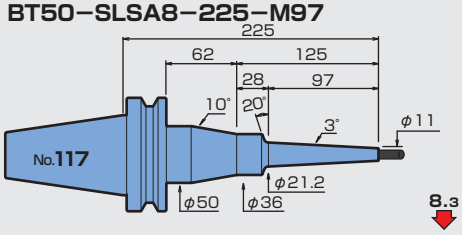
BT50−SLSA8−165−M97



BT50−SLSA8−195−M97

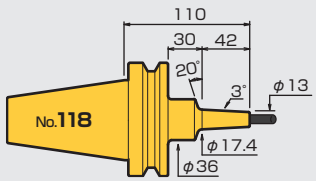


BT50−SLSA8−225−M97

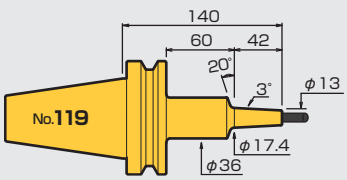


φ8 SLSB t=2.5

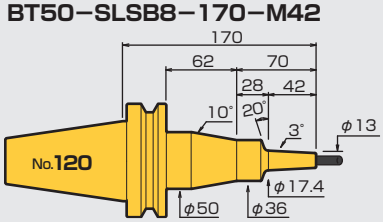
BT50−SLSB8−110−M42



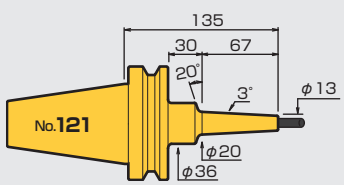
BT50−SLSB8−140−M42



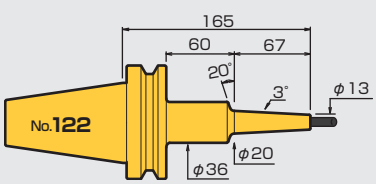
BT50−SLSB8−170−M42



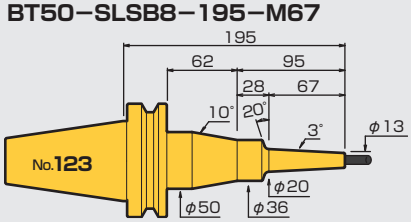
BT50−SLSB8−135−M67



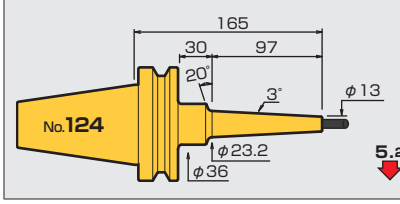
BT50−SLSB8−165−M67



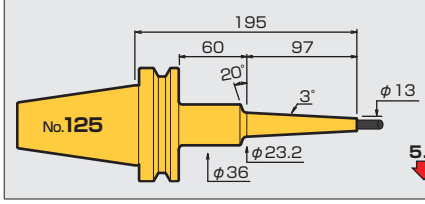
BT50−SLSB8−195−M67



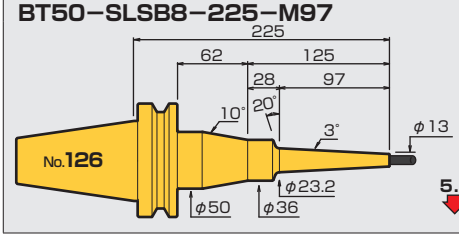
BT50−SLSB8−165−M97



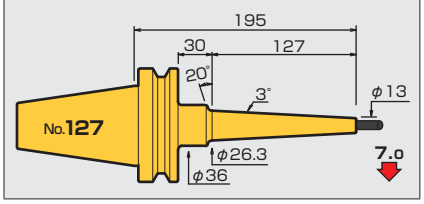
BT50−SLSB8−195−M97



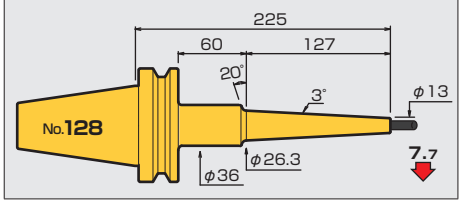
BT50−SLSB8−225−M97



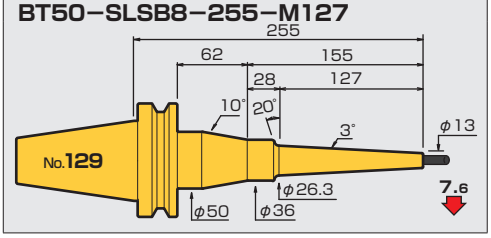
BT50−SLSB8−195−M127



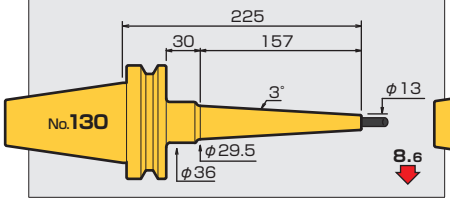
BT50−SLSB8−225−M127



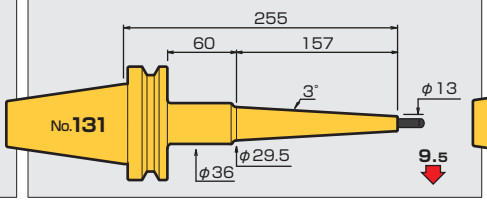
BT50−SLSB8−255−M127



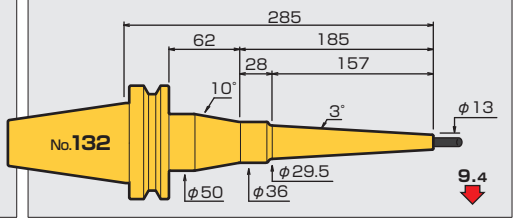
BT50−SLSB8−225−M157



BT50−SLSB8−255−M157

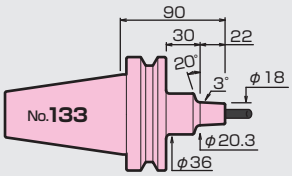


BT50−SLSB8−285−M157

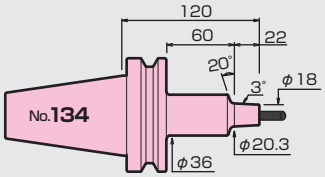


φ8 SLRB t=5

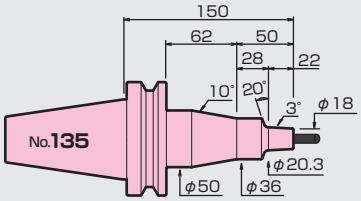
BT50−SLRB8−90−M22



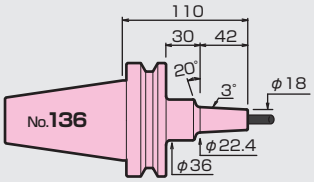
BT50−SLRB8−120−M22



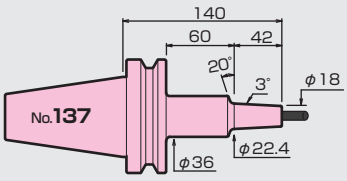
BT50−SLRB8−150−M22



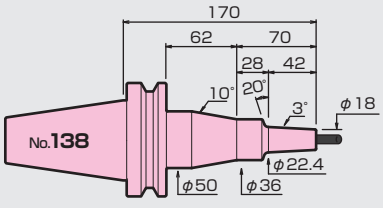
BT50−SLRB8−110−M42



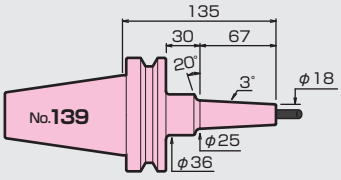
BT50−SLRB8−140−M42



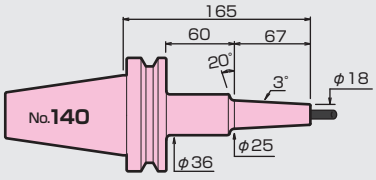
BT50−SLRB8−170−M42



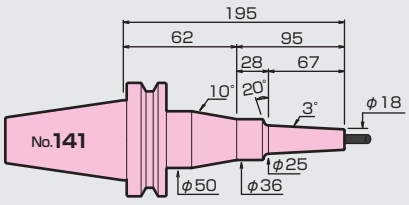
BT50−SLRB8−135−M67



BT50−SLRB8−165−M67

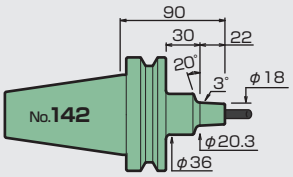


BT50−SLRB8−195−M67

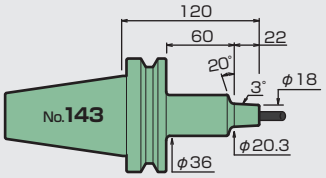


φ8 SLFB t=5

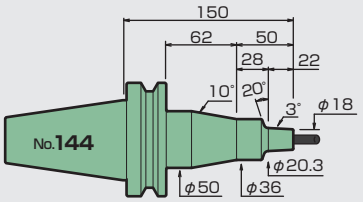
BT50−SLFB8−90−M22



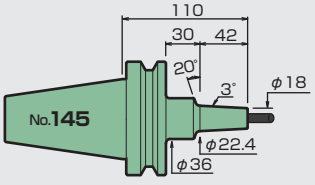
BT50−SLFB8−120−M22



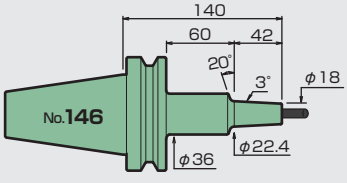
BT50−SLFB8−150−M22



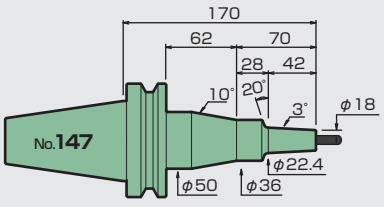
BT50−SLFB8−110−M42



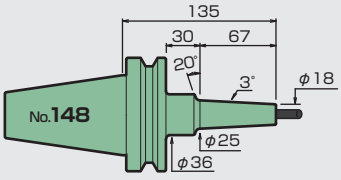
BT50−SLFB8−140−M42



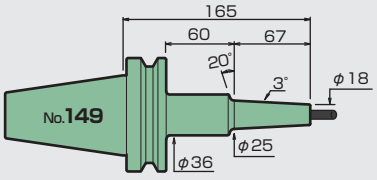
BT50−SLFB8−170−M42



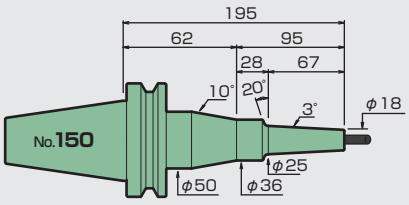
BT50−SLFB8−135−M67



BT50−SLFB8−165−M67

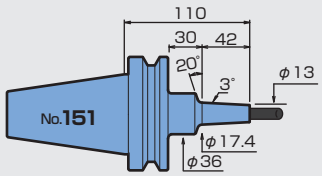


BT50−SLFB8−195−M67

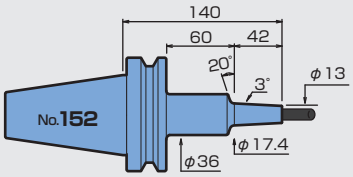


φ10 SLSA t=1.5

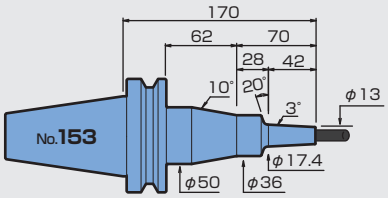
BT50−SLSA10−110−M42



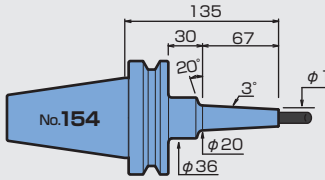
BT50−SLSA10−140−M42



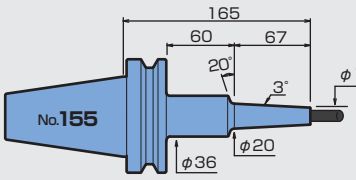
BT50−SLSA10−170−M42



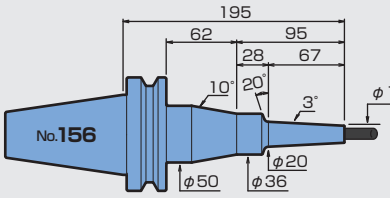
BT50−SLSA10−135−M67



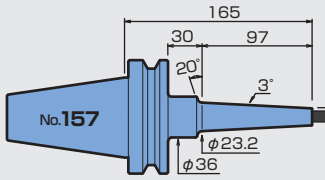
BT50−SLSA10−165−M67



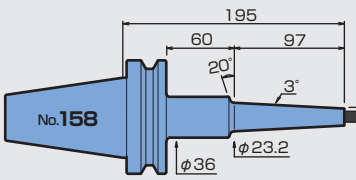
BT50−SLSA10−195−M67



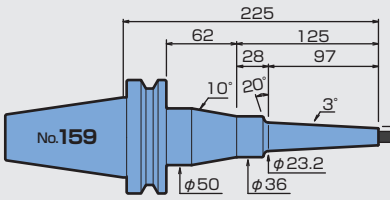
BT50−SLSA10−165−M97



BT50−SLSA10−195−M97

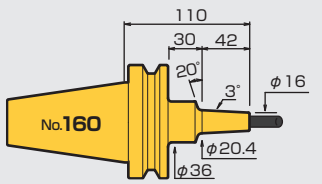


BT50−SLSA10−225−M97

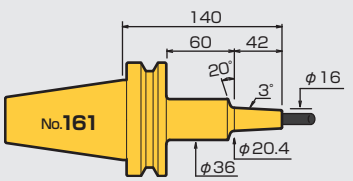


φ10 SLSB t=3

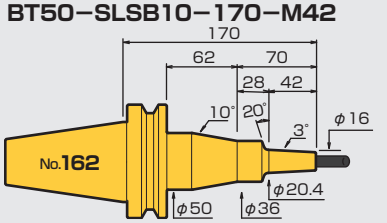
BT50−SLSB10−110−M42



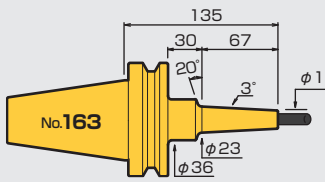
BT50−SLSB10−140−M42



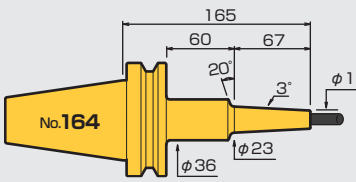
BT50−SLSB10−170−M42



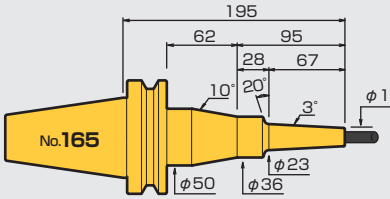
BT50−SLSB10−135−M67



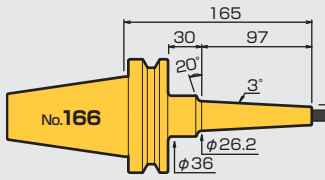
BT50−SLSB10−165−M67



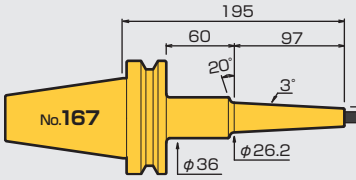
BT50−SLSB10−195−M67



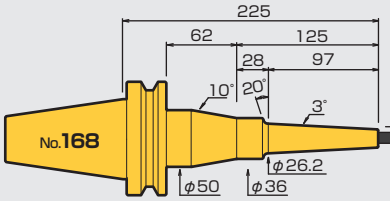
BT50−SLSB10−165−M97



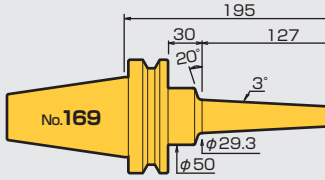
BT50−SLSB10−195−M97



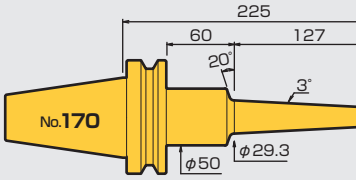
BT50−SLSB10−225−M97



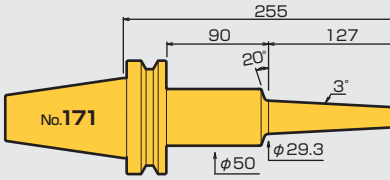
BT50−SLSB10−195−M127



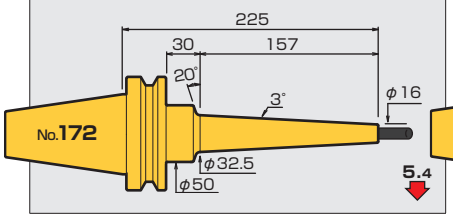
BT50−SLSB10−225−M127



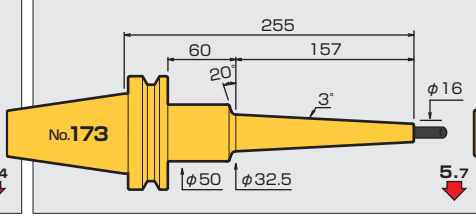
BT50−SLSB10−255−M127



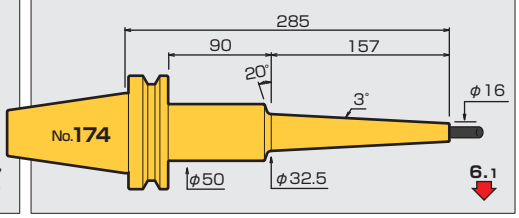
BT50−SLSB10−225−M157



BT50−SLSB10−255−M157

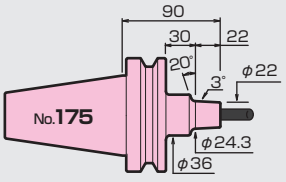


BT50−SLSB10−285−M157

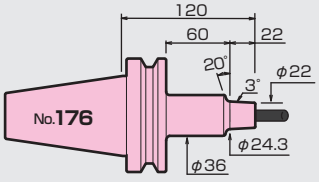


φ10 SLRB t=6

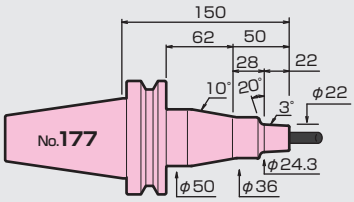
BT50−SLRB10−90−M22



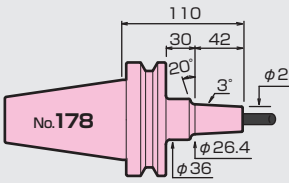
BT50−SLRB10−120−M22



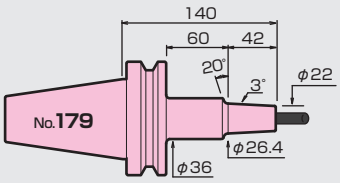
BT50−SLRB10−150−M22



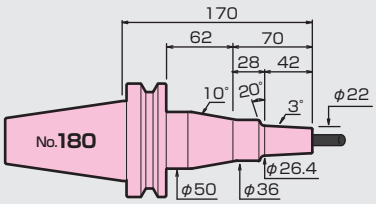
BT50−SLRB10−110−M42



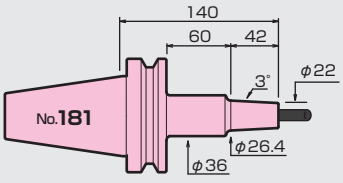
BT50−SLRB10−140−M42



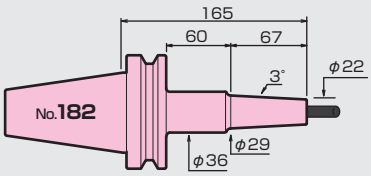
BT50−SLRB10−170−M42



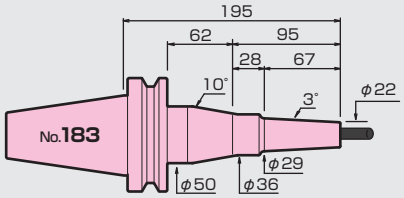
BT50−SLRB10−135−M67



BT50−SLRB10−165−M67

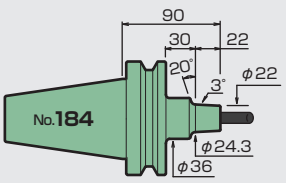


BT50−SLRB10−195−M67

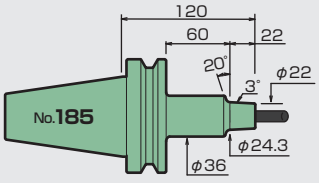


φ10 SLFB t=6

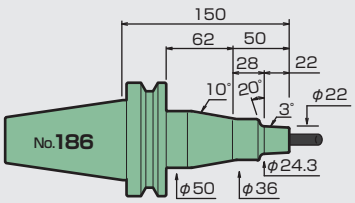
BT50−SLFB10−90−M22



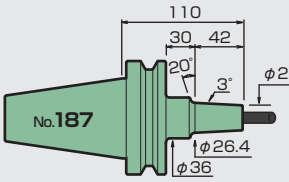
BT50−SLFB10−120−M22



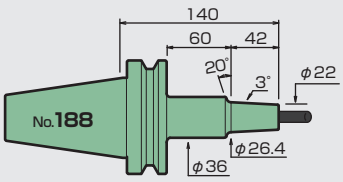
BT50−SLFB10−150−M22



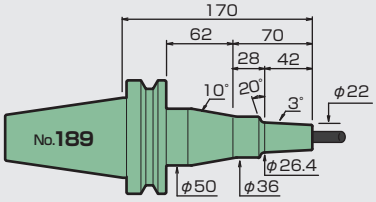
BT50−SLFB10−110−M42



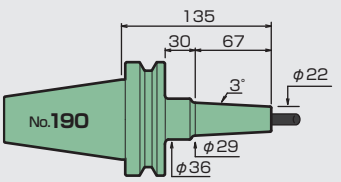
BT50−SLFB10−140−M42



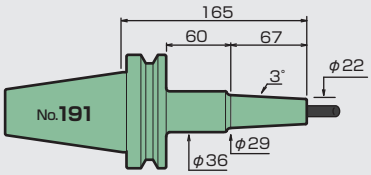
BT50−SLFB10−170−M42



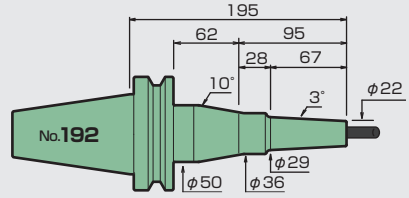
BT50−SLFB10−135−M67



BT50−SLFB10−165−M67

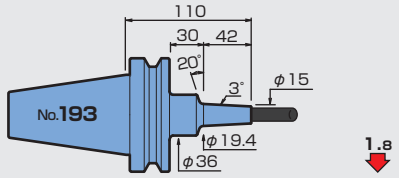


BT50−SLFB10−195−M67

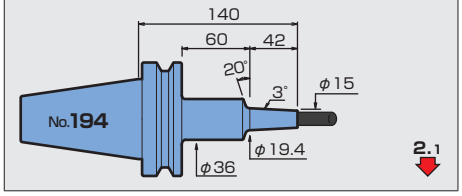


φ12 SLSA t=1.5

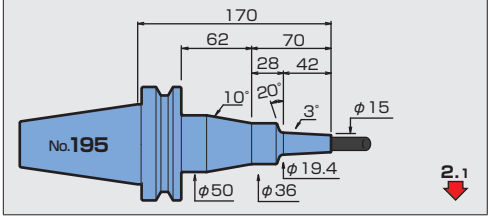
BT50−SLSA12−110−M42



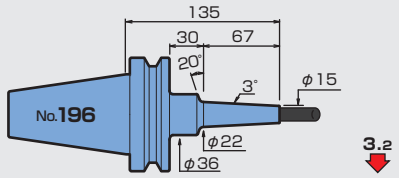
BT50−SLSA12−140−M42



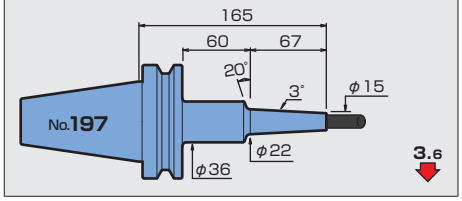
BT50−SLSA12−170−M42



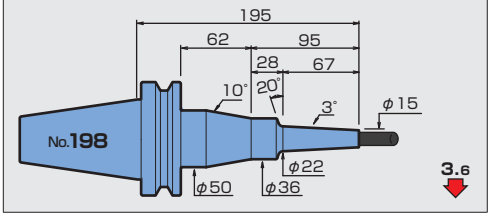
BT50−SLSA12−135−M67



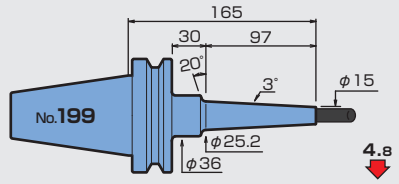
BT50−SLSA12−165−M67



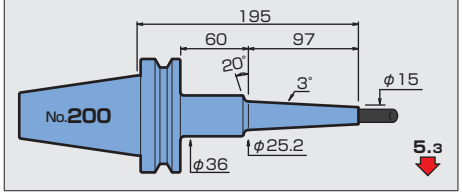
BT50−SLSA12−195−M67



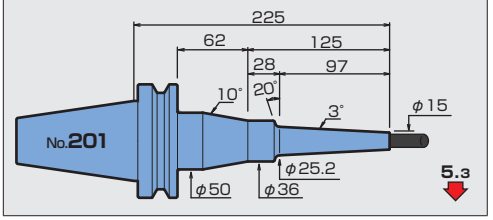
BT50−SLSA12−165−M97



BT50−SLSA12−195−M97

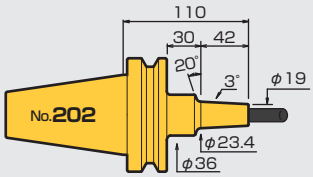


BT50−SLSA12−225−M97

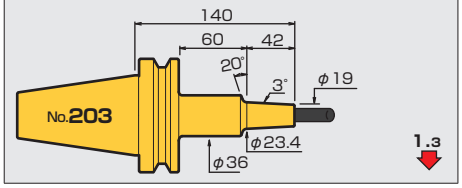


φ12 SLSB t=3.5

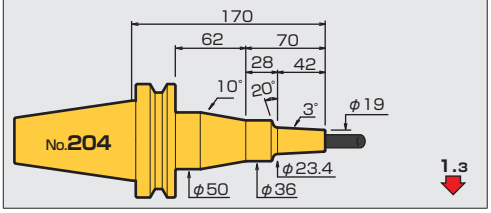
BT50−SLSB12−110−M42



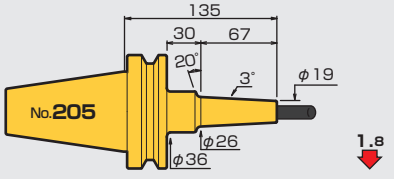
BT50−SLSB12−140−M42



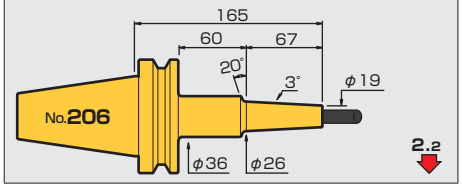
BT50−SLSB12−170−M42



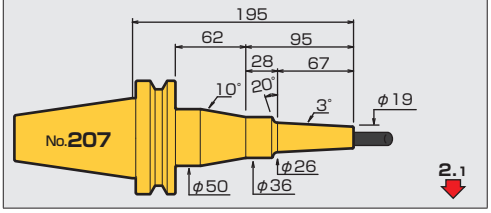
BT50−SLSB12−135−M67



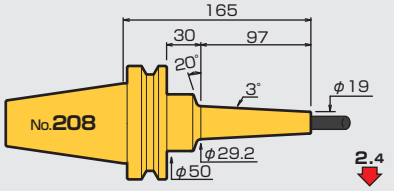
BT50−SLSB12−165−M67



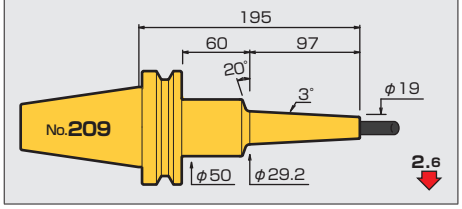
BT50−SLSB12−195−M67



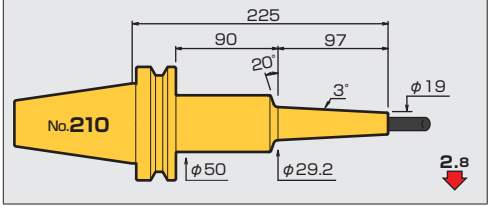
BT50−SLSB12−165−M97



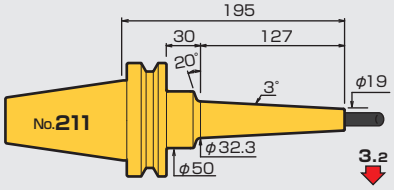
BT50−SLSB12−195−M97



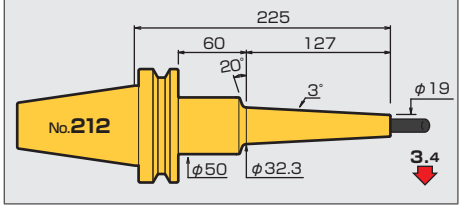
BT50−SLSB12−225−M97



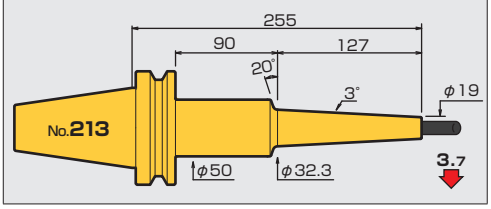
BT50−SLSB12−195−M127



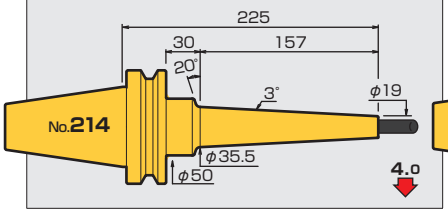
BT50−SLSB12−225−M127



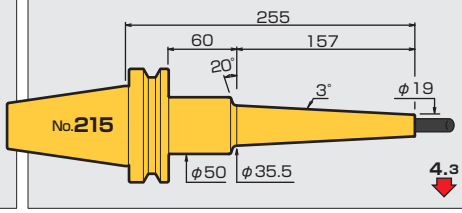
BT50−SLSB12−255−M127



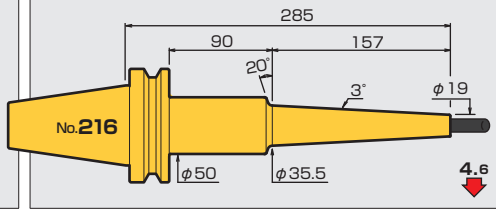
BT50−SLSB12−225−M157



BT50−SLSB12−255−M157

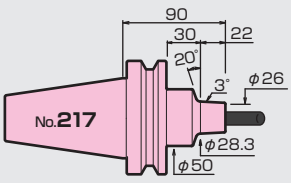


BT50−SLSB12−285−M157

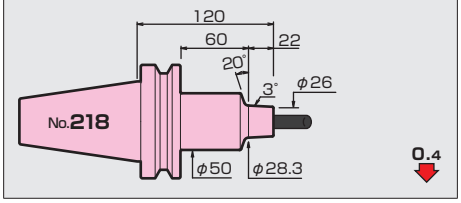


φ12 SLRB t=7

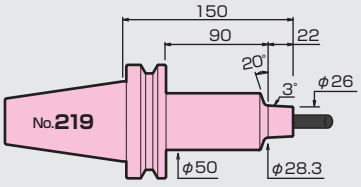
BT50−SLRB12−90−M22



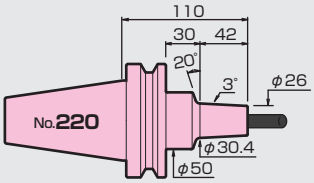
BT50−SLRB12−120−M22



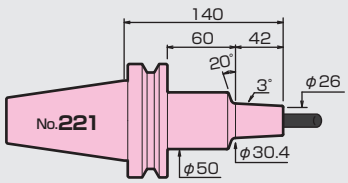
BT50−SLRB12−150−M22



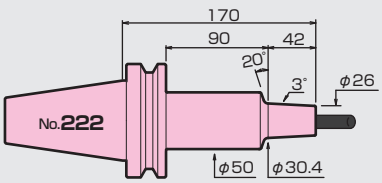
BT50−SLRB12−110−M42



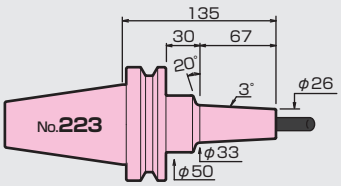
BT50−SLRB12−140−M42



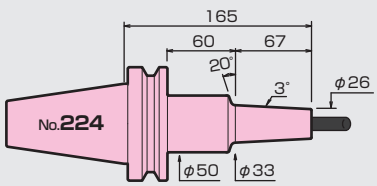
BT50−SLRB12−170−M42



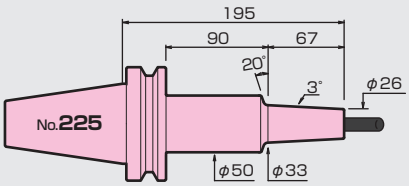
BT50−SLRB12−135−M67



BT50−SLRB12−165−M67

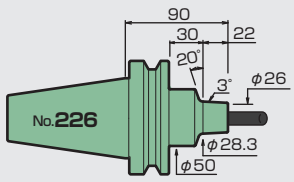


BT50−SLRB12−195−M67

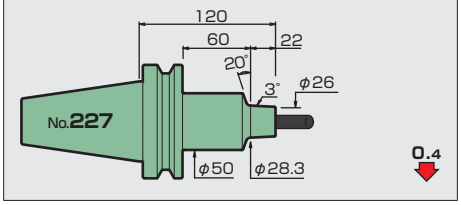


φ12 SLFB t=7

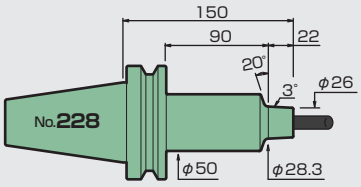
BT50−SLFB12−90−M22



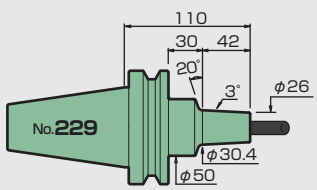
BT50−SLFB12−120−M22



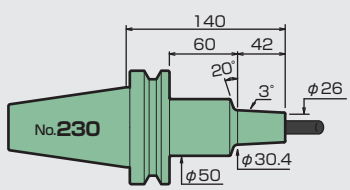
BT50−SLFB12−150−M22



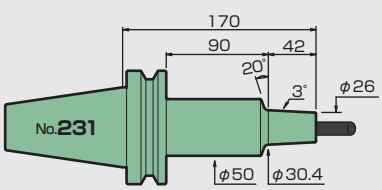
BT50−SLFB12−110−M42



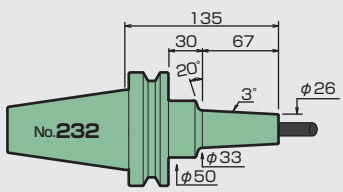
BT50−SLFB12−140−M42



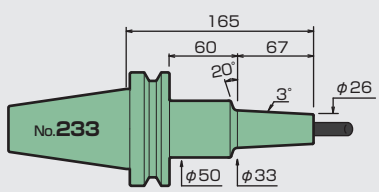
BT50−SLFB12−170−M42



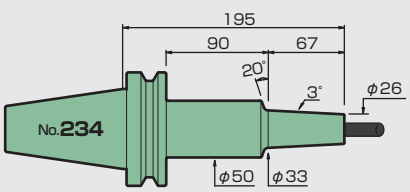
BT50−SLFB12−135−M67



BT50−SLFB12−165−M67

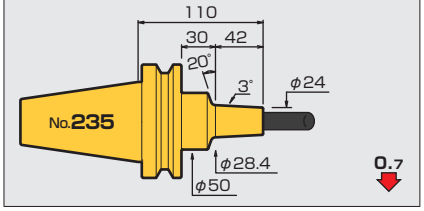


BT50−SLFB12−195−M67

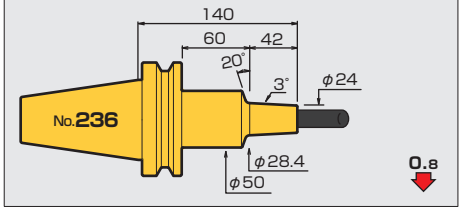


φ16 SLSB t=4

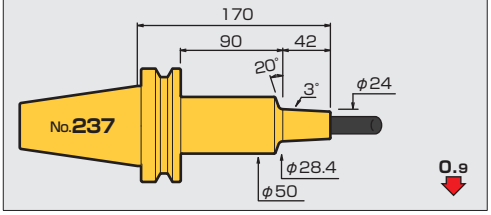
BT50-SLSB16-110-M42



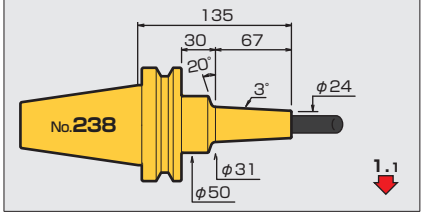
BT50-SLSB16-140-M42



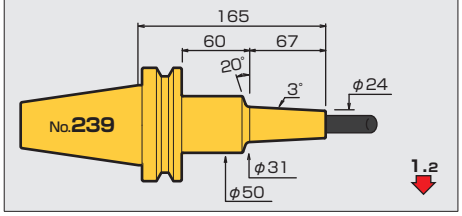
BT50-SLSB16-170-M42



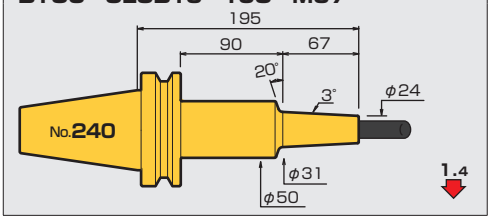
BT50-SLSB16-135-M67



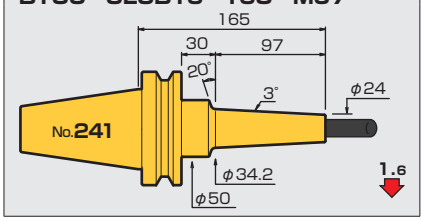
BT50-SLSB16-165-M67



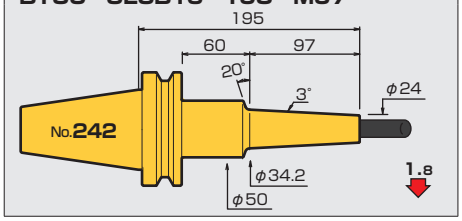
BT50-SLSB16-195-M67



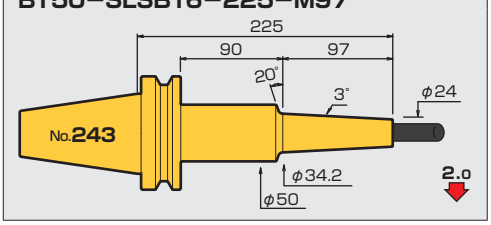
BT50-SLSB16-165-M97



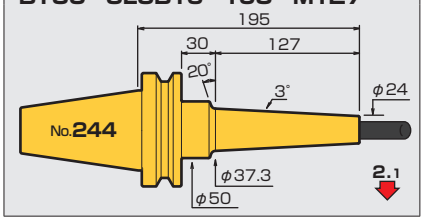
BT50-SLSB16-195-M97



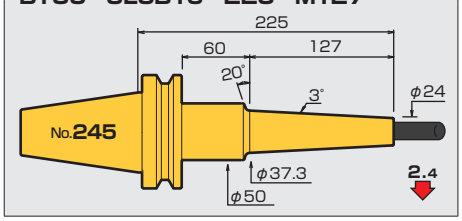
BT50-SLSB16-225-M97



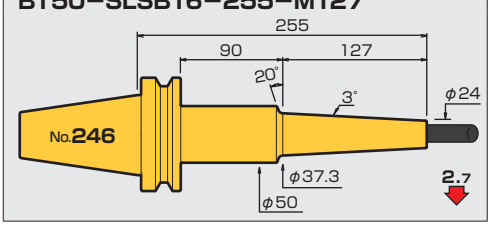
BT50-SLSB16-195-M127



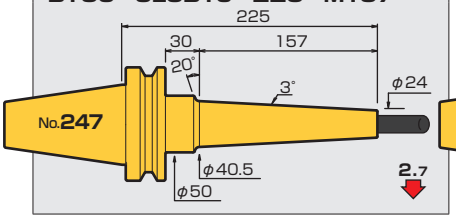
BT50-SLSB16-225-M127



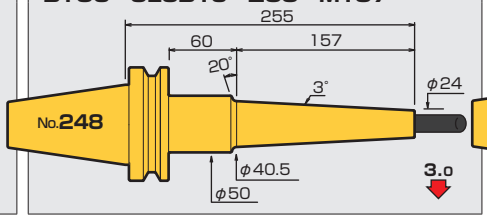
BT50-SLSB16-255-M127



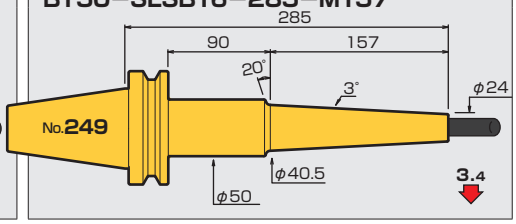
BT50-SLSB16-225-M157



BT50-SLSB16-255-M157

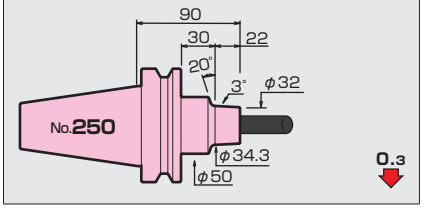


BT50-SLSB16-285-M157

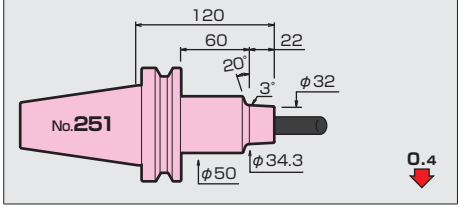


φ16 SLRB t=8

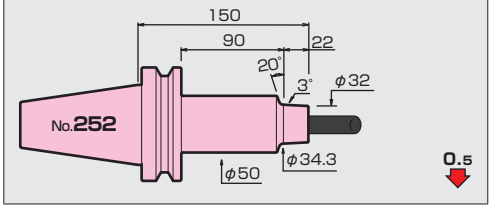
BT50-SLRB16-90-M22



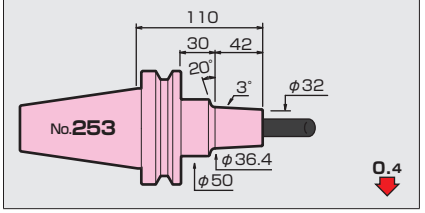
BT50-SLRB16-120-M22



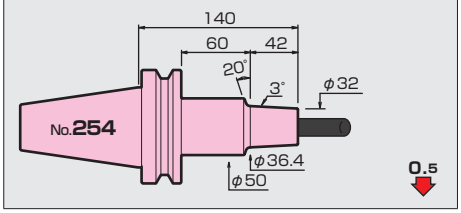
BT50-SLRB16-150-M22



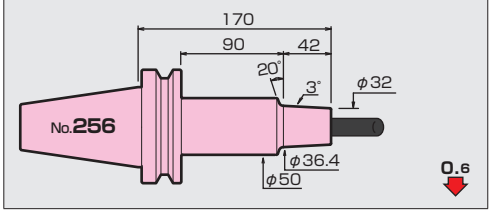
BT50-SLRB16-110-M42



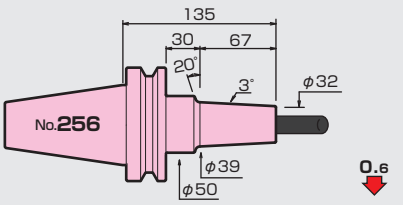
BT50-SLRB16-140-M42



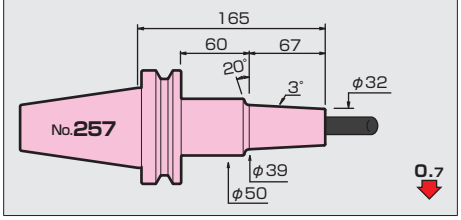
BT50-SLRB16-170-M42



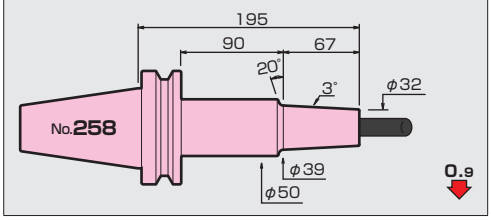
BT50−SLRB16−135−M67



BT50−SLRB16−165−M67

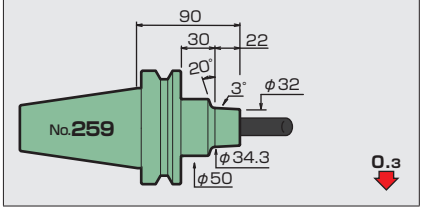


BT50−SLRB16−195−M67

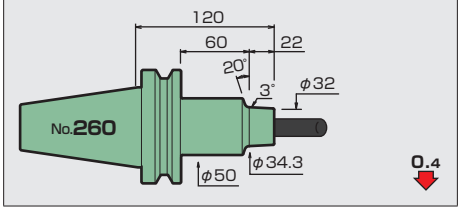


φ16 SLFB t=8

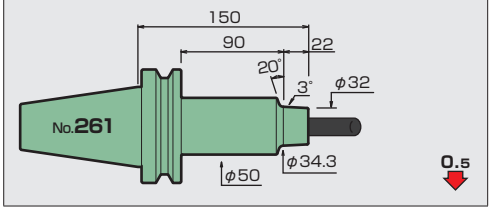
BT50−SLFB16−90−M22



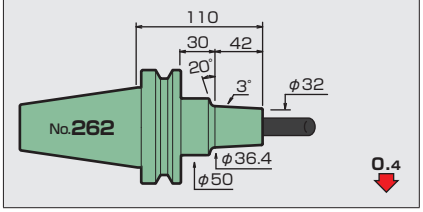
BT50−SLFB16−120−M22



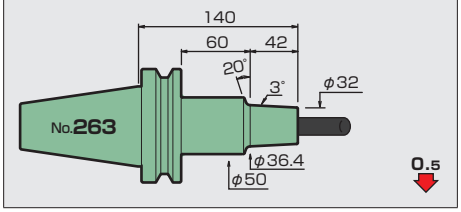
BT50−SLFB16−150−M22



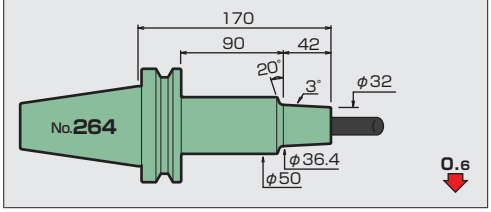
BT50−SLFB16−110−M42



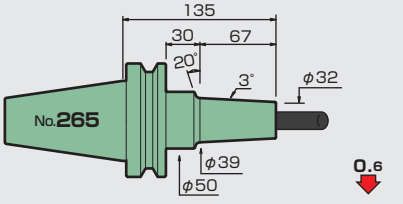
BT50−SLFB16−140−M42



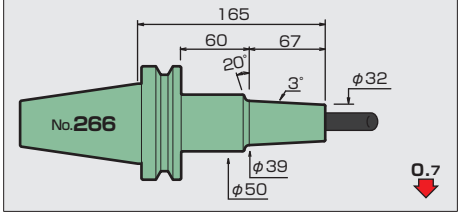
BT50−SLFB16−170−M42



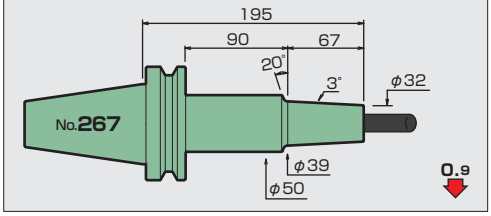
BT50−SLFB16−135−M67



BT50−SLFB16−165−M67

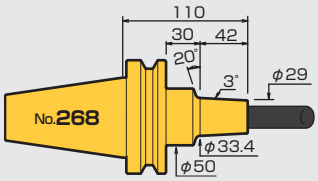


BT50−SLFB16−195−M67

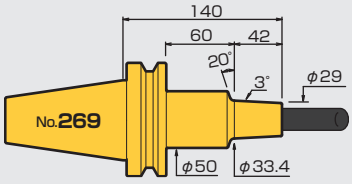


φ20 SLSB t=4.5

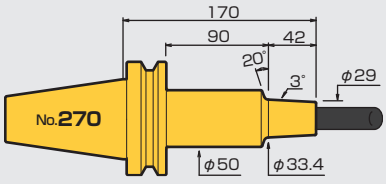
BT50−SLSB20−110−M42



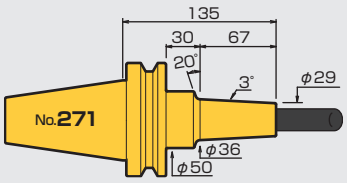
BT50−SLSB20−140−M42



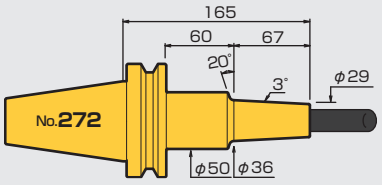
BT50−SLSB20−170−M42



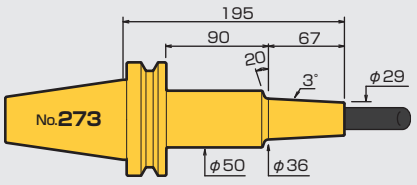
BT50−SLSB20−135−M67



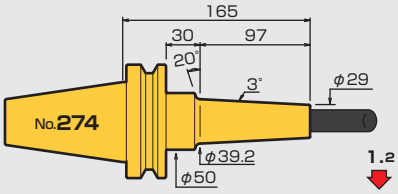
BT50−SLSB20−165−M67



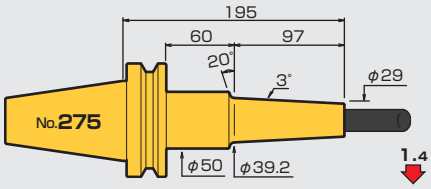
BT50−SLSB20−195−M67



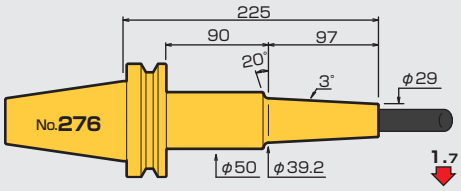
BT50−SLSB20−165−M97



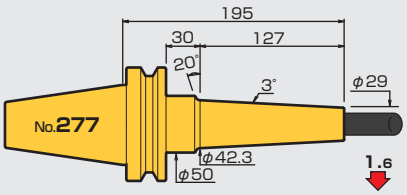
BT50−SLSB20−195−M97



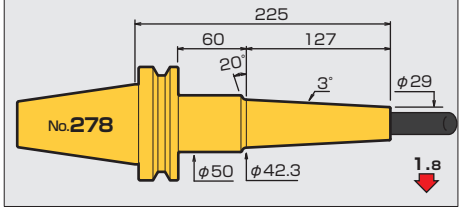
BT50−SLSB20−225−M97



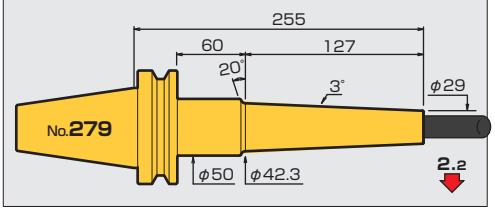
BT50−SLSB20−195−M127



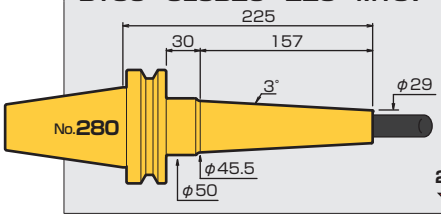
BT50−SLSB20−225−M127



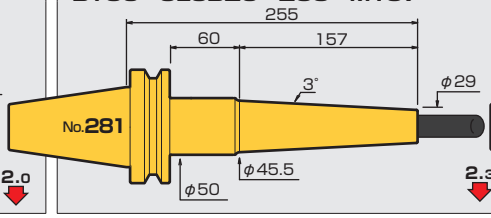
BT50−SLSB20−255−M127



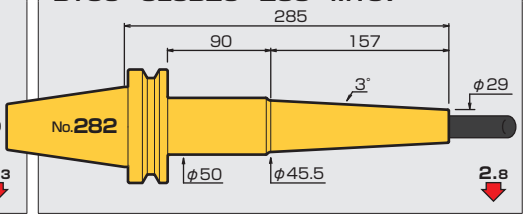
BT50−SLSB20−225−M157



BT50−SLSB20−255−M157

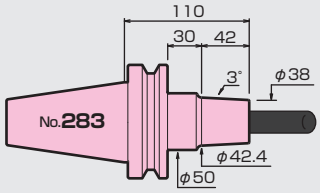


BT50−SLSB20−285−M157

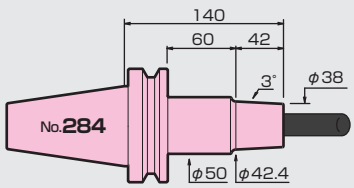


φ20 SLRB t=9

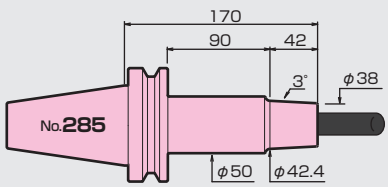
BT50−SLRB20−110−M42



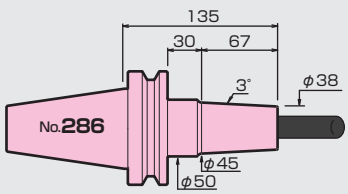
BT50−SLRB20−140−M42



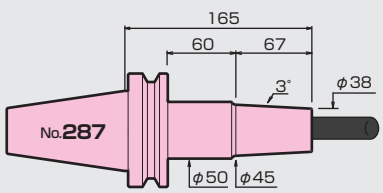
BT50−SLRB20−170−M42



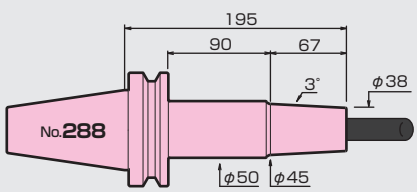
BT50−SLRB20−135−M67



BT50−SLRB20−165−M67

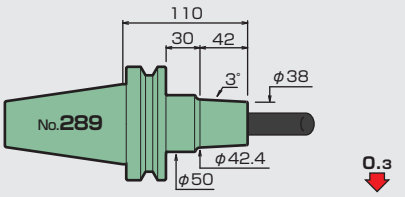


BT50−SLRB20−195−M67

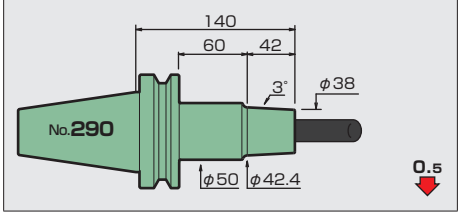


φ20 SLFB t=9

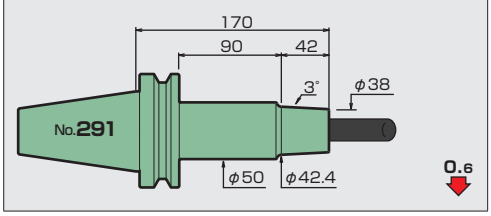
BT50−SLFB20−110−M42



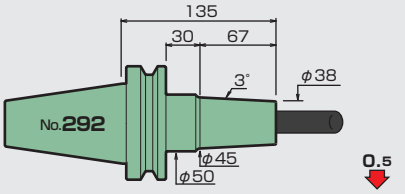
BT50−SLFB20−140−M42



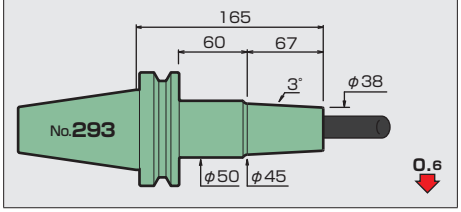
BT50−SLFB20−170−M42



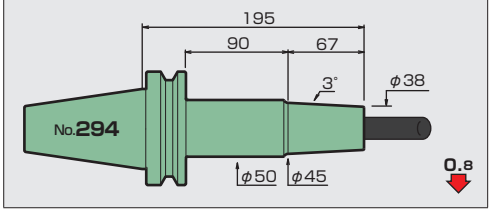
BT50−SLFB20−135−M67



BT50−SLFB20−165−M67

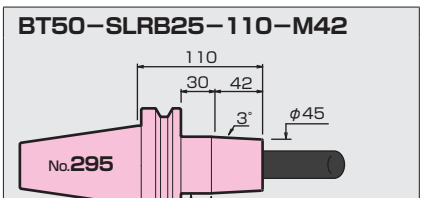


BT50−SLFB20−195−M67

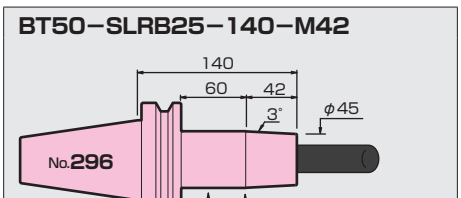


φ25 SLRB t=10

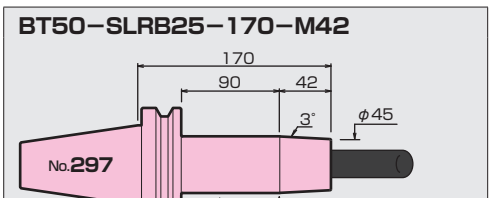
BT50−SLRB25−110−M42



BT50−SLRB25−140−M42

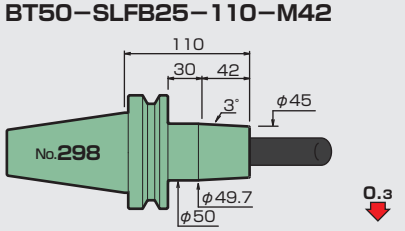


BT50−SLRB25−170−M42

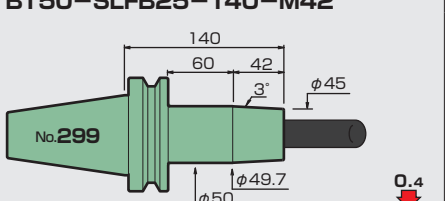


φ25 SLFB t=10

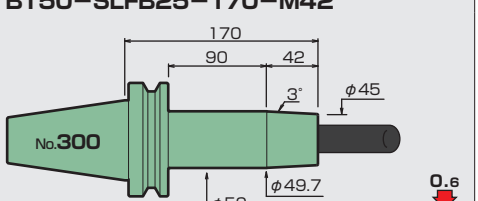
BT50−SLFB25−110−M42



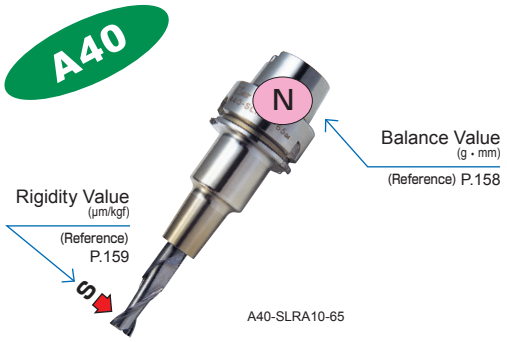
BT50−SLFB25−140−M42

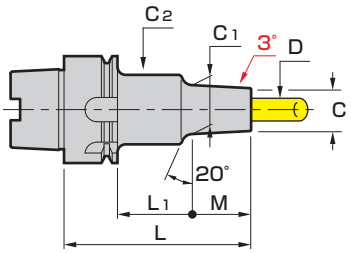


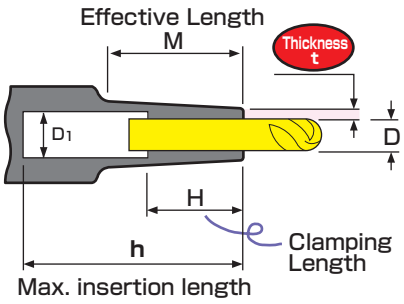
BT50−SLFB25−170−M42



HSK-A40 Code Table



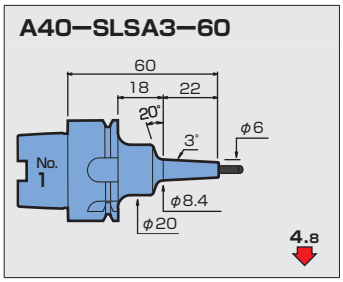


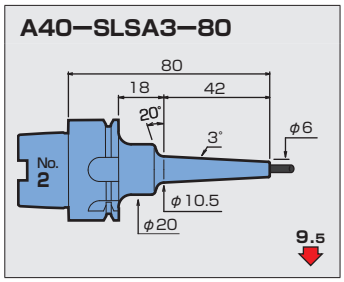


CODE	φD	φC	Thickness t	L	M	L1	φC1	φC2	φD1	H	h	Kg	N	S	Scale model
A40—SLSA 3—60	3	6	1.5	60	22	18	8.4	20	4	9	44	0.2	1.3	4.8	1
—80				80	42		10.5				64		1.4	9.5	2
A40—SLSA3.175—60	3.175	6.175	1.5	60	22	18	8.5	20	4	9	44	0.2	1.4	4.5	3
—80				80	42		10.6				64			9.0	4
A40—SLSA 4—60	4	7	1.5	60	22	18	9.4	20	5	12	44	0.2	1.4	3.8	5
—80				80	42		11.5				64			7.5	6
A40—SLSA 5—60	5	8	1.5	60	22	18	10.4	20	6	15	34	0.2	1.4	3.0	7
—80				80	42		12.5				54		1.5	6.1	8
A40—SLSA 6—60	6	9	1.5	60	22	18	11.4	20	6.6	18	40	0.2	1.4	2.4	9
—80				80	42		13.5		7		54		1.5	5.1	10
—SLRA 6—60		12	3	60	22		14.4	26	6.6		39	0.3	1.4	1.3	11
A40—SLSA 8—70	8	11	1.5	70	22	28	13.4	26	8.6	24	49	0.3	1.6	1.6	12
—90				90	42		15.5				64		1.8	3.5	13
—SLRA 8—60		14	3	60	22	18	16.4				39		1.5	1.0	14
A40—SLSA10—70	10	13	1.5	70	22	28	15.4	26	10.6	30	49	0.3	1.7	1.3	15
—90				90	42		17.5				64		1.9	2.6	16
—SLRA10—65		16	3	65	22	23	18.4				44		1.6	0.9	17
A40—SLRA12—65	12	20	4	65	22	23	22.4	30	12.6	30	44	0.3	1.7	0.7	18
A40—SLRA16—65	16	26	5	65	22	23	28.4	33.5	16.6	32	44	0.4	2.0	0.5	19
A40—SLRA20—70	20	32	6	70	50	—	33.5	—	20.6	38	49	0.4	2.4	0.6	20

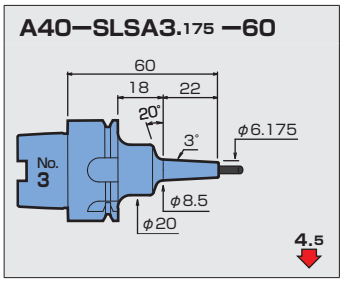
HSK-A40 Scale Model S=1:3

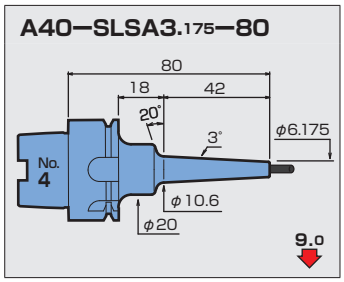
φ3



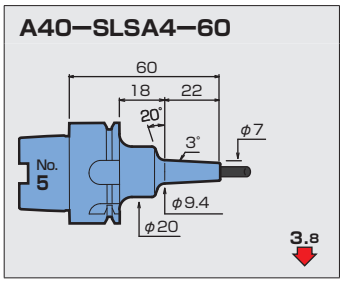


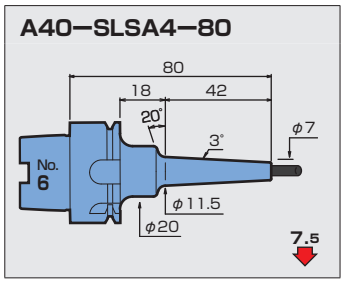
φ3.175



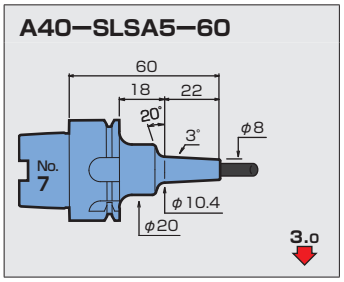


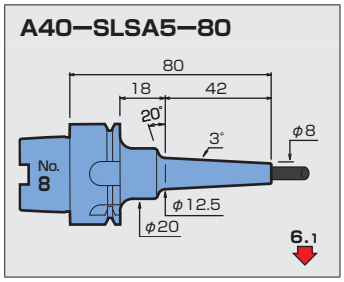
φ4





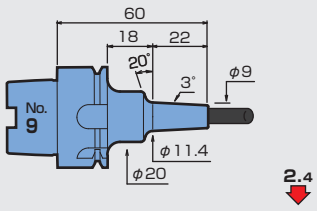
φ5



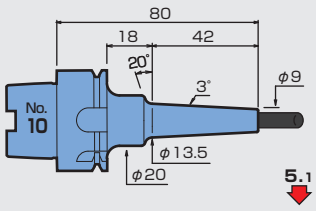


φ6

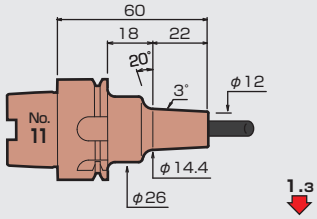
A40–SLSA6–60



A40–SLSA6–80

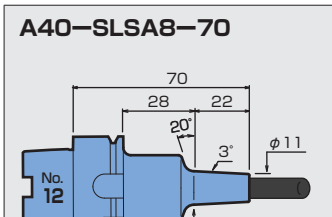


A40–SLRA6–60

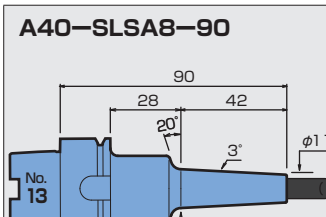


φ8

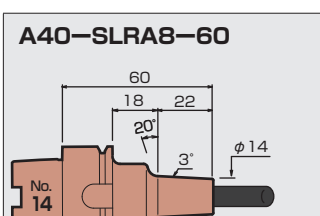
A40–SLSA8–70



A40–SLSA8–90

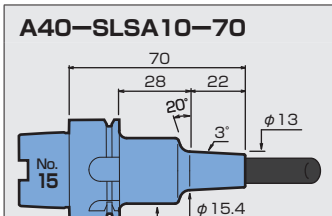


A40–SLRA8–60

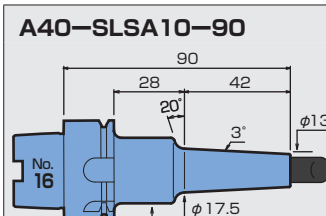


φ10

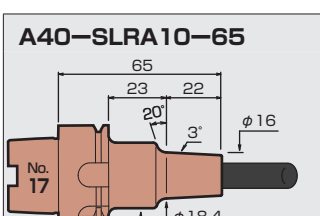
A40–SLSA10–70



A40–SLSA10–90

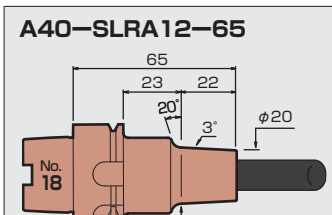


A40–SLRA10–65



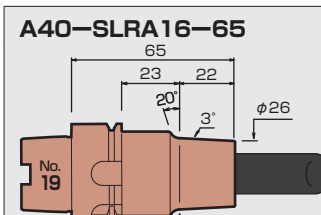
φ12

A40–SLRA12–65



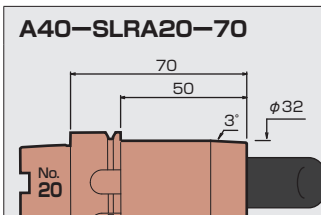
φ16

A40–SLRA16–65



φ20

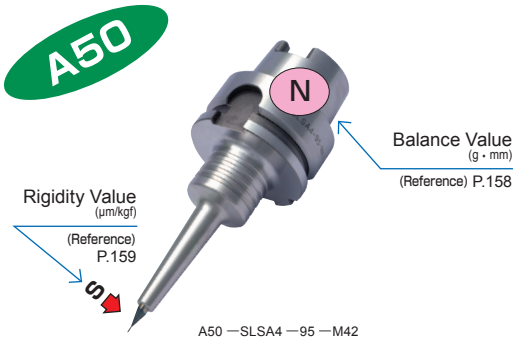
A40–SLRA20–70

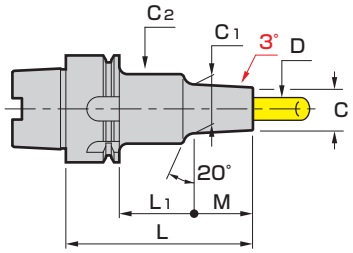


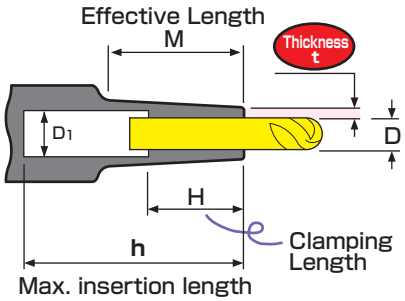
BROTHER
TC-32B QT

MORI SEIKI
NX2000 DCG

HSK-A50 Code Table



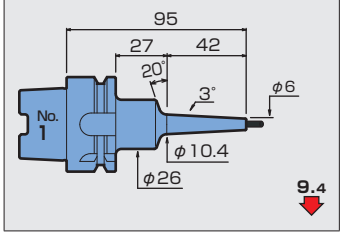




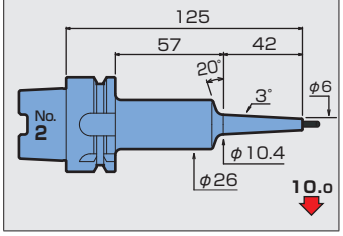
CODE	φD	φC	Thickness t	L	M	L1	φC1	φC2	φD1	H	h	Kg	N	S	Scale model
A50 —SLSA 3— 95—M42	3	6	1.5	95	42	27	10.4	26	4	9	69	0.5	5.8	9.4	1
—125—M42				125		57					100	0.6	6.5	10.0	2
—SLRA 3— 75—M22		7.5	2.25	75	22	27	9.8				49	0.5	6.2	2.8	3
— 95—M42				95	42		11.9				69		6.6	5.4	4
—125—M42				125		57					100	0.6	7.3	6.0	5
A50 —SLSA 4— 95—M42	4	7	1.5	95	42	27	11.4	26	5	12	69	0.5	7.0	7.3	6
—125—M42				125		57					100	0.6	7.7	8.0	7
—SLRA 4— 75—M22		10	3	75	22	27	12.3				49	0.5	6.3	1.7	8
— 95—M42				95	42		14.4				69		7.0	3.1	9
—125—M42				125		57					99	0.6	7.7	3.8	10
A50 —SLSA 6— 95—M42	6	9	1.5	95	42	27	13.4	26	7	18	69	0.5	7.3	4.9	11
—125—M42				125		57					100	0.6	8.0	5.6	12
—SLRB 6— 75—M22		14	4	75	22	27	16.3	36	8		49		7.2	1.0	13
— 95—M42				95	42		18.4				69		8.9	1.6	14
—125—M42				125		57					99	0.8	10.2	1.8	15
A50 —SLSA 8— 95—M42	8	11	1.5	95	42	27	15.4	36	9	24	69	0.6	9.3	3.2	16
—125—M42				125		57					98	0.9	11.8	3.5	17
—SLRB 8— 75—M22		18	5	75	22	27	20.3		10		49	0.6	7.9	0.7	18
— 95—M42				95	42		22.4				69	0.7	10.5	1.1	19
—125—M42				125		57					99	0.9	11.8	1.3	20
A50 —SLSA10— 95—M42	10	13	1.5	95	42	27	17.4	36	11	30	69	0.6	10.7	2.3	21
—125—M42				125		57					98	0.8	12.1	2.6	22
—SLRB10— 75—M22		22	6	75	22	27	24.3		12		49	0.6	8.3	0.6	23
— 95—M42				95	42		26.4				69	0.7	11.9	0.8	24
—125—M42				125		57					98	0.9	13.3	1.1	25
A50M—SLRB12— 75—M22	12	26	7	75	22	27	28.3	49	12.6	30	51	0.8	6.2	0.4	26
— 95—M42				95	42		30.4				71	0.9	6.3	0.6	27
—125—M42				125		57			14		96	1.2	22.9	0.7	28
A50M—SLRB16— 75—M22	16	32	8	75	22	27	34.3	49	16.6	32	51	0.8	6.3	0.3	29
—105—M22				105		57			18		76	1.1	19.0	0.4	30
A50M—SLRB20— 75—M22	20	38	9	75	22	27	40.3	49	20.6	40	51	0.8	6.4	0.3	31
—105—M22				105		57			22		76	1.2	15.1	0.4	32

φ3

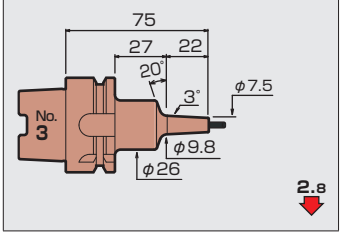
A50–SLSA3–95–M42



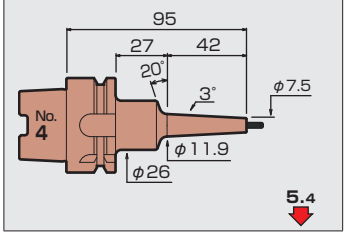
A50–SLSA3–125–M42



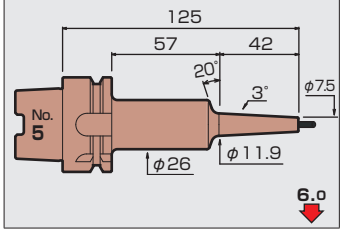
A50–SLRA3–75–M22



A50–SLRA3–95–M42

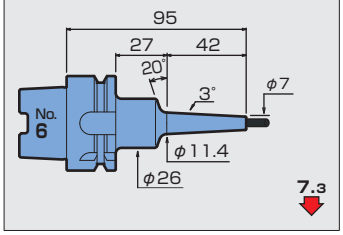


A50–SLRA3–125–M42

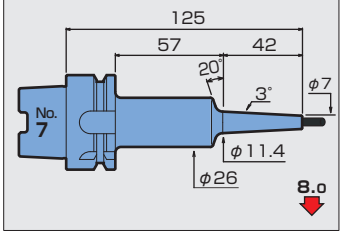


φ4

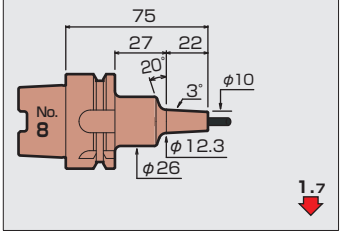
A50–SLSA4–95–M42



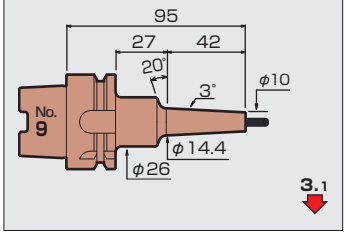
A50–SLSA4–125–M42



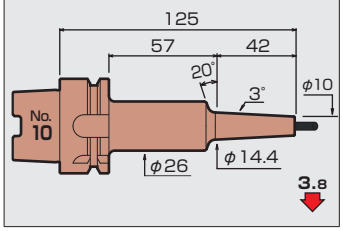
A50–SLRA4–75–M22



A50–SLRA4–95–M42

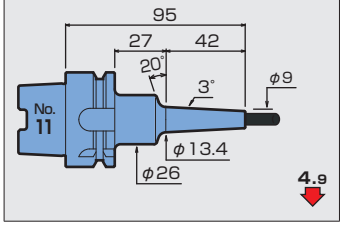


A50–SLRA4–125–M42



φ6

A50–SLSA6–95–M42



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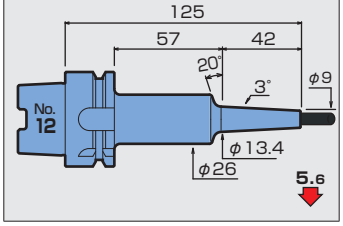
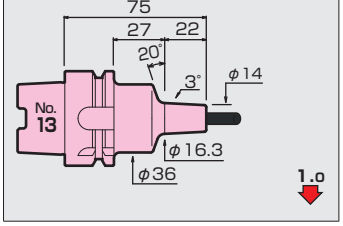
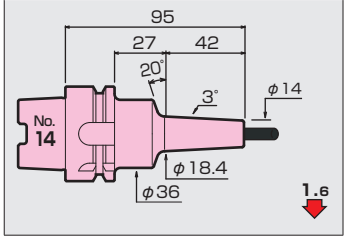


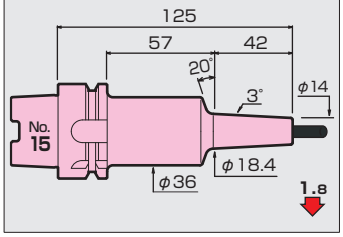
A50–SLRB6–75–M22



A50–SLRB6–95–M42

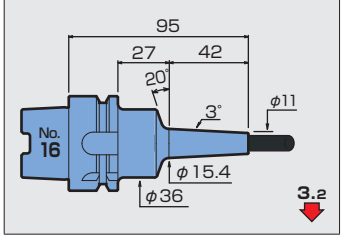


A50–SLRB6–125–M42

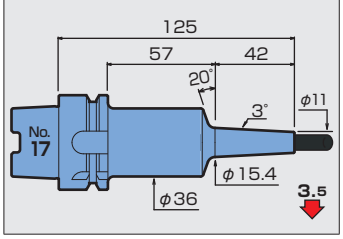


φ8

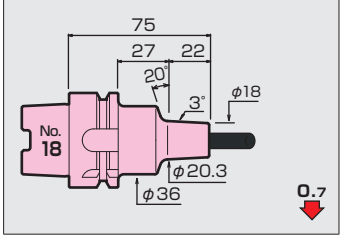
A50—SLSA8—95—M42



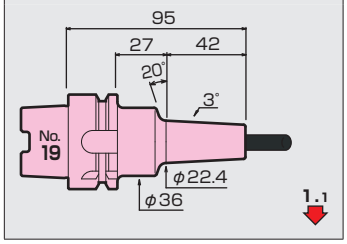
A50—SLSA8—125—M42



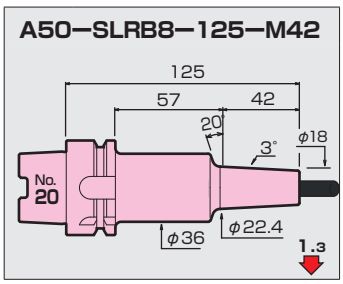
A50—SLRB8—75—M22



A50—SLRB8—95—M42

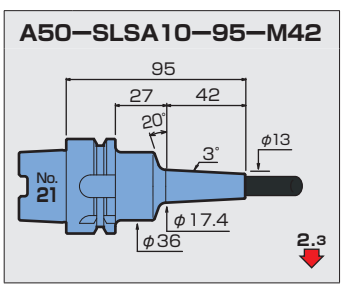


A50—SLRB8—125—M42

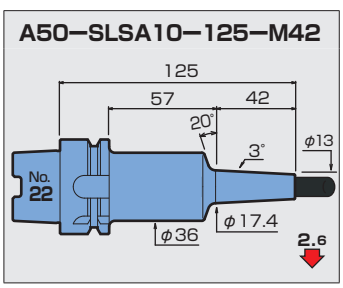


φ10

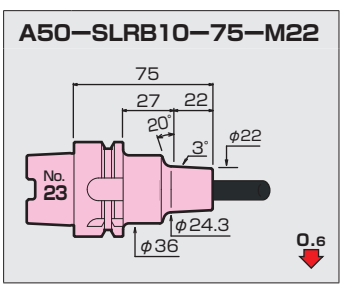
A50—SLSA10—95—M42



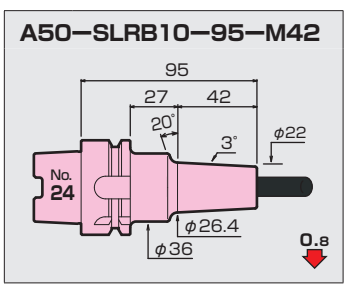
A50—SLSA10—125—M42



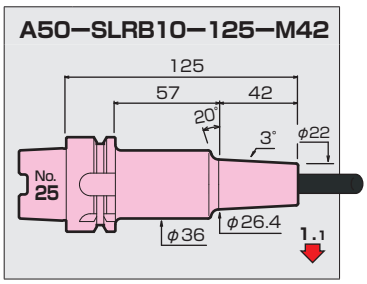
A50—SLRB10—75—M22



A50—SLRB10—95—M42

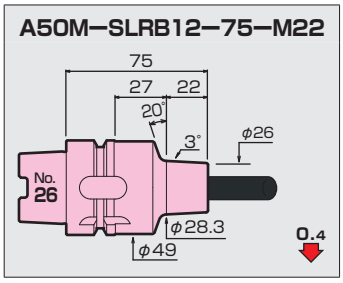


A50—SLRB10—125—M42

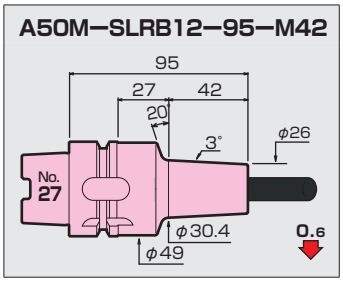


φ12

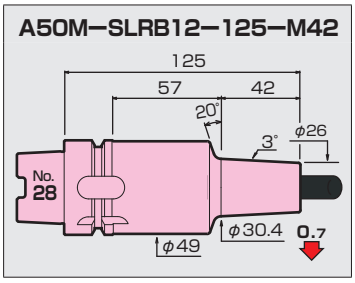
A50M—SLRB12—75—M22



A50M—SLRB12—95—M42

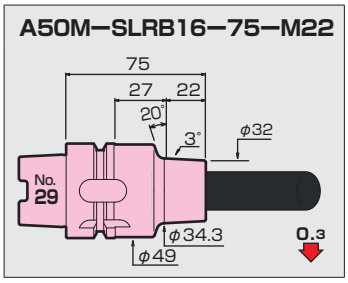


A50M—SLRB12—125—M42

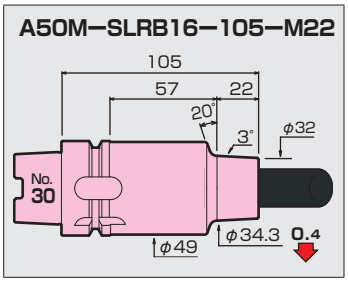


φ16

A50M−SLRB16−75−M22

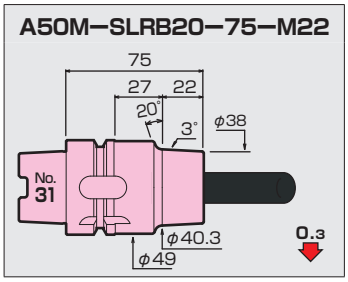


A50M−SLRB16−105−M22

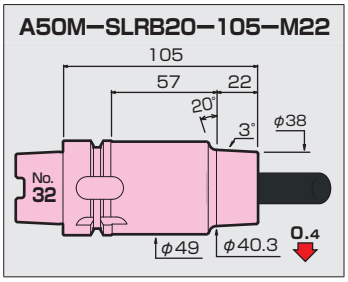


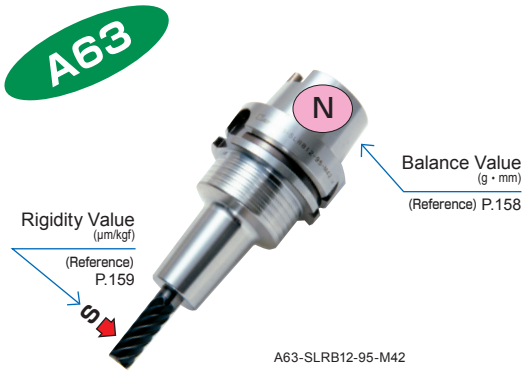
φ20

A50M−SLRB20−75−M22



A50M−SLRB20−105−M22





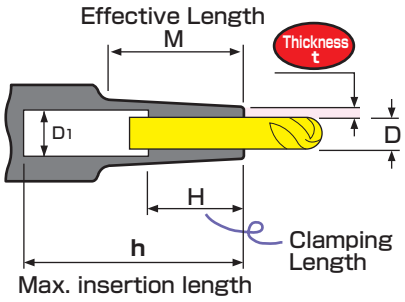


Fig.1

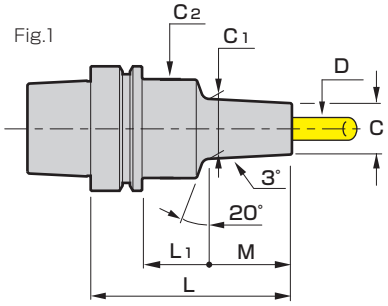
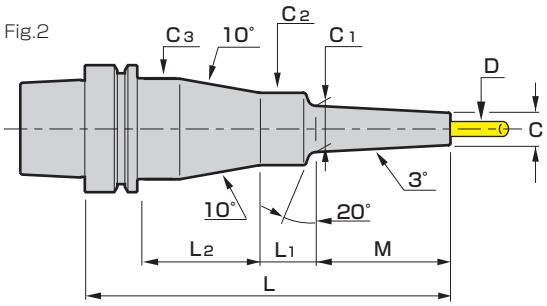


Fig.2



CODE	Fig.	φD	φC	Thickness t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Scale model
A63−SLSA 3− 95−M 42	1	3	6		95	42	27	—	10.4	26	—	4	9	70	0.7	8.1	9.3	1
−120−M 67					120	67			13					95	0.8	9.2	14.9	4
−125−M 42					125	42	57		10.4					100	0.9	8.2	9.6	2
−150−M 67					150	67			13					125		9.3	15.9	5
−M 97				1.5		97	27		16.2						0.8	10.5	20.7	7
−155−M 42	2				155	42	33	54	10.4		40			130	1.2	8.4	9.9	3
−180−M 67					180	67			13					155		9.6	15.8	6
−M 97	1					97	57	—	16.2		—				0.9	10.6	22.2	8
−210−M 97	2				210		33	54			40			185	1.2	10.8	22.1	9
−SLRA 3− 75−M 22	1	3	7.5		75	22	27	—	9.8	26	—	5	9	50	0.7	8.4	2.8	10
− 95−M 42					95	42			11.9					70	0.8	8.9	5.4	13
−105−M 22					105	22	57		9.8					80	0.9	8.6	3.2	11
−120−M 67					120	67	27		14.5					95	0.8	9.6	8.9	16
−125−M 42					125	42	57		11.9					100	0.9	9.0	6.0	14
−135−M 22	2				135	22	33	54	9.8		40			110	1.1	8.8	3.2	12
−150−M 67	1				150	67	57	—	14.5		—			125	0.9	9.8	9.8	17
−M 97				2.25		97	27		17.7						0.8	10.6	12.9	19
−155−M 42	2				155	42	33	54	11.9		40			130	1.2	9.2	6.0	15
−180−M 67					180	67			14.5					155		10.0	9.8	18
−M 97	1					97	57	—	17.7		—				0.9	10.8	14.4	20
−M127						127	27		20.8	36					1.0	12.6	15.7	22
−210−M 97	2				210	97	33	54	17.7	26	40			185	1.2	11.0	14.3	21
−M127	1					127	57	—	20.8	36	—					12.8	16.2	23
−240−M127	2				240		28	59			50			215	1.7	13.2	16.3	24
−SLFB 3− 75−M 22	1	3	9.5		75	22	27	—	11.8	26	—	5	9	50	0.7	8.1	1.9	25
− 95−M 42					95	42			13.9					70	0.8	8.5	3.3	28
−105−M 22					105	22	57		11.8					80	0.9	8.2	2.3	26
−120−M 67					120	67	27		16.5					95	0.8	9.7	5.3	31
−125−M 42				3.25	125	42	57		13.9					100	0.9	8.7	3.8	29
−135−M 22	2				135	22	33	54	11.8		40			110	1.2	8.5	2.3	27
−150−M 67	1				150	67	57	—	16.5		—			125	0.9	9.8	6.3	32
−155−M 42	2				155	42	33	54	13.9		40			130	1.2	8.9	3.8	30
−180−M 67					180	67			16.5					155		10.0	6.3	33

A63

CODE	Fig.	φD	φC	Thickness t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Scale model
A63−SLSA 4− 95−M 42	1	4	7		95	42	27	—	11.4	26	—	5	12	70	0.8	9.2	7.3	34
−120−M 67					120	67			14					95			11.9	37
−125−M 42					125	42	57		11.4					100	0.9	9.4	7.9	35
−150−M 67					150	67			14					125			12.8	38
−M 97				1.5		97	27		17.2						0.8	10.6	16.7	40
−155−M 42	2				155	42	33	54	11.4		40			130	1.2	9.6	7.9	36
−180−M 67					180	67			14					155			12.8	39
−M 97	1					97	57	—	17.2		—				0.9	10.8	18.2	41
−210−M 97	2				210		33	54			40			185	1.2	11.0	18.1	42
−SLRA 4− 75−M 22	1	4	10		75	22	27	—	12.3	26	—	6	12	50	0.7	8.6	1.7	43
− 95−M 42					95	42			14.4					70	0.8	9.2	3.1	46
−105−M 22					105	22	57		12.3					80	0.9	8.7	2.1	44
−120−M 67					120	67	27		17					95	0.8	10.3	5.1	49
−125−M 42					125	42	57		14.4					100	0.9	9.3	3.7	47
−135−M 22	2				135	22	33	54	12.3		40			110	1.2	8.9	2.1	45
−150−M 67	1				150	67	57	—	17		—			125	0.9	10.4	6.1	50
−M 97				3		97	27		20.2							11.7	7.7	52
−155−M 42	2				155	42	33	54	14.4		40			130	1.2	9.6	3.7	48
−180−M 67					180	67			17					155		10.7	6.1	51
−M 97	1					97	57	—	20.2		—				1.0	11.8	9.2	53
−M127						127	27		23.3	36						14.8	9.3	55
−210−M 97	2				210	97	33	54	20.2	26	40			185	1.3	12.1	9.1	54
−M127	1					127	57	—	23.3	36	—				1.2	15.1	9.9	56
−240−M127	2				240		27	59			50			215	1.7	15.4		57
−SLFB 4− 75−M 22	1	4	12		75	22	27	—	14.3	26	—	6	12	50	0.8	8.4	1.3	58
− 95−M 42					95	42			16.4					70		9.0	2.2	61
−105−M 22					105	22	57		14.3					80	0.9	8.5	1.7	59
−120−M 67					120	67	27		19					95	0.8	10.3	3.5	64
−125−M 42				4	125	42	57		16.4					100	0.9	9.1	2.8	62
−135−M 22	2				135	22	37	54	14.3		40			110	1.2	8.7	1.7	60
−150−M 67	1				150	67	57	—	19		—			125	0.9	10.4	4.5	65
−155−M 42	2				155	42	33	54	16.4		40			130	1.2	9.4	2.8	63
−180−M 67					180	67			19					155		10.6	4.5	66
A63−SLSA 6− 95−M 42	1	6	9		95	42	27	—	13.4	26	—	7	18	70	0.8	9.5	4.8	67
−120−M 67					120	67			16					95		11.1	7.9	70
−125−M 42					125	42	57		13.4					100	0.9	9.7	5.5	68
−150−M 67					150	67			16					125		11.2	9.1	71
−M 97				1.5		97	27		19.2	36						13.4	11.0	73
−155−M 42	2				155	42	33	54	13.4	26	40			130	1.2	9.9	5.5	69
−180−M 67					180	67			16					155		11.5	9.0	72
−M 97	1					97	57	—	19.2	36	—				1.1	13.6	11.4	74
−210−M 97	2				210		28	59			50			185	1.6	14.0	11.5	75
−SLSB 6− 95−M 42	1	6	10		95	42	27	—	14.4	26	—	8	18	70	0.8	10.5	3.8	76
−120−M 67					120	67			17					95		12.6	6.3	79
−125−M 42					125	42	57		14.4					100	0.9	10.6	4.5	77
−150−M 67					150	67			17					125		12.7	7.4	80
−M 97						97	27		20.2	36						15.4	8.9	82
−155−M 42	2				155	42	34	54	14.4	26	40			130	1.2	10.9	4.5	78
−180−M 67					180	67			17					155		12.9	7.4	81
−M 97	1			2		97	57	—	20.2	36	—				1.1	15.7	9.3	83
−M127						127	27		23.3						1.0	17.9	11.4	85
−210−M 97	2				210	97	28	59	20.2		50			185	1.6	16.0	9.3	84
−M127	1					127	57	—	23.3		—				1.2	18.2	12.0	86
−M157						157	27		26.5						1.1	20.4	13.6	88
−240−M127	2				240	127	28	59	23.3		50			215	1.7	18.5	12.1	87
−M157	1					157	57	—	26.5		—				1.3	20.7	14.5	89
−270−M157	2				270		28	59			50			245	1.8	21.0		90

CODE	Fig.	φD	φC	Thickness t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Scale model
A63−SLRB 6− 75−M 22	1	6	14		75	22	27	—	16.3	36	—	8	18	50	0.8	9.3	0.9	91
− 95−M 42					95	42			18.4					70	0.9	10.9	1.6	94
−105−M 22					105	22	57		16.3					80	1.0	9.5	1.1	92
−120−M 67					120	67	27		21					95	0.9	13.0	2.5	97
−125−M 42				4	125	42	57		18.4					100	1.1	11.2	1.8	95
−135−M 22	2				135	22	28	59	16.3		50			110	1.6	9.9	1.1	93
−150−M 67	1				150	67	57	—	21		—			125	1.1	13.2	2.8	98
−155−M 42	2				155	42	28	59	18.4		50			130	1.6	11.5	1.8	96
−180−M 67					180	67			21					155		13.6	2.9	99
−SLFB 6− 75−M 22	1	6	14		75	22	27	—	16.3	36	—	8	18	50	0.8	9.3	0.9	100
− 95−M 42					95	42			18.4					70	0.9	10.9	1.6	103
−105−M 22					105	22	57		16.3					80	1.0	9.5	1.1	101
−120−M 67					120	67	27		21					95	0.9	13.0	2.5	106
−125−M 42				4	125	42	57		18.4					100	1.1	11.2	1.8	104
−135−M 22	2				135	22	28	59	16.3		50			110	1.6	9.9	1.1	102
−150−M 67	1				150	67	57	—	21		—			125	1.1	13.2	2.8	107
−155−M 42	2				155	42	28	59	18.4		50			130	1.6	11.5	1.8	105
−180−M 67					180	67			21					155		13.6	2.9	108
A63−SLSA 8− 95−M 42	1	8	11		95	42	27	—	15.4	36	—	9	24	70	0.8	11.4	3.2	109
−120−M 67					120	67			18					95	0.9	14.0	5.4	112
−125−M 42					125	42	57		15.4					100	1.0	11.6	3.4	110
−150−M 67					150	67			18					125	1.1	14.2	5.7	113
−M 97				1.5		97	27		21.2						0.9	17.1	7.8	115
−155−M 42	2				155	42	28	59	15.4		50			130	1.5	12.0	3.4	111
−180−M 67					180	67			18					155	1.6	14.6	5.7	114
−M 97	1					97	57	—	21.2		—				1.1	17.4	8.3	116
−210−M 97	2				210		28	59			50			185	1.6	17.7		117
−SLSB 8− 95−M 42	1	8	13		95	42	27	—	17.4	36	—	10	24	70	0.8	12.5	2.1	118
−120−M 67					120	67			20					95	0.9	15.7	3.5	121
−125−M 42					125	42	57		17.4					100	1.1	12.7	2.3	119
−150−M 67					150	67			20					125		15.9	3.9	122
−M 97						97	27		23.2						1.0	19.5	5.2	124
−155−M 42	2				155	42	28	59	17.4		50			130	1.6	13.1	2.3	120
−180−M 67					180	67			20					155		16.3	3.9	123
−M 97	1			2.5		97	57	—	23.2		—				1.2	19.8	5.7	125
−180−M127						127	27		26.3						1.1	23.4	7.0	127
−210−M 97	2				210	97		59	23.2		50			185	1.7	20.2	5.7	126
−M127	1					127	57	—	26.3		—				1.3	23.7	7.7	128
−M157						157	27		29.5						1.2	27.3	8.5	130
−240−M127	2				240	127	28	59	26.3		50			215	1.8	24.0	7.7	129
−M157	1					157	57	—	29.5		—				1.4	27.5	9.4	131
−270−M157	2				270		28	59			50			245	1.9	27.9	9.5	132
−SLRB 8− 75−M 22	1	8	18		75	22	27	—	20.3	36	—	10	24	50	0.9	10.0	0.7	133
− 95−M 42					95	42			22.4					70		12.5	1.0	136
−105−M 22					105	22	57		20.3					80	1.1	10.2	0.8	134
−120−M 67					120	67	27		25					95	1.0	15.7	1.6	139
−125−M 42				5	125	42	57		22.4					100	1.1	12.8	1.2	137
−135−M 22	2				135	22	28	59	20.3		50			110	1.6	10.6	0.8	135
−150−M 67	1				150	67	57	—	25		—			125	1.2	16.0	1.9	140
−155−M 42	2				155	42	28	59	22.4		50			130	1.6	13.2	1.3	138
−180−M 67					180	67			25					155	1.7	16.4	2.0	141
−SLFB 8− 75−M 22	1	8	18		75	22	27	—	20.3	36	—	10	24	50	0.9	10.0	0.7	142
− 95−M 42					95	42			22.4					70		12.5	1.0	145
−105−M 22					105	22	57		20.3					80	1.1	10.2	0.8	143
−120−M 67					120	67	27		25					95	1.0	15.7	1.6	148
−125−M 42				5	125	42	57		22.4					100	1.1	12.8	1.2	146
−135−M 22	2				135	22	28	59	20.3		50			110	1.6	10.6	0.8	144
−150−M 67	1				150	67	57	—	25		—			125	1.2	16.0	1.9	149
−155−M 42	2				155	42	28	59	22.4		50			130	1.6	13.2	1.3	147
−180−M 67					180	67			25					155	1.7	16.4	2.0	150

A63

CODE	Fig.	φD	φC	Thickness t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Scale model
A63−SLSA10− 95−M 42	1	10	13		95	42	27	—	17.4	36	—	11	30	68	0.8	12.8	2.3	151
−120−M 67					120	67			20					93	0.9	16.6	4.0	154
−125−M 42					125	42	57		17.4					98	1.0	13.0	2.5	152
−150−M 67					150	67			20					123	1.1	16.9	4.3	155
−M 97				1.5		97	27		23.2						1.0	21.3	5.9	157
−155−M 42	2				155	42	28	59	17.4		50			128	1.6	13.4	2.5	153
−180−M 67					180	67			20					153		17.3	4.4	156
−M 97	1					97	57	—	23.2		—				1.2	21.6	6.4	158
−210−M 97	2				210		28	59			50			183	1.7	21.9	6.5	159
−SLSB10− 95−M 42	1	10	16		95	42	27	—	20.4	36	—	12	30	68	0.9	13.9	1.4	160
−120−M 67					120	67			23					93		18.5	2.4	163
−125−M 42					125	42	57		20.4					98	1.1	14.2	1.6	161
−150−M 67					150	67			23					123		18.8	2.7	164
−M 97						97	27		26.2						1.0	24.0	3.5	166
−155−M 42	2				155	42	28	59	20.4		50			128	1.6	14.6	1.7	162
−180−M 67					180	67			23					153		19.2	2.7	165
−M 97	1			3		97	57	—	26.2		—				1.2	24.3	4.1	167
−M127						127	27		29.3	50					1.3	30.2	4.4	169
−210−M 97	2				210	97	28	59	26.2	36	50			180	1.7	24.7	4.1	168
−M127	1					127	57	—	29.3	50	—				1.6	31.0	4.4	170
−M157						157	27		32.5						1.4	35.7	5.5	172
−240−M127					240	127	87		29.3					215	2.0	31.8	4.9	171
−M157						157	57		32.5						1.8	36.5	5.8	173
−270−M157					270		87							245	2.1	37.4	6.1	174
−SLRB10− 75−M 22	1	10	22		75	22	27	—	24.3	36	—	12	30	48	0.9	10.3	0.5	175
− 95−M 42					95	42			26.4					68		14.0	0.8	178
−105−M 22					105	22	57		24.3					78	1.1	10.6	0.7	176
−120−M 67					120	67	27		29					93	1.0	18.6	1.2	181
−125−M 42				6	125	42	57		26.4					98	1.2	14.2	1.0	179
−135−M 22	2				135	22	28	59	24.3		50			108	1.6	10.9	0.7	177
−150−M 67	1				150	67	57	—	29		—			123	1.3	18.9	1.5	182
−155−M 42	2				155	42	28	59	26.4		50			128	1.7	14.6	1.0	180
−180−M 67					180	67			29					153	1.8	19.2	1.6	183
−SLFB10− 75−M 22	1	10	22		75	22	27	—	24.3	36	—	12	30	48	0.9	10.3	0.5	184
− 95−M 42					95	42			26.4					68		14.0	0.8	187
−105−M 22					105	22	57		24.3					78	1.1	10.6	0.7	185
−120−M 67					120	67	27		29					93	1.0	18.6	1.2	190
−125−M 42				6	125	42	57		26.4					98	1.2	14.2	1.0	188
−135−M 22	2				135	22	28	59	24.3		50			108	1.6	10.9	0.7	186
−150−M 67	1				150	67	57	—	29		—			123	1.3	18.9	1.5	191
−155−M 42	2				155	42	28	59	26.4		50			128	1.7	14.6	1.0	189
−180−M 67					180	67			29					153	1.8	19.2	1.6	192
A63−SLSA12− 95−M 42	1	12	15		95	42	27	—	19.4	36	—	13	30	68	0.8	15.2	1.8	193
−120−M 67					120	67			22					93	0.9	20.6	3.2	196
−125−M 42					125	42	57		19.4					98	1.0	15.4	2.1	194
−150−M 67					150	67			22					123	1.1	20.8	3.6	197
−M 97				1.5		97	27		25.2							27.5	4.8	199
−155−M 42	2				155	42	28	59	19.4		50			128	1.6	15.8	2.1	195
−180−M 67					180	67			22					153		21.2	3.6	198
−M 97	1					97	57	—	25.2		—				1.3	27.8	5.3	200
−210−M 97	2				210		28	59			50			183	1.8	28.2		201

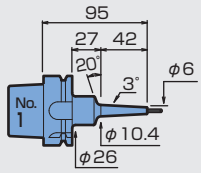
CODE	Fig.	φD	φC	Thickness t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Scale model
A63−SLSB12− 95−M 42	1	12	19		95	42	27	—	23.4	36	—	14	30	68	0.9	16.5	1.1	202
−120−M 67					120	67			26					93	1.0	22.8	1.8	205
−125−M 42					125	42	57		23.4					98	1.1	16.8	1.3	203
−150−M 67					150	67			26					123	1.2	23.1	2.1	206
−M 97						97	27		29.2	50						30.9	2.4	208
−155−M 42	2				155	42	28	59	23.4	36	50			128	1.6	17.2	1.4	204
−180−M 67					180	67			26					153	1.7	23.4	2.2	207
−M 97	1			3.5		97	57	—	29.2	50	—			150	1.6	31.7	2.6	209
−M127						127	27		32.3					153	1.4	38.5	3.2	211
−210−M 97					210	97	87		29.2					180	1.9	32.6	2.8	210
−M127						127	57		32.3						1.7	39.3	3.5	212
−M157						157	27		35.5					183	1.6	46.0	4.0	214
−240−M127					240	127	87		32.3					215	2.1	40.1	3.8	213
−M157						157	57		35.5						1.9	46.8	4.3	215
−270−M157					270		87							245	2.2	47.7	4.7	216
−SLRB12− 75−M 22	1	12	26		75	22	27	—	28.3	50	—	14	30	48	1.0	14.5	0.4	217
− 95−M 42					95	42			30.4					68	1.1	17.2	0.5	220
−105−M 22					105	22	57		28.3					75	1.4	15.3		218
−120−M 67					120	67	27		33					93	1.2	23.5	0.8	223
−125−M 42				7	125	42	57		30.4					95	1.5	18.0	0.6	221
−135−M 22					135	22	87		28.3					105	1.7	16.2		219
−150−M 67					150	67	57		33					120		24.3	0.9	224
−155−M 42					155	42	87		30.4					125	1.8	18.9	0.8	222
−180−M 67					180	67			33					150	1.9	25.2	1.1	225
−SLFB12− 75−M 22	1	12	26		75	22	27	—	28.3	50	—	14	30	48	1.0	14.5	0.4	226
− 95−M 42					95	42			30.4					68	1.1	17.2	0.5	229
−105−M 22					105	22	57		28.3					75	1.4	15.3		227
−120−M 67					120	67	27		33					93	1.2	23.5	0.8	232
−125−M 42				7	125	42	57		30.4					95	1.5	18.0	0.6	230
−135−M 22					135	22	87		28.3					105	1.7	16.2		228
−150−M 67					150	67	57		33					120	1.6	24.3	0.9	233
−155−M 42					155	42	87		30.4					125	1.8	18.9	0.8	231
−180−M 67					180	67			33					150	1.9	25.2	1.1	234
A63−SLSB16− 95−M 42	1	16	24		95	42	27	—	28.4	50	—	18	32	68	1.1	22.7	0.7	235
−120−M 67					120	67			31					93	1.2	33.0	1.1	238
−125−M 42					125	42	57		28.4					95	1.4	23.5	0.8	236
−150−M 67					150	67			31					120	1.5	33.8	1.2	239
−M 97						97	27		34.2					123	1.3	45.5	1.6	241
−155−M 42					155	42	87		28.4					130	1.7	24.4	0.9	237
−180−M 67					180	67			31					155	1.8	34.7	1.4	240
−M 97				4		97	57		34.2						1.6	46.3	1.8	242
−M127						127	27		37.3					153	1.5	57.9	2.2	244
−210−M 97					210	97	87		34.2					185	2.0	47.1	2.1	243
−M127						127	57		37.3						1.8	58.7	2.4	245
−M157						157	27		40.5					183	1.7	70.3	2.7	247
−240−M127					240	127	87		37.3					215	2.2	59.5	2.8	246
−M157						157	57		40.5						2.1	71.1	3.1	248
−270−M157					270		87							245	2.4	72.0	3.5	249
−SLRB16− 75−M 22	1	16	32		75	22	27	—	34.3	50	—	18	32	48	1.1	14.5	0.3	250
− 95−M 42					95	42			36.4					68	1.2	22.8	0.4	253
−105−M 22					105	22	57		34.3					75	1.4	15.3		251
−120−M 67					120	67	27		39					93		33.2	0.6	256
−125−M 42				8	125	42	57		36.4					95	1.6	23.6	0.5	254
−135−M 22					135	22	87		34.3					105	1.7	16.2		252
−150−M 67					150	67	57		39					120		34.0	0.7	257
−155−M 42					155	42	87		36.4					125	1.9	24.5		255
−180−M 67					180	67			39					150	2.1	34.9	0.9	258

A63

CODE	Fig.	φD	φC	Thickness t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Scale model
A63−SLFB16− 75−M 22	1	16	32	8	75	22	27	—	34.3	50	—	18	32	48	1.1	14.5	0.3	259
− 95−M 42					95	42			36.4					68	1.2	22.8	0.4	262
−105−M 22					105	22	57		34.3					75	1.4	15.3		260
−120−M 67					120	67	27		39					93		33.2	0.6	265
−125−M 42					125	42	57		36.4					95	1.6	23.6	0.5	263
−135−M 22					135	22	87		34.3					105	1.7	16.2		261
−150−M 67					150	67	57		39					120		34.0	0.7	266
−155−M 42					155	42	87		36.4					125	1.9	24.5		264
−180−M 67					180	67			39					150	2.1	34.9	0.9	267
A63−SLSB20− 95−M 42	1	20	29	4.5	95	42	27	—	33.4	50	—	22	40	68	1.1	25.4	0.5	268
−120−M 67					120	67			36					93	1.2	40.8	0.8	271
−125−M 42					125	42	57		33.4					95	1.4	26.2	0.6	269
−150−M 67					150	67			36					120	1.6	41.6	1.0	272
−M 97						97	27		39.2					123	1.4	59.3	1.2	274
−155−M 42					155	42	87		33.4					130	1.8	27.1	0.8	270
−180−M 67					180	67			36					155	1.9	42.5	1.2	273
−M 97						97	57		39.2						1.7	60.1	1.4	275
−M127						127	27		42.3					153	1.6	79.1	1.6	277
−210−M 97					210	97	87		39.2					185	2.1	61.0	1.7	276
−M127						127	57		42.3						2.0	79.9	1.9	278
−M157						157	27		45.5					183	1.9	97.6	2.0	280
−240−M127					240	127	87		42.3					215	2.3	80.7	2.3	279
−M157						157	57		45.5						2.2	98.4	2.4	281
−270−M157					270		87							245	2.6	99.3	2.8	282
−SLRB20− 95−M 42	1	20	38	9	95	42	27	—	42.4	50	—	22	40	68	1.3	25.6	0.4	283
−120−M 67					120	67			45					93	1.5	41.0	0.5	286
−125−M 42					125	42	57		42.4					95	1.6	26.4		284
−150−M 67					150	67			45					120	1.9	41.8	0.7	287
−155−M 42					155	42	87		42.4					125	2.0	27.2	0.6	285
−180−M 67					180	67			45					150	2.2	42.7	0.9	288
−SLFB20− 95−M 42	1	20	38	9	95	42	27	—	42.4	50	—	22	40	68	1.3	25.6	0.4	289
−120−M 67					120	67			45					93	1.5	41.0	0.5	292
−125−M 42					125	42	57		42.4					95	1.6	26.4		290
−150−M 67					150	67			45					120	1.9	41.8	0.7	293
−155−M 42					155	42	87		42.4					125	2.0	27.2	0.6	291
−180−M 67					180	67			45					150	2.2	42.7	0.9	294
A63−SLRB25− 95−M 42	1	25	45	10	95	42	27	—	49.7	50	—	26	45	68	1.4	28.7	0.3	295
−125−M 42					125		57							95	1.7	29.5	0.5	296
−155−M 42					155		87							125	2.0	30.4	0.7	297
−SLFB25− 95−M 42	1	25	45	10	95	42	27	—	49.7	50	—	26	45	68	1.4	28.7	0.3	298
−125−M 42					125		57							95	1.7	29.5	0.5	299
−155−M 42					155		87							125	2.0	30.4	0.7	300

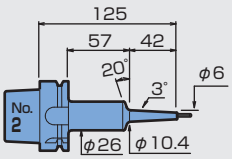
φ3 SLSA t=1.5

A63-SLSA3-95-M42



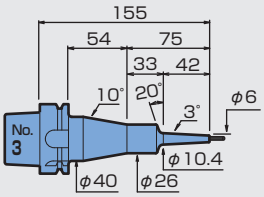
9.3

A63-SLSA3-125-M42



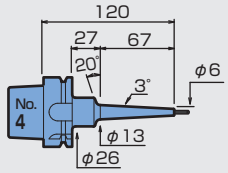
9.6

A63-SLSA3-155-M42



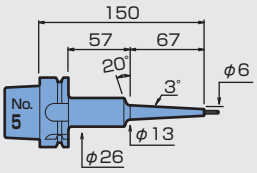
9.9

A63-SLSA3-120-M67



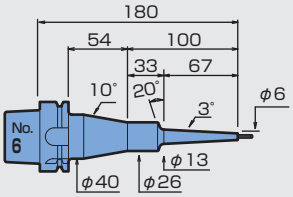
14.9

A63-SLSA3-150-M67



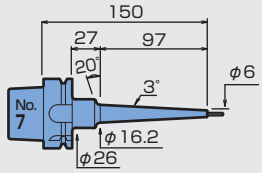
15.9

A63-SLSA3-180-M67



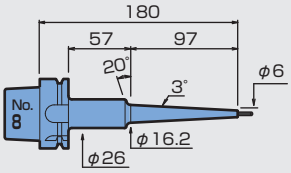
15.8

A63-SLSA3-150-M97



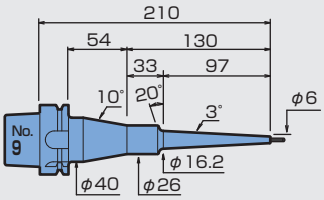
20.7

A63-SLSA3-180-M97



22.2

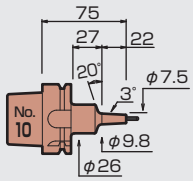
A63-SLSA3-210-M97



22.1

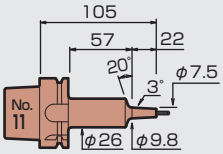
φ3 SLRA t=2.25

A63-SLRA3-75-M22



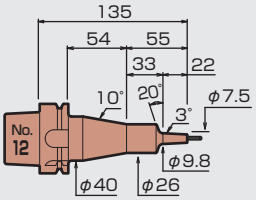
2.8

A63-SLRA3-105-M22



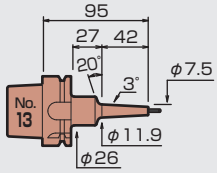
3.2

A63-SLRA3-135-M22



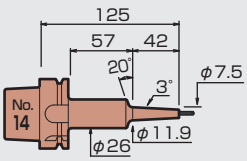
3.2

A63-SLRA3-95-M42



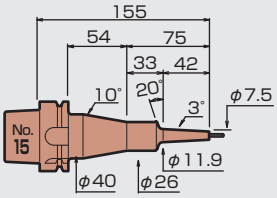
5.4

A63-SLRA3-125-M42



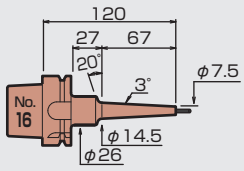
6.0

A63-SLRA3-155-M42



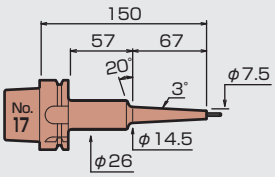
6.0

A63-SLRA3-120-M67



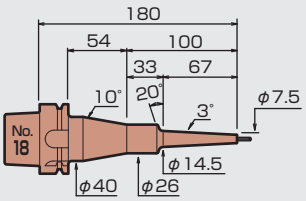
8.9

A63-SLRA3-150-M67



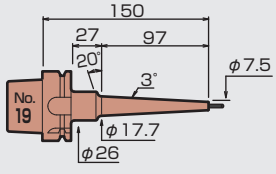
9.8

A63-SLRA3-180-M67



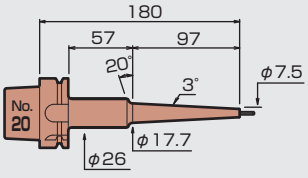
9.8

A63-SLRA3-150-M97



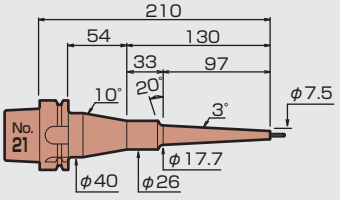
12.9

A63-SLRA3-180-M97



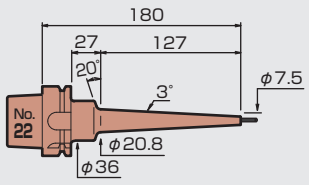
14.4

A63-SLRA3-210-M97



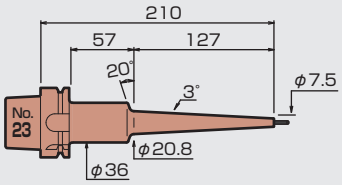
14.3

A63−SLRA3−180−M127



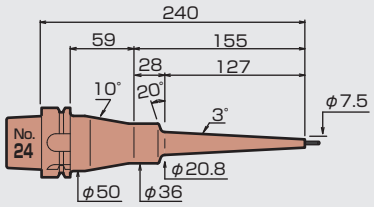
15.7

A63−SLRA3−210−M127



16.2

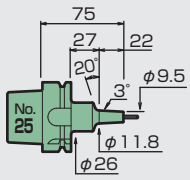
A63−SLRA3−240−M127



16.3

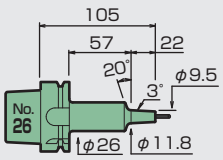
φ3 SLFB t=3.25

A63−SLFB3−75−M22



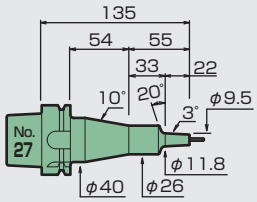
1.9

A63−SLFB3−105−M22



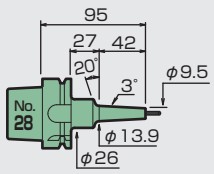
2.3

A63−SLFB3−135−M22



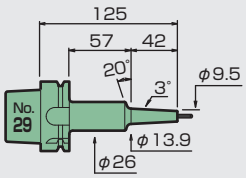
2.3

A63−SLFB3−95−M42



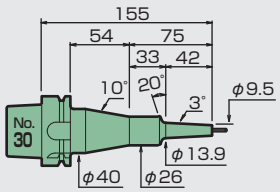
3.3

A63−SLFB3−125−M42



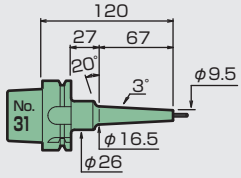
3.8

A63−SLFB3−155−M42



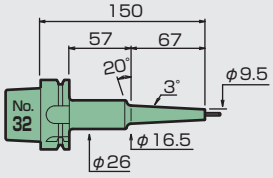
3.8

A63−SLFB3−120−M67



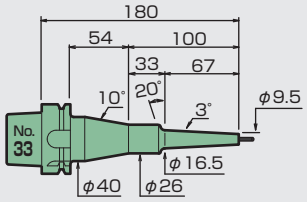
5.3

A63−SLFB3−150−M67



6.3

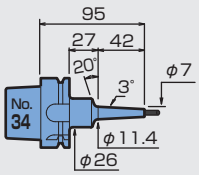
A63−SLFB3−180−M67



6.3

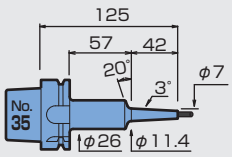
φ4 SLSA t=1.5

A63-SLSA4-95-M42



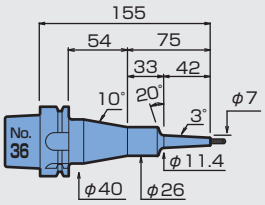
7.3

A63-SLSA4-125-M42



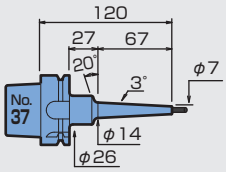
7.9

A63-SLSA4-155-M42



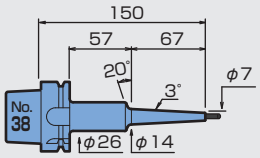
7.9

A63-SLSA4-120-M67



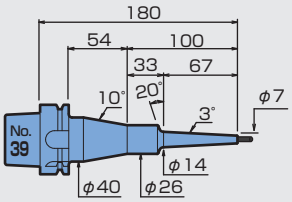
11.9

A63-SLSA4-150-M67



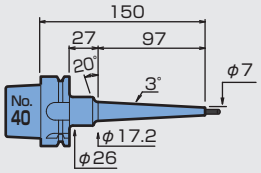
12.8

A63-SLSA4-180-M67



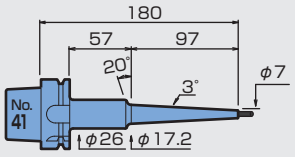
12.8

A63-SLSA4-150-M97



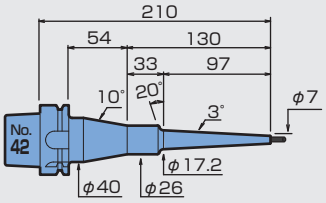
16.7

A63-SLSA4-180-M97



18.2

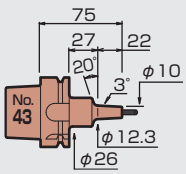
A63-SLSA4-210-M97



18.1

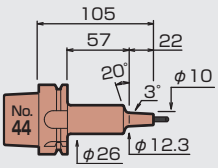
φ4 SLRA t=3

A63-SLRA4-75-M22



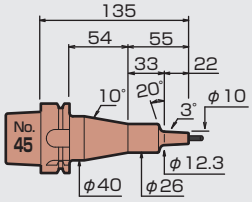
1.7

A63-SLRA4-105-M22



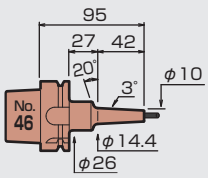
2.1

A63-SLRA4-135-M22



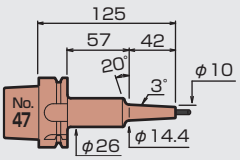
2.1

A63-SLRA4-95-M42



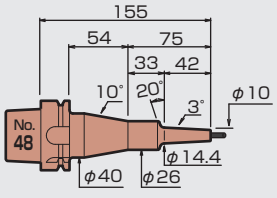
3.1

A63-SLRA4-125-M42



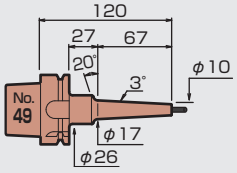
3.7

A63-SLRA4-155-M42



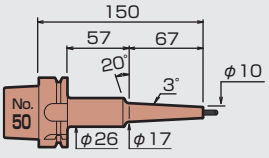
3.7

A63-SLRA4-120-M67



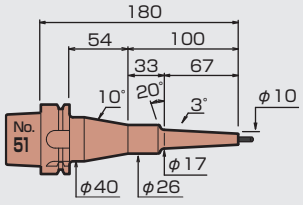
5.1

A63-SLRA4-150-M67



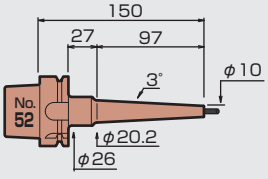
6.1

A63-SLRA4-180-M67



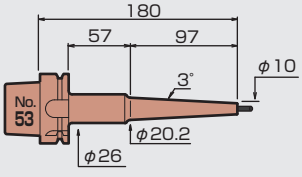
6.1

A63-SLRA4-150-M97



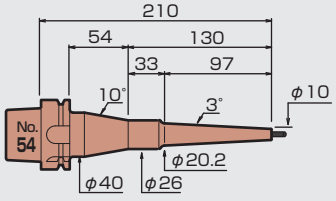
7.7

A63-SLRA4-180-M97



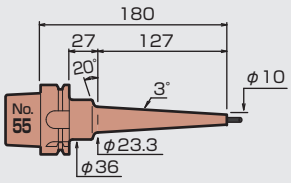
9.2

A63-SLRA4-210-M97



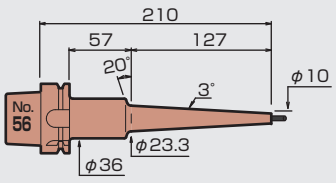
9.1

A63−SLRA4−180−M127



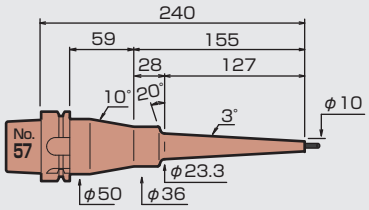
9.3

A63−SLRA4−210−M127



9.9

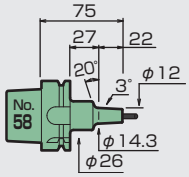
A63−SLRA4−240−M127



9.9

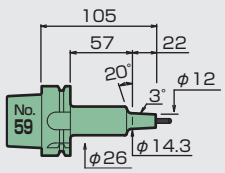
φ4 SLFB t=4

A63−SLFB4−75−M22



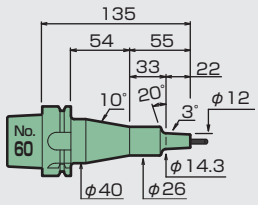
1.3

A63−SLFB4−105−M22



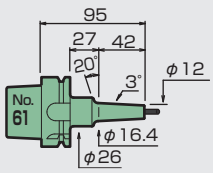
1.7

A63−SLFB4−135−M22



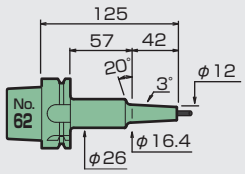
1.7

A63−SLFB4−95−M42



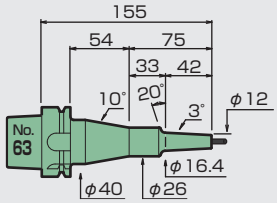
2.2

A63−SLFB4−125−M42



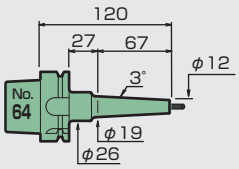
2.8

A63−SLFB4−155−M42



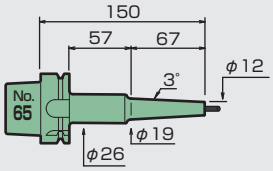
2.8

A63−SLFB4−120−M67



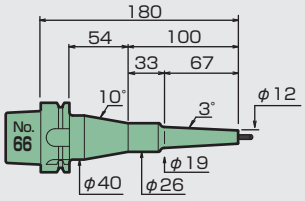
3.5

A63−SLFB4−150−M67



4.5

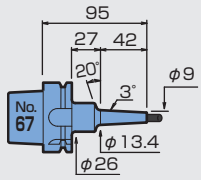
A63−SLFB4−180−M67



4.5

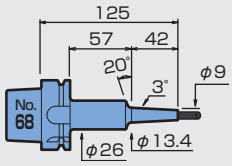
φ6 SLSA t=1.5

A63-SLSA6-95-M42



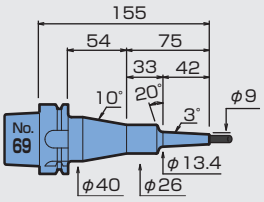
4.8

A63-SLSA6-125-M42



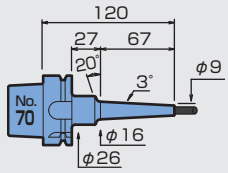
5.5

A63-SLSA6-155-M42



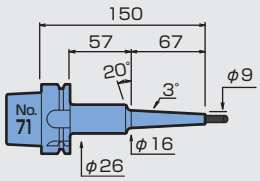
5.5

A63-SLSA6-120-M67



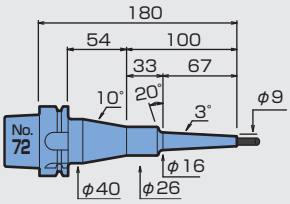
7.9

A63-SLSA6-150-M67



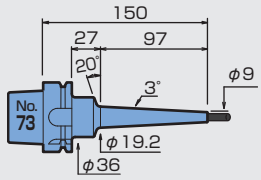
9.1

A63-SLSA6-180-M67



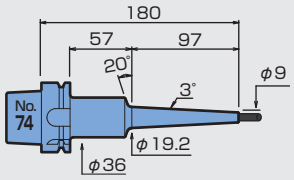
9.0

A63-SLSA6-150-M97



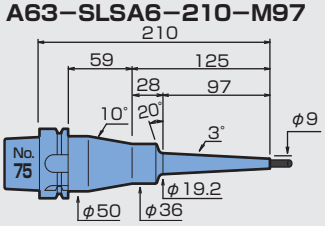
11.0

A63-SLSA6-180-M97



11.4

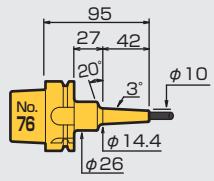
A63-SLSA6-210-M97



11.5

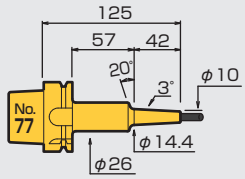
φ6 SLSB t=2

A63-SLSB6-95-M42



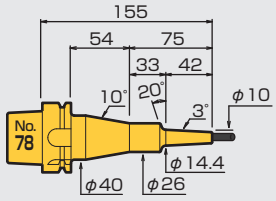
3.8

A63-SLSB6-125-M42



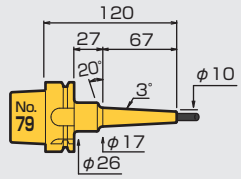
4.5

A63-SLSB6-155-M42



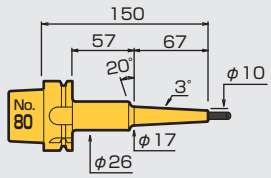
4.5

A63-SLSB6-120-M67



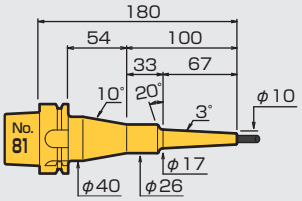
6.3

A63-SLSB6-150-M67



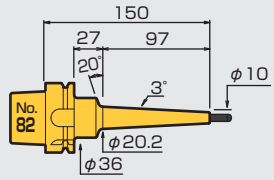
7.4

A63-SLSB6-180-M67



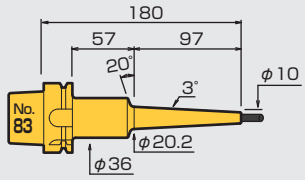
7.4

A63-SLSB6-150-M97



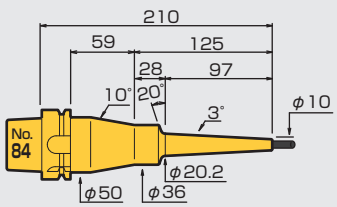
8.9

A63-SLSB6-180-M97



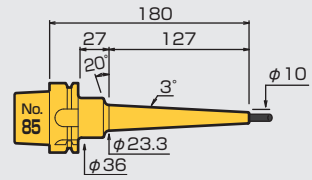
9.3

A63-SLSB6-210-M97



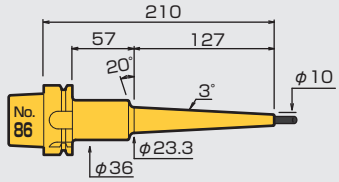
9.3

A63-SLSB6-180-M127



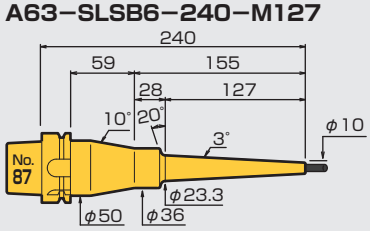
11.4

A63-SLSB6-210-M127



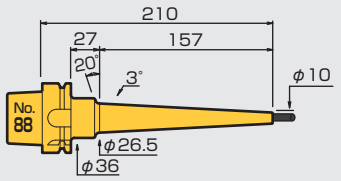
12.0

A63-SLSB6-240-M127



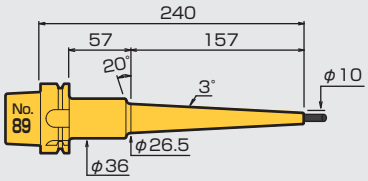
12.1

A63-SLSB6-210-M157



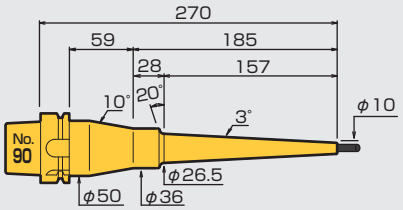
13.6

A63-SLSB6-240-M157



14.5

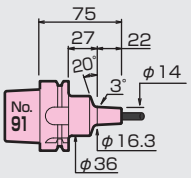
A63-SLSB6-270-M157



14.5

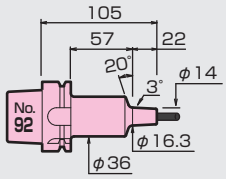
φ6 SLRB t=4

A63-SLRB6-75-M22



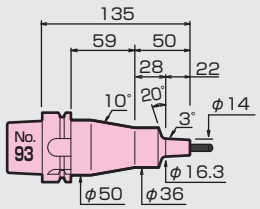
0.9

A63-SLRB6-105-M22



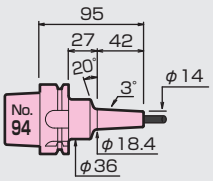
1.1

A63-SLRB6-135-M22



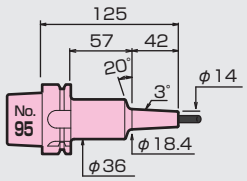
1.1

A63-SLRB6-95-M42



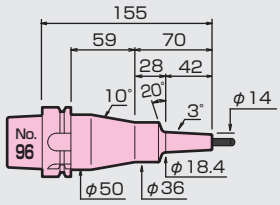
1.6

A63-SLRB6-125-M42



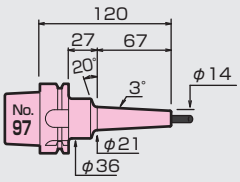
1.8

A63-SLRB6-155-M42



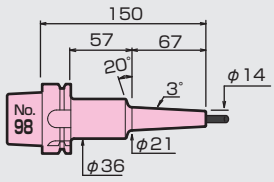
1.8

A63-SLRB6-120-M67



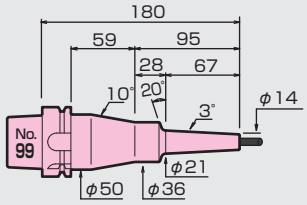
2.5

A63-SLRB6-150-M67



2.8

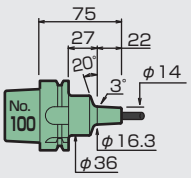
A63-SLRB6-180-M67



2.9

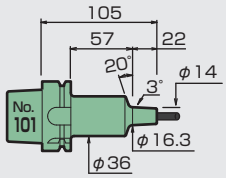
φ6 SLFB t=4

A63-SLFB6-75-M22



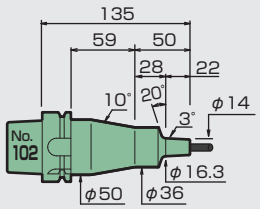
0.9

A63-SLFB6-105-M22



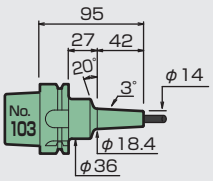
1.1

A63-SLFB6-135-M22



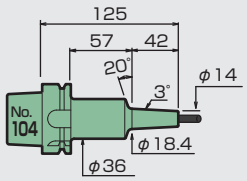
1.1

A63-SLFB6-95-M42



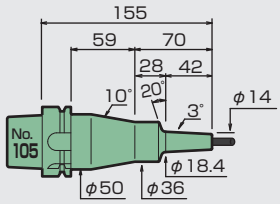
1.6

A63-SLFB6-125-M42



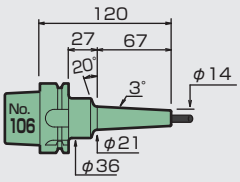
1.8

A63-SLFB6-155-M42



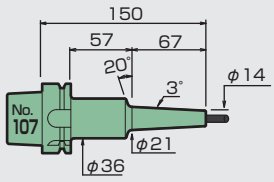
1.8

A63-SLFB6-120-M67



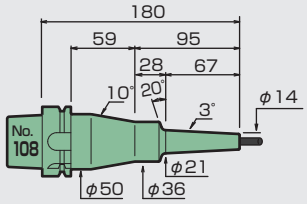
2.5

A63-SLFB6-150-M67



2.8

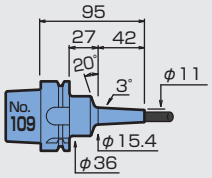
A63-SLFB6-180-M67



2.9

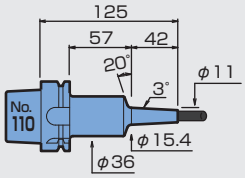
φ8 SLSA t=1.5

A63-SLSA8-95-M42



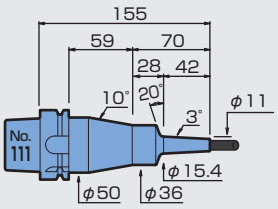
3.2

A63-SLSA8-125-M42



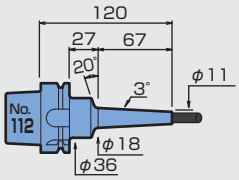
3.4

A63-SLSA8-155-M42



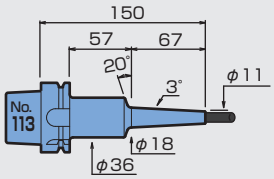
3.4

A63-SLSA8-120-M67



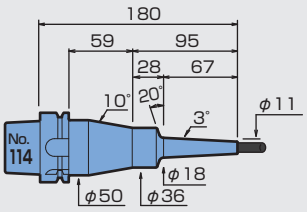
5.4

A63-SLSA8-150-M67



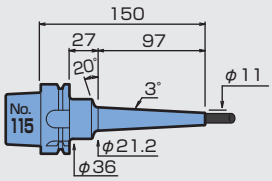
5.7

A63-SLSA8-180-M67



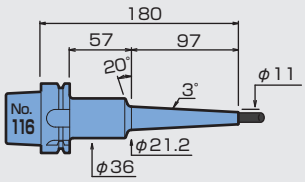
5.7

A63-SLSA8-150-M97



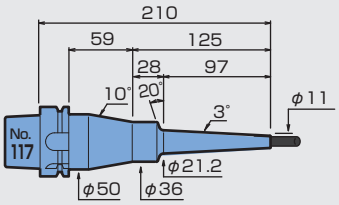
7.8

A63-SLSA8-180-M97



8.3

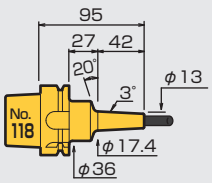
A63-SLSA8-210-M97



8.3

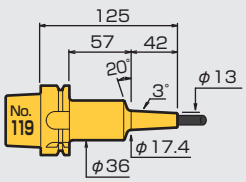
φ8 SLSB t=2.5

A63-SLSB8-95-M42



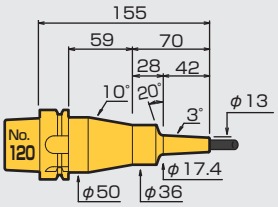
2.1

A63-SLSB8-125-M42



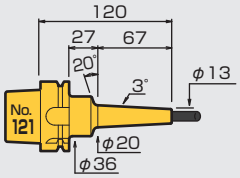
2.3

A63-SLSB8-155-M42



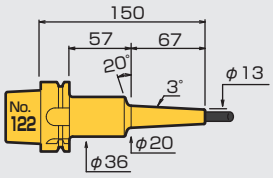
2.3

A63-SLSB8-120-M67



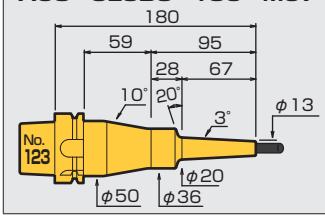
3.5

A63-SLSB8-150-M67



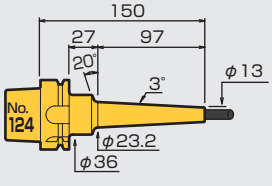
3.9

A63-SLSB8-180-M67



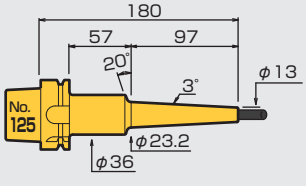
3.9

A63-SLSB8-150-M97



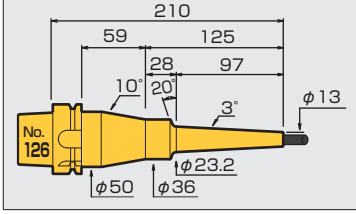
5.2

A63-SLSB8-180-M97



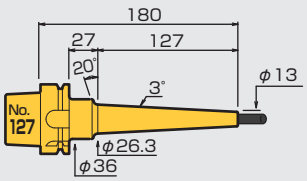
5.7

A63-SLSB8-210-M97



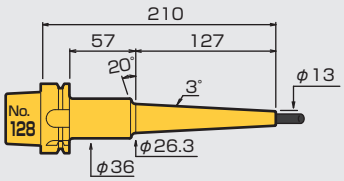
5.7

A63-SLSB8-180-M127



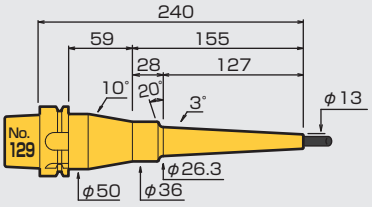
7.0

A63-SLSB8-210-M127



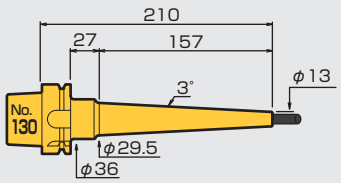
7.7

A63-SLSB8-240-M127



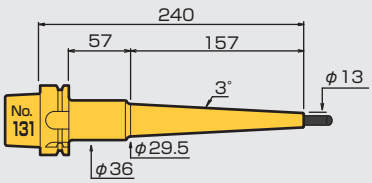
7.7

A63-SLSB8-210-M157



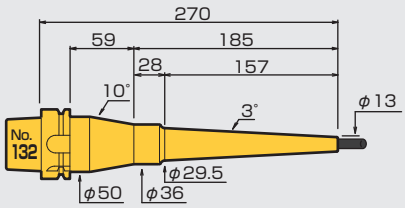
8.5

A63-SLSB8-240-M157



9.4

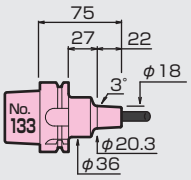
A63-SLSB8-270-M157



9.5

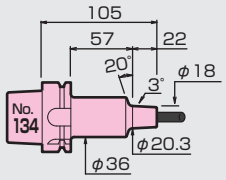
φ8 SLRB t=5

A63-SLRB8-75-M22



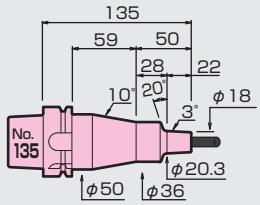
0.7

A63-SLRB8-105-M22



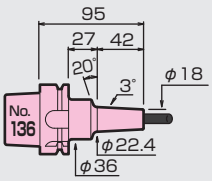
0.8

A63-SLRB8-135-M22



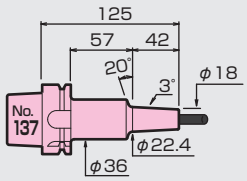
0.8

A63-SLRB8-95-M42



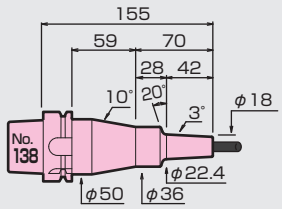
1.0

A63-SLRB8-125-M42



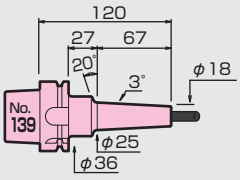
1.2

A63-SLRB8-155-M42



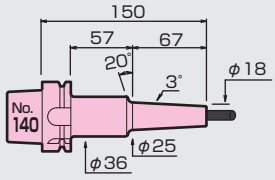
1.3

A63-SLRB8-120-M67



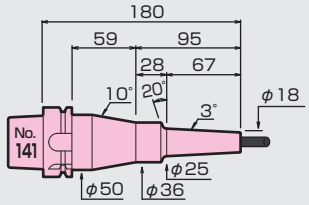
1.6

A63-SLRB8-150-M67



1.9

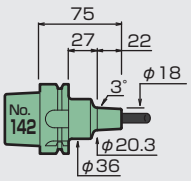
A63-SLRB8-180-M67



2.0

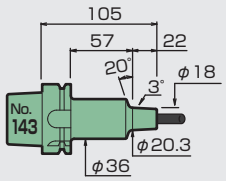
φ8 SLFB t=5

A63-SLFB8-75-M22



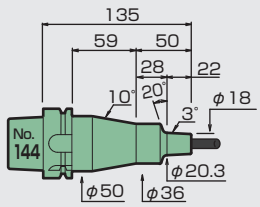
0.7

A63-SLFB8-105-M22



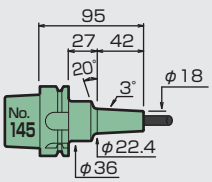
0.8

A63-SLFB8-135-M22



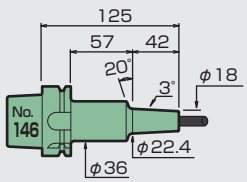
0.8

A63-SLFB8-95-M42



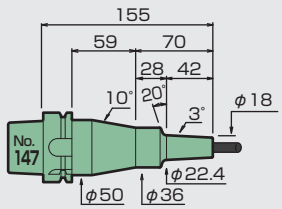
1.0

A63-SLFB8-125-M42



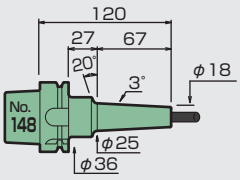
1.2

A63-SLFB8-155-M42



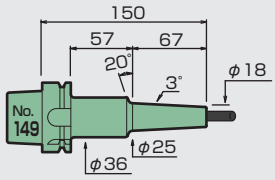
1.3

A63-SLFB8-120-M67



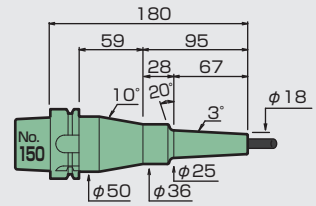
1.6

A63-SLFB8-150-M67



1.9

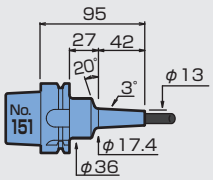
A63-SLFB8-180-M67



2.0

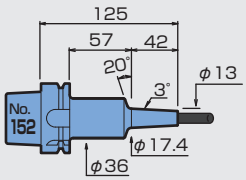
φ10 SLSA t=1.5

A63-SLSA10-95-M42



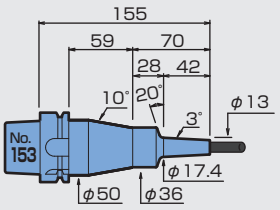
2.3

A63-SLSA10-125-M42



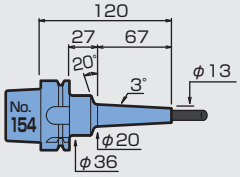
2.5

A63-SLSA10-155-M42



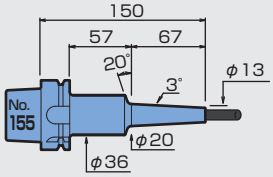
2.5

A63-SLSA10-120-M67



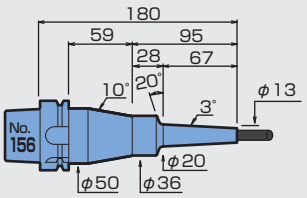
4.0

A63-SLSA10-150-M67



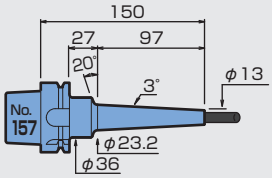
4.3

A63-SLSA10-180-M67



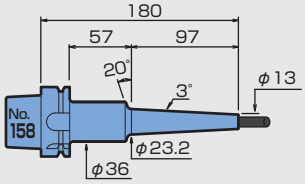
4.4

A63-SLSA10-150-M97



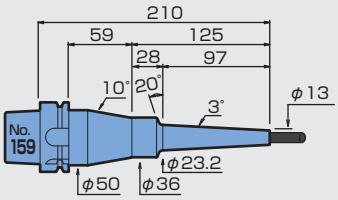
5.9

A63-SLSA10-180-M97



6.4

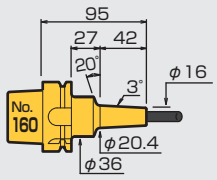
A63-SLSA10-210-M97



6.5

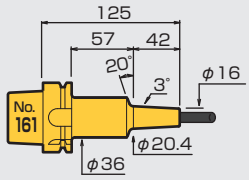
φ10 SLSB t=3

A63-SLSB10-95-M42



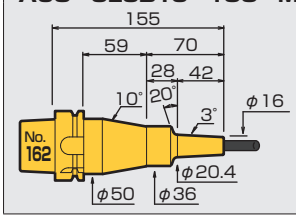
1.4

A63-SLSB10-125-M42



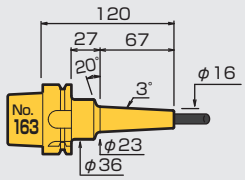
1.6

A63-SLSB10-155-M42



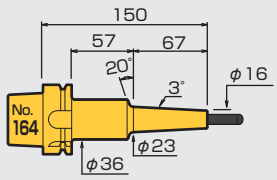
1.7

A63-SLSB10-120-M67



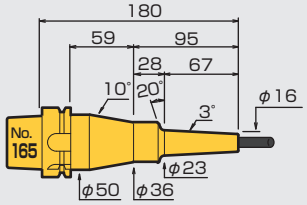
2.4

A63-SLSB10-150-M67



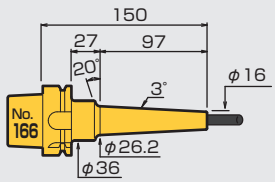
2.7

A63-SLSB10-180-M67



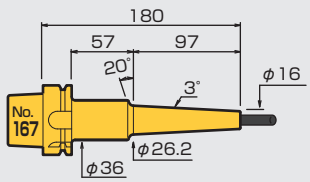
2.7

A63-SLSB10-150-M97



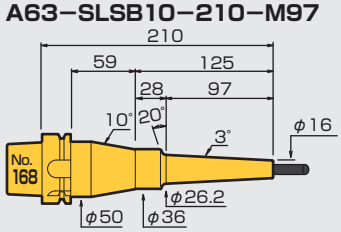
3.5

A63-SLSB10-180-M97



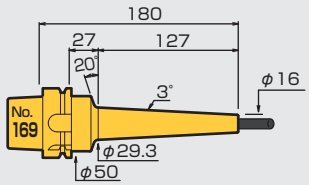
4.1

A63-SLSB10-210-M97



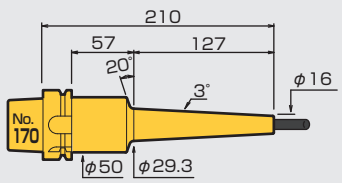
4.1

A63-SLSB10-180-M127



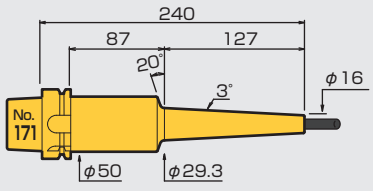
4.4

A63-SLSB10-210-M127



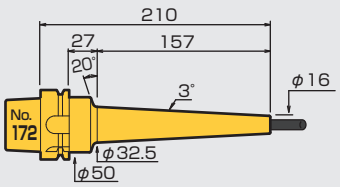
4.4

A63-SLSB10-240-M127



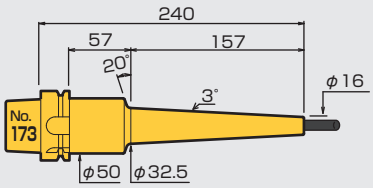
4.9

A63−SLSB10−210−M157



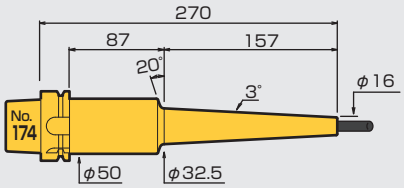
5.5

A63−SLSB10−240−M157



5.8

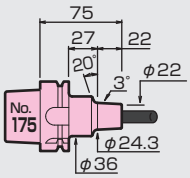
A63−SLSB10−270−M157



6.1

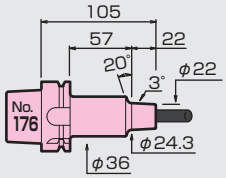
φ10 SLRB t=6

A63−SLRB10−75−M22



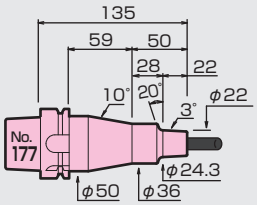
0.5

A63−SLRB10−105−M22



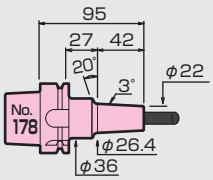
0.7

A63−SLRB10−135−M22



0.7

A63−SLRB10−95−M42



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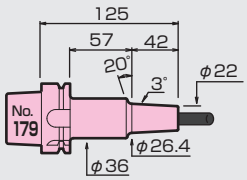
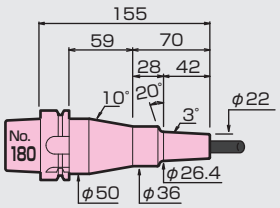
A63−SLRB10−125−M42



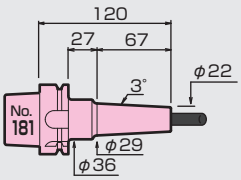
1.0

A63−SLRB10−155−M42



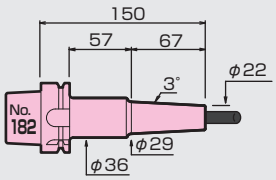
1.0

A63−SLRB10−120−M67



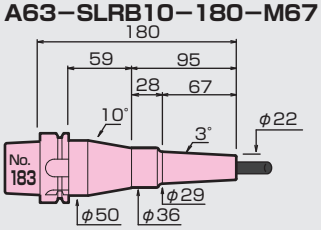
1.2

A63−SLRB10−150−M67



1.5

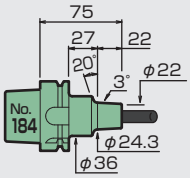
A63−SLRB10−180−M67



1.6

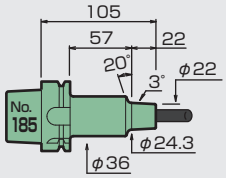
φ10 SLFB t=6

A63−SLFB10−75−M22



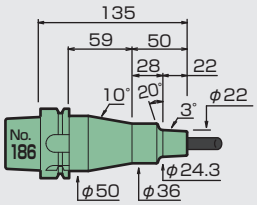
0.5

A63−SLFB10−105−M22



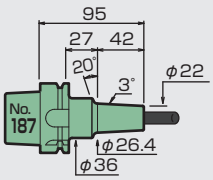
0.7

A63−SLFB10−135−M22



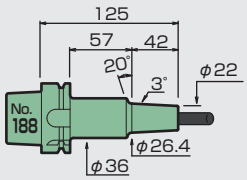
0.7

A63−SLFB10−95−M42



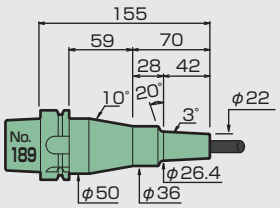
0.8

A63−SLFB10−125−M42



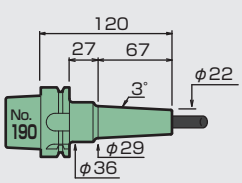
1.0

A63−SLFB10−155−M42



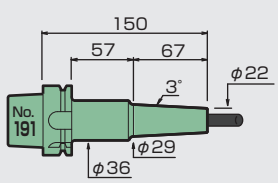
1.0

A63−SLFB10−120−M67



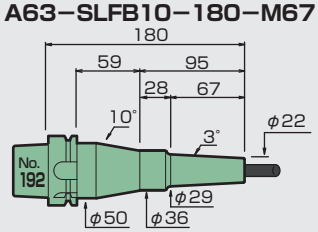
1.2

A63−SLFB10−150−M67



1.5

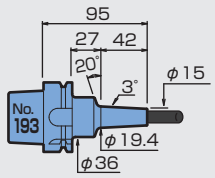
A63−SLFB10−180−M67



1.6

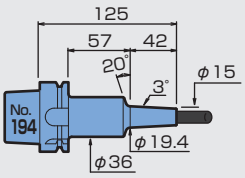
φ12 SLSA t=1.5

A63-SLSA12-95-M42



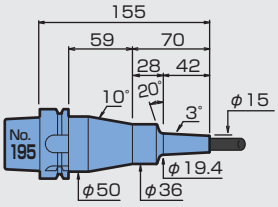
1.8

A63-SLSA12-125-M42



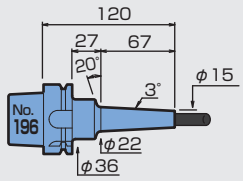
2.1

A63-SLSA12-155-M42



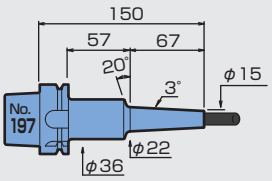
2.1

A63-SLSA12-120-M67



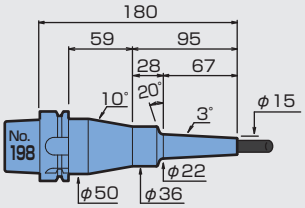
3.2

A63-SLSA12-150-M67



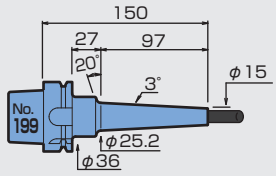
3.6

A63-SLSA12-180-M67



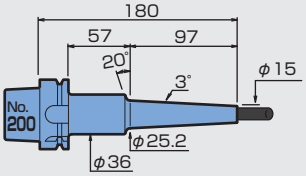
3.6

A63-SLSA12-150-M97



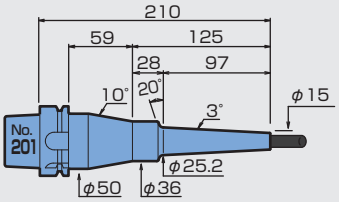
4.8

A63-SLSA12-180-M97



5.3

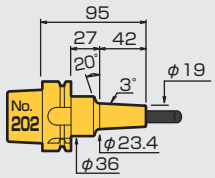
A63-SLSA12-210-M97



5.3

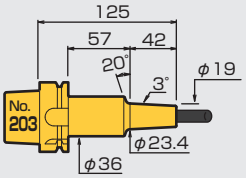
φ12 SLSB t=3.5

A63-SLSB12-95-M42



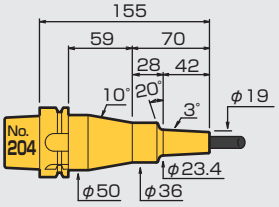
1.1

A63-SLSB12-125-M42



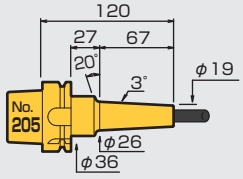
1.3

A63-SLSB12-155-M42



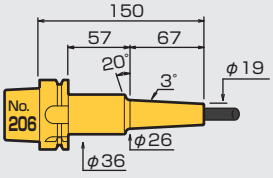
1.4

A63-SLSB12-120-M67



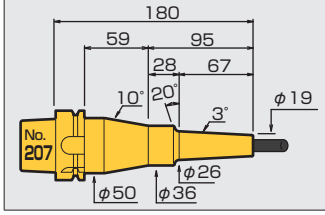
1.8

A63-SLSB12-150-M67



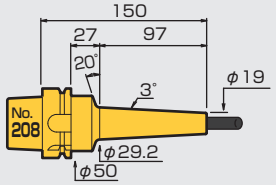
2.1

A63-SLSB12-180-M67



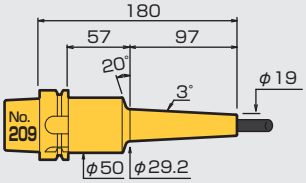
2.2

A63-SLSB12-150-M97



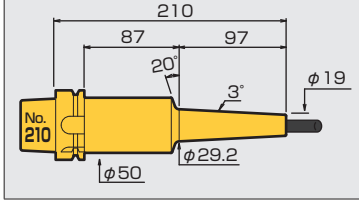
2.4

A63-SLSB12-180-M97



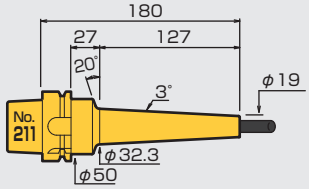
2.6

A63-SLSB12-210-M97



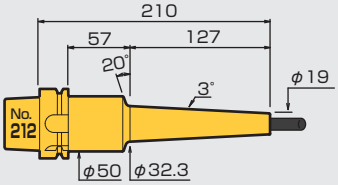
2.8

A63-SLSB12-180-M127



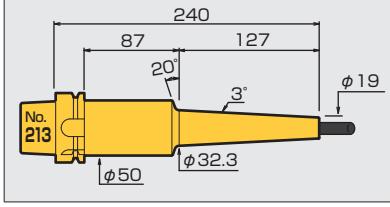
3.2

A63-SLSB12-210-M127



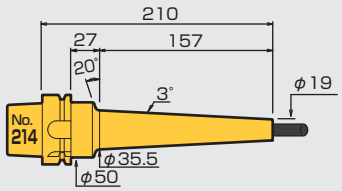
3.5

A63-SLSB12-240-M127



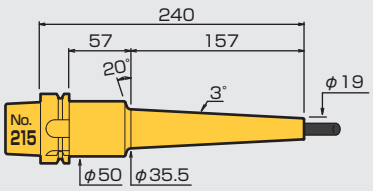
3.8

A63-SLSB12-210-M157



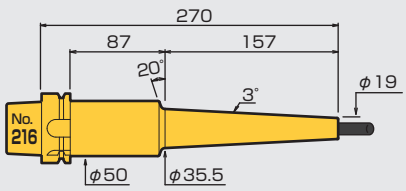
4.0

A63-SLSB12-240-M157



4.3

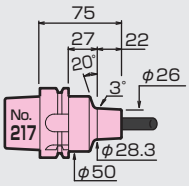
A63-SLSB12-270-M157



4.7

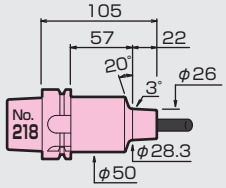
φ12 SLRB t=7

A63-SLRB12-75-M22



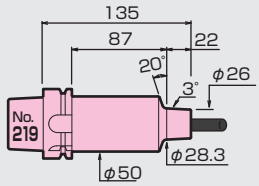
0.4

A63-SLRB12-105-M22



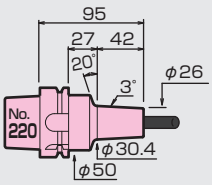
0.5

A63-SLRB12-135-M22



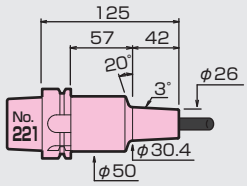
0.6

A63-SLRB12-95-M42



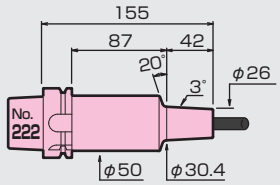
0.5

A63-SLRB12-125-M42



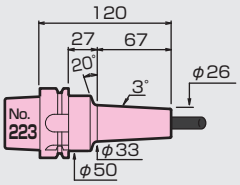
0.6

A63-SLRB12-155-M42



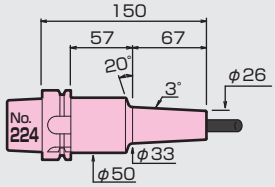
0.8

A63-SLRB12-120-M67



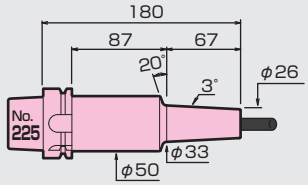
0.8

A63-SLRB12-150-M67



0.9

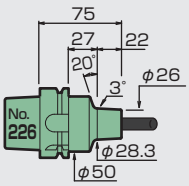
A63-SLRB12-180-M67



1.1

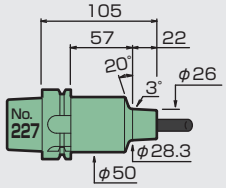
φ12 SLFB t=7

A63-SLFB12-75-M22



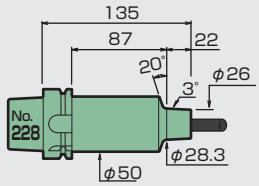
0.4

A63-SLFB12-105-M22



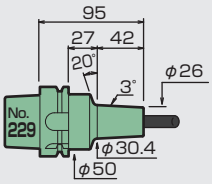
0.5

A63-SLFB12-135-M22



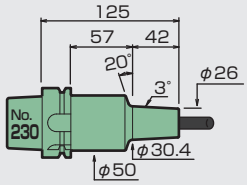
0.6

A63-SLFB12-95-M42



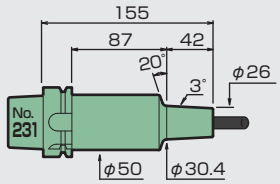
0.5

A63-SLFB12-125-M42



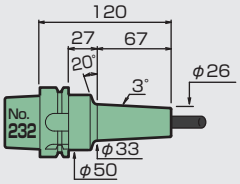
0.6

A63-SLFB12-155-M42



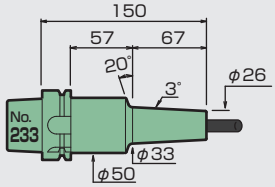
0.8

A63-SLFB12-120-M67



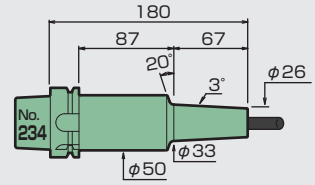
0.8

A63-SLFB12-150-M67



0.9

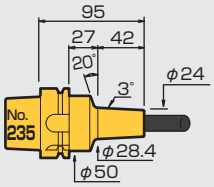
A63-SLFB12-180-M67



1.1

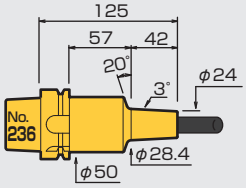
φ16 SLSB t=4

A63-SLSB16-95-M42



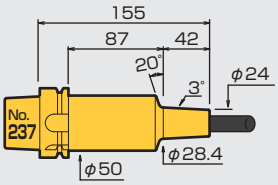
0.7

A63-SLSB16-125-M42



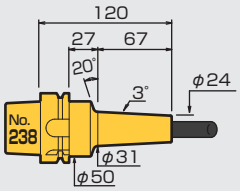
0.8

A63-SLSB16-155-M42



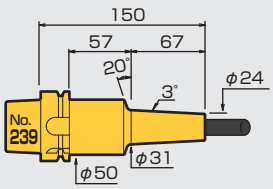
0.9

A63-SLSB16-120-M67



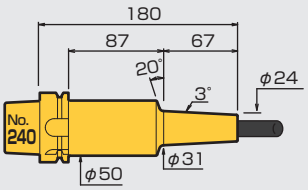
1.1

A63-SLSB16-150-M67



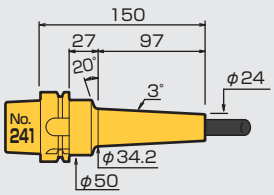
1.2

A63-SLSB16-180-M67



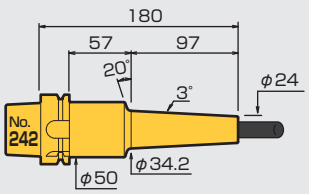
1.4

A63-SLSB16-150-M97



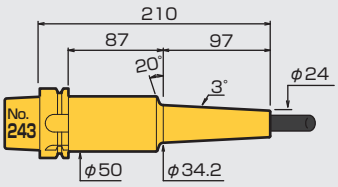
1.6

A63-SLSB16-180-M97



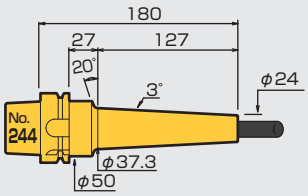
1.8

A63-SLSB16-210-M97



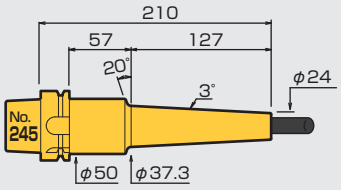
2.1

A63-SLSB16-180-M127



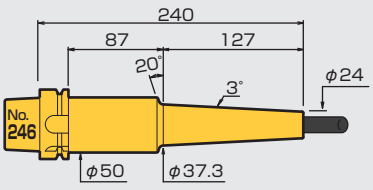
2.2

A63-SLSB16-210-M127



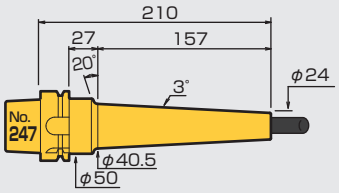
2.4

A63-SLSB16-240-M127



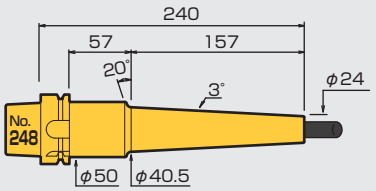
2.8

A63-SLSB16-210-M157



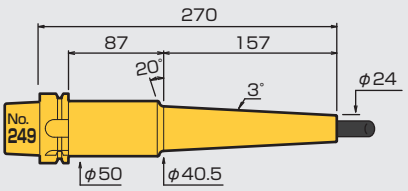
2.7

A63-SLSB16-240-M157



3.1

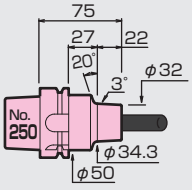
A63-SLSB16-270-M157



3.5

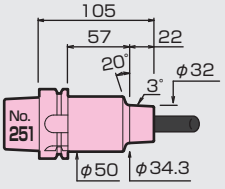
φ16 SLRB t=8

A63-SLRB16-75-M22



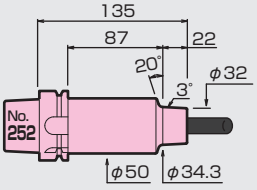
0.3

A63-SLRB16-105-M22



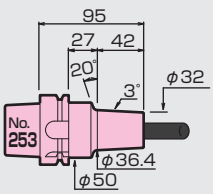
0.4

A63-SLRB16-135-M22



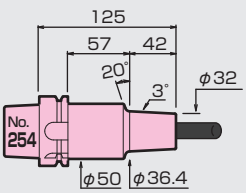
0.5

A63-SLRB16-95-M42



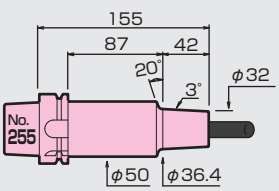
0.4

A63-SLRB16-125-M42



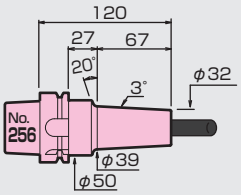
0.5

A63-SLRB16-155-M42



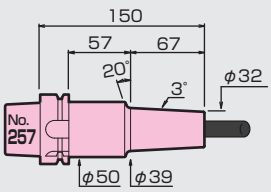
0.7

A63−SLRB16−120−M67



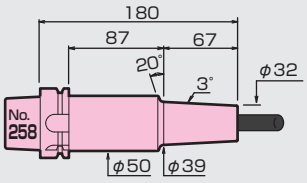
0.6

A63−SLRB16−150−M67



0.7

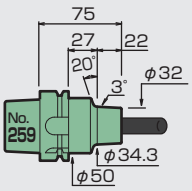
A63−SLRB16−180−M67



0.9

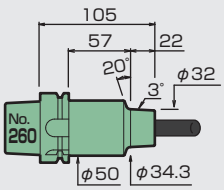
φ16 SLFB t=8

A63−SLFB16−75−M22



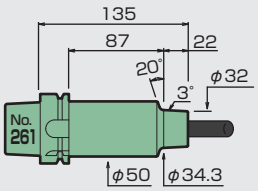
0.3

A63−SLFB16−105−M22



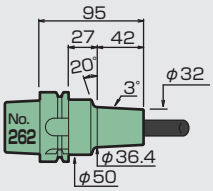
0.4

A63−SLFB16−135−M22



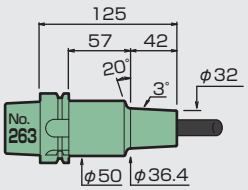
0.5

A63−SLFB16−95−M42



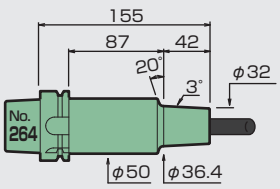
0.4

A63−SLFB16−125−M42



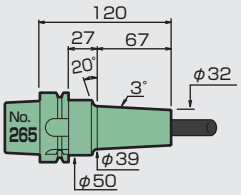
0.5

A63−SLFB16−155−M42



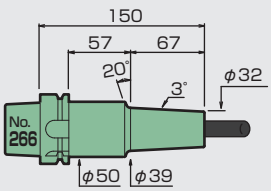
0.7

A63−SLFB16−120−M67



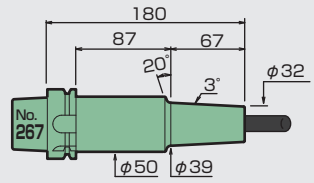
0.6

A63−SLFB16−150−M67



0.7

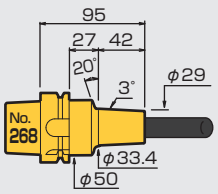
A63−SLFB16−180−M67



0.9

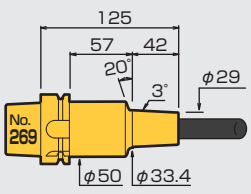
φ20 SLSB t=4.5

A63-SLSB20-95-M42



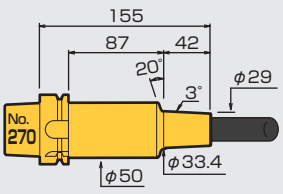
0.5

A63-SLSB20-125-M42



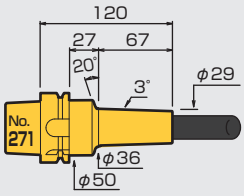
0.6

A63-SLSB20-155-M42



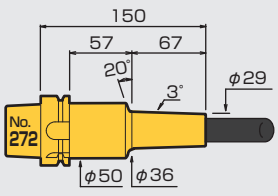
0.8

A63-SLSB20-120-M67



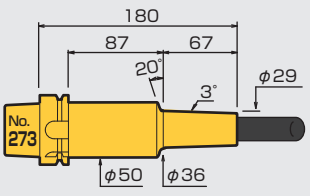
0.8

A63-SLSB20-150-M67



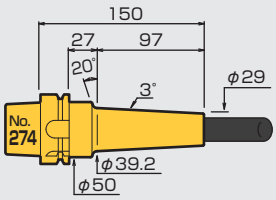
1.0

A63-SLSB20-180-M67



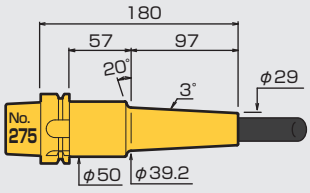
1.2

A63-SLSB20-150-M97



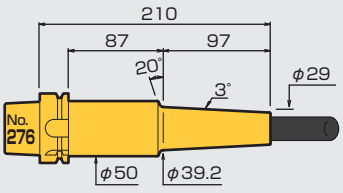
1.2

A63-SLSB20-180-M97



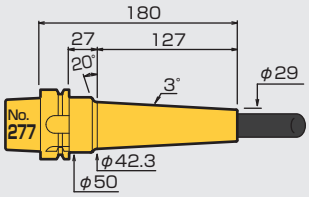
1.4

A63-SLSB20-210-M97



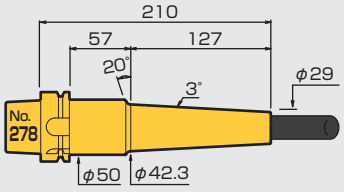
1.7

A63-SLSB20-180-M127



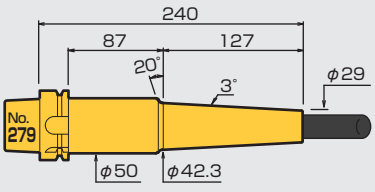
1.6

A63-SLSB20-210-M127



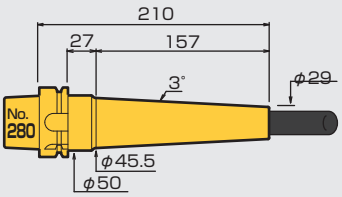
1.9

A63-SLSB20-240-M127



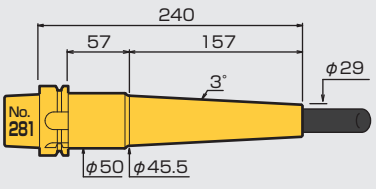
2.3

A63-SLSB20-210-M157



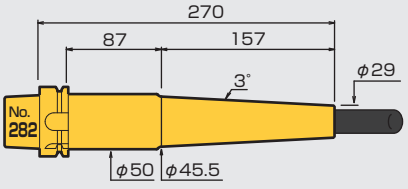
2.0

A63-SLSB20-240-M157



2.4

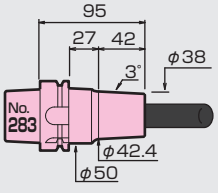
A63-SLSB20-270-M157



2.8

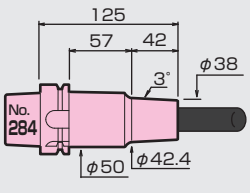
φ20 SLRB t=9

A63-SLRB20-95-M42



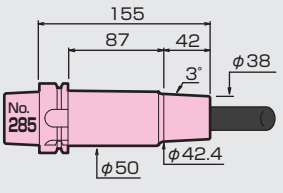
0.4

A63-SLRB20-125-M42



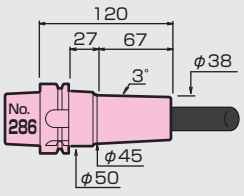
0.5

A63-SLRB20-155-M42



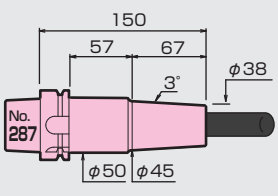
0.6

A63-SLRB20-120-M67



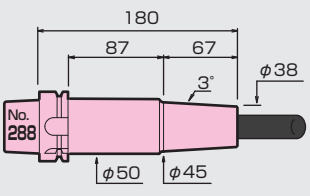
0.5

A63-SLRB20-150-M67



0.7

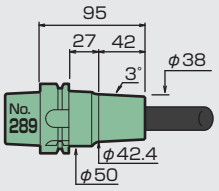
A63-SLRB20-180-M67



0.9

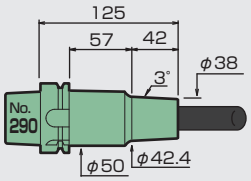
φ20 SLFB t=9

A63−SLFB20−95−M42



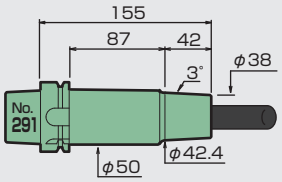
0.4

A63−SLFB20−125−M42



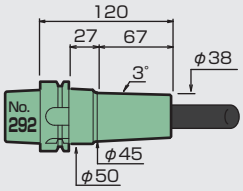
0.5

A63−SLFB20−155−M42



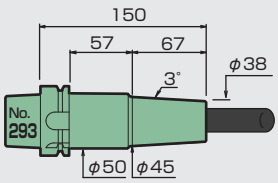
0.6

A63−SLFB20−120−M67



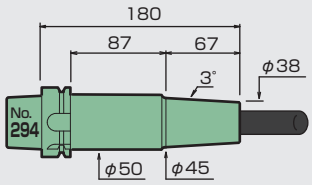
0.5

A63−SLFB20−150−M67



0.7

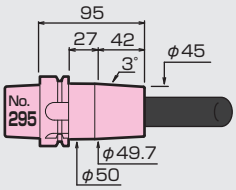
A63−SLFB20−180−M67



0.9

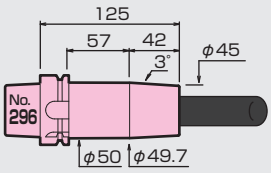
φ25 SLRB t=10

A63−SLRB25−95−M42



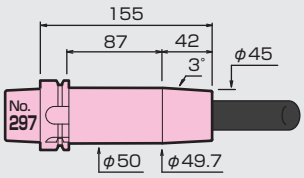
0.3

A63−SLRB25−125−M42



0.5

A63−SLRB25−155−M42



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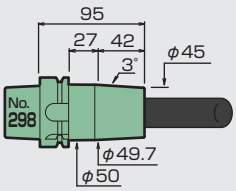
φ25 SLFB t=10

A63−SLFB25−95−M42



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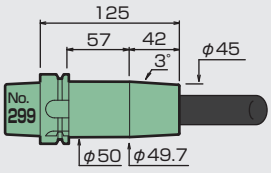

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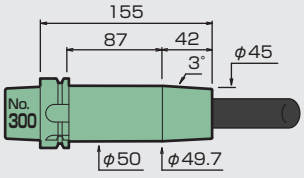
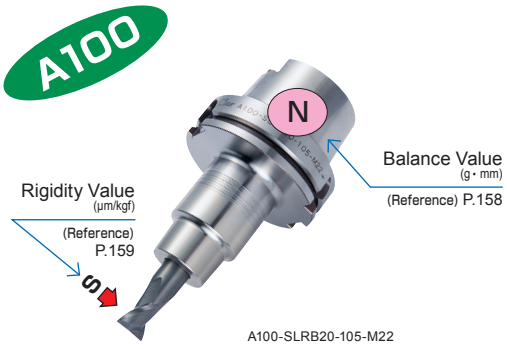


0.7

HSK-A100 Code Table



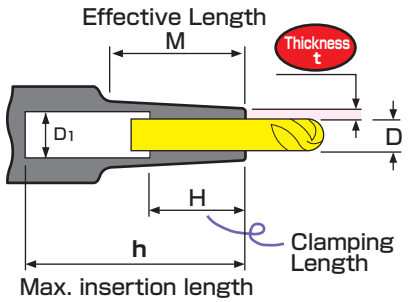


Fig.1

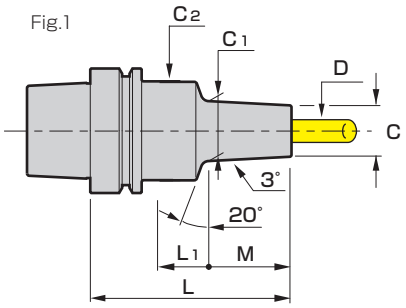
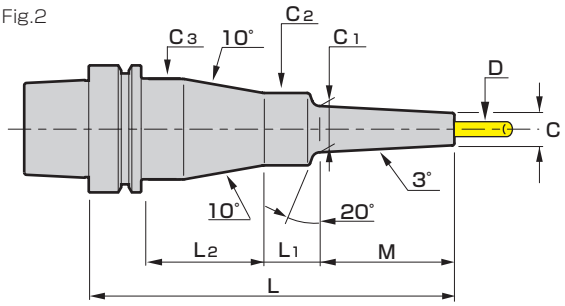


Fig.2



CODE	Fig.	φD	φC	Thickness t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Scale model
A100-SLSA 3-110-M 42	1	3	6		110	42	39	—	10.4	26	—	4	9	80	2.2	19.8	9.4	1
-135-M 67					135	67			13					105	2.3	20.9	15.1	4
-140-M 42					140	42	69		10.4					110		19.9	10.1	2
-165-M 67					165	67			13					135		21.0	16.1	5
-M 97				1.5		97	39		16.2							22.2	21.0	7
-170-M 42	2				170	42	33	66	10.4		40			140	2.6	20.2	10.0	3
-195-M 67					195	67			13					165		21.3	15.9	6
-M 97	1					97	69	—	16.2		—				2.4	22.3	22.5	8
-225-M 97	2				225		33	66			40			195	2.7	22.6	22.2	9
-SLRA 3- 90-M 22	1	3	7.5		90	22	39	—	9.8	26	—	5	9	60	2.2	20.2	2.9	10
-110-M 42					110	42			11.9					80		20.6	5.5	13
-120-M 22					120	22	69		9.8					90	2.3	20.3	3.3	11
-135-M 67					135	67	39		14.5					105		21.4	9.0	16
-140-M 42					140	42	69		11.9					110		20.7	6.1	14
-150-M 22	2				150	22	33	66	9.8		40			120	2.6	20.6	3.2	12
-165-M 67	1				165	67	69	—	14.5		—			135	2.4	21.5	10.1	17
-M 97				2.25		97	39		17.7						2.3	22.4	13.1	19
-170-M 42	2				170	42	33	66	11.9		40			140	2.6	21.0	6.0	15
-195-M 67					195	67			14.5					165		21.8	9.9	18
-M 97	1					97	69	—	17.7		—				2.4	22.5	14.7	20
-M127						127	39		20.8	36						24.5	15.8	22
-225-M 97	2				225	97	33	66	17.7	26	40			195	2.7	22.8	14.4	21
-M127	1					127	69	—	20.8	36	—				2.6	24.6	16.4	23
-255-M127	2				255		28	71			50			225	3.2	24.9	16.3	24
-SLFB 3- 90-M 22	1	3	9.5		90	22	39	—	11.8	26	—	5	9	60	2.2	19.8	1.9	25
-110-M 42					110	42			13.9					80	2.3	20.3	3.3	28
-120-M 22					120	22	69		11.8					90		19.9	2.3	26
-135-M 67					135	67	39		16.5					105		21.4	5.5	31
-140-M 42				3.25	140	42	69		13.9					110		20.4	4.0	29
-150-M 22	2				150	22	33	66	11.8		40			120	2.6	20.2	2.3	27
-165-M 67	1				165	67	69	—	16.5		—			135	2.4	21.5	6.5	32
-170-M 42	2				170	42	33	66	13.9		40			140	2.6	20.7	3.9	30
-195-M 67					195	67			16.5					165		21.8	6.3	33

CODE	Fig.	φD	φC	Thickness t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Scale model
A100−SLSA 4−110−M 42	1	4	7		110	42	39	—	11.4	26	—	5	12	80	2.3	21.0	7.4	34
−135−M 67					135	67			14					105			12.0	37
−140−M 42					140	42	69		11.4					110		21.1	8.1	35
−165−M 67					165	67			14					135	2.4		13.1	38
−M 97				1.5		97	39		17.2						2.3	22.4	16.9	40
−170−M 42	2				170	42	33	66	11.4		40			140	2.6	21.4	8.0	36
−195−M 67					195	67			14					165			12.9	39
−M 97	1					97	69	—	17.2		—				2.4	22.5	18.6	41
−225−M 97	2				225		33	66			40			195	2.7	22.8	18.2	42
−SLRA 4− 90−M 22	1	4	10		90	22	39	—	12.3	26	—	6	12	60	2.2	20.3	1.8	43
−110−M 42					110	42			14.4					80	2.3	21.0	3.2	46
−120−M 22					120	22	69		12.3					90		20.4	2.2	44
−135−M 67					135	67	39		17					105		22.0	5.3	49
−140−M 42					140	42	69		14.4					110		21.1	3.9	47
−150−M 22	2				150	22	33	66	12.3		40			120	2.6	20.7	2.2	45
−165−M 67	1				165	67	69	—	17		—			135	2.4	22.1	6.3	50
−M 97				3		97	39		20.2							23.5	7.9	52
−170−M 42	2				170	42	33	66	14.4		40			140	2.6	21.4	3.8	48
−195−M 67					195	67			17					165	2.7	22.5	6.1	51
−M 97	1					97	69	—	20.2		—				2.4	23.5	9.5	53
−M127						127	39		23.3	36					2.5	26.7	9.4	55
−225−M 97	2				225	97	33	66	20.2	26	40			195	2.7	23.9	9.2	54
−M127	1					127	69	—	23.3	36	—					26.8	10.1	56
−255−M127	2				255		28	71			50			225	3.3	27.2	9.9	57
−SLFB 4− 90−M 22	1	4	12		90	22	39	—	14.3	26	—	6	12	60	2.2	20.1	1.4	58
−110−M 42					110	42			16.4					80	2.3	20.8	2.3	61
−120−M 22					120	22	69		14.3					90		20.2	1.8	59
−135−M 67					135	67	39		19					105		22.0	3.7	64
−140−M 42				4	140	42	69		16.4					110	2.4	20.8	2.9	62
−150−M 22	2				150	22	33	66	14.3		40			120	2.6	20.5	1.8	60
−165−M 67	1				165	67	69	—	19		—			135	2.4	22.1	4.7	65
−170−M 42	2				170	42	33	66	16.4		40			140	2.6	21.2	2.8	63
−195−M 67					195	67			19					165	2.7	22.4	4.5	66
A100−SLSA 6−110−M 42	1	6	9		110	42	39	—	13.4	26	—	7	18	80	2.2	21.3	4.9	67
−135−M 67					135	67			16					105	2.3	22.8	8.1	70
−140−M 42					140	42	69		13.4					110		21.4	5.7	68
−165−M 67					165	67			16					135	2.4	22.9	9.3	71
−M 97				1.5		97	39		19.2	36						25.3	11.1	73
−170−M 42	2				170	42	33	66	13.4	26	40			140	2.6	21.7	5.6	69
−195−M 67					195	67			16					165		23.2	9.1	72
−M 97	1					97	69	—	19.2	36	—					25.4	11.6	74
−225−M 97	2				225		28	71			50			195	3.2	25.7	11.5	75
−SLSB 6−110−M 42	1	6	10		110	42	39	—	14.4	26	—	8	18	80	2.2	22.2	3.9	76
−135−M 67					135	67			17					105	2.3	24.3	6.5	79
−140−M 42					140	42	69		14.4					110		22.3	4.7	77
−165−M 67					165	67			17					135	2.4	24.4	7.7	80
−M 97						97	39		20.2	36						27.3	9.0	82
−170−M 42	2				170	42	33	66	14.4	26	40			140	2.6	22.6	4.6	78
−195−M 67					195	67			17					165		24.7	7.5	81
−M 97	1			2		97	69	—	20.2	36	—					27.4	9.5	83
−M127						127	39		23.3						2.5	29.8	11.5	85
−225−M 97	2				225	97	28	71	20.2		50			195	3.2	27.8	9.3	84
−M127	1					127	69	—	23.3		—				2.7	29.9	12.2	86
−M157						157	39		26.5						2.6	32.3	13.8	88
−255−M127	2				255	127	28	71	23.3		50			225	3.2	30.3	12.1	87
−M157	1					157	69	—	26.5		—				2.8	32.4	14.8	89
−285−M157	2				285		28	71			50			255	3.3	32.8	14.5	90

A100

CODE	Fig.	φD	φC	Thickness t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Scale model
A100-SLRB 6- 90-M 22	1	6	14		90	22	39	—	16.3	36	—	8	18	60	2.3	21.1	1.0	91
-110-M 42					110	42			18.4					80		22.8	1.6	94
-120-M 22					120	22	69		16.3					90	2.5	21.3	1.1	92
-135-M 67					135	67	39		21					105	2.4	24.9	2.6	97
-140-M 42				4	140	42	69		18.4					110	2.5	22.9	1.8	95
-150-M 22	2				150	22	28	71	16.3		50			120	3.1	21.6	1.1	93
-165-M 67	1				165	67	69	—	21		—			135	2.6	25.0	2.9	98
-170-M 42	2				170	42	28	71	18.4		50			140	3.1	23.3	1.8	96
-195-M 67					195	67			21					165	3.2	25.3	2.9	99
-SLFB 6- 90-M 22	1	6	14		90	22	39	—	16.3	36	—	8	18	60	2.3	21.1	1.0	100
-110-M 42					110	42			18.4					80		22.8	1.6	103
-120-M 22					120	22	69		16.3					90	2.5	21.3	1.1	101
-135-M 67					135	67	39		21					105	2.4	24.9	2.6	106
-140-M 42				4	140	42	69		18.4					110	2.5	22.9	1.8	104
-150-M 22	2				150	22	28	71	16.3		50			120	3.1	21.6	1.1	102
-165-M 67	1				165	67	69	—	21		—			135	2.6	25.0	2.9	107
-170-M 42	2				170	42	28	71	18.4		50			140	3.1	23.3	1.8	105
-195-M 67					195	67			21					165	3.2	25.3	2.9	108
A100-SLSA 8-110-M 42	1	8	11		110	42	39	—	15.4	36	—	9	24	80	2.3	23.2	3.2	109
-135-M 67					135	67			18					105		25.8	5.4	112
-140-M 42					140	42	69		15.4					110	2.5	23.4	3.5	110
-165-M 67					165	67			18					135		26.0	5.8	113
-M 97				1.5		97	39		21.2						2.4	29.0	7.9	115
-170-M 42	2				170	42	28	71	15.4		50			140	3.1	23.7	3.4	111
-195-M 67					195	67			18					165		26.3	5.7	114
-M 97	1					97	69	—	21.2		—				2.6	29.1	8.5	116
-225-M 97	2				225		28	71			50			195	3.2	29.5	8.3	117
-SLSB 8-110-M 42	1	8	13		110	42	39	—	17.4	36	—	10	24	80	2.3	24.3	2.1	118
-135-M 67					135	67			20					105		27.5	3.6	121
-140-M 42					140	42	69		17.4					110	2.5	24.5	2.4	119
-165-M 67					165	67			20					135		27.7	4.0	122
-M 97						97	39		23.2						2.4	31.4	5.3	124
-170-M 42	2				170	42	28	71	17.4		50			140	3.1	24.8	2.4	120
-195-M 67					195	67			20					165		28	3.9	123
-M 97	1			2.5		97	69	—	23.2		—				2.6	31.5	5.9	125
-M127						127	39		26.3						2.5	35.3	7.1	127
-225-M 97	2				225	97	28	71	23.2		50			195	3.2	31.9	5.8	126
-M127	1					127	69	—	26.3		—				2.7	35.4	7.9	128
-M157						157	39		29.5						2.6	39.1	8.7	130
-255-M127	2				255	127	28	71	26.3		50			225	3.3	35.7	7.7	129
-M157	1					157	69	—	29.5		—				2.9	39.3	9.7	131
-285-M157	2				285		28	71			50			255	3.4	39.6	9.5	132
-SLRB 8- 90-M 22	1	8	18		90	22	39	—	20.3	36	—	10	24	60	2.3	21.8	0.7	133
-110-M 42					110	42			22.4					80		24.4	1.1	136
-120-M 22					120	22	69		20.3					90	2.5	22	0.9	134
-135-M 67					135	67	39		25					105	2.4	27.6	1.7	139
-140-M 42				5	140	42	69		22.4					110	2.6	24.5	1.3	137
-150-M 22	2				150	22	28	71	20.3		50			120	3.1	22.3	0.8	135
-165-M 67	1				165	67	69	—	25		—			135	2.6	27.8	2.0	140
-170-M 42	2				170	42	28	71	22.4		50			140	3.1	24.9	1.3	138
-195-M 67					195	67			25					165	3.2	28.1	2.0	141
-SLFB 8- 90-M 22	1	8	18		90	22	39	—	20.3	36	—	10	24	60	2.3	21.8	0.7	142
-110-M 42					110	42			22.4					80		24.4	1.1	145
-120-M 22					120	22	69		20.3					90	2.5	22.0	0.9	143
-135-M 67					135	67	39		25					105	2.4	27.6	1.7	148
-140-M 42				5	140	42	69		22.4					110	2.6	24.5	1.3	146
-150-M 22	2				150	22	28	71	20.3		50			120	3.1	22.3	0.8	144
-165-M 67	1				165	67	69	—	25		—			135	2.6	27.8	2.0	149
-170-M 42	2				170	42	28	71	22.4		50			140	3.1	24.9	1.3	147
-195-M 67					195	67			25					165	3.2	28.1	2.0	150

A100

A100

CODE	Fig.	φD	φC	Thickness t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Scale model
A100−SLSA10−110−M 42	1	10	13		110	42	39	—	17.4	36	—	11	30	80	2.3	24.6	2.3	151
−135−M 67					135	67			20					105		28.5	4.0	154
−140−M 42					140	42	69		17.4					110	2.5	24.8	2.6	152
−165−M 67					165	67			20					135		28.6	4.4	155
−M 97				1.5		97	39		23.2						2.4	33.2	6.0	157
−170−M 42	2				170	42	28	71	17.4		50			140	3.1	25.1	2.5	153
−195−M 67					195	67			20					165		29.0	4.4	156
−M 97	1					97	69	—	23.2		—				2.6	33.3	6.6	158
−225−M 97	2				225		28	71			50			195	3.2	33.7	6.5	159
−SLSB10−110−M 42	1	10	16		110	42	39	—	20.4	36	—	12	30	80	2.3	25.8	1.4	160
−135−M 67					135	67			23					105	2.4	30.4	2.4	163
−140−M 42					140	42	69		20.4					110	2.5	25.9	1.7	161
−165−M 67					165	67			23					135	2.6	30.5	2.8	164
−M 97						97	39		26.2						2.5	35.9	3.7	166
−170−M 42	2				170	42	28	71	20.4		50			140	3.1	26.3	1.7	162
−195−M 67					195	67			23					165	3.2	30.9	2.7	165
−M 97	1			3		97	69	—	26.2		—				2.7	36.1	4.2	167
−M127						127	39		29.3	50					2.8	42.1	4.4	169
−225−M 97	2				225	97	28	71	26.2	36	50			195	3.2	36.4	4.1	168
−M127	1					127	69	—	29.3	50	—				3.1	42.5	4.7	170
−M157						157	39		32.5						3.0	47.7	5.5	172
−255−M127					255	127	99		29.3					225	3.5	42.8	5.0	171
−M157						157	69		32.5						3.3	48.1	5.8	173
−285−M157					285		99							255	3.6	48.4	6.1	174
−SLRB10− 90−M 22	1	10	22		90	22	39	—	24.3	36	—	12	30	60	2.3	22.2	0.6	175
−110−M 42					110	42			26.4					80	2.4	25.9	0.8	178
−120−M 22					120	22	69		24.3					90	2.5	22.3		176
−135−M 67					135	67	39		29					105		30.5	1.2	181
−140−M 42				6	140	42	69		26.4					110	2.6	26.0	1.1	179
−150−M 22	2				150	22	28	71	24.3		50			120	3.1	22.7	0.7	177
−165−M 67	1				165	67	69	—	29		—			135	2.7	30.6	1.6	182
−170−M 42	2				170	42	28	71	26.4		50			140	3.2	26.3	1.0	180
−195−M 67					195	67			29					165	3.3	31.0	1.6	183
−SLFB10− 90−M 22	1	10	22		90	22	39	—	24.3	36	—	12	30	60	2.3	22.2	0.6	184
−110−M 42					110	42			26.4					80	2.4	25.9	0.8	187
−120−M 22					120	22	69		24.3					90	2.5	22.3		185
−135−M 67					135	67	39		29					105		30.5	1.2	190
−140−M 42				6	140	42	69		26.4					110	2.6	26.0	1.1	188
−150−M 22	2				150	22	28	71	24.3		50			120	3.1	22.7	0.7	186
−165−M 67	1				165	67	69	—	29		—			135	2.7	30.6	1.6	191
−170−M 42	2				170	42	28	71	26.4		50			140	3.2	26.3	1.0	189
−195−M 67					195	67			29					165	3.3	31.0	1.6	192
A100−SLSA12−110−M 42	1	12	15		110	42	39	—	19.4	36	—	13	30	79	2.3	27.0	1.9	193
−135−M 67					135	67			22					104		32.5	3.3	196
−140−M 42					140	42	69		19.4					105	2.5	27.2	2.2	194
−165−M 67					165	67			22					130		32.6	3.7	197
−M 97				1.5		97	39		25.2					134		39.4	4.9	199
−170−M 42	2				170	42	28	71	19.4		50			135	3.1	27.5	2.1	195
−195−M 67					195	67			22					160		32.9	3.6	198
−M 97	1					97	69	—	25.2		—				2.7	39.6	5.5	200
−225−M 97	2				225		28	71			50			190	3.3	39.9	5.4	201

A100

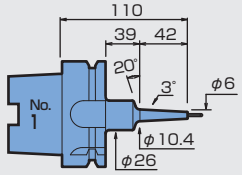
CODE	Fig.	φD	φC	Thickness t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Scale model
A100−SLSB12−110−M 42	1	12	19		110	42	39	—	23.4	36	—	14	30	79	2.3	28.4	1.1	202
−135−M 67					135	67			26					104	2.4	34.7	1.8	205
−140−M 42					140	42	69		23.4					105	2.5	28.5	1.4	203
−165−M 67					165	67			26					130	2.6	34.8	2.3	206
−M 97						97	39		29.2	50					2.7	42.9	2.4	208
−170−M 42	2				170	42	28	71	23.4	36	50			135	3.1	28.9	1.4	204
−195−M 67					195	67			26					160	3.2	35.2	2.2	207
−M 97	1			3.5		97	69	—	29.2	50	—				3.1	43.2	2.6	209
−M127						127	39		32.3						2.9	50.4	3.2	211
−225−M 97					225	97	99		29.2					190	3.4	43.6	2.8	210
−M127						127	69		32.3						3.2	50.8	3.5	212
−M157						157	39		35.5						3.1	58.0	4.0	214
−255−M127					255	127	99		32.3					220	3.6	51.1	3.8	213
−M157						157	69		35.5						3.4	58.3	4.3	215
−285−M157					285		99							250	3.7	58.7	4.7	216
−SLRB12− 90−M 22	1	12	26		90	22	39	—	28.3	50	—	14	30	55	2.6	26.5	0.4	217
−110−M 42					110	42			30.4					75	2.7	29.2	0.5	220
−120−M 22					120	22	69		28.3					85	2.9	26.8		218
−135−M 67					135	67	39		33					100	2.7	35.5	0.8	223
−140−M 42				7	140	42	69		30.4					105	3.0	29.6	0.6	221
−150−M 22					150	22	99		28.3					115	3.2	27.2		219
−165−M 67					165	67	69		33					130	3.1	35.8	0.9	224
−170−M 42					170	42	99		30.4					135	3.3	29.9	0.8	222
−195−M 67					195	67			33					160	3.4	36.2	1.1	225
−SLFB12− 90−M 22	1	12	26		90	22	39	—	28.3	50	—	14	30	55	2.6	26.5	0.4	226
−110−M 42					110	42			30.4					75	2.7	29.2	0.5	229
−120−M 22					120	22	69		28.3					85	2.9	26.8		227
−135−M 67					135	67	39		33					100	2.7	35.5	0.8	232
−140−M 42				7	140	42	69		30.4					105	3.0	29.6	0.6	230
−150−M 22					150	22	99		28.3					115	3.2	27.2		228
−165−M 67					165	67	69		33					130	3.1	35.8	0.9	233
−170−M 42					170	42	99		30.4					135	3.3	29.9	0.8	231
−195−M 67					195	67			33					160	3.4	36.2	1.1	234
A100−SLSB16−110−M 42	1	16	24		110	42	39	—	28.4	50	—	18	32	75	2.6	34.7	0.7	235
−135−M 67					135	67			31					100	2.7	45.0	1.1	238
−140−M 42					140	42	69		28.4					105	2.9	35.0	0.8	236
−165−M 67					165	67			31					130	3.0	45.4	1.2	239
−M 97						97	39		34.2						2.8	57.4	1.6	241
−170−M 42					170	42	99		28.4					135	3.2	35.4	0.9	237
−195−M 67					195	67			31					160	3.3	45.7	1.4	240
−M 97				4		97	69		34.2						3.1	57.8	1.8	242
−M127						127	39		37.3						3.0	69.8	2.2	244
−225−M 97					225	97	99		34.2					190	3.5	58.1	2.1	243
−M127						127	69		37.3						3.3	70.2	2.5	245
−M157						157	39		40.5						3.2	82.3	2.7	247
−255−M127					255	127	99		37.3					220	3.7	70.6	2.8	246
−M157						157	69		40.5						3.6	82.6	3.1	248
−285−M157					285		99							250	3.9	83.0	3.5	249
−SLRB16− 90−M 22	1	16	32		90	22	39	—	34.3	50	—	18	32	55	2.6	26.5	0.3	250
−110−M 42					110	42			36.4					75	2.7	34.8	0.4	253
−120−M 22					120	22	69		34.3					85	2.9	26.9		251
−135−M 67					135	67	39		39					100		45.2	0.6	256
−140−M 42				8	140	42	69		36.4					105	3.1	35.2	0.5	254
−150−M 22					150	22	99		34.3					115	3.2	27.2		252
−165−M 67					165	67	69		39					130		45.5	0.7	257
−170−M 42					170	42	99		36.4					135	3.4	35.5		255
−195−M 67					195	67			39					160	3.6	45.9	0.9	258

A100

CODE	Fig.	φD	φC	Thickness t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Scale model
A100−SLFB16− 90−M 22	1	16	32	8	90	22	39	—	34.3	50	—	18	32	55	2.6	26.5	0.3	259
−110−M 42					110	42			36.4					75	2.7	34.8	0.4	262
−120−M 22					120	22	69		34.3					85	2.9	26.9		260
−135−M 67					135	67	39		39					100		45.2	0.6	265
−140−M 42					140	42	69		36.4					105	3.1	35.2	0.5	263
−150−M 22					150	22	99		34.3					115	3.2	27.2		261
−165−M 67					165	67	69		39					130		45.5	0.7	266
−170−M 42					170	42	99		36.4					135	3.4	35.5		264
−195−M 67					195	67			39					160	3.6	45.9	0.9	267
A100−SLSB20−110−M 42	1	20	29	4.5	110	42	39	—	33.4	50	—	22	40	75	2.6	37.4	0.5	268
−135−M 67					135	67			36					100	2.7	52.8	0.8	271
−140−M 42					140	42	69		33.4					105	2.9	37.8	0.6	269
−165−M 67					165	67			36					130	3.1	53.2	1.0	272
−M 97						97	39		39.2						2.9	71.3	1.2	274
−170−M 42					170	42	99		33.4					135	3.3	38.1	0.8	270
−195−M 67					195	67			36					160	3.4	53.5	1.2	273
−M 97						97	69		39.2						3.2	71.7	1.4	275
−M127						127	39		42.3						3.1	91.0	1.6	277
−225−M 97					225	97	99		39.2					190	3.6	72.0	1.7	276
−M127						127	69		42.3						3.5	91.4	1.9	278
−M157						157	39		45.5						3.4	109.6	2.0	280
−255−M127					255	127	99		42.3					220	3.8	91.8	2.3	279
−M157						157	69		45.5						3.7	109.9	2.4	281
−285−M157					285		99							250	4.1	110.3	2.9	282
−SLRB20−110−M 42	1	20	38	9	110	42	39	—	42.4	50	—	22	40	75	2.8	37.5	0.4	283
−135−M 67					135	67			45					100	3.0	53.0	0.5	286
−140−M 42					140	42	69		42.4					105	3.1	37.9		284
−165−M 67					165	67			45					130	3.4	53.3	0.7	287
−170−M 42					170	42	99		42.4					135	3.5	38.2		285
−195−M 67					195	67			45					160	3.7	53.7	0.9	288
−SLFB20−110−M 42	1	20	38	9	110	42	39	—	42.4	50	—	22	40	75	2.8	37.5	0.4	289
−135−M 67					135	67			45					100	3.0	53.0	0.5	292
−140−M 42					140	42	69		42.4					105	3.1	37.9		290
−165−M 67					165	67			45					130	3.4	53.3	0.7	293
−170−M 42					170	42	99		42.4					135	3.5	38.2		291
−195−M 67					195	67			45					160	3.7	53.7	0.9	294
A100−SLRB25−110−M 42	1	25	45	10	110	42	39	—	49.7	50	—	26	45	75	2.9	40.7	0.3	295
−140−M 42					140		69							105	3.2	41.0	0.5	296
−170−M 42					170		99							135	3.5	41.4	0.7	297
−SLFB25−110−M 42	1	25	45	10	110	42	39	—	49.7	50	—	26	45	75	2.9	40.7	0.3	298
−140−M 42					140		69							105	3.2	41.0	0.5	299
−170−M 42					170		99							135	3.5	41.4	0.7	300

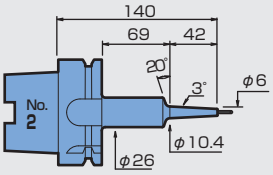
φ3 SLSA t=1.5

A100-SLSA3-110-M42



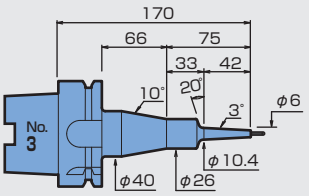
9.4

A100-SLSA3-140-M42



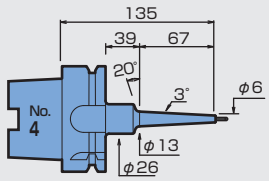
10.1

A100-SLSA3-170-M42



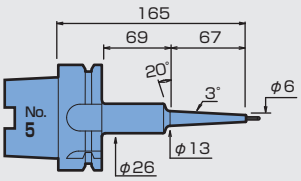
10.0

A100-SLSA3-135-M67



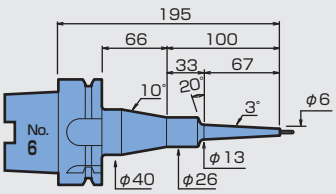
15.1

A100-SLSA3-165-M67



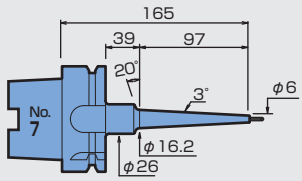
16.1

A100-SLSA3-195-M67



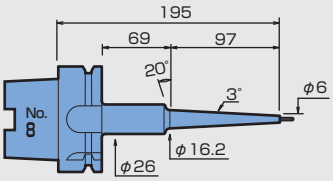
15.9

A100-SLSA3-165-M97



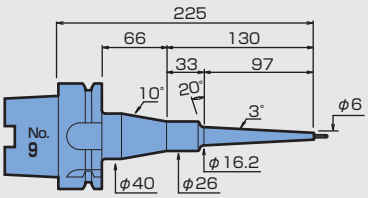
21.0

A100-SLSA3-195-M97



22.5

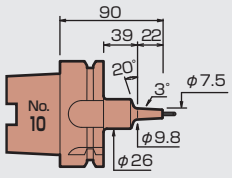
A100-SLSA3-225-M97



22.2

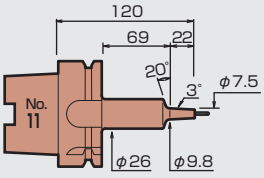
φ3 SLRA t=2.25

A100-SLRA3-90-M22



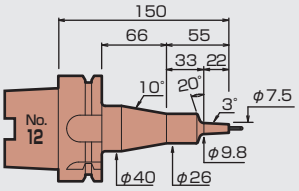
2.9

A100-SLRA3-120-M22



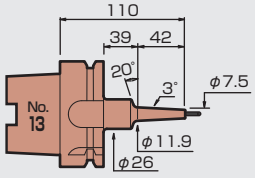
3.3

A100-SLRA3-150-M22



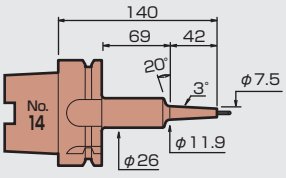
3.2

A100-SLRA3-110-M42



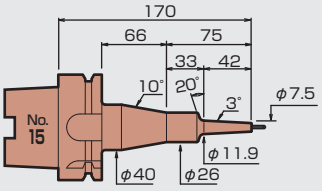
5.5

A100-SLRA3-140-M42



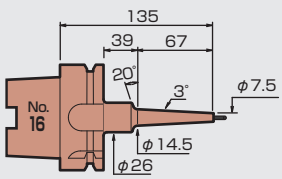
6.1

A100-SLRA3-170-M42



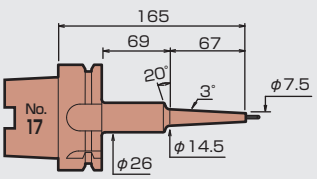
6.0

A100-SLRA3-135-M67



9.0

A100-SLRA3-165-M67



10.1

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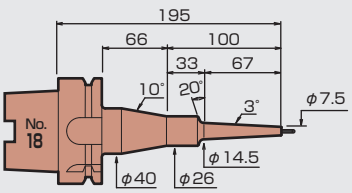
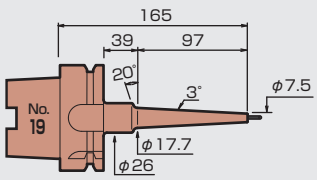


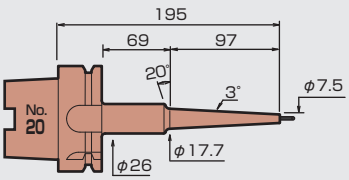
9.9

A100-SLRA3-165-M97



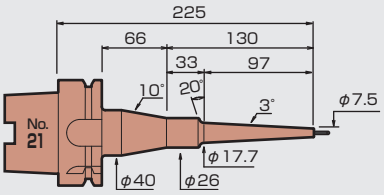
13.1

A100-SLRA3-195-M97



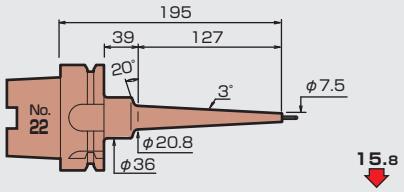
14.7

A100-SLRA3-225-M97



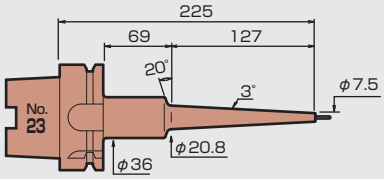
14.4

A100-SLRA3-195-M127



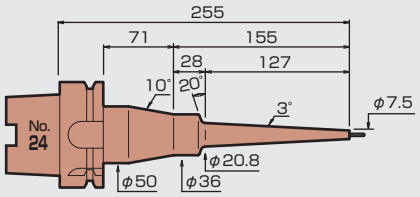
15.8

A100-SLRA3-225-M127



16.4

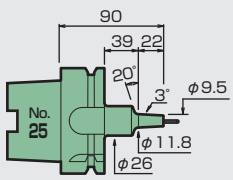
A100-SLRA3-255-M127



16.3

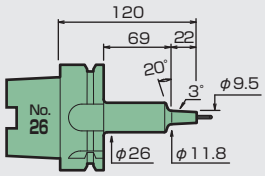
φ3 SLFB t=3.25

A100-SLFB3-90-M22



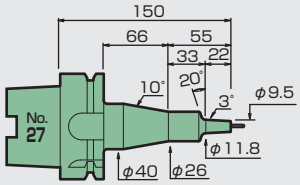
1.9

A100-SLFB3-120-M22



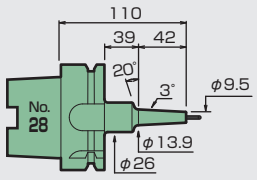
2.3

A100-SLFB3-150-M22



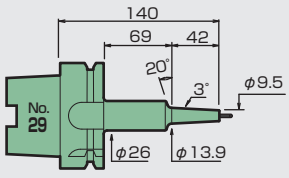
2.3

A100-SLFB3-110-M42



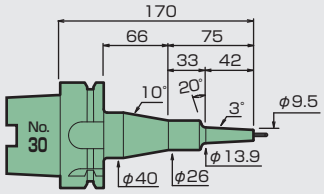
3.3

A100-SLFB3-140-M42



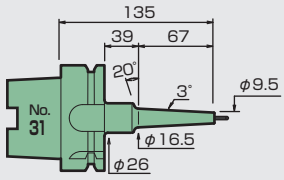
4.0

A100-SLFB3-170-M42



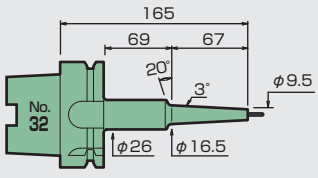
3.9

A100-SLFB3-135-M67



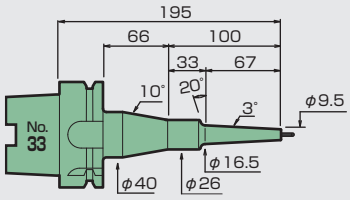
5.5

A100-SLFB3-165-M67



6.5

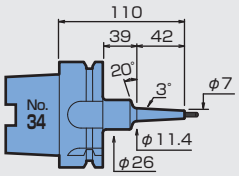
A100-SLFB3-195-M67



6.3

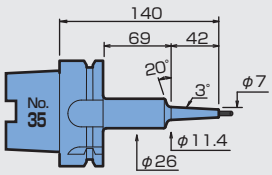
φ4 SLSA t=1.5

A100-SLSA4-110-M42



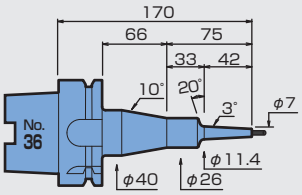
7.4

A100-SLSA4-140-M42



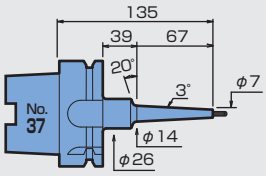
8.1

A100-SLSA4-170-M42



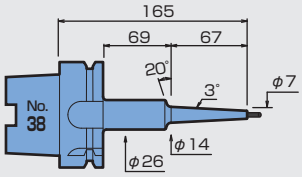
8.0

A100-SLSA4-135-M67



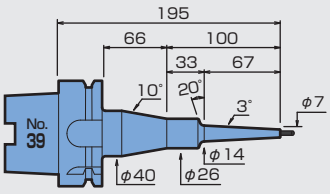
12.0

A100-SLSA4-165-M67



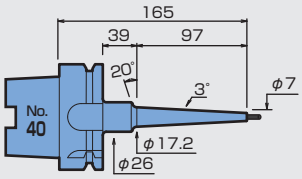
13.1

A100-SLSA4-195-M67



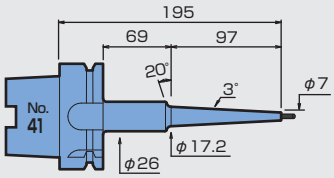
12.9

A100-SLSA4-165-M97



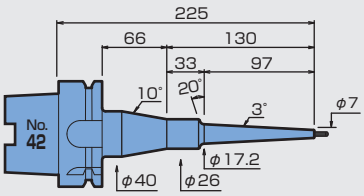
16.9

A100-SLSA4-195-M97



18.6

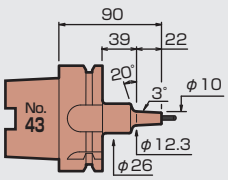
A100-SLSA4-225-M97



18.2

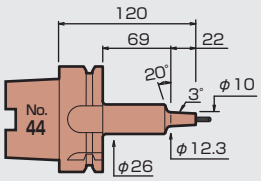
φ4 SLRA t=3

A100-SLRA4-90-M22



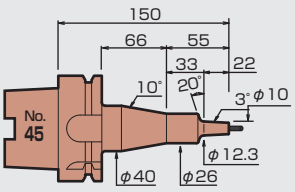
1.8

A100-SLRA4-120-M22



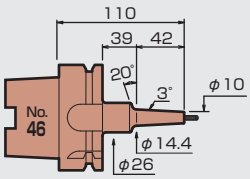
2.2

A100-SLRA4-150-M22



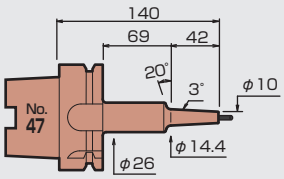
2.2

A100-SLRA4-110-M42



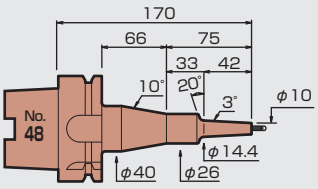
3.2

A100-SLRA4-140-M42



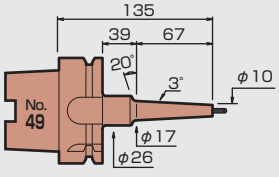
3.9

A100-SLRA4-170-M42



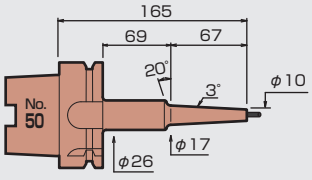
3.8

A100-SLRA4-135-M67



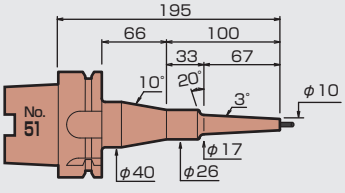
5.3

A100-SLRA4-165-M67



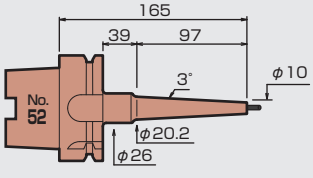
6.3

A100-SLRA4-195-M67



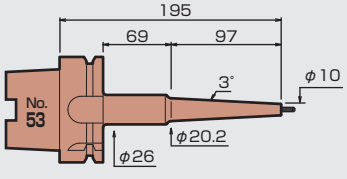
6.1

A100-SLRA4-165-M97



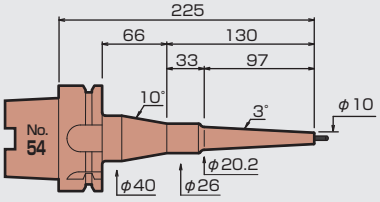
7.9

A100-SLRA4-195-M97



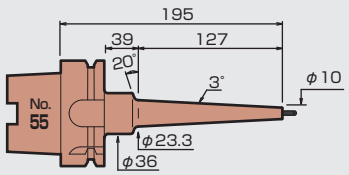
9.5

A100-SLRA4-225-M97



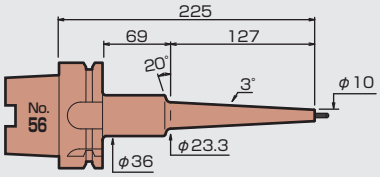
9.2

A100−SLRA4−195−M127



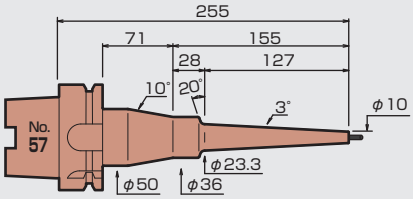
9.4

A100−SLRA4−225−M127



10.1

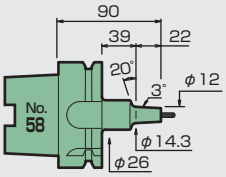
A100−SLRA4−255−M127



9.9

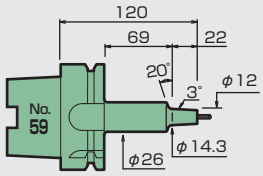
φ4 SLFB t=4

A100−SLFB4−90−M22



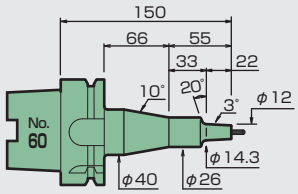
1.4

A100−SLFB4−120−M22



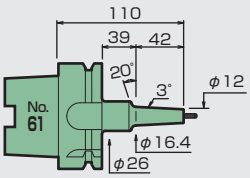
1.8

A100−SLFB4−150−M22



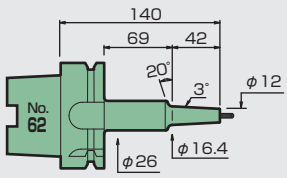
1.8

A100−SLFB4−110−M42



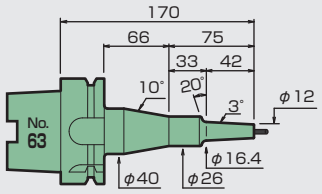
2.3

A100−SLFB4−140−M42



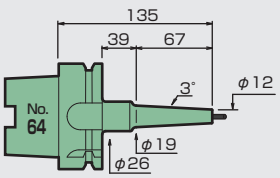
2.9

A100−SLFB4−170−M42



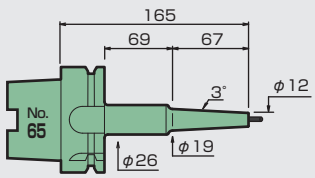
2.8

A100−SLFB4−135−M67



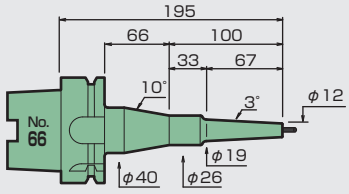
3.7

A100−SLFB4−165−M67



4.7

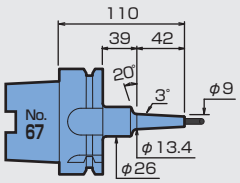
A100−SLFB4−195−M67



4.5

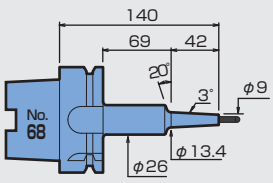
φ6 SLSA t=1.5

A100-SLSA6-110-M42



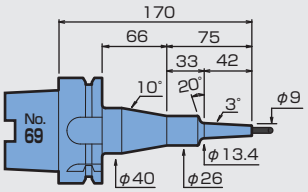
4.9

A100-SLSA6-140-M42



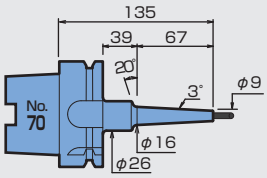
5.7

A100-SLSA6-170-M42



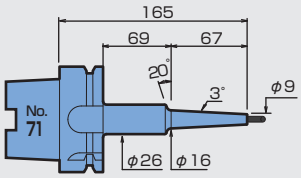
5.6

A100-SLSA6-135-M67



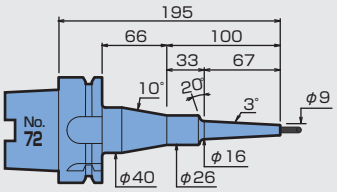
8.1

A100-SLSA6-165-M67



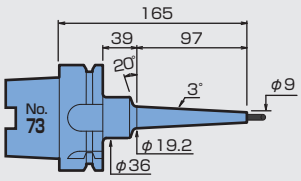
9.3

A100-SLSA6-195-M67



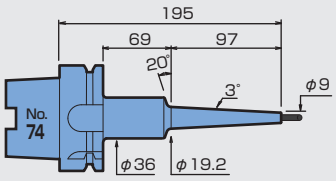
9.1

A100-SLSA6-165-M97



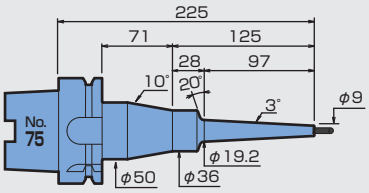
11.1

A100-SLSA6-195-M97



11.6

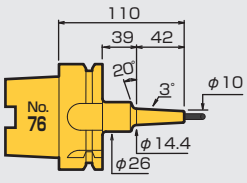
A100-SLSA6-225-M97



11.5

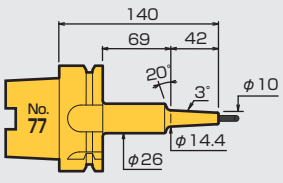
φ6 SLSB t=2

A100-SLSB6-110-M42



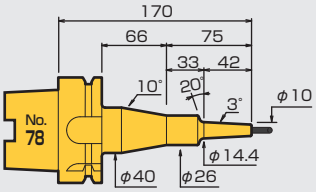
3.9

A100-SLSB6-140-M42



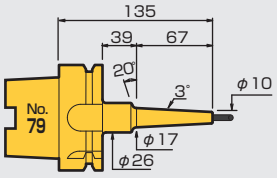
4.7

A100-SLSB6-170-M42



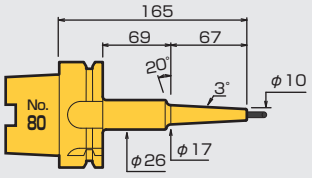
4.6

A100-SLSB6-135-M67



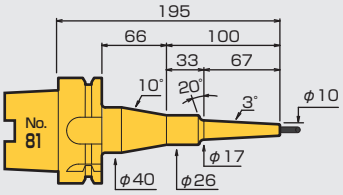
6.5

A100-SLSB6-165-M67



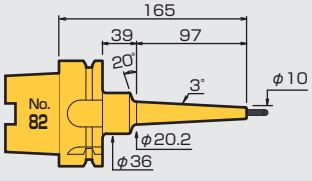
7.7

A100-SLSB6-195-M67



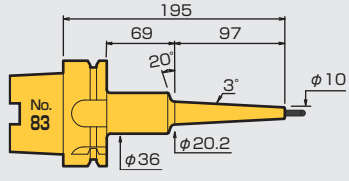
7.5

A100-SLSB6-165-M97



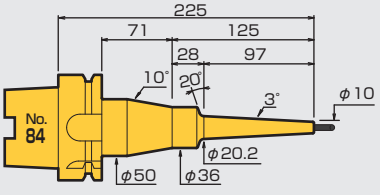
9.0

A100-SLSB6-195-M97



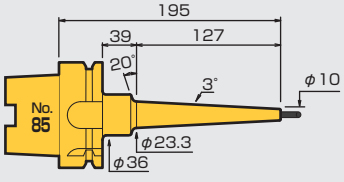
9.5

A100-SLSB6-225-M97



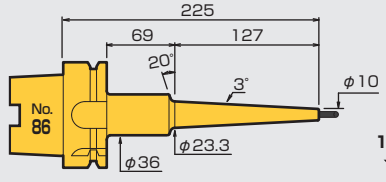
9.3

A100-SLSB6-195-M127



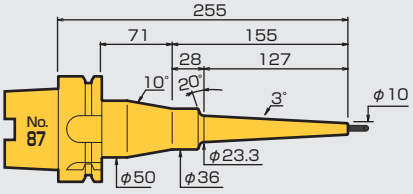
11.5

A100-SLSB6-225-M127



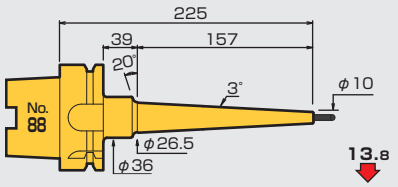
12.2

A100-SLSB6-255-M127



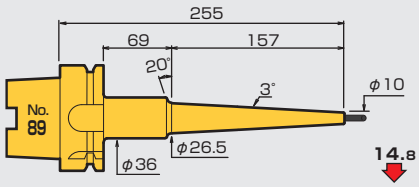
12.1

A100-SLSB6-225-M157



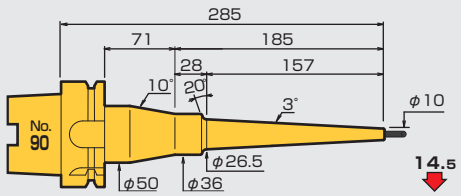
13.8

A100-SLSB6-255-M157



14.8

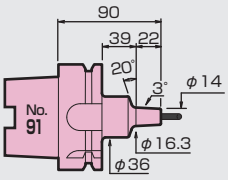
A100-SLSB6-285-M157



14.5

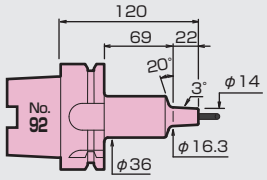
φ6 SLRB t=4

A100-SLRB6-90-M22



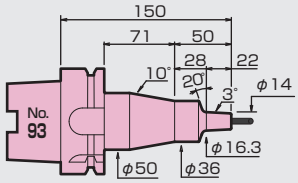
1.0

A100-SLRB6-120-M22



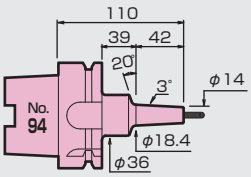
1.1

A100-SLRB6-150-M22



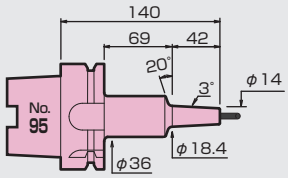
1.1

A100-SLRB6-110-M42



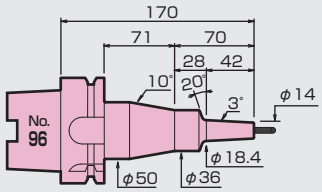
1.6

A100-SLRB6-140-M42



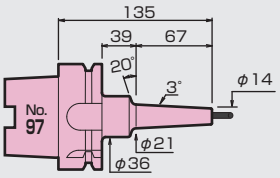
1.8

A100-SLRB6-170-M42



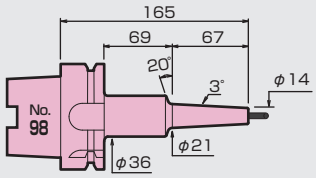
1.8

A100-SLRB6-135-M67



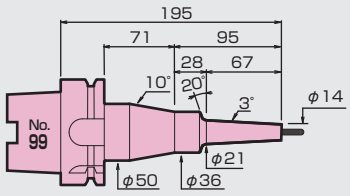
2.6

A100-SLRB6-165-M67



2.9

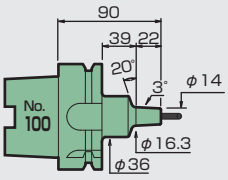
A100-SLRB6-195-M67



2.9

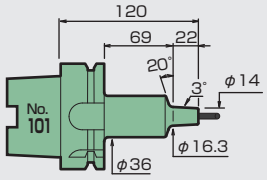
φ6 SLFB t=4

A100-SLFB6-90-M22



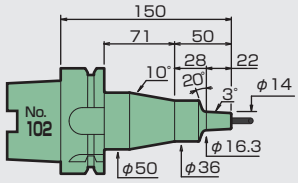
1.0

A100-SLFB6-120-M22



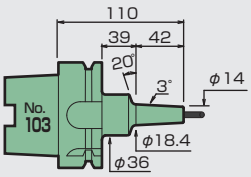
1.1

A100-SLFB6-150-M22



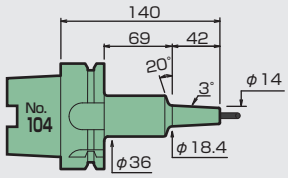
1.1

A100-SLFB6-110-M42



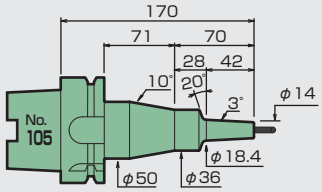
1.6

A100-SLFB6-140-M42



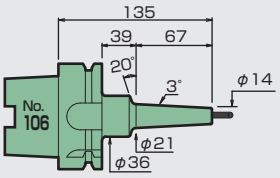
1.8

A100-SLFB6-170-M42



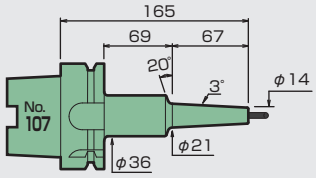
1.8

A100-SLFB6-135-M67



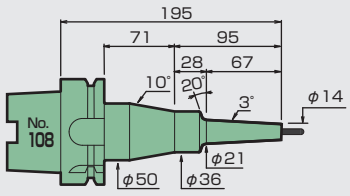
2.6

A100-SLFB6-165-M67



2.9

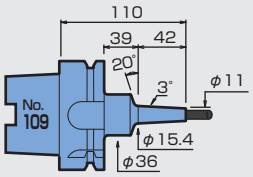
A100-SLFB6-195-M67



2.9

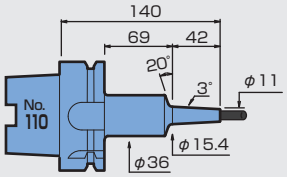
φ8 SLSA t=1.5

A100-SLSA8-110-M42



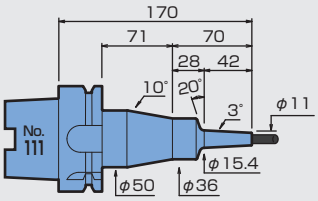
3.2

A100-SLSA8-140-M42



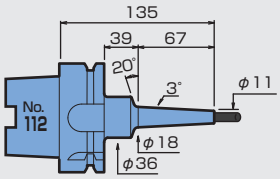
3.5

A100-SLSA8-170-M42



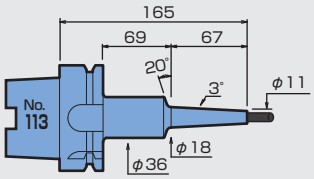
3.4

A100-SLSA8-135-M67



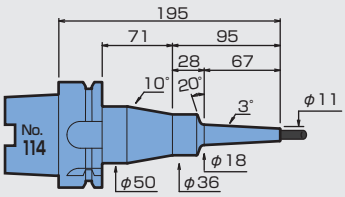
5.4

A100-SLSA8-165-M67



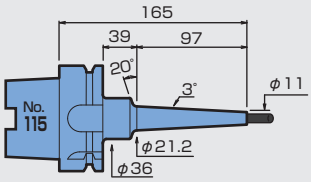
5.8

A100-SLSA8-195-M67



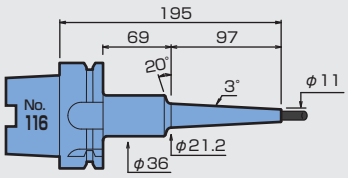
5.7

A100-SLSA8-165-M97



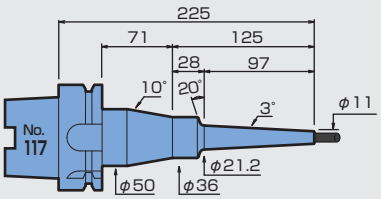
7.9

A100-SLSA8-195-M97



8.5

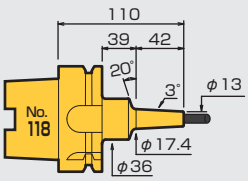
A100-SLSA8-225-M97



8.3

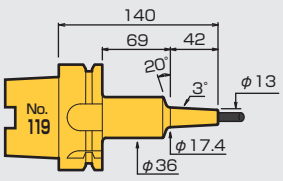
φ8 SLSB t=2.5

A100-SLSB8-110-M42



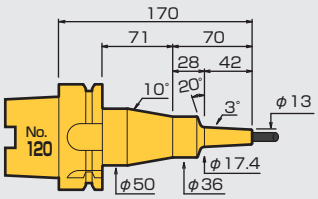
2.1

A100-SLSB8-140-M42



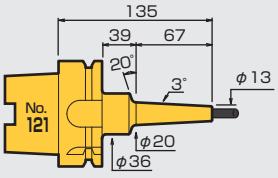
2.4

A100-SLSB8-170-M42



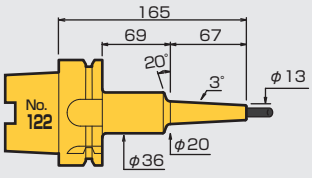
2.4

A100-SLSB8-135-M67



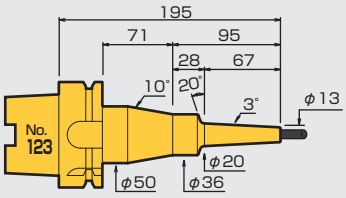
3.6

A100-SLSB8-165-M67



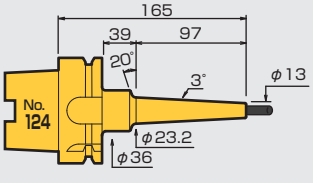
4.0

A100-SLSB8-195-M67



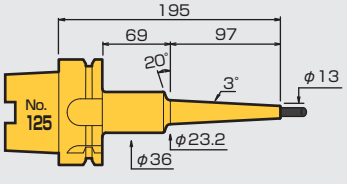
3.9

A100-SLSB8-165-M97



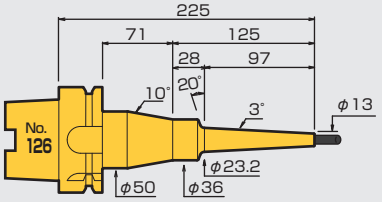
5.3

A100-SLSB8-195-M97



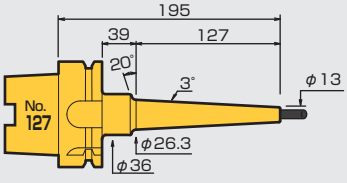
5.9

A100-SLSB8-225-M97



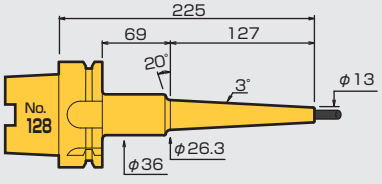
5.8

A100-SLSB8-195-M127



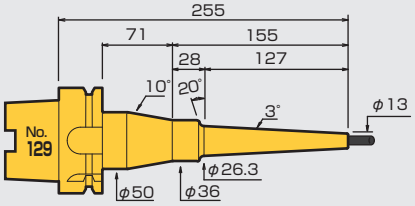
7.1

A100-SLSB8-225-M127



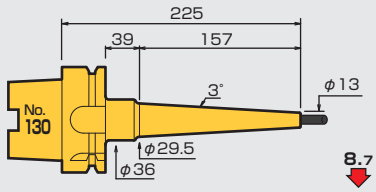
7.9

A100-SLSB8-255-M127

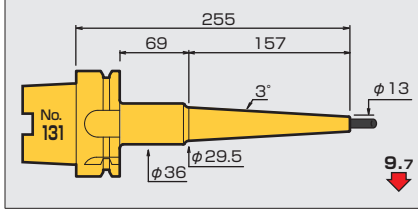


7.7

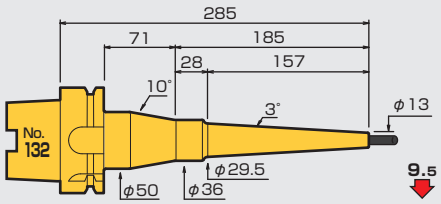
A100-SLSB8-225-M157



A100-SLSB8-255-M157

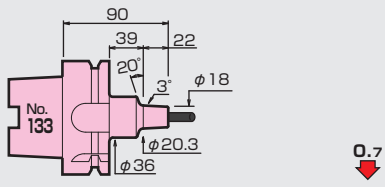


A100-SLSB8-285-M157

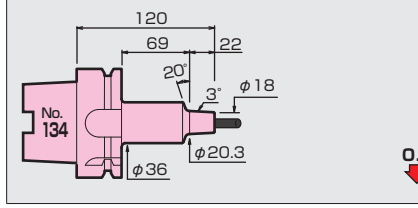


φ8 SLRB t=5

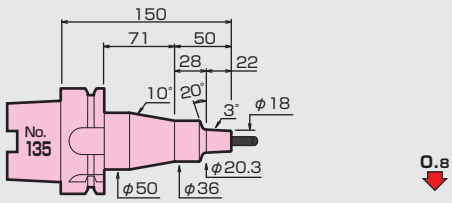
A100-SLRB8-90-M22



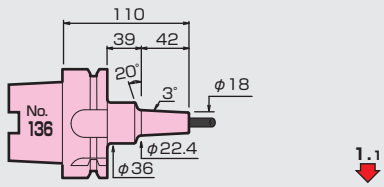
A100-SLRB8-120-M22



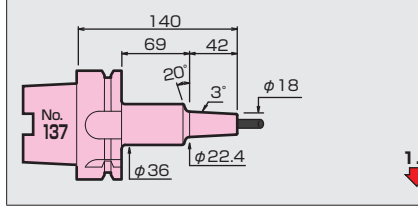
A100-SLRB8-150-M22



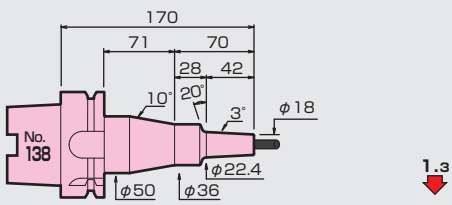
A100-SLRB8-110-M42



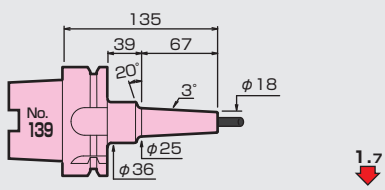
A100-SLRB8-140-M42



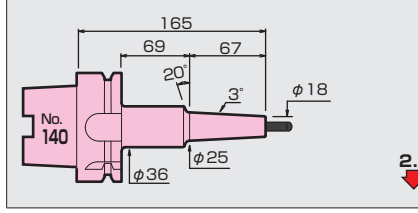
A100-SLRB8-170-M42



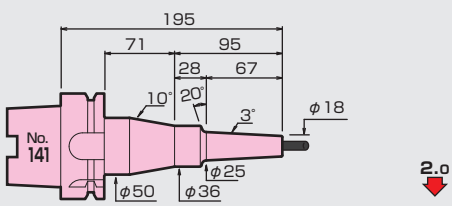
A100-SLRB8-135-M67



A100-SLRB8-165-M67

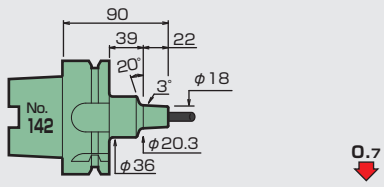


A100-SLRB8-195-M67

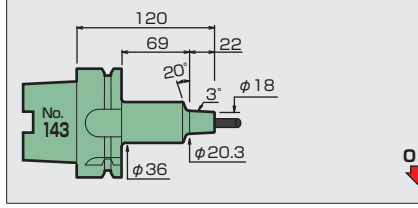


φ8 SLFB t=5

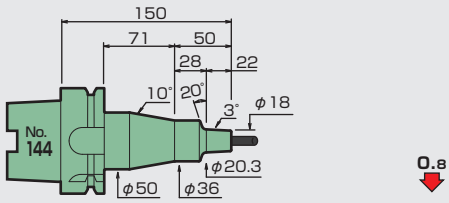
A100-SLFB8-90-M22



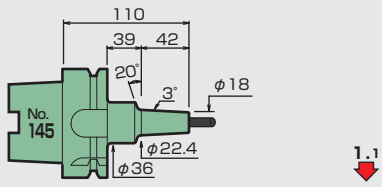
A100-SLFB8-120-M22



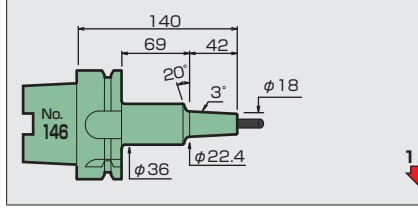
A100-SLFB8-150-M22



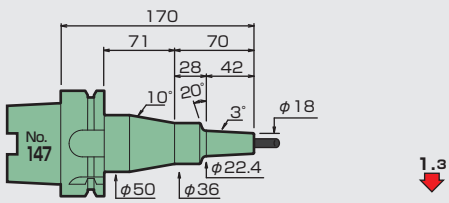
A100-SLFB8-110-M42



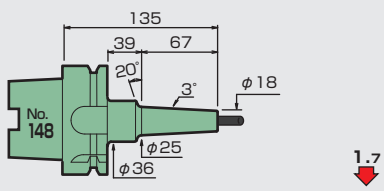
A100-SLFB8-140-M42



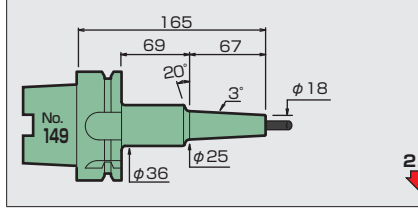
A100-SLFB8-170-M42



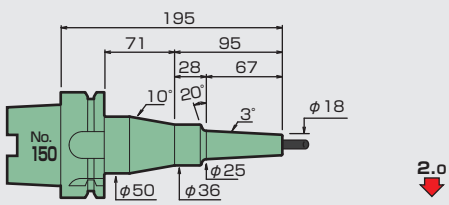
A100-SLFB8-135-M67



A100-SLFB8-165-M67

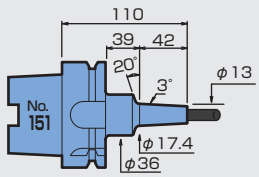


A100-SLFB8-195-M67



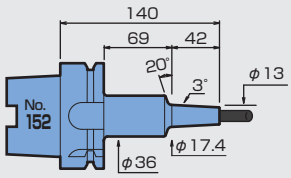
φ10 SLSA t=1.5

A100-SLSA10-110-M42



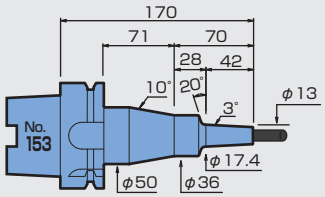
2.3

A100-SLSA10-140-M42



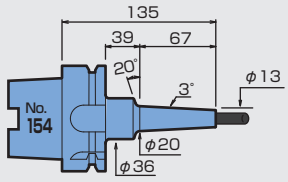
2.6

A100-SLSA10-170-M42



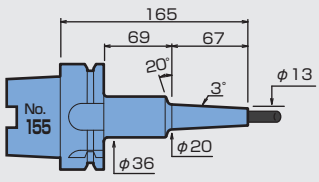
2.5

A100-SLSA10-135-M67



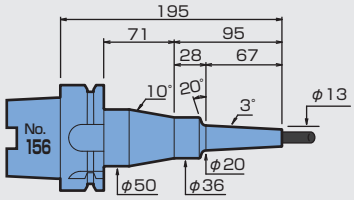
4.0

A100-SLSA10-165-M67



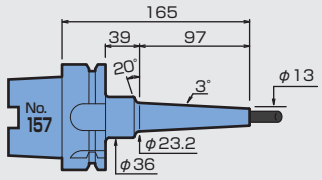
4.4

A100-SLSA10-195-M67



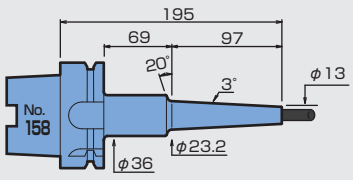
4.4

A100-SLSA10-165-M97



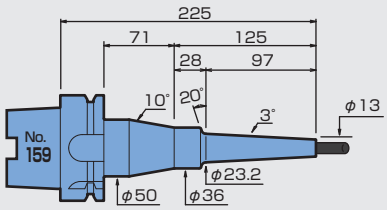
6.0

A100-SLSA10-195-M97



6.6

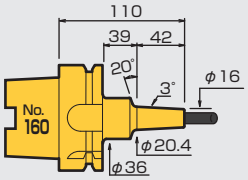
A100-SLSA10-225-M97



6.5

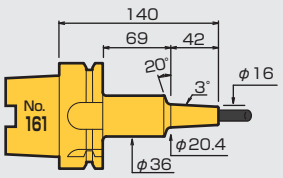
φ10 SLSB t=3

A100-SLSB10-110-M42



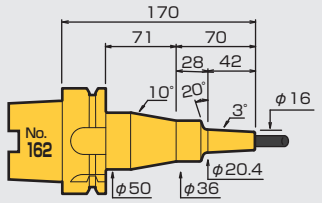
1.4

A100-SLSB10-140-M42



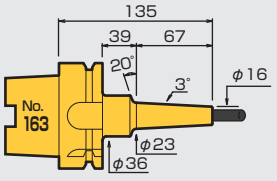
1.7

A100-SLSB10-170-M42



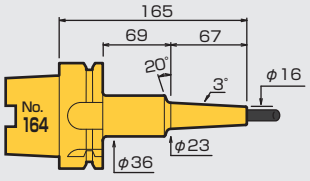
1.7

A100-SLSB10-135-M67



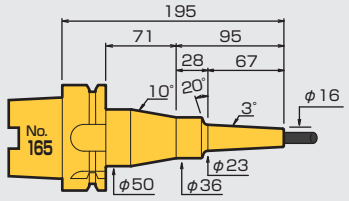
2.4

A100-SLSB10-165-M67



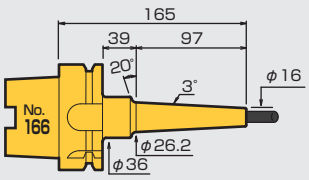
2.8

A100-SLSB10-195-M67



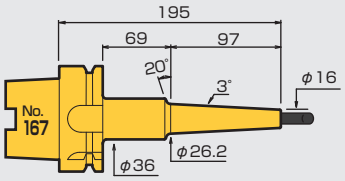
2.7

A100-SLSB10-165-M97



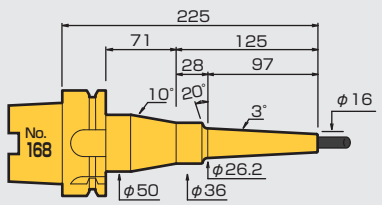
3.7

A100-SLSB10-195-M97



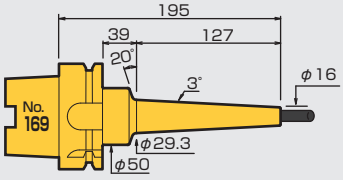
4.2

A100-SLSB10-225-M97



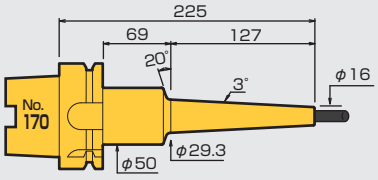
4.1

A100-SLSB10-195-M127



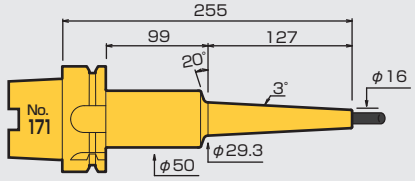
4.4

A100-SLSB10-225-M127



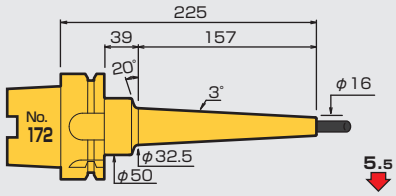
4.7

A100-SLSB10-255-M127



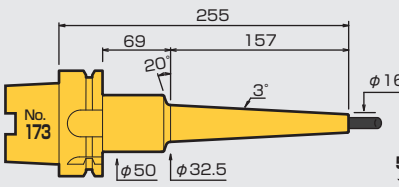
5.0

A100-SLSB10-225-M157



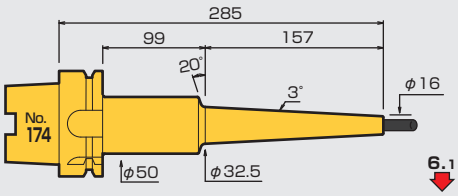
5.5

A100-SLSB10-255-M157



5.8

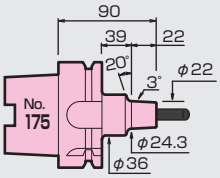
A100-SLSB10-285-M157



6.1

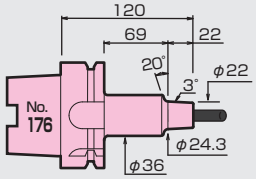
φ10 SLRB t=6

A100-SLRB10-90-M22



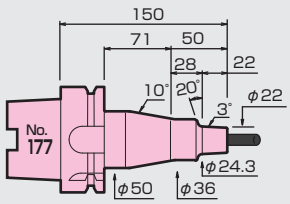
0.6

A100-SLRB10-120-M22



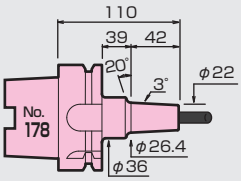
0.8

A100-SLRB10-150-M22



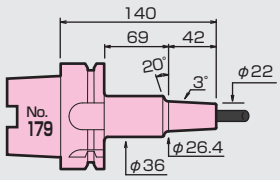
0.7

A100-SLRB10-110-M42



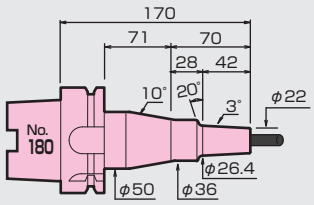
0.8

A100-SLRB10-140-M42



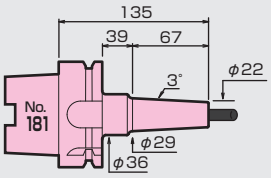
1.1

A100-SLRB10-170-M42



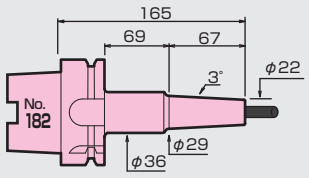
1.0

A100-SLRB10-135-M67



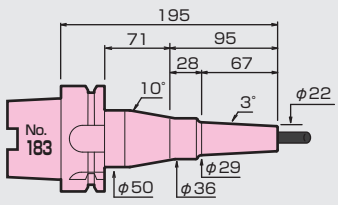
1.2

A100-SLRB10-165-M67



1.6

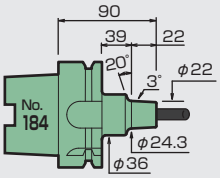
A100-SLRB10-195-M67



1.6

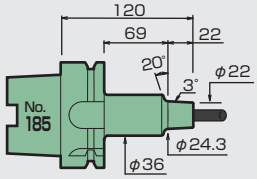
φ10 SLFB t=6

A100-SLFB10-90-M22



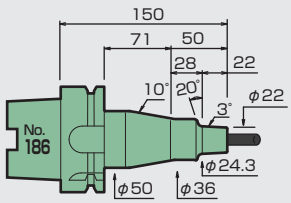
0.6

A100-SLFB10-120-M22



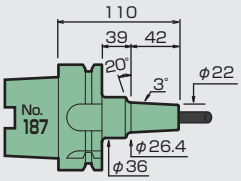
0.8

A100-SLFB10-150-M22



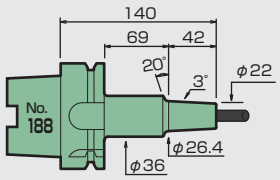
0.7

A100-SLFB10-110-M42



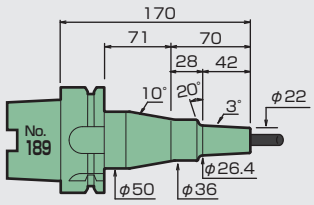
0.8

A100-SLFB10-140-M42



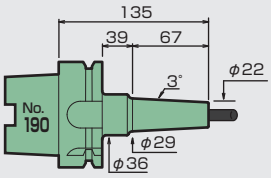
1.1

A100-SLFB10-170-M42



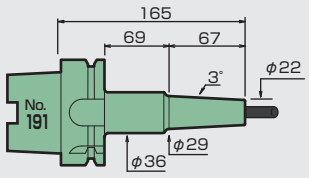
1.0

A100-SLFB10-135-M67



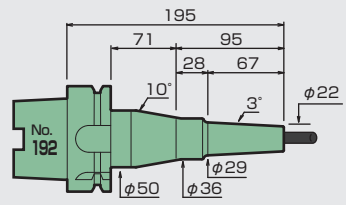
1.2

A100-SLFB10-165-M67



1.6

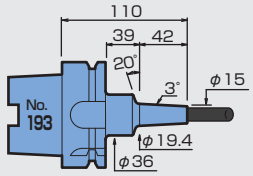
A100-SLFB10-195-M67



1.6

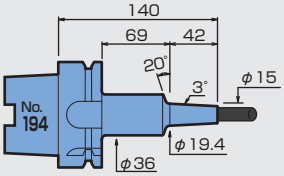
φ12 SLSA t=1.5

A100-SLSA12-110-M42



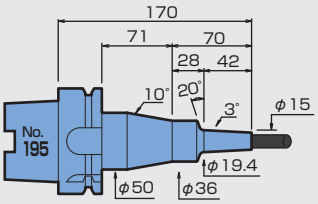
1.9

A100-SLSA12-140-M42



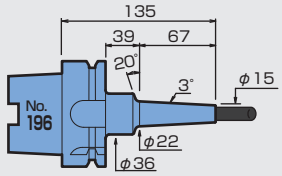
2.2

A100-SLSA12-170-M42



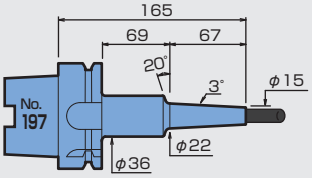
2.1

A100-SLSA12-135-M67



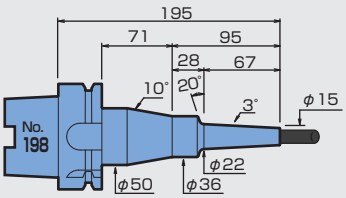
3.3

A100-SLSA12-165-M67



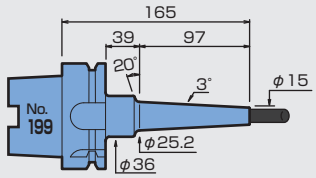
3.7

A100-SLSA12-195-M67



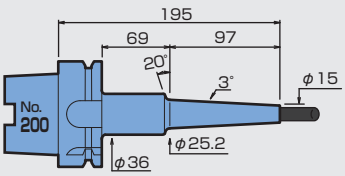
3.6

A100-SLSA12-165-M97



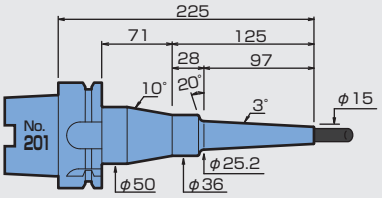
4.9

A100-SLSA12-195-M97



5.5

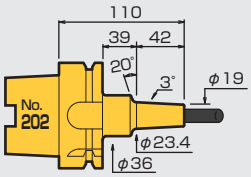
A100-SLSA12-225-M97



5.4

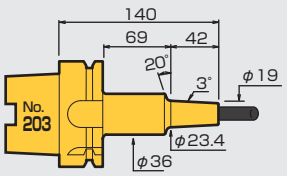
φ12 SLSB t=3.5

A100-SLSB12-110-M42



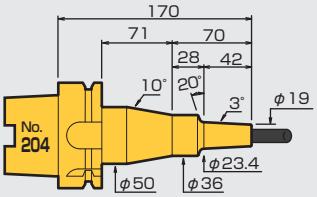
1.1

A100-SLSB12-140-M42



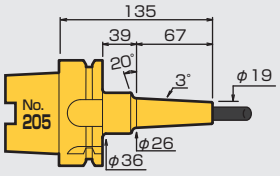
1.4

A100-SLSB12-170-M42



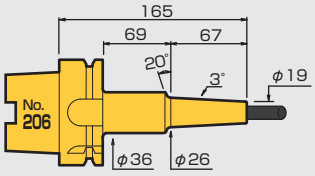
1.4

A100-SLSB12-135-M67



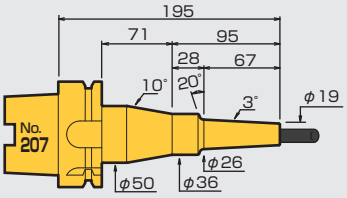
1.8

A100-SLSB12-165-M67



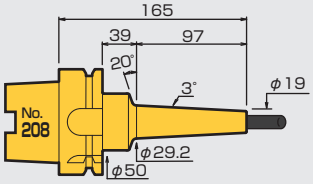
2.3

A100-SLSB12-195-M67



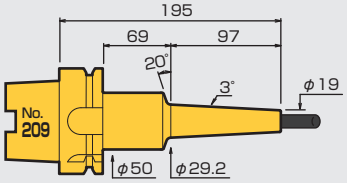
2.2

A100-SLSB12-165-M97



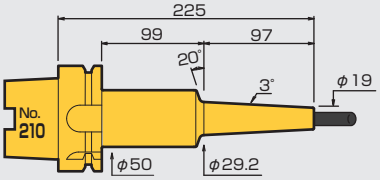
2.4

A100-SLSB12-195-M97



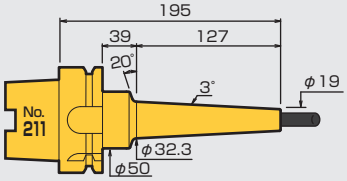
2.6

A100-SLSB12-225-M97



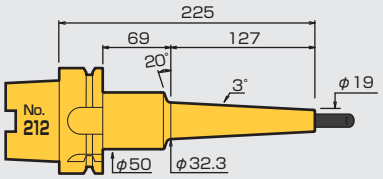
2.8

A100-SLSB12-195-M127



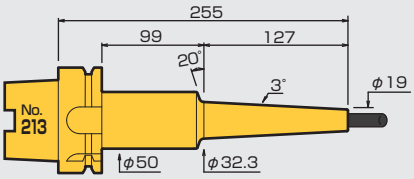
3.2

A100-SLSB12-225-M127



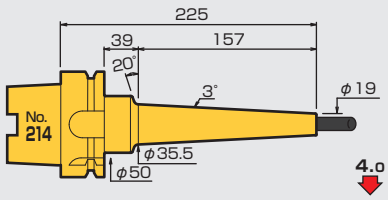
3.5

A100-SLSB12-255-M127

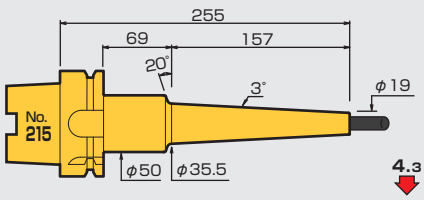


3.8

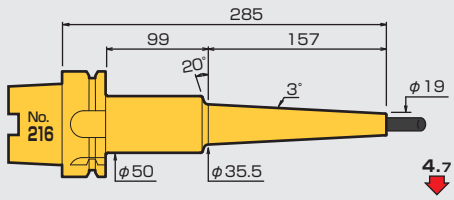
A100-SLSB12-225-M157



A100-SLSB12-255-M157

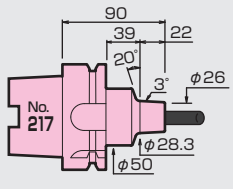


A100-SLSB12-285-M157

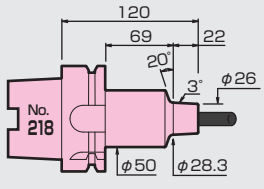


φ12 SLRB t=7

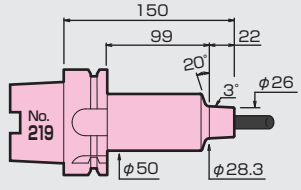
A100-SLRB12-90-M22



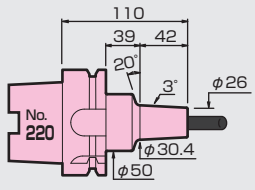
A100-SLRB12-120-M22



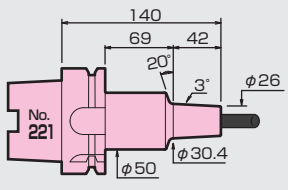
A100-SLRB12-150-M22



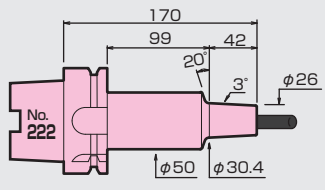
A100-SLRB12-110-M42



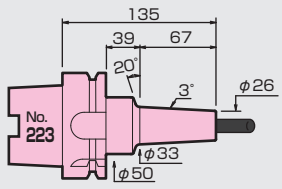
A100-SLRB12-140-M42



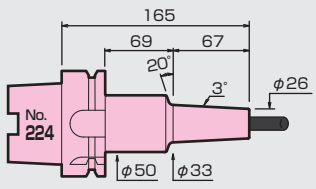
A100-SLRB12-170-M42



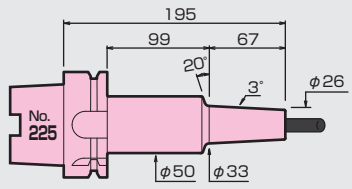
A100-SLRB12-135-M67



A100-SLRB12-165-M67

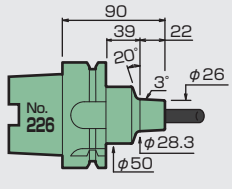


A100-SLRB12-195-M67

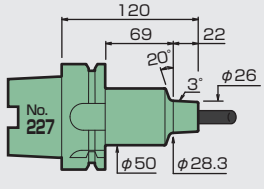


φ12 SLFB t=7

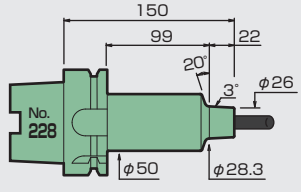
A100-SLFB12-90-M22



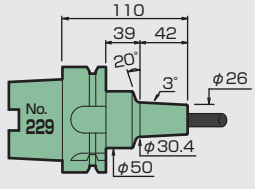
A100-SLFB12-120-M22



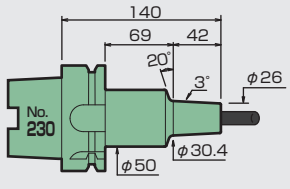
A100-SLFB12-150-M22



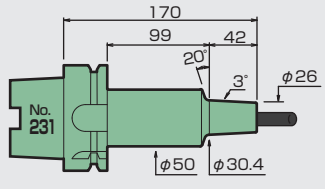
A100-SLFB12-110-M42



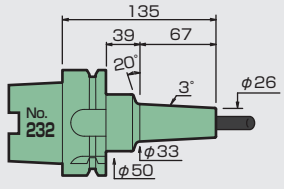
A100-SLFB12-140-M42



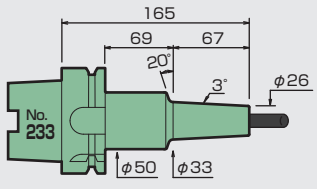
A100-SLFB12-170-M42



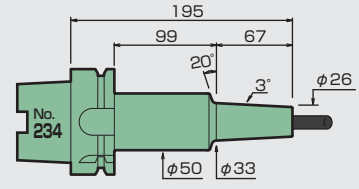
A100-SLFB12-135-M67



A100-SLFB12-165-M67

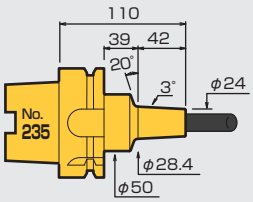


A100-SLFB12-195-M67



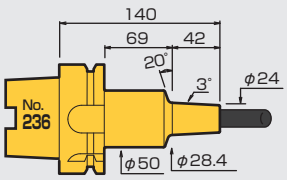
φ16 SLSB t=4

A100-SLSB16-110-M42



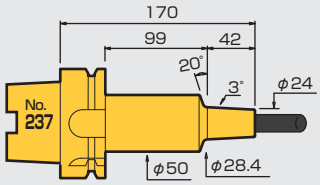
0.7

A100-SLSB16-140-M42



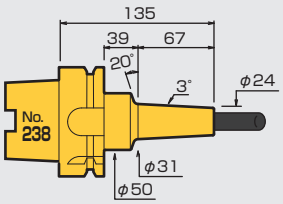
0.8

A100-SLSB16-170-M42



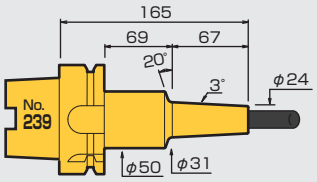
0.9

A100-SLSB16-135-M67



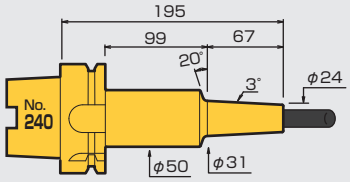
1.1

A100-SLSB16-165-M67



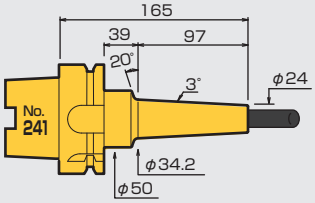
1.2

A100-SLSB16-195-M67



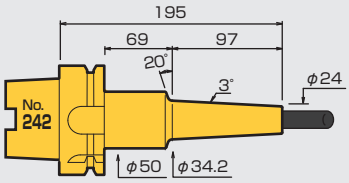
1.4

A100-SLSB16-165-M97



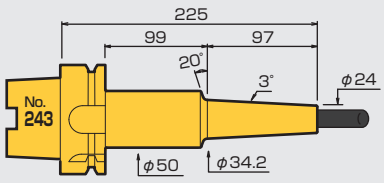
1.6

A100-SLSB16-195-M97



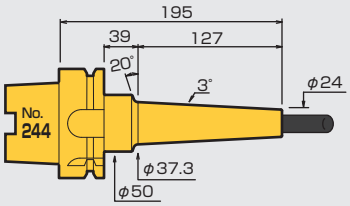
1.8

A100-SLSB16-225-M97



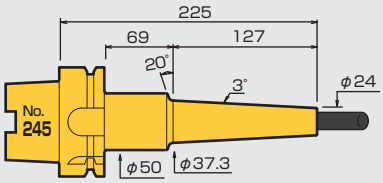
2.1

A100-SLSB16-195-M127



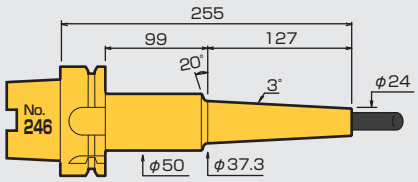
2.2

A100-SLSB16-225-M127



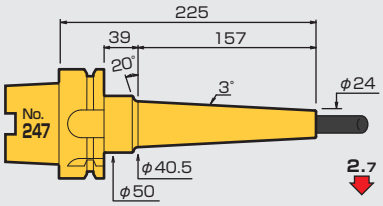
2.5

A100-SLSB16-255-M127



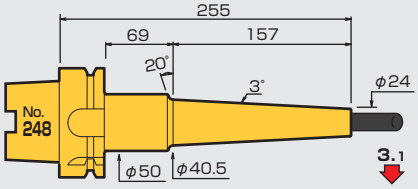
2.8

A100-SLSB16-225-M157



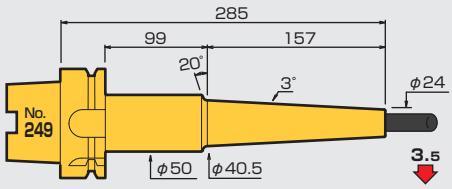
2.7

A100-SLSB16-255-M157



3.1

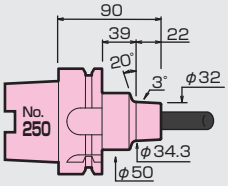
A100-SLSB16-285-M157



3.5

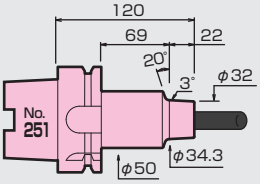
φ16 SLRB t=8

A100-SLRB16-90-M22



0.3

A100-SLRB16-120-M22



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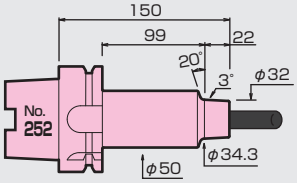
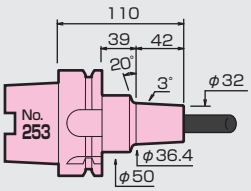
A100-SLRB16-150-M22



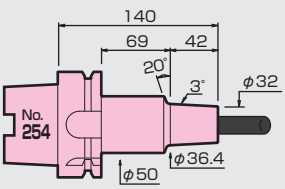
0.5

A100-SLRB16-110-M42



0.4

A100-SLRB16-140-M42



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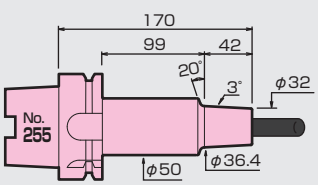
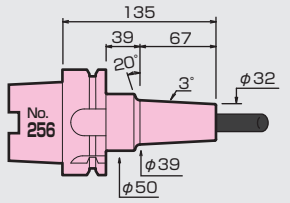
A100-SLRB16-170-M42



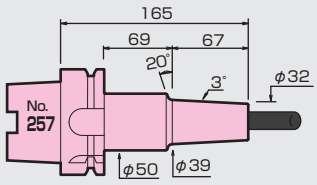
0.7

A100−SLRB16−135−M67



0.6

A100−SLRB16−165−M67



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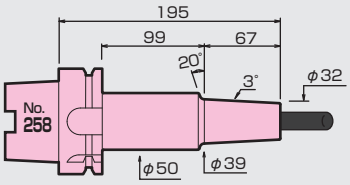
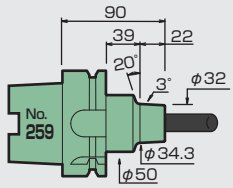
A100−SLRB16−195−M67



0.9

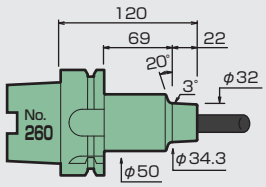
φ16 SLFB t=8

A100−SLFB16−90−M22



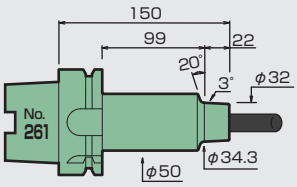
0.3

A100−SLFB16−120−M22



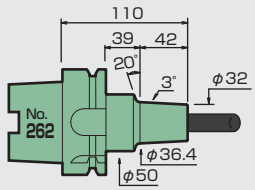
0.4

A100−SLFB16−150−M22



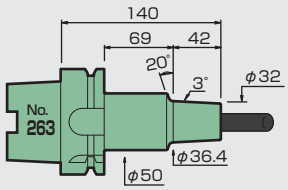
0.5

A100−SLFB16−110−M42



0.4

A100−SLFB16−140−M42



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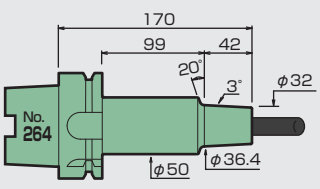
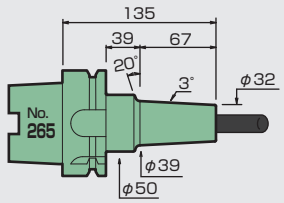
A100−SLFB16−170−M42



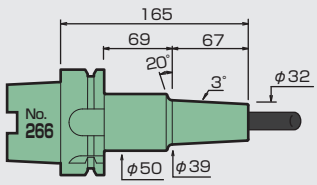
0.7

A100−SLFB16−135−M67



0.6

A100−SLFB16−165−M67



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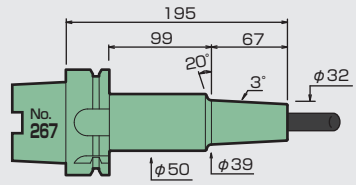
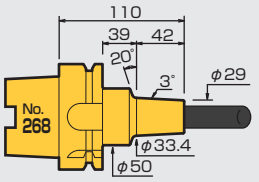
A100−SLFB16−195−M67



0.9

φ20 SLSB t=4.5

A100-SLSB20-110-M42



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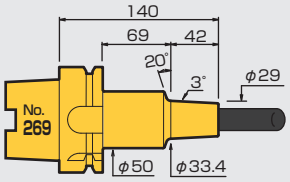
A100-SLSB20-140-M42



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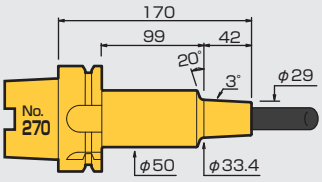
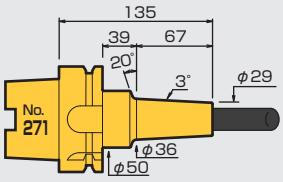
A100-SLSB20-170-M42



0.8

A100-SLSB20-135-M67



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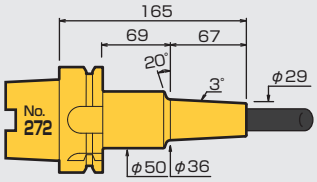
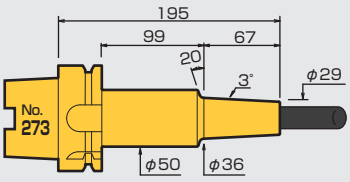
A100-SLSB20-165-M67



1.0

A100-SLSB20-195-M67



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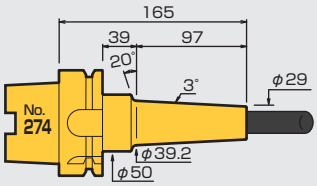
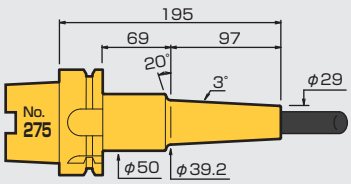
A100-SLSB20-165-M97



1.2

A100-SLSB20-195-M97



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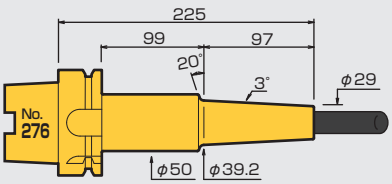
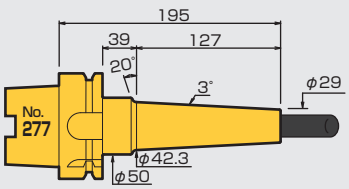
A100-SLSB20-225-M97



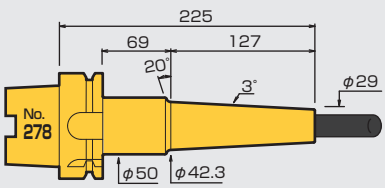
1.7

A100-SLSB20-195-M127



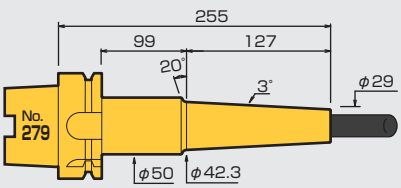
1.6

A100-SLSB20-225-M127



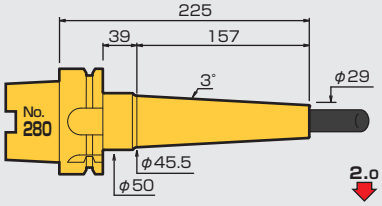
1.9

A100-SLSB20-255-M127



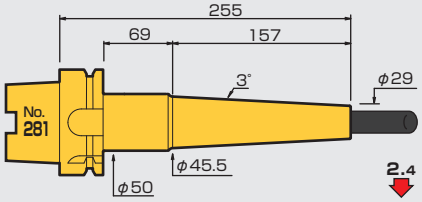
2.3

A100-SLSB20-225-M157



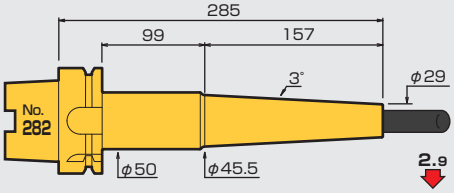
2.0

A100-SLSB20-255-M157



2.4

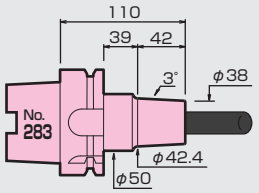
A100-SLSB20-285-M157



2.9

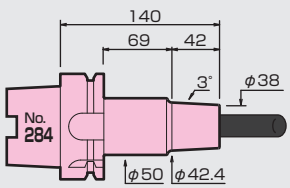
φ20 SLRB t=9

A100-SLRB20-110-M42



0.4

A100-SLRB20-140-M42



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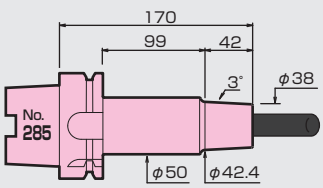
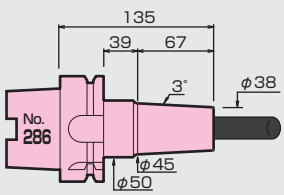
A100-SLRB20-170-M42



0.7

A100-SLRB20-135-M67



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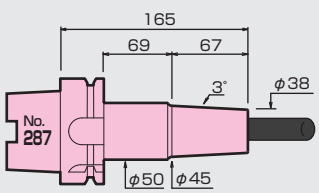
A100-SLRB20-165-M67



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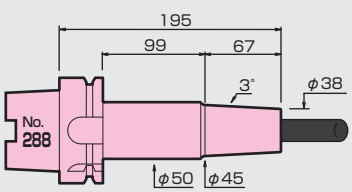
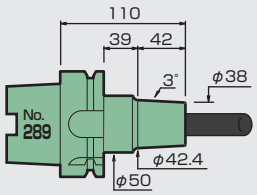
A100-SLRB20-195-M67



0.9

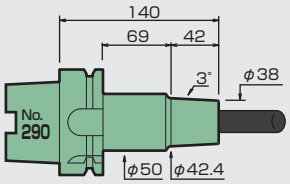
φ20 SLFB t=9

A100-SLFB20-110-M42



0.4

A100-SLFB20-140-M42



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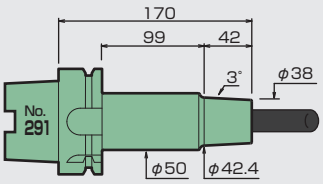
A100-SLFB20-170-M42



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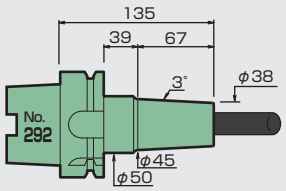
A100-SLFB20-135-M67



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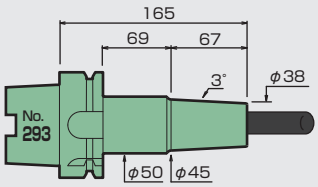
A100-SLFB20-165-M67



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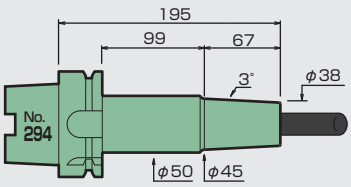
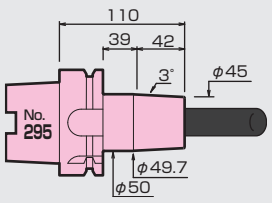
A100-SLFB20-195-M67



0.9

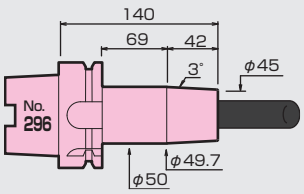
φ25 SLRB t=10

A100-SLRB25-110-M42



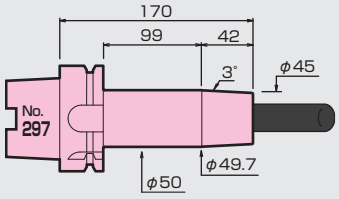
0.3

A100-SLRB25-140-M42



0.5

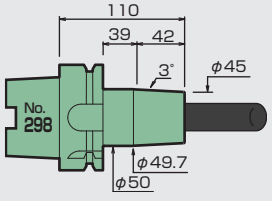
A100-SLRB25-170-M42



0.7

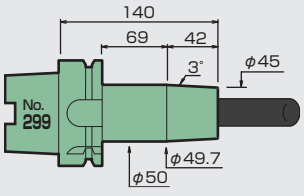
φ25 SLFB t=10

A100-SLFB25-110-M42



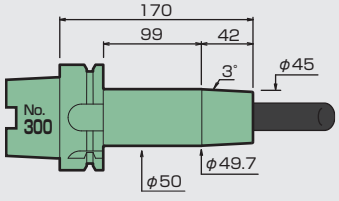
0.3

A100-SLFB25-140-M42



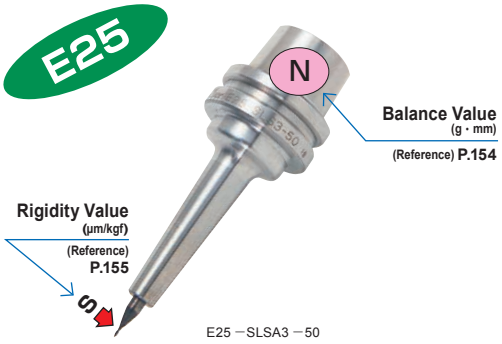
0.5

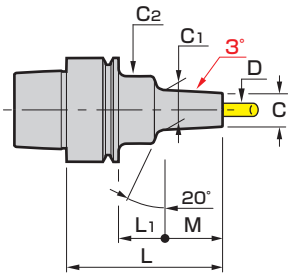
A100-SLFB25-170-M42

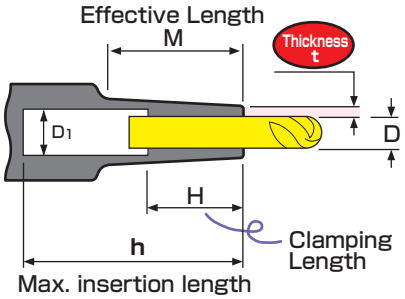


0.7

HSK-E25 Code Table



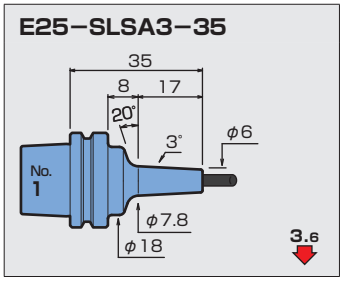


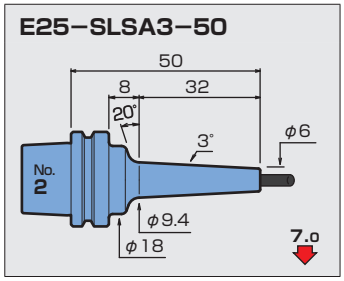


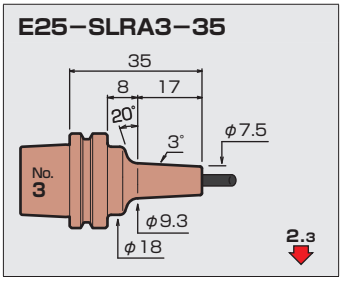
CODE	φD	φC	Thickness t	L	M	L_1	$φC_1$	$φC_2$	$φD_1$	H	h	Kg	N	S	Scale model
E25−SLSA3−35	3	6	1.5	35	17	8	7.8	18	4	9	29	0.06	0.37	3.6	1
−50				50	32		9.4				44		0.39	7.0	2
−SLRA3−35		7.5	2.25	35	17		9.3				29		0.37	2.3	3
E25−SLSA3.175−35	3.175	6.175	1.5	35	17	8	8	18	4	9	29	0.06	0.37	3.5	4
−50				50	32		9.6				44		0.39	6.6	5
E25−SLSA4−35	4	7	1.5	35	17	8	8.8	18	4.3	12	29	0.06	0.38	2.8	6
−50				50	32		10.4				44		0.4	5.3	7
−SLRA4−35		10	3	35	17		11.8				29		0.38	1.4	8
E25−SLSA5−35	5	8	1.5	35	17	8	9.8	18	5.6	15	26	0.06	0.38	2.2	9
E25−SLSA6−35	6	9	1.5	35	17	8	10.8	18	6.6	18	26	0.05	0.38	1.8	10
−50				50	32		12.4				39	0.07	0.43	3.6	11
−SLRA6−35		12	3	35	17		13.8				26		0.39	1.1	12

HSK-E25 Scale Model S=1:2

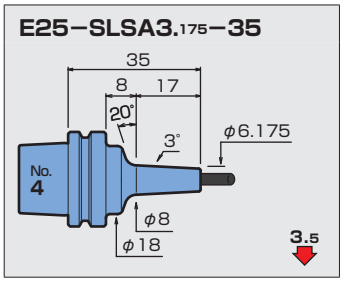
φ3

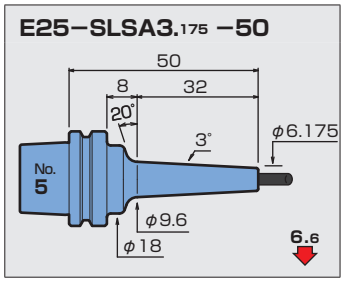






φ3.175





SODICK HIGHTECH
MC430L

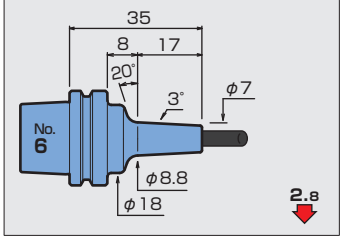
ROKU-ROKU
MEGAⅢ / NANO-21

MITSUBISHI
μ machining V1

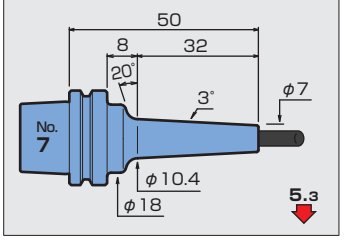
KERN
HSPC2525

φ4

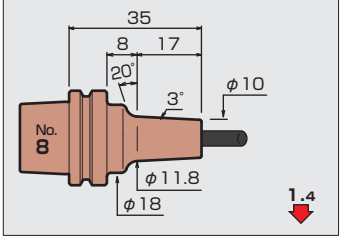
E25−SLSA4−35



E25−SLSA4−50

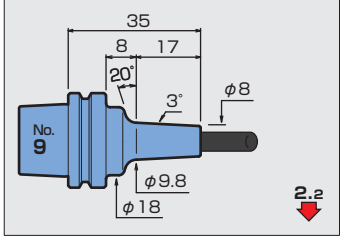


E25−SLRA4−35



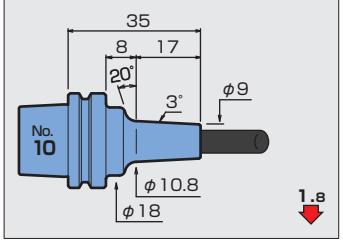
φ5

E25−SLSA5−35

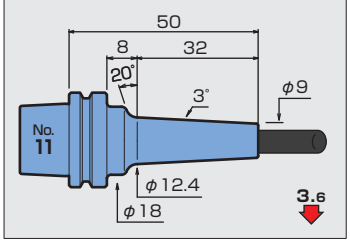


φ6

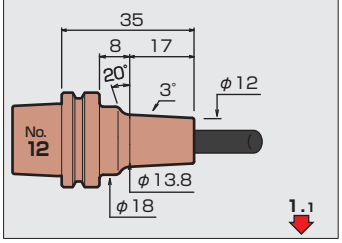
E25−SLSA6−35



E25−SLSA6−50



E25−SLRA6−35



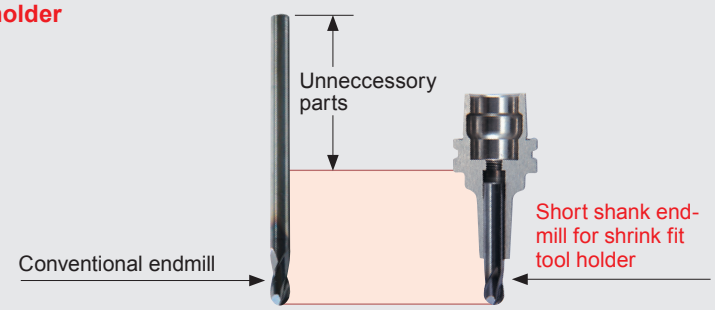
Short length endmill for shrink fit tool holder

Because of their short insertion allowance, holders for small-sized, ultra-fast machining centers, such as the HSK-E25 and E32, do not require the longer cutting tools that used to be required by conventional holders.

We propose the short length endmill for shrink fit tool holder

Short shank → **Minimizing cutter projection**

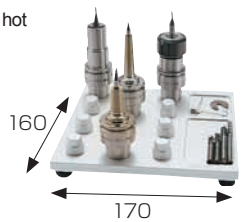
Short cutter flute → **Increasing rigidity**



Holder Stand

For compact storage of holder. Accommodates hot cutting tools after removal for cooling.
Can be shared with the E32.

CODE	max.Q'ty	
SDT−01	12	E25,E32



Measuring Instrument Holder

Use when centering the work piece.
A collet (C10—6P) and Centering bar (ST6—CEB102) is needed separately.
Specifications for fastening nuts by hand.

CODE
E25−CEH10−37

■ **Caution** ●Do not use for milling and drilling.

Cleaning Tool

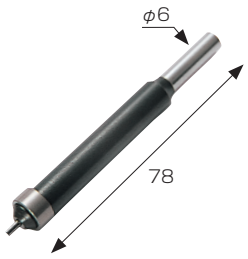
Use when cleaning the machine spindle taper. A leather is an exchange formula.
(1 set of leather for exchange is attached.)

CODE
SCT−E25

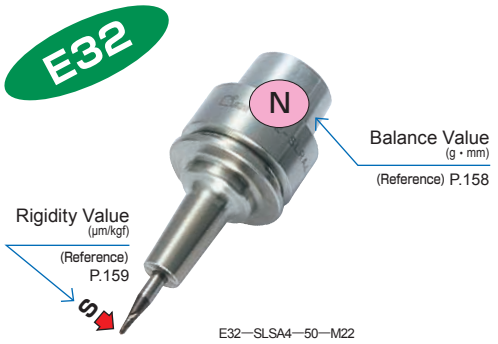
Centering Bar

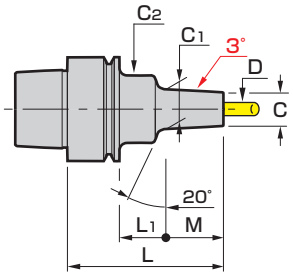
A bar used to find the reference position of the item being machined.

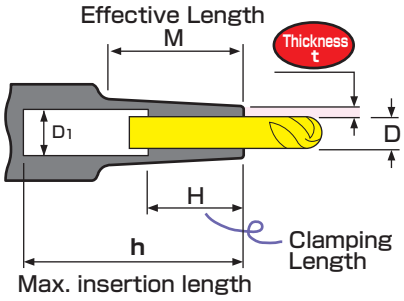
CODE
ST6−CEB102



HSK-E32 Code Table



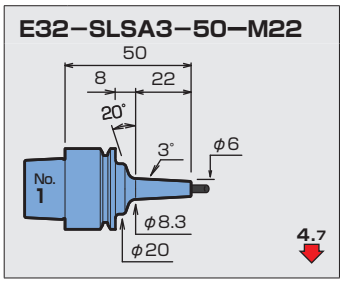


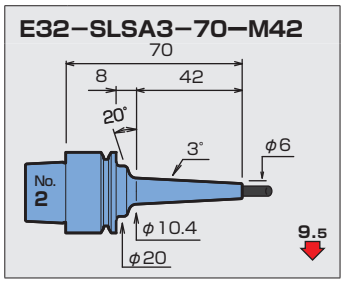


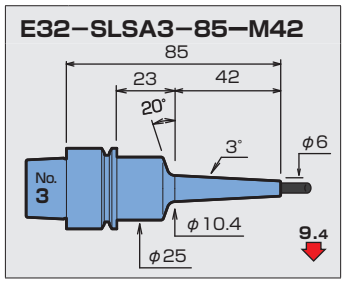
CODE	φD	φC	Thickness t	L	M	L_1	$φC_1$	$φC_2$	$φD_1$	H	h	Kg	N	S	Scale model
E32—SLSA 3—50—M22	3	6	1.5	50	22	8	8.3	20	4	9	42	0.1	0.4	4.7	1
—70—M42				70	42		10.4				62	0.2		9.5	2
—85—M42				85		23		25			69		0.8	9.4	3
—SLRA 3—50—M22		7.5	2.25	50	22	8	9.8	20			42	0.1	0.4	2.8	4
—70—M42				70	42		11.9				62	0.2		5.3	5
—85—M42				85		23		25			69		0.8	5.5	6
E32—SLSA3.175—50—M22	3.175	6.175	1.5	50	22	8	8.5	20	4	9	42	0.1	0.4	4.4	7
E32—SLSA 4—50—M22	4	7	1.5	50	22	8	9.3	20	5	12	35	0.1	0.4	3.6	8
—70—M42				70	42		11.4				54	0.2		7.3	9
—85—M42				85		23		25			69		0.8	7.4	10
—SLRA 4—50—M22		10	3	50	22	8	12.3	20			35		0.4	1.7	11
—70—M42				70	42		14.4				54		0.5	3.1	12
—85—M42				85		23		25			69		0.9	3.2	13
E32—SLSA 6—70—M42	6	9	1.5	70	42	8	13.4	20	7	18	54	0.2	0.5	4.8	14
—SLRA 6—50—M22		12	3	50	22		14.3	26	6.6		39			1.2	15
—70—M42				70	42		16.4		7		54			2.4	16
—85—M42				85		23		25			69		0.9	2.5	17
E32—SLRA 8—50—M22	8	14	3	50	22	8	16.3	26	8.6	24	39	0.2	0.5	1.0	18
—85—M42				85	42	23	18.4	25	9		69		0.9	2.1	19
E32—SLRA10—55—M22	10	16	3	55	22	13	18.3	26	10.6	30	44	0.2	0.6	0.9	20
E32—SLRA12—55—M22	12	20	4	55	22	13	22.3	26	12.6	30	44	0.2	0.7	0.7	21
E32—SLRA16—55—M35	16	26	5	55	35	—	—	—	16.6	32	44	0.2	0.6	0.7	22

HSK-E32 Scale Model S=1:3

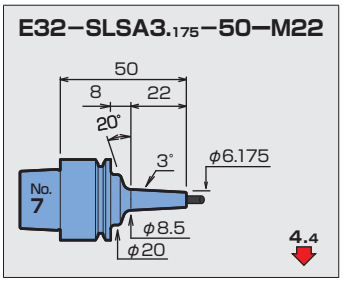
φ3

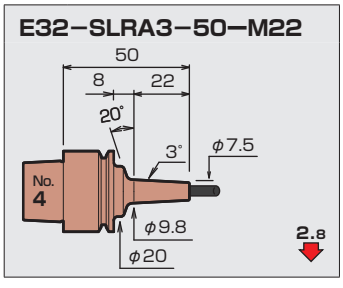


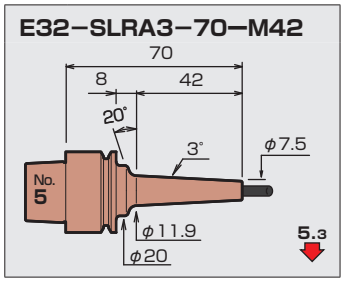


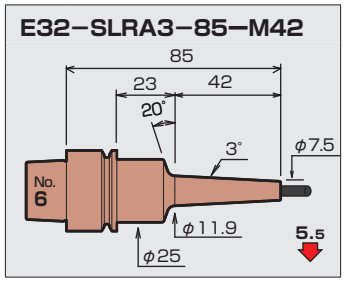


φ3.175



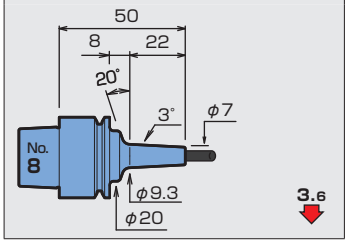




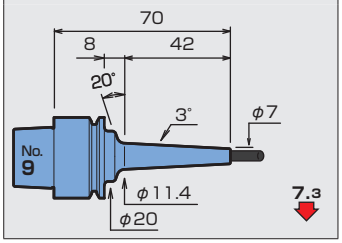


φ4

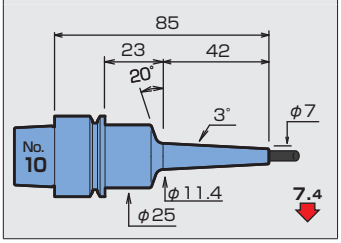
E32−SLSA4−50−M22



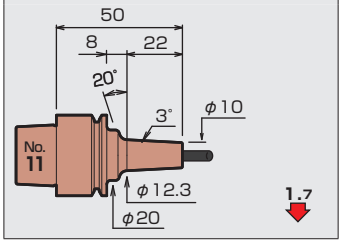
E32−SLSA4−70−M42



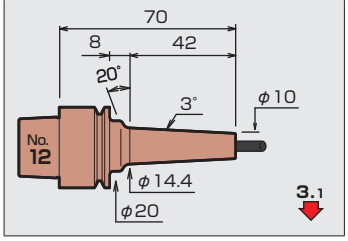
E32−SLSA4−85−M42



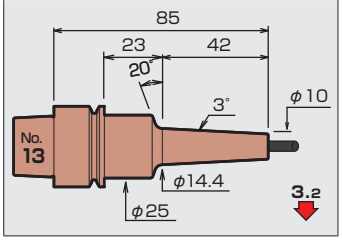
E32−SLRA4−50−M22



E32−SLRA4−70−M42

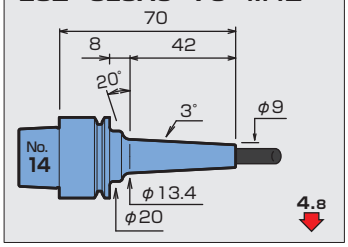


E32−SLRA4−85−M42

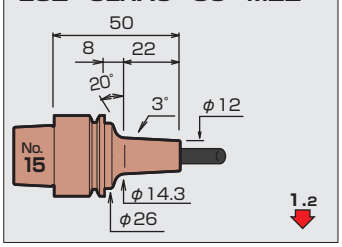


φ6

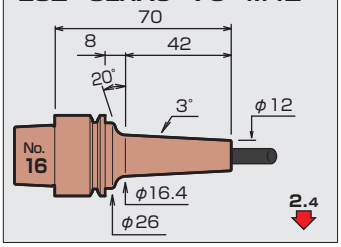
E32−SLSA6−70−M42



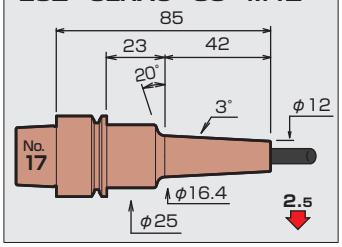
E32−SLRA6−50−M22



E32−SLRA6−70−M42

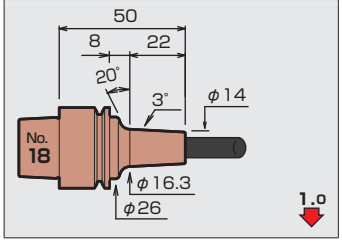


E32−SLRA6−85−M42

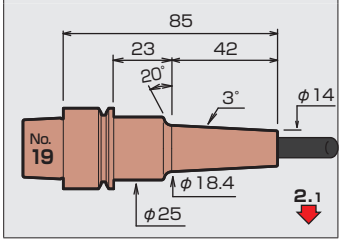


φ8

E32−SLRA8−50−M22

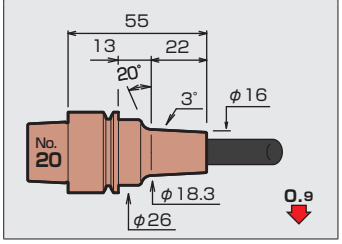


E32−SLRA8−85−M42



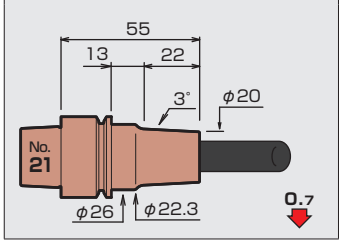
φ10

E32−SLRA10−55−M22



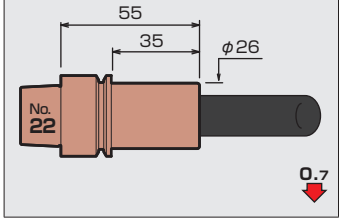
φ12

E32−SLRA12−55−M22



φ16

E32−SLRA16−55−M35



Cleaning Tool

Use when cleaning the machine spindle taper.A leather is an exchange formula. (1 set of leather for exchange is attached.)

CODE
SCT−E32

MAKINO
V22 / V33

SODICK HIGHTECH
MC430L / MC650L / HS150L

MORI SEIKI
NVD1500DCG

MITSUI SEIKI
VL30

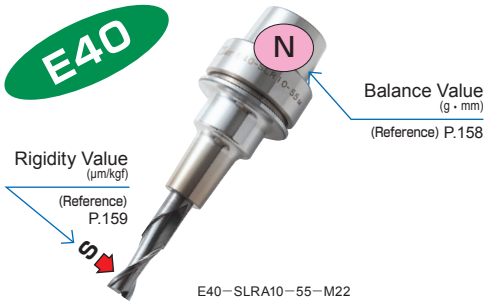
OKK
VD300

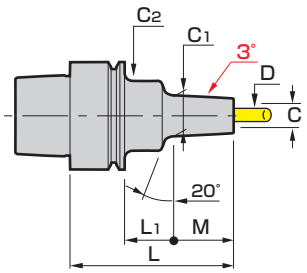
NIPPEI TOYAMA
Zμ3500

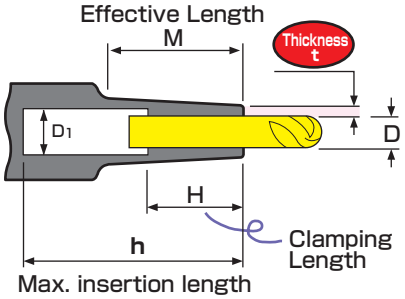
OPS-INGERSOLL
OPS600

ROEDERS GMBH
RHP600

HSK-E40 Code Table



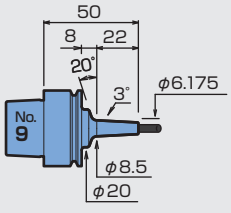




CODE	φD	φC	Thickness t	L	M	L_1	$φC_1$	$φC_2$	$φD_1$	H	h	Kg	N	S	Scale model
E40−SLSA 3− 50−M22	3	6	1.5	50	22	8	8.3	20	4	9	42	0.2	0.7	4.6	1
− 70−M42				70	42		10.4				62			9.4	2
− 85−M42				85		23		25			69	0.3	1.1	9.3	3
−110−M67				110	67		13				94		2.2	15.0	4
−SLRA 3− 50−M22		7.5	2.25	50	22	8	9.8	20			42	0.2	0.7	2.8	5
− 70−M42				70	42		11.9				62			5.3	6
− 85−M42				85		23		25			69	0.3	1.1	5.4	7
−110−M67				110	67		14.5				94			9.0	8
E40−SLSA3.175− 50−M22	3.175	6.175	1.5	50	22	8	8.5	20	4	9	42	0.2	0.7	4.4	9
E40−SLSA 4− 50−M22	4	7	1.5	50	22	8	9.3	20	5	12	42	0.2	0.7	3.6	10
− 70−M42				70	42		11.4				62			7.2	11
− 85−M42				85		23		25			74	0.3	1.1	7.3	12
−110−M67				110	67		14				99		1.2	11.9	13
−SLRA 4− 50−M22		10	3	50	22	8	12.3	20			42	0.2	0.7	1.6	14
− 70−M42				70	42		14.4				62	0.3		3.0	15
− 85−M42				85		23		25			69		1.1	3.1	16
−110−M67				110	67		17				94		1.2	5.2	17
E40−SLSA 6− 50−M22	6	9	1.5	50	22	8	11.3	20	6.6	18	39	0.2	0.7	2.2	18
− 70−M42				70	42		13.4		7		54			4.7	19
− 85−M42				85		23		25			69	0.3	1.1	4.9	20
−110−M67				110	67		16				94		1.2	8.0	21
−SLRA 6− 50−M22		12	3	50	22	8	14.3	26	6.6		39	0.2	0.7	1.2	22
− 70−M42				70	42		16.4				54	0.3	0.8	2.3	23
− 85−M42				85		23		25	7		69		1.2	2.5	24
−110−M67				110	67		19				94	0.4		4.1	25
E40−SLSA 8− 60−M22	8	11	1.5	60	22	18	13.3	26	8.6	24	49	0.3	1.0	1.5	26
− 80−M42				80	42		15.4				64			3.3	27
−100−M42				100		38		25	9		84		1.5	3.8	28
−SLRA 8− 50−M22		14	3	50	22	8	16.3	26	8.6		39	0.2	0.7	0.9	29
− 85−M42				85	42	23	18.4	25	9		69	0.3	1.2	2.1	30
−100−M42				100		38					84	0.4	1.5	2.4	31
E40−SLSA10− 60−M22	10	13	1.5	60	22	18	15.3	26	10.6	30	49	0.3	1.0	1.2	32
− 80−M42				80	42		17.4				64		1.1	2.4	33
−100−M42				100		38		25	11		89		1.5	3.1	34
−SLRA10− 55−M22		16	3	55	22	13	18.3	26	10.6		44		0.9	0.8	35
− 85−M42				85	42	23	20.4	25	11		64		1.2	1.7	36
−100−M42				100		38						0.4	1.6	2.2	37
E40−SLRA12− 55−M22	12	20	4	55	22	13	22.3	30	12.6	30	44	0.3	1.0	0.6	38
− 85−M42				85	42	23	24.4	32	13		74	0.4	1.6	1.1	39
E40−SLRA16− 55−M22	16	26	5	55	22	13	28.3	34	16.6	32	44	0.3	1.2	0.4	40
E40−SLRA20− 60−M40	20	32	6	60	40	—	34	—	20.6	38	49	0.4	1.6	0.4	41

φ3.175

E40−SLSA3.175−50−M22



ROKU-ROKU
CEGA-542

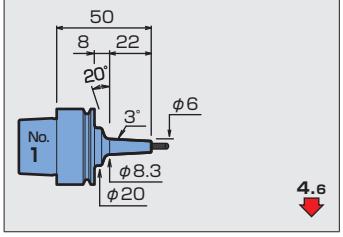
MIKRON
HSM400 / UCP600

HERMLE
C Series

DIGMA
HSC800 / 5

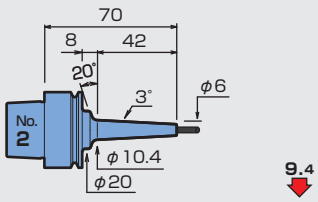
φ3

E40–SLSA3–50–M22



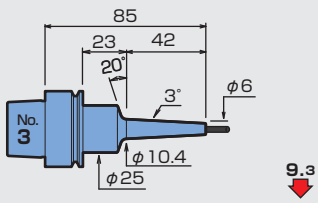
4.6

E40–SLSA3–70–M42



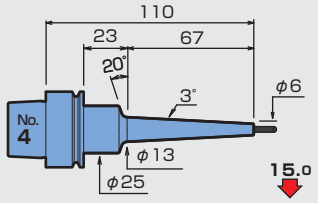
9.4

E40–SLSA3–85–M42



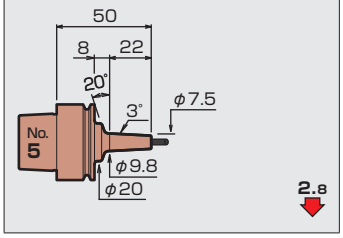
9.3

E40–SLSA3–110–M67



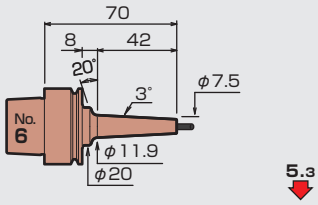
15.0

E40–SLRA3–50–M22



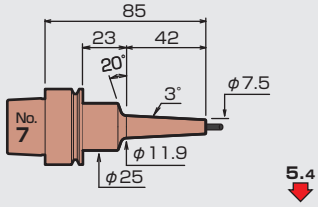
2.8

E40–SLRA3–70–M42



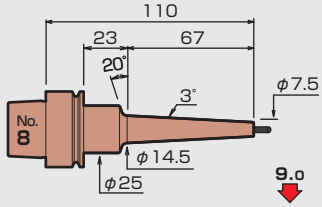
5.3

E40–SLRA3–85–M42



5.4

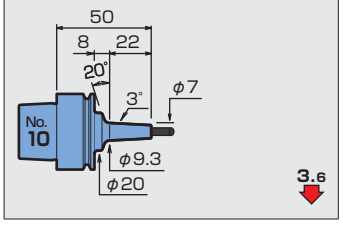
E40–SLRA3–110–M67



9.0

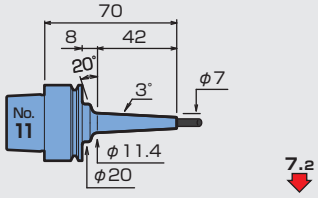
φ4

E40–SLSA4–50–M22



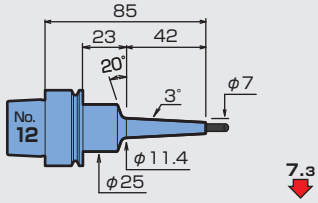
3.6

E40–SLSA4–70–M42



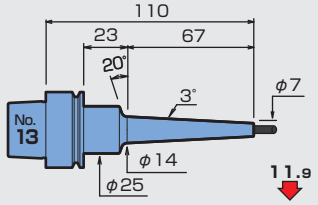
7.2

E40–SLSA4–85–M42



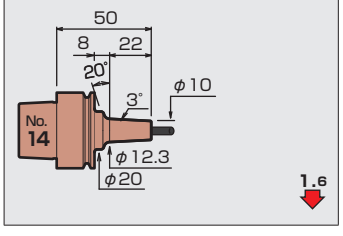
7.3

E40–SLSA4–110–M67



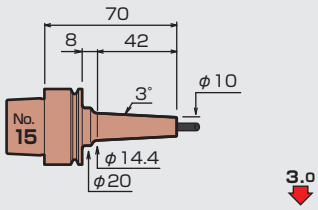
11.9

E40–SLRA4–50–M22



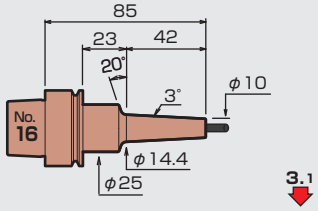
1.6

E40–SLRA4–70–M42



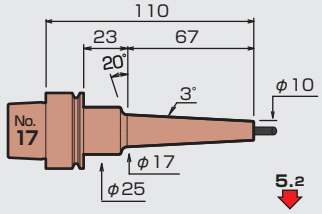
3.0

E40–SLRA4–85–M42



3.1

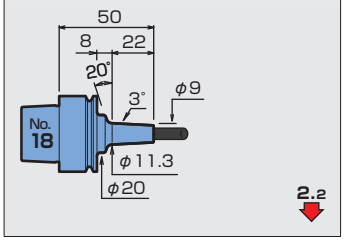
E40–SLRA4–110–M67



5.2

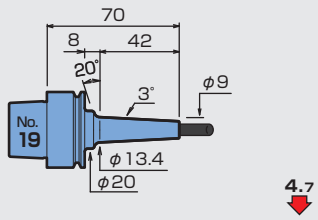
φ6

E40–SLSA6–50–M22



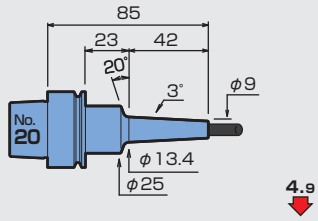
2.2

E40–SLSA6–70–M42



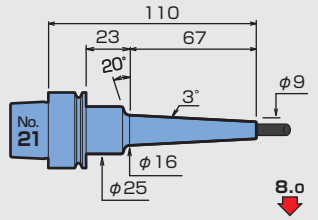
4.7

E40–SLSA6–85–M42



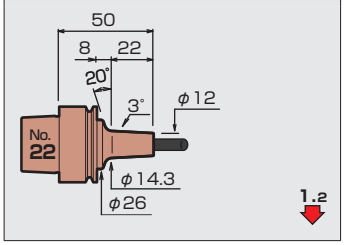
4.9

E40–SLSA6–110–M67



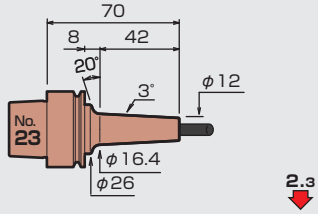
8.0

E40–SLRA6–50–M22



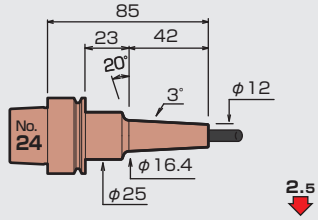
1.2

E40–SLRA6–70–M42



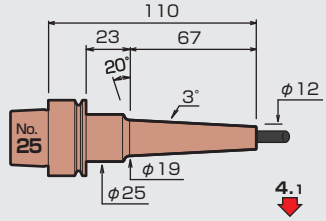
2.3

E40–SLRA6–85–M42



2.5

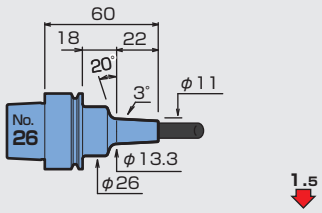
E40–SLRA6–110–M67



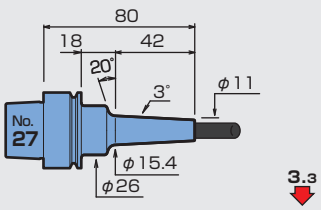
4.1

φ8

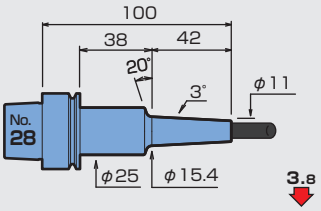
E40–SLSA8–60–M22



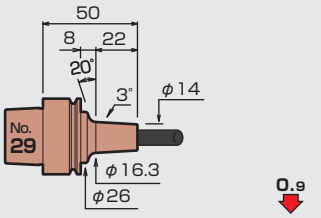
E40–SLSA8–80–M42



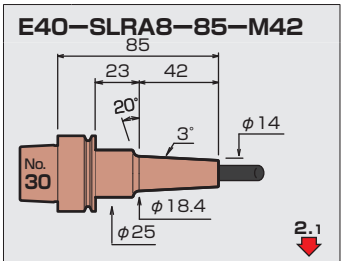
E40–SLSA8–100–M42



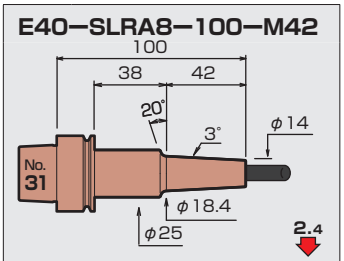
E40–SLRA8–50–M22



E40–SLRA8–85–M42

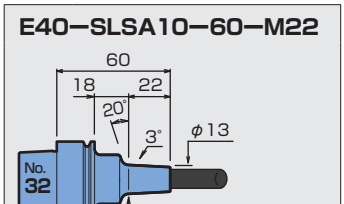


E40–SLRA8–100–M42

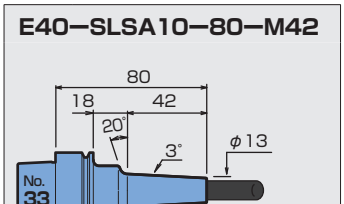


φ10

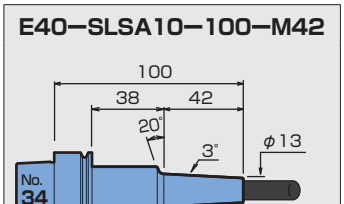
E40–SLSA10–60–M22



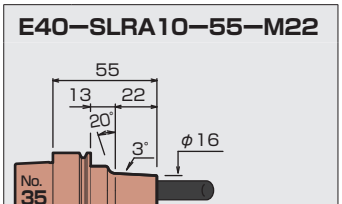
E40–SLSA10–80–M42



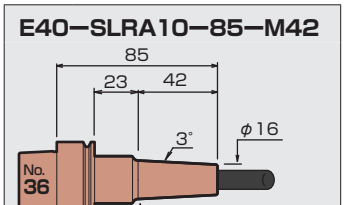
E40–SLSA10–100–M42



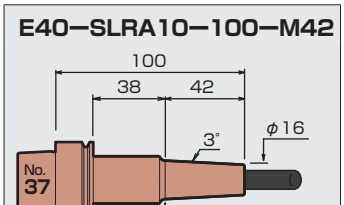
E40–SLRA10–55–M22



E40–SLRA10–85–M42

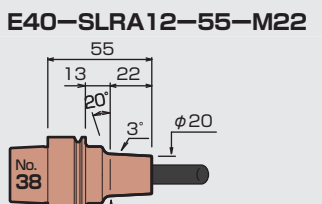


E40–SLRA10–100–M42

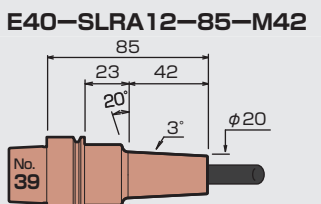


φ12

E40–SLRA12–55–M22

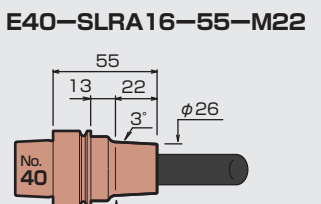


E40–SLRA12–85–M42



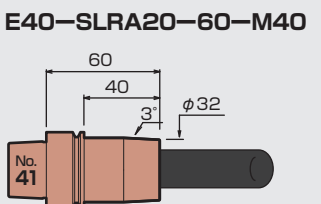
φ16

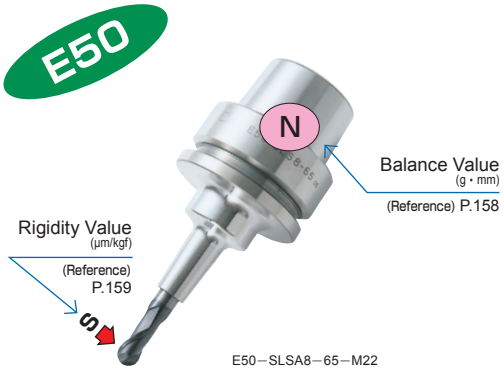
E40–SLRA16–55–M22

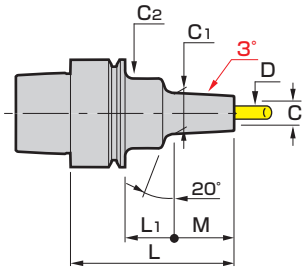


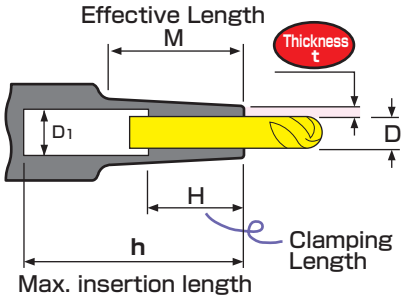
φ20

E40–SLRA20–60–M40









CODE	φD	φC	Thickness t	L	M	L_1	$φC_1$	$φC_2$	$φD_1$	H	h	Kg	N	S	Scale model
E50−SLSA 3− 60−M 22	3	6	1.5	60	22	12	8.3	20	4	9	50	0.4	1.3	4.7	1
− 80−M 42				80	42		10.4				70	0.5		9.3	2
− 95−M 42				95		27		25			85		1.7	9.4	3
−SLRA 3− 75−M 22		7.5	2.25	75	22		9.8				65			2.8	4
− 95−M 42				95	42		11.9				85			5.4	5
−120−M 67				120	67		14.5				110		1.8	9.0	6
−150−M 97				150	97		17.7				132	0.6		13.1	7
−SLFB 3− 75−M 22		9.5	3.25	75	22		11.8				65	0.5		1.9	8
E50−SLSA 4− 60−M 22	4	7	1.5	60	22	12	9.3	20	5	12	50	0.4	1.3	3.6	9
− 80−M 42				80	42		11.4				70	0.5		7.3	10
− 95−M 42				95		27		25			85		1.8	7.4	11
−SLRA 4− 75−M 22		10	3	75	22		12.3				65		1.7	1.7	12
− 95−M 42				95	42		14.4				85		1.8	3.2	13
−120−M 67				120	67		17				110	0.6		5.2	14
−150−M 97				150	97		20.2	32			132	0.7	2.2	7.3	15
−SLFB 4− 75−M 22		12	4	75	22		14.3	25			62	0.5	1.9	1.4	16
E50−SLSA 6− 60−M 22	6	9	1.5	60	22	12	11.3	20	7	18	42	0.5	1.3	2.3	17
− 80−M 42				80	42		13.4				62			4.8	18
−120−M 67				120	67	27	16	25			102		1.8	8.1	19
−150−M 97				150	97		19.2	32			132	0.6	2.3	11.2	20
−SLSB 6− 95−M 42		10	2	95	42		14.4	25			77	0.5	1.8	3.9	21
−120−M 67				120	67		17				102	0.6		6.5	22
−150−M 97				150	97		20.2	32			132	0.7	2.3	8.6	23
−SLRA 6− 60−M 22		12	3	60	22	12	14.3	26	6.6		44	0.5	1.4	1.2	24
− 95−M 42				95	42	27	16.4	25	7		77		1.8	2.5	25
−120−M 67				120	67		19				102	0.6	1.9	4.2	26
−SLRB 6− 95−M 42		14	4	95	42		18.4	32			77		2.2	1.6	27
−SLFB 6− 75−M 22				75	22		16.3				57		2.1	1.0	28
E50−SLSA 8− 65−M 22	8	11	1.5	65	22	17	13.3	26	8.6	24	49	0.5	1.5	1.5	29
− 85−M 42				85	42		15.4				67		1.6	3.2	30
−120−M 67				120	67	27	18	32	9		102	0.6	2.3	5.9	31
−150−M 97				150	97		21.2				132	0.7	2.4	8.1	32
−SLSB 8− 95−M 42		13	2.5	95	42		17.4				77	0.6	2.2	2.2	33
−120−M 67				120	67		20				102		2.3	3.7	34
−150−M 97				150	97		23.2				132	0.7	2.4	5.3	35
−SLRA 8− 60−M 22		14	3	60	22	12	16.3	26	8.6		44	0.5	1.4	0.9	36
− 95−M 42				95	42	27	18.4	25	9		77		1.8	2.1	37
−SLRB 8− 95−M 42		18	5				22.4	32				0.6	2.2	1.1	38
−120−M 67				120	67		25				102	0.7	2.3	1.8	39
−SLFB 8− 75−M 22				75	22		20.3				57	0.6	2.2	0.7	40

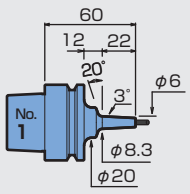
HSK-E50 Code Table

CODE	φD	φC	Thickness t	L	M	L_1	$φC_1$	$φC_2$	$φD_1$	H	h	Kg	N	S	Scale model
E50−SLSA10− 65−M 22	10	13	1.5	65	22	17	15.3	26	10.6	30	49	0.5	1.5	1.1	41
− 85−M 42				85	42		17.4				64		1.6	2.4	42
−120−M 67				120	67	27	20	32	11			0.6	2.3	4.4	43
−150−M 97				150	97		23.2					0.7	2.5	6.2	44
−SLSB10− 95−M 42		16	3	95	42		20.4					0.6	2.2	1.5	45
−120−M 67				120	67		23					0.7	2.4	2.5	46
−150−M 97				150	97		26.2						2.5	3.7	47
−SLRA10− 60−M 22				60	22	12	18.3	26	10.6		44	0.5	1.4	0.8	48
−SLRB10− 95−M 42		22	6	95	42	27	26.4	32	11		64	0.7	2.3	0.9	49
−120−M 67				120	67		29	42				0.8	3.2	1.1	50
−SLFB10− 75−M 22				75	22		24.3	32	16		60	0.6	2.2	0.6	51
E50−SLSA12− 65−M 22	12	15	1.5	65	22	17	17.3	26	12.6	30	49	0.5	1.6	0.9	52
− 85−M 42				85	42		19.4				64		1.7	1.9	53
−120−M 67				120	67	27	22	32	13			0.6	2.4	3.4	54
−SLSB12− 95−M 42		19	3.5	95	42		23.4						2.3	1.2	55
−120−M 67				120	67		26					0.7	2.5	1.9	56
−150−M 97				150	97		29.2	42				0.9	3.5	2.6	57
−SLRA12− 60−M 22		20	4	60	22	12	22.3	30	12.6		44	0.5	1.5	0.6	58
−SLRB12− 95−M 42		26	7	95	42	27	30.4	42	13		64	0.8	3.1		59
−120−M 67				120	67		33					0.9	3.3	0.9	60
−SLFB12− 75−M 22				75	22		28.3		21		60	0.7	3.0	0.4	61
E50−SLSB16− 95−M 42	16	24	4	95	42	27	28.4	42	17	32	81	0.7	3.2	0.8	62
−120−M 67				120	67		31					0.8	3.5	1.2	63
−SLRA16− 60−M 22		26	5	60	22	12	28.3	34	16.6		44	0.6	1.7	0.4	64
−SLRB16− 75−M 22		32	8	75		27	34.3	42	22.2		61	0.7	3.0		65
−SLFB16− 75−M 22											60				66
E50−SLSB20− 95−M 42	20	29	4.5	95	42	27	33.4	42	21	40	81	0.7	3.3	0.6	67
−SLRA20− 65−M 22		32	6	65	22	17	34.3	40	20.6	38	49	0.6	2.2	0.3	68

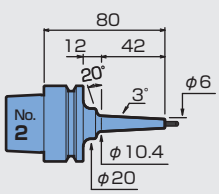
HSK-E50 Scale Model S=1:5

φ3

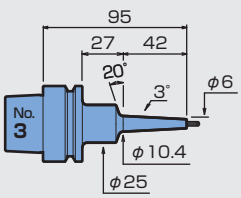
E50−SLSA3−60−M22



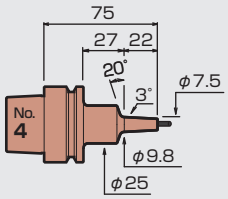
E50−SLSA3−80−M42



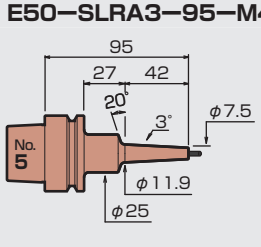
E50−SLSA3−95−M42



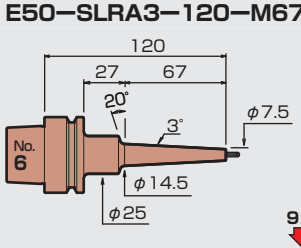
E50−SLRA3−75−M22



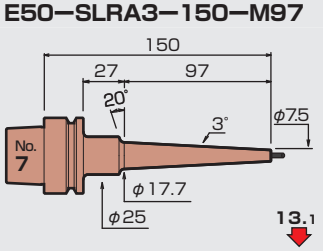
E50−SLRA3−95−M42



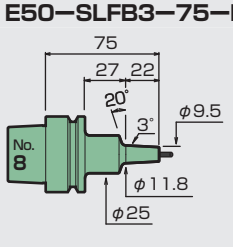
E50−SLRA3−120−M67



E50−SLRA3−150−M97

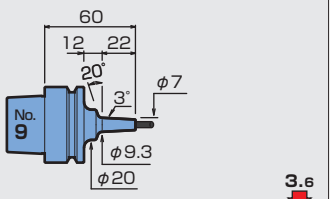


E50−SLFB3−75−M22



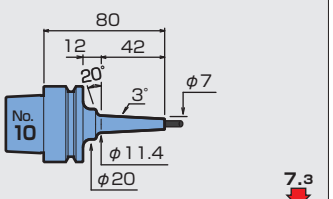
φ4

E50–SLSA4–60–M22



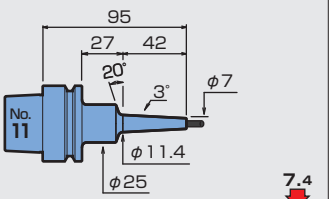
3.6

E50–SLSA4–80–M42



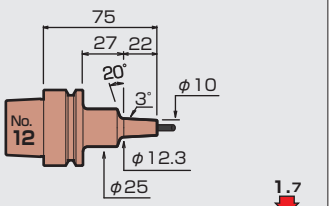
7.3

E50–SLSA4–95–M42



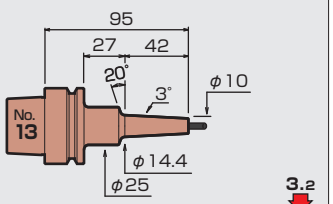
7.4

E50–SLRA4–75–M22



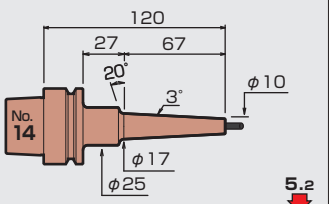
1.7

E50–SLRA4–95–M42



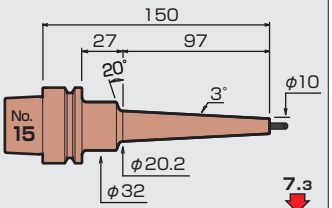
3.2

E50–SLRA4–120–M67



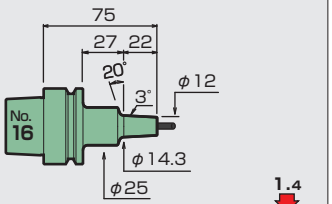
5.2

E50–SLRA4–150–M97



7.3

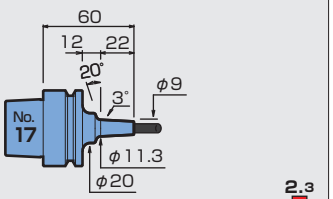
E50–SLFB4–75–M22



1.4

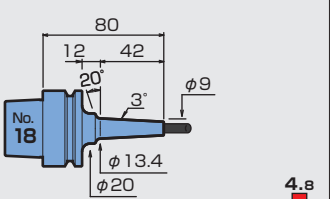
φ6

E50–SLSA6–60–M22



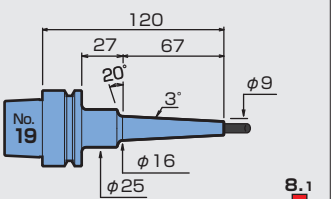
2.3

E50–SLSA6–80–M42



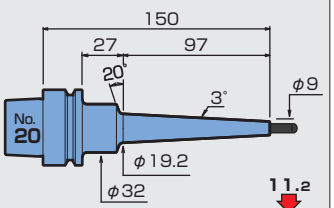
4.8

E50–SLSA6–120–M67



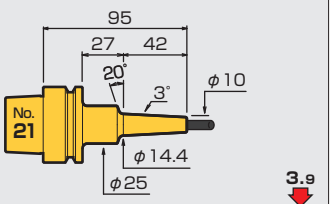
8.1

E50–SLSA6–150–M97



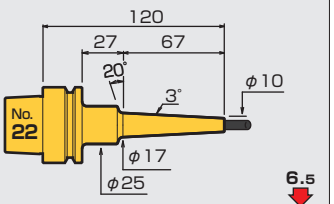
11.2

E50–SLSB6–95–M42



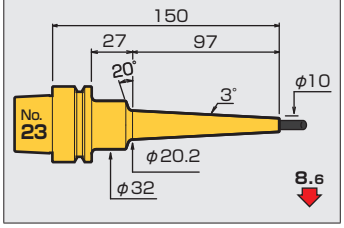
3.9

E50–SLSB6–120–M67



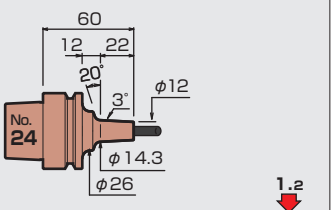
6.5

E50–SLSB6–150–M97



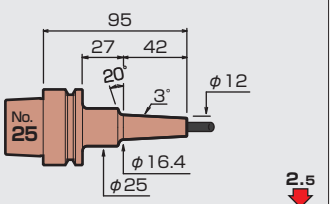
8.6

E50–SLRA6–60–M22



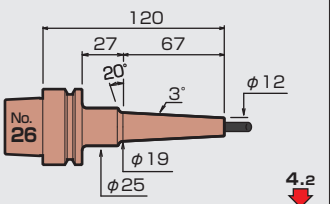
1.2

E50–SLRA6–95–M42



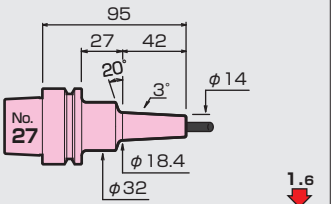
2.5

E50–SLRA6–120–M67



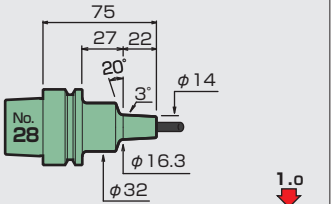
4.2

E50–SLRB6–95–M42



1.6

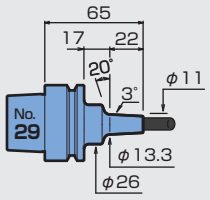
E50–SLFB6–75–M22



1.0

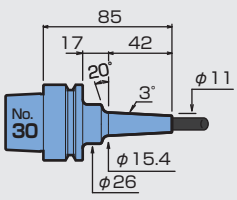
φ8

E50–SLSA8–65–M22



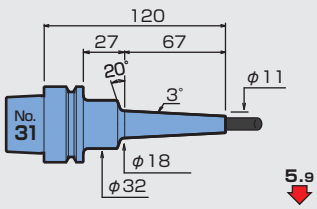
1.5

E50–SLSA8–85–M42



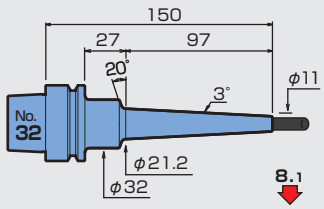
3.2

E50–SLSA8–120–M67



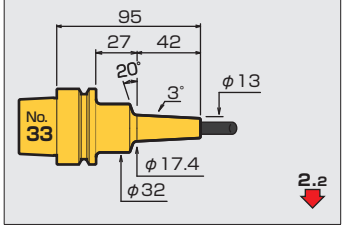
5.9

E50–SLSA8–150–M97



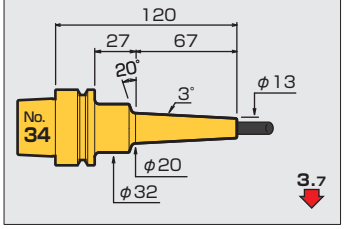
8.1

E50–SLSB8–95–M42



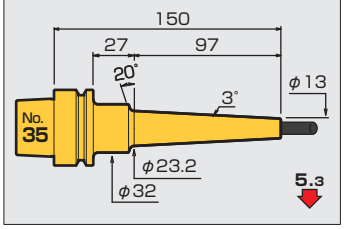
2.2

E50–SLSB8–120–M67



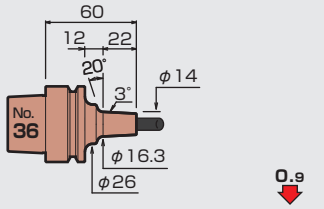
3.7

E50–SLSB8–150–M97



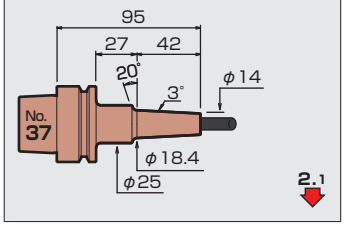
5.3

E50–SLRA8–60–M22



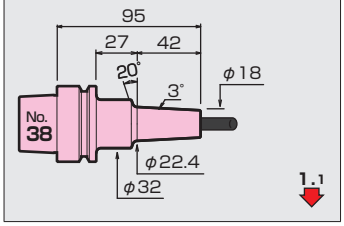
0.9

E50–SLRA8–95–M42



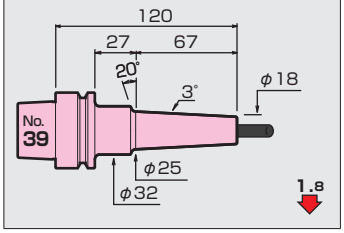
2.1

E50–SLRB8–95–M42



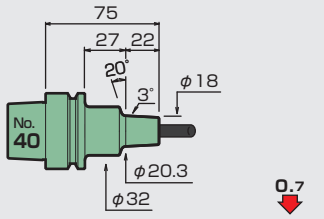
1.1

E50–SLRB8–120–M67



1.8

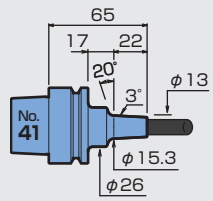
E50–SLFB8–75–M22



0.7

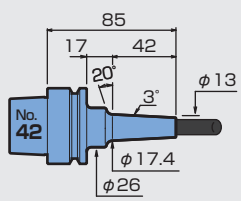
φ10

E50–SLSA10–65–M22



1.1

E50–SLSA10–85–M42



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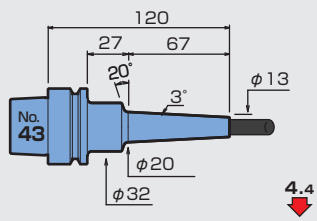
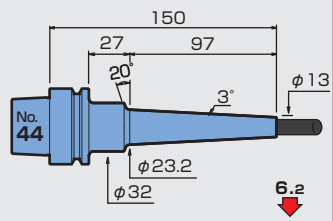
E50–SLSA10–120–M67



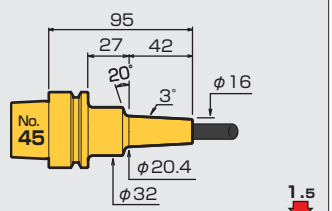
4.4

E50–SLSA10–150–M97



6.2

E50–SLSB10–95–M42



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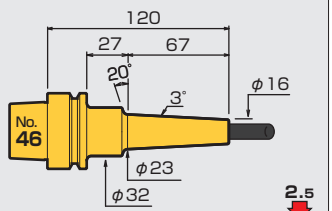
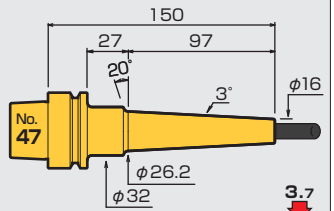


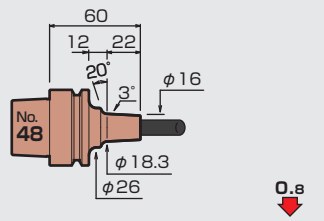
2.5

E50–SLSB10–150–M97



3.7

E50–SLRA10–60–M22



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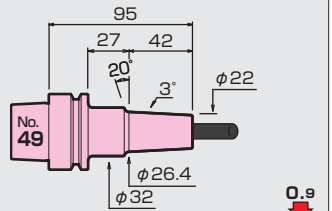

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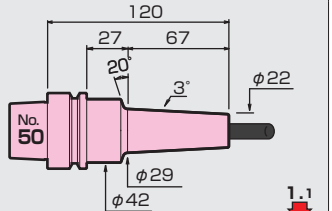
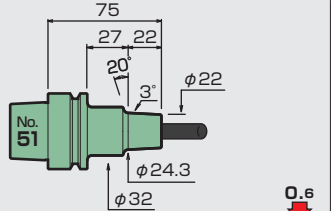
E50–SLRB10–120–M67



1.1

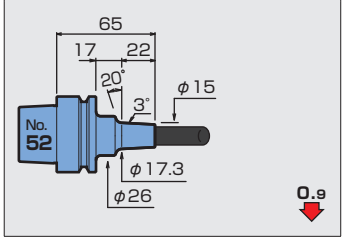
E50–SLFB10–75–M22



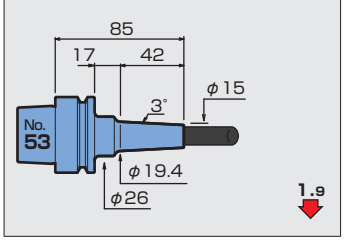
0.6

φ12

E50–SLSA12–65–M22



E50–SLSA12–85–M42



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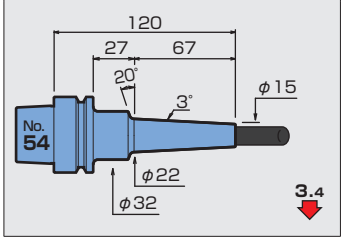

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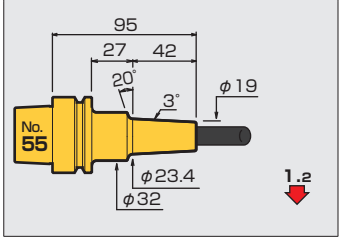

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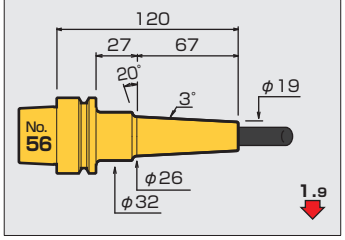
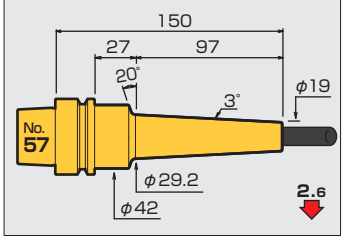
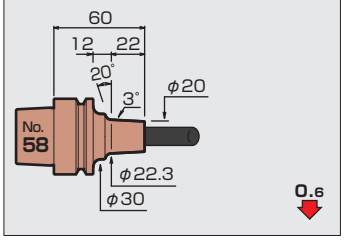


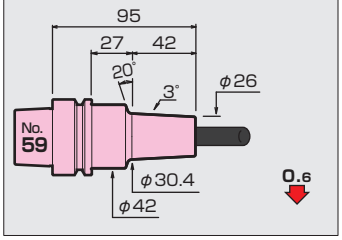
E50–SLSB12–150–M97



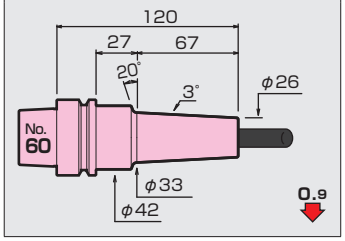
E50–SLRA12–60–M22



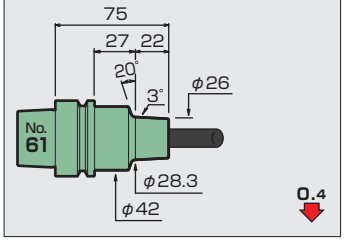
E50–SLRB12–95–M42



E50–SLRB12–120–M67

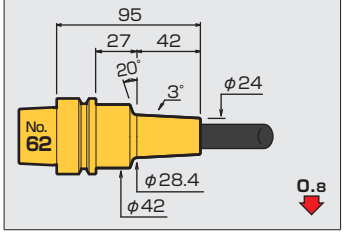


E50–SLFB12–75–M22

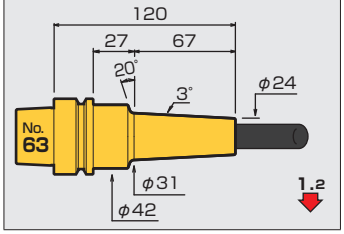


φ16

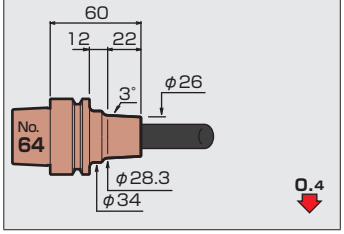
E50–SLSB16–95–M42



E50–SLSB16–120–M67



E50–SLRA16–60–M22



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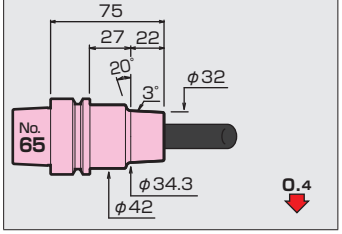
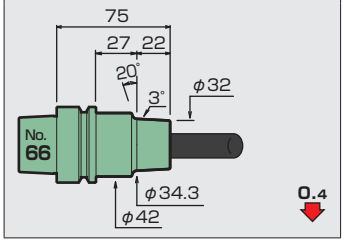
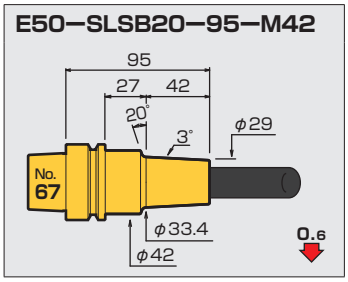


E50–SLFB16–75–M22

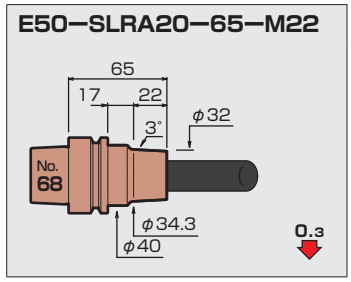


φ20

E50–SLSB20–95–M42



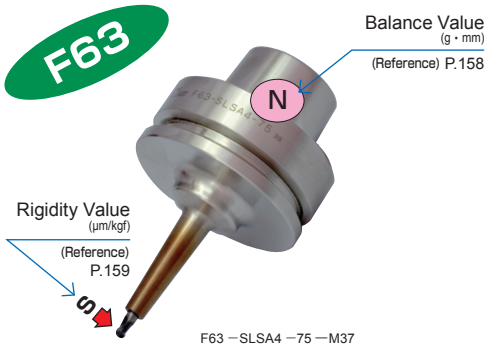
E50–SLRA20–65–M22

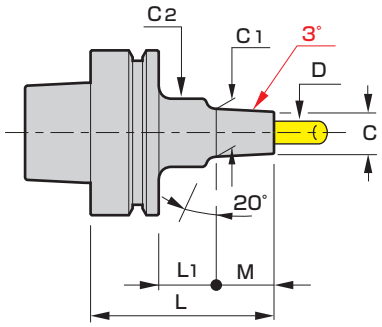


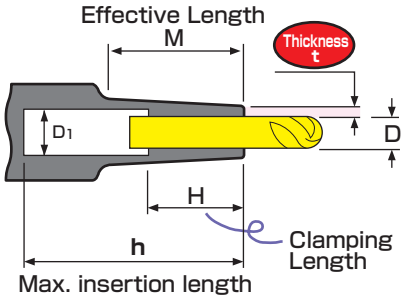
FIDIA
HS664RT

DIGMA
HSC800 / 5

HSK-F63 Code Table





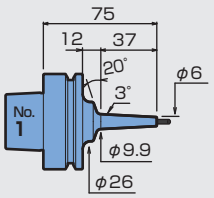


CODE	φD	φC	Thickness t	L	M	L_1	$φC_1$	$φC_2$	$φD_1$	H	h	Kg	N	S	Scale model
F63—SLSA 3— 75—M37	3	6	1.5	75	37	12	9.9	26	4	9	58	0.7	1.5	8.0	1
— 95—M42				95	42	27	10.4	25			73		1.8	9.3	2
—SLRA 3— 70—M22		7.5	2.25	70	22	22	9.8	26			53		1.7	2.8	3
— 95—M42				95	42	27	11.9	25			73		1.9	5.4	4
—SLFB 3— 75—M22		9.5		75	22		11.8				53			1.9	5
— 95—M42			3.25	95	42		13.9				73	0.8	2.0	3.3	6
—120—M67				120	67		16.5				98			5.4	7
F63—SLSA 4— 75—M37	4	7	1.5	75	37	12	10.9	26	5	12	58	0.7	1.5	6.2	8
— 95—M42				95	42	27	11.4	25			73		1.9	7.3	9
—SLRA 4— 70—M22		10	3	70	22	22	12.3	26			53		1.7	1.7	10
— 95—M42				95	42	27	14.4	25			73	0.8	1.9	3.1	11
—SLFB 4— 75—M22		12		75	22		14.3				53	0.7	2.0	1.4	12
— 95—M42			4	95	42		16.4				73	0.8		2.2	13
—120—M67				120	67		19				98		2.1	3.6	14
F63—SLSA 6— 75—M37	6	9	1.5	75	37	12	12.9	26	7	18	58	0.7	1.5	4.0	15
— 95—M42				95	42	27	13.4	25			73		1.9	4.9	16
—SLSB 6— 95—M42		10	2				14.4							3.9	17
—SLRA 6— 70—M22		12	3	70	22	22	14.3	26			53		1.7	1.3	18
— 95—M42				95	42	27	16.4	25			73	0.8	1.9	2.5	19
—SLFB 6— 75—M22		14	4	75	22		16.3	32			53		2.2	1.0	20
F63—SLSA 8— 95—M42	8	11	1.5	95	42	27	15.4	25	9	24	73	0.7	1.9	3.5	21
—SLSB 8— 95—M42		13	2.5				17.4	32				0.8	2.3	2.2	22
—SLRA 8— 70—M22		14	3	70	22	22	16.3	26	8.6		53	0.7	1.8	1.0	23
— 95—M42				95	42	27	18.4	25	9		73	0.8	1.9	2.1	24
—SLFB 8— 75—M22		18	5	75	22		20.3	32			53		2.2	0.7	25
F63—SLSA10— 95—M42	10	13	1.5	95	42	27	17.4	25	11	30	73	0.8	2.0	2.7	26
—SLSB10— 95—M42		16	3				20.4	32					2.3	1.5	27
—SLRA10— 70—M22				70	22	22	18.3	26	10.6		53	0.7	1.8	0.9	28
—SLFB10— 75—M22		22	6	75		27	24.3	32	16			0.8	2.3	0.6	29
F63—SLSA12— 95—M42	12	15	1.5	95	42	27	19.4	32	13	30	64	0.8	2.3	1.9	30
—SLSB12— 95—M42		19	3.5				23.4				73		2.4	1.1	31
—SLRA12— 70—M22		20	4	70	22	22	22.3	30	12.6		53		2.0	0.6	32
—SLFB12— 75—M22		26	7	75		27	28.3	42	21			0.9	3.0	0.4	33
F63—SLFB16— 75—M22	16	32	8	75	22	27	34.3	42	22.2	32	53	1.0	3.1	0.3	34
F63—SLFB20— 75—M22	20	38	9	75	22	27	40.3	50	20.6	40	53	1.1	3.6	0.3	35
F63—SLFB25— 75—M22	25	45	10	75	22	27	47.3	50	25.6	45	53	1.1	3.7	0.2	36

MAKINO
V33
MORI SEIKI
NV4000 DCG

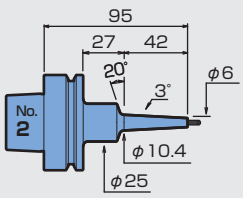
φ3

F63-SLSA3-75-M37



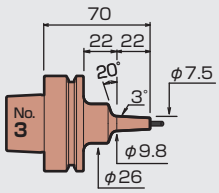
8.0

F63-SLSA3-95-M42



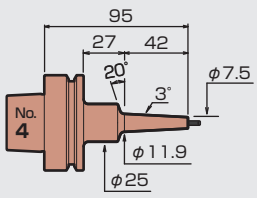
9.3

F63-SLRA3-70-M22



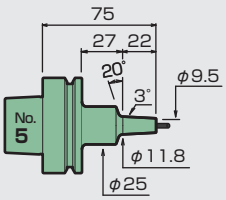
2.8

F63-SLRA3-95-M42



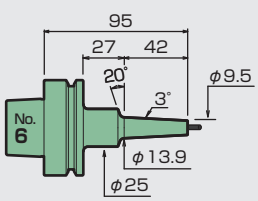
5.4

F63-SLFB3-75-M22



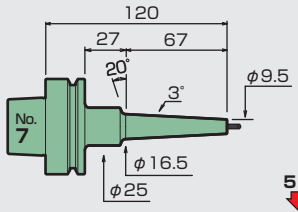
1.9

F63-SLFB3-95-M42



3.3

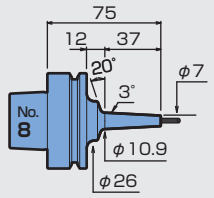
F63-SLFB3-120-M67



5.4

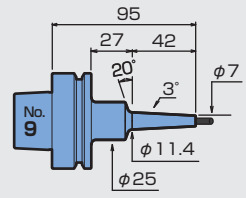
φ4

F63-SLSA4-75-M37



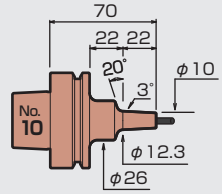
6.2

F63-SLSA4-95-M42



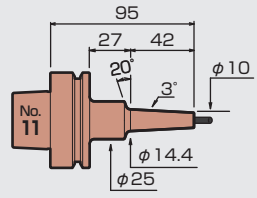
7.3

F63-SLRA4-70-M22



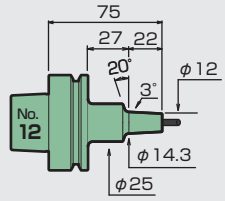
1.7

F63-SLRA4-95-M42



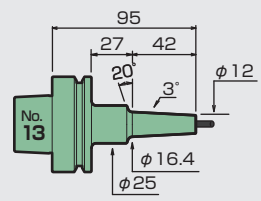
3.1

F63-SLFB4-75-M22



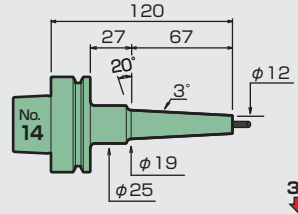
1.4

F63-SLFB4-95-M42



2.2

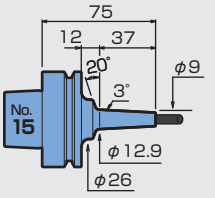
F63-SLFB4-120-M67



3.6

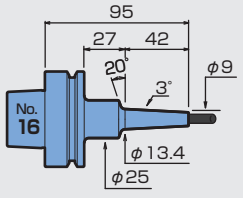
φ6

F63-SLSA6-75-M37



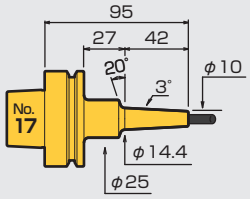
4.0

F63-SLSA6-95-M42



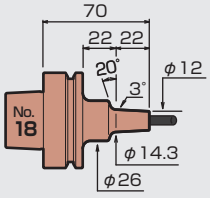
4.9

F63-SLSB6-95-M42



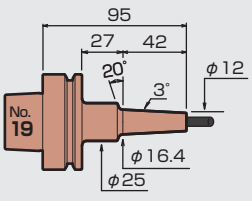
3.9

F63-SLRA6-70-M22



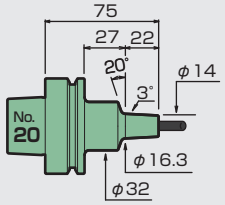
1.3

F63-SLRA6-95-M42



2.5

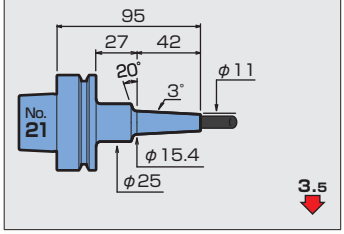
F63-SLFB6-75-M22



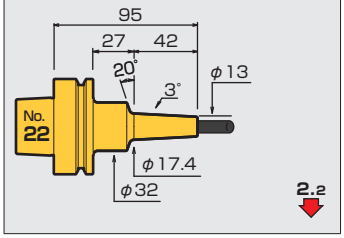
1.0

φ8

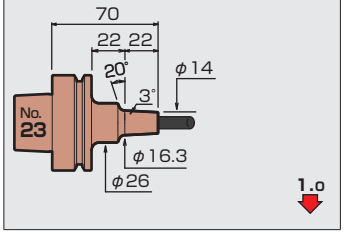
F63−SLSA8−95−M42



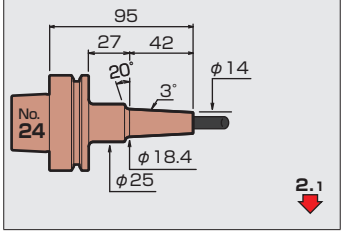
F63−SLSB8−95−M42



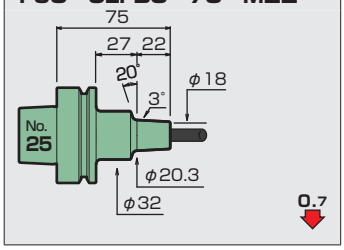
F63−SLRA8−70−M22



F63−SLRA8−95−M42

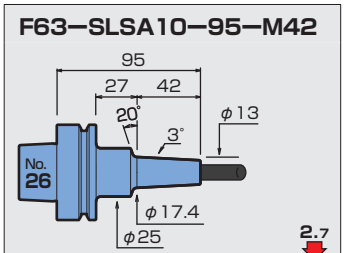


F63−SLFB8−75−M22

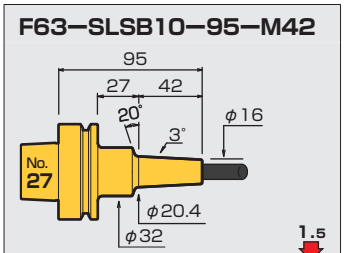


φ10

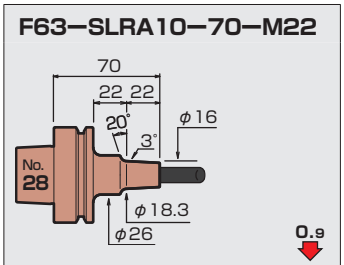
F63−SLSA10−95−M42



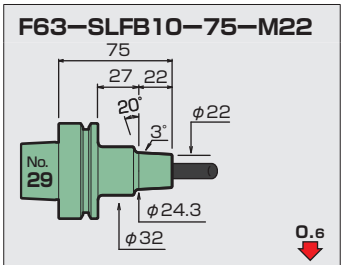
F63−SLSB10−95−M42



F63−SLRA10−70−M22

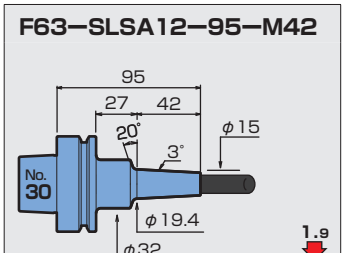


F63−SLFB10−75−M22

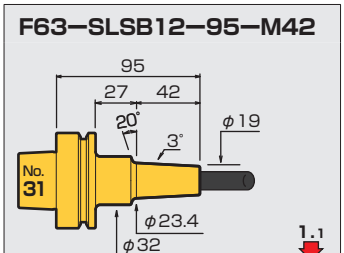


φ12

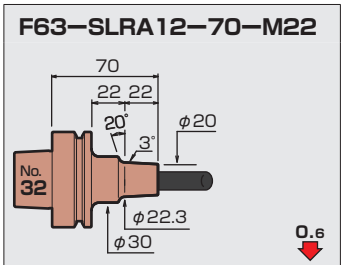
F63−SLSA12−95−M42



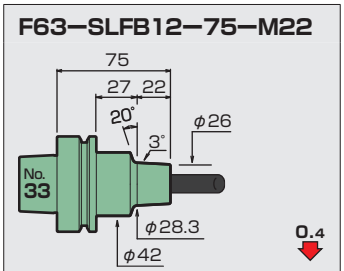
F63−SLSB12−95−M42



F63−SLRA12−70−M22

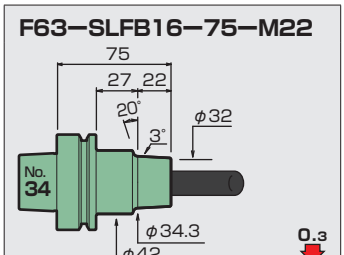


F63−SLFB12−75−M22



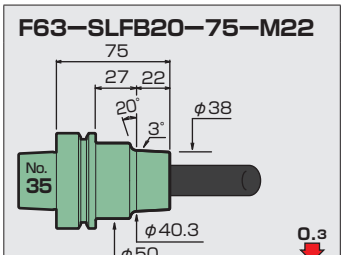
φ16

F63−SLFB16−75−M22



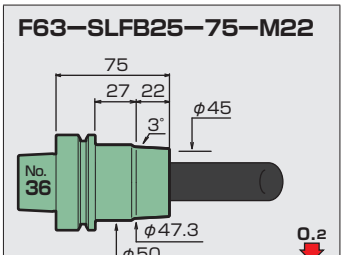
φ20

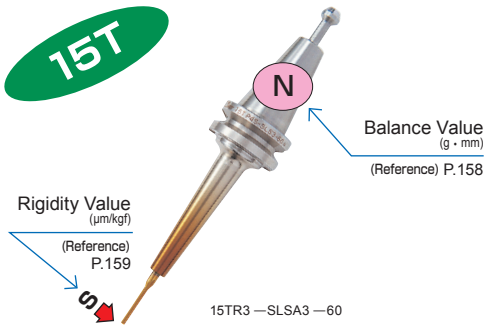
F63−SLFB20−75−M22

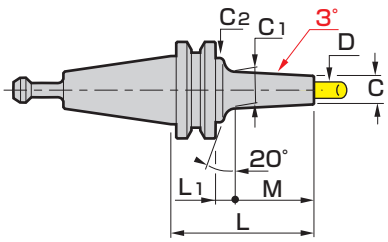


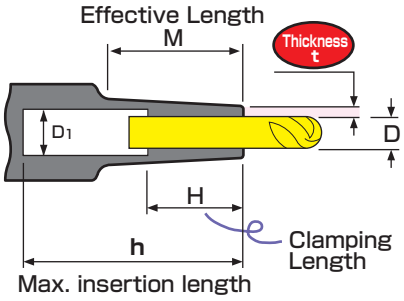
φ25

F63−SLFB25−75−M22









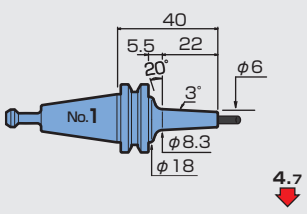
CODE	φD	φC	Thickness t	L	M	L_1	$φC_1$	$φC_2$	$φD_1$	H	h	Kg	N	S	Scale model
15TR3—SLSA 3—40	3	6	1.5	40	22	5.5	8.3	18	4	9	46	0.1	0.3	4.7	1
—60				60	42		10.4				66			9.3	2
15TR3—SLSA3.175—40	3.175	6.175	1.5	40	22	5.5	8.5	18	4	9	46	0.1	0.3	4.4	3
—60				60	42		10.6				66			8.8	4
15TR3—SLSA 4—40	4	7	1.5	40	22	5.5	9.3	18	5	12	46	0.1	0.3	3.6	5
—60				60	42		11.4				66			7.3	6
15TR3—SLSA 5—40	5	8	1.5	40	22	5.5	10.3	18	6	15	46	0.1	0.3	2.9	7
—60				60	42		12.4				66			5.9	8
15TR3—SLSA 6—60	6	9	1.5	60	42	5.5	13.4	18	7	18	66	0.1	0.4	4.9	9
—SLRA 6—35		12	3	35	19.6	2.9	14.1	—	6.6		46		0.2	1.2	10
15TR3—SLRA 8—35	8	14	3	35	19.6	2.9	16.1	—	8.6	20	51	0.1	0.3	0.9	11
15TR3—SLRA10—35	10	16	3	35	19.6	2.9	18.1	—	10.6	20	51	0.1	0.4	0.8	12

S=1:3

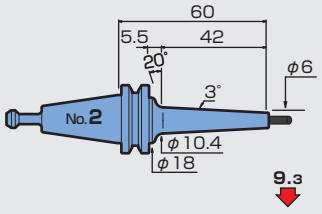
15T Scale Model

φ3

15TR3—SLSA3—40

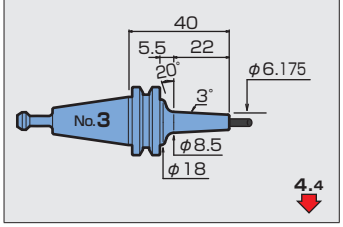


15TR3—SLSA3—60

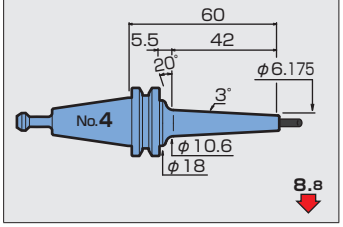


φ3.175

15TR3—SLSA3.175—40

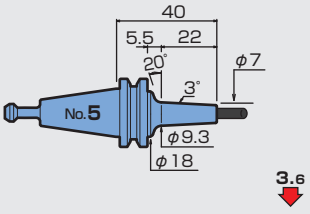


15TR3—SLSA3.175—60

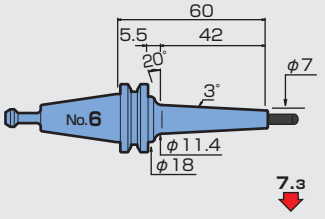


φ4

15TR3—SLSA4—40

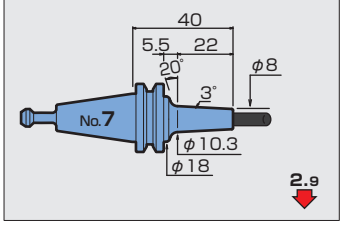


15TR3—SLSA4—60

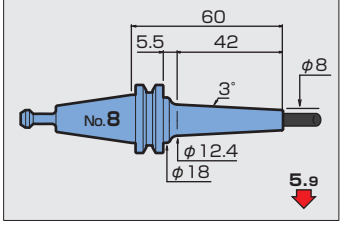


φ5

15TR3—SLSA5—40

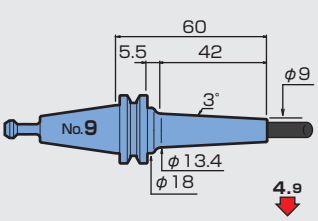


15TR3—SLSA5—60

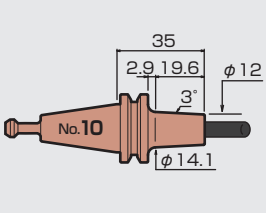


φ6

15TR3—SLSA6—60

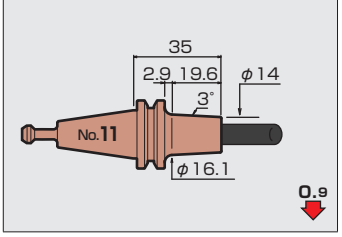


15TR3—SLRA6—35



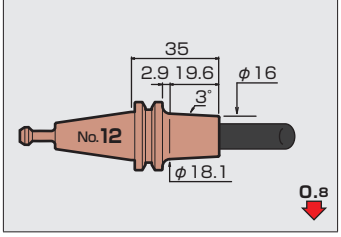
φ8

15TR3—SLRA8—35

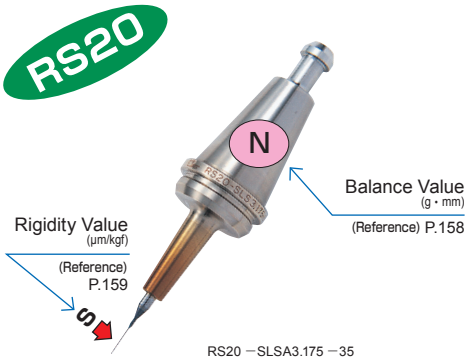


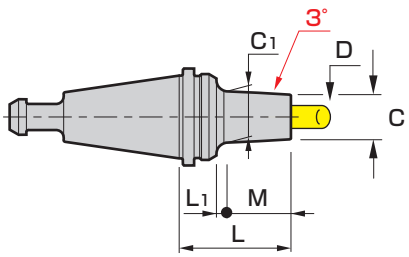
φ10

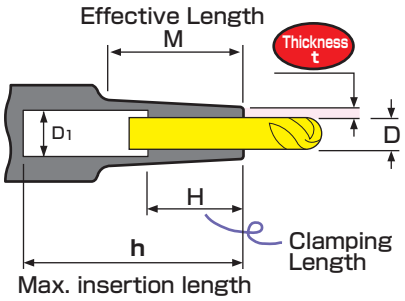
15TR3—SLRA10—35



RS20 Code Table







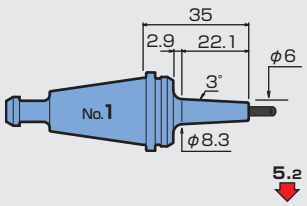
CODE	φD	φC	Thickness t	L	M	L_1	$φC_1$	$φD_1$	H	h	Kg	N	S ↓	Scale model
RS20−SLSA 3−35	3	6	1.5	35	22.1	2.9	8.3	4	9	46	0.1	0.2	5.2	1
RS20−SLSA $3._{175}$ −35	$3._{175}$	$6._{175}$	1.5	35	22.1	2.9	8.5	4	9	46	0.1	0.2	4.9	2
RS20−SLSA 4−35	4	7	1.5	35	22.1	2.9	9.3	5	12	46	0.1	0.2	4.0	3
RS20−SLSA 5−35	5	8	1.5	35	22.1	2.9	10.3	6	15	46	0.1	0.2	3.2	4
RS20−SLRA 6−30	6	12	3	30	17.1	2.9	13.8	6.4	18	46	0.1	0.2	1.1	5
RS20−SLRA 8−30	8	14	3	30	17.2	2.8	15.8	8.6	20	51	0.1	0.3	0.9	6
RS20−SLRA10−30	10	16	3	30	17.6	2.4	17.9	10.6	20	51	0.1	0.4	0.7	7

RS20 Scale Model

S=1:2.5

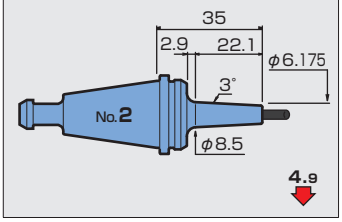
φ3

RS20−SLSA3−35



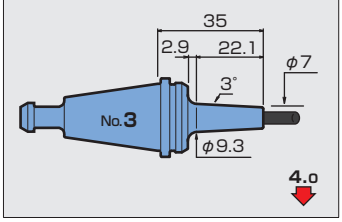
φ3.175

RS20−SLSA3.175−35



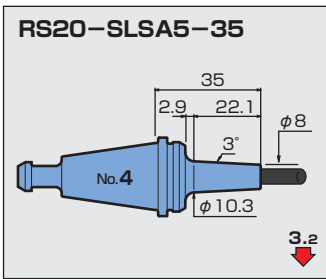
φ4

RS20−SLSA4−35



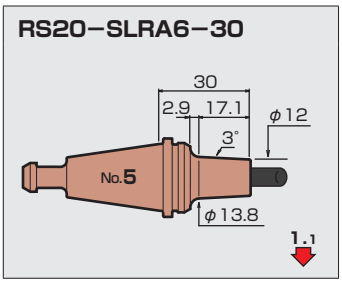
φ5

RS20−SLSA5−35



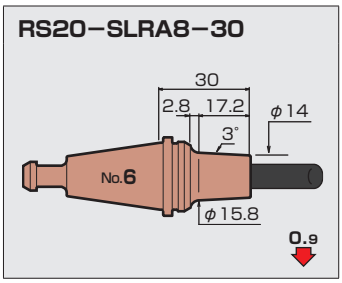
φ6

RS20−SLRA6−30



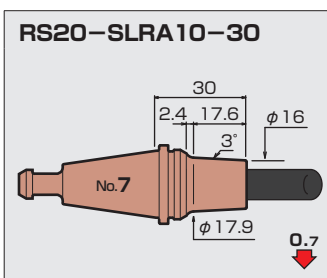
φ8

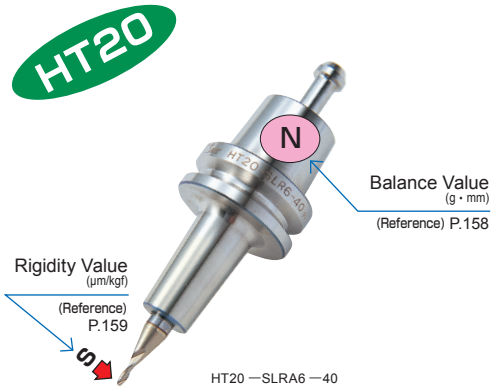
RS20−SLRA8−30

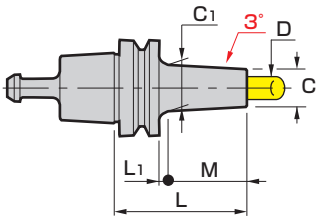


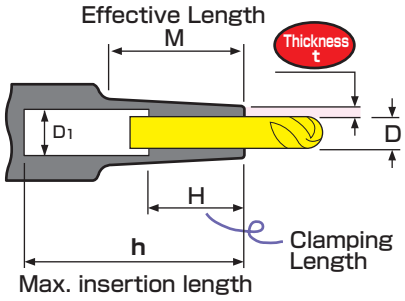
φ10

RS20−SLRA10−30









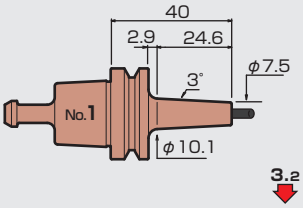
CODE	φD	φC	Thickness t	L	M	L_1	$φC_1$	$φD_1$	H	h	Kg	N	S	Scale model
HT20—SLRA 3—40	3	7.5	2.25	40	24.6	2.9	10.1	3.6	9	14	0.1	0.2	3.2	1
HT20—SLRA 4—40	4	10	3	40	24.6	2.9	12.6	4.6	12	20	0.1	0.2	1.8	2
HT20—SLRA 6—40	6	12	3	40	24.6	2.9	14.6	6.6	18	46	0.1	0.3	1.4	3
HT20—SLRA 8—40	8	14	3	40	24.6	2.9	16.6	8.6	24	46	0.1	0.3	1.1	4
HT20—SLRA10—45	10	16	3	45	29.6	2.9	19.1	10.6	30	51	0.1	0.4	1.0	5

HT20 Scale Model

S=1:2.5

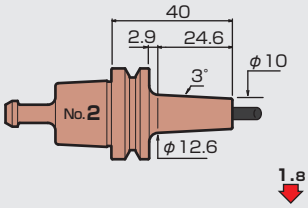
φ3

HT20—SLRA3—40



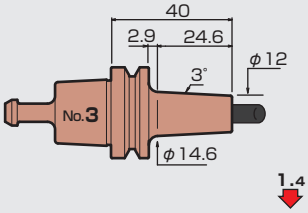
φ4

HT20—SLRA4—40



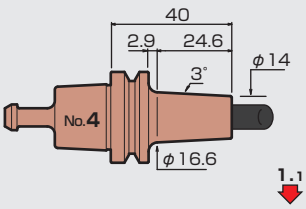
φ6

HT20—SLRA6—40



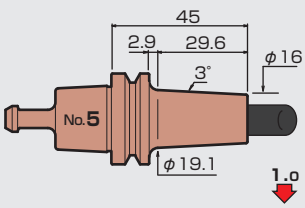
φ8

HT20—SLRA8—40

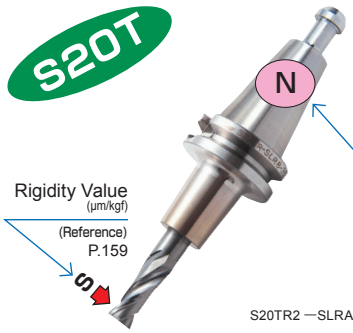


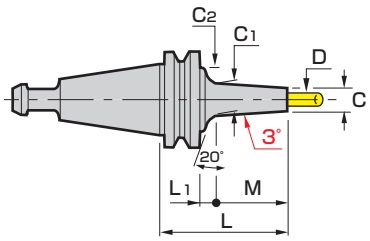
φ10

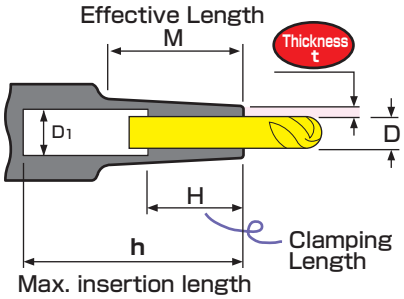
HT20—SLRA10—45



S20T Code Table





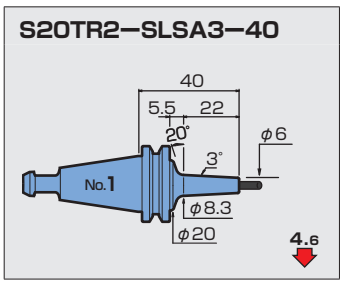


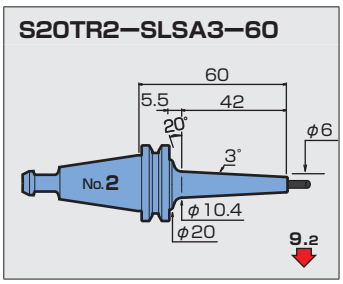
CODE	φD	φC	Thickness t	L	M	L1	φC1	φC2	φD1	H	h	Kg	N	S	Scale model
S20TR2—SLSA 3—40	3	6	1.5	40	22	5.5	8.3	20	4	9	46	0.1	0.4	4.6	1
—60				60	42		10.4				66			9.2	2
S20TR2—SLSA3.175—40	3.175	6.175	1.5	40	22	5.5	8.5	20	4	9	46	0.1	0.4	4.4	3
—60				60	42		10.6				66			8.8	4
S20TR2—SLSA 4—40	4	7	1.5	40	22	5.5	9.3	20	5	12	46	0.1	0.4	3.6	5
—60				60	42		11.4				66			7.2	6
S20TR2—SLSA 5—40	5	8	1.5	40	22	5.5	10.3	20	6	15	46	0.1	0.4	2.8	7
—60				60	42		12.4				66		0.5	5.8	8
S20TR2—SLSA 6—60	6	9	1.5	60	42	5.5	13.4	20	7	18	66	0.1	0.5	4.7	9
—SLRA 6—35		12	3	35	19.6	2.9	14.1	—	6.4		46		0.3	1.1	10
S20TR2—SLRA 8—35	8	14	3	35	19.6	2.9	16.1	—	8.6	20	51	0.1	0.4	0.9	11
S20TR2—SLRA10—35	10	16	3	35	19.6	2.9	18.1	—	10.6	20	51	0.1	0.5	0.8	12
S20TR2—SLRA12—45	12	20	4	45	32.5	—	23.4	—	12.6	30	51	0.2	0.6	0.8	13

S20T Scale Model

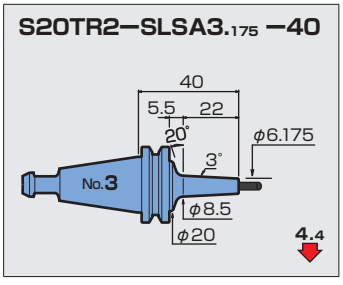
S=1:3

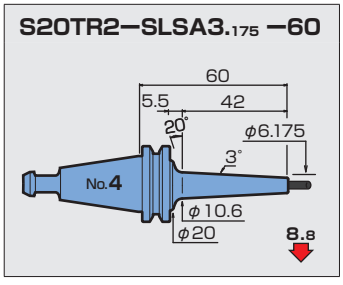
φ3



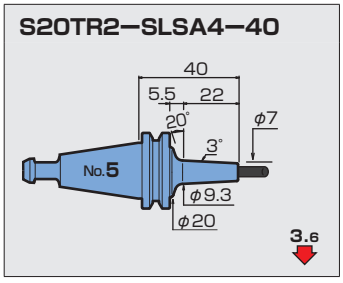


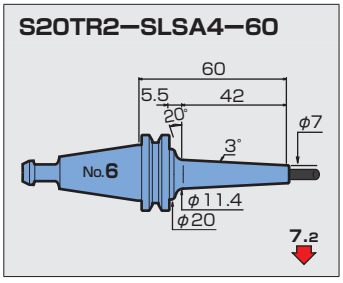
φ3.175



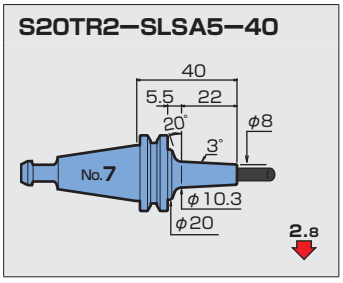


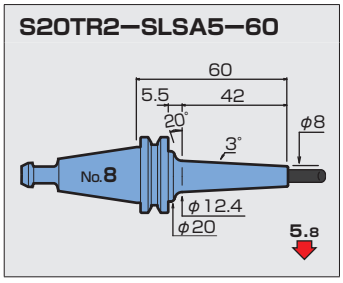
φ4



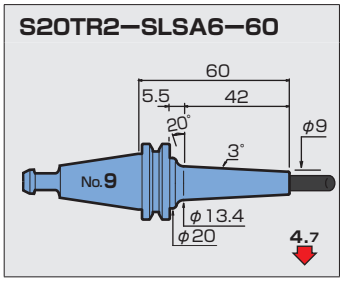


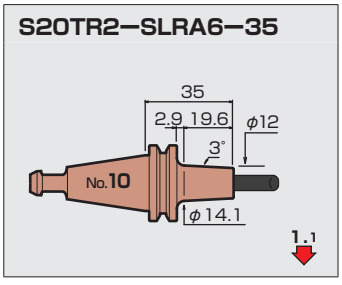
φ5



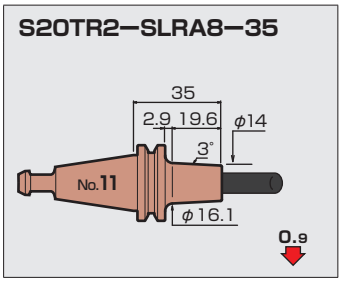


φ6

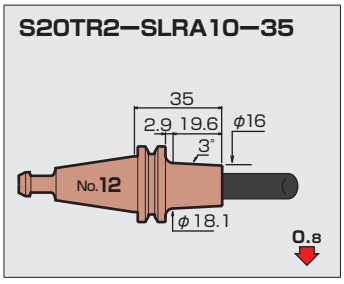




φ8

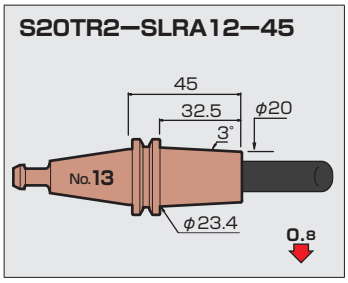


φ10



φ12

S20TR2—SLRA12—45



SUGINO
V9 / H7 / Xion- II

The Holders Except for Slimline

Pin・Point chuck (PPA)

E32—PPA3—65—M30

15T—PPA3—30—M12

Fig.1

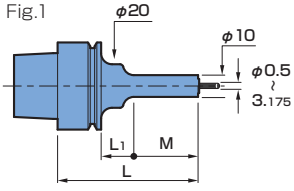
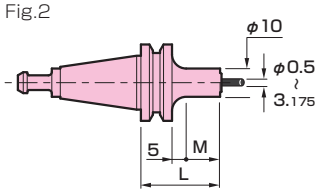
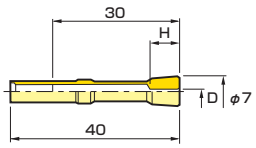


Fig.2



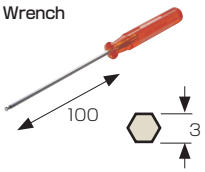
CODE	Fig.	L	M	L1	Kg
E32 —PPA3— 65—M30	1	65	30	15	0.2
E40 —PPA3— 65—M30					0.3
— 90—M45		90	45	25	
E50 —PPA3— 75—M30		75	30	19	0.5
— 90—M30		90		34	
— 90—M45			45	19	
F63M—PPA3— 75—M30		75	30		0.7
— 90—M30		90		34	
—M45			45	19	
—120—M60		120	60	34	
—M90			90	—	
15T —PPA3— 30—M12	2	30	12.5	—	0.1
— 45—M27		45	27.5		
S20T—PPA3— 30—M12		30	12.5		
— 45—M27		45	27.5		

P collet



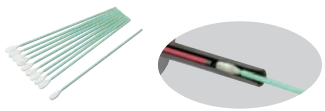
CODE		φD	H	Cutter Insertion Length
Precision Collet	Standard Collet			
P3—0.6—P	P3—0.6	0.5 ~0.6	6.9	6.9 ~30
—0.8—P	—0.8	0.6 ~0.8		
—1 —P	—1	0.8 ~1	7	7 ~30
—1.5—P	—1.5	1 ~1.5	7.2	7.2 ~30
—2 —P	—2	1.5 ~2	7.3	7.3 ~30
—2.5—P	—2.5	2 ~2.5	7.4	7.4 ~30
—3 —P	—3	2.5 ~3	7.6	7.6 ~30
—3.175—P	—3.175	2.7 ~3.175		

Wrench



CODE
DW—3

Cleaning Tool

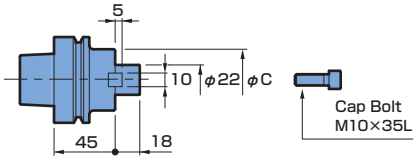


CODE	Q'ty
PCT01—10	10
—25	25

■Option •P collet •Wrench •Cleaning tool

Face Mill Arbor (FMC)

F63 —FMC22 —45

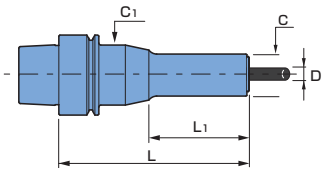


CODE	Cutter dia	C	Kg
E50—FMC22—45	50 , 63	42	0.7
F63—FMC22—45		45	1.0

■Standard Accessories •Cap Bolt •Stopper Key
■Note •The cap bolt may differ depending upon the shape of the cutter.

DETa-1 Collet Holder B type (DTB)

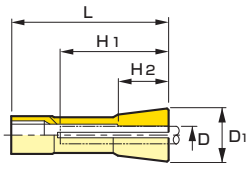
E32 —DTB7 —65K



CODE	φD	L	φC	L1	Kg
E32 —DTB 7— 65K (※)	1 ～ 7	65	21	33	0.2
E40 —DTB 7— 95		95		50	0.4
12—110	2.5～13	110	30	90	0.5
E50 —DTB 7—100	1 ～ 7	100	21	50	0.6
—DTB12—115	2.5～13	115	30	89	0.8
F63M—DTB 7—100	1 ～ 7	100	21	50	0.9
12—120	2.5～13	120	30	70	1.1

■Option •DETa-1 Collet •Wrench
■Caution •※=Collapsibility of collet cannot use.
The holding diameter applies only to the reference diameter of collet.

DETa-1 Collet



CODE		φD	Collap-sibility	φD1	L	H1	H2
Precision Collet	Standard Collet						
D 7— 1.5—P	D 7— 1.5	1 ～ 1.5	0.5	17	50	36	7
— 2 —P	— 2	1.5～ 2					10
— 2.5—P	— 2.5	2 ～ 2.5					12
— 3 —P	— 3	2.5～ 3					
— 4 —P	— 4	3 ～ 4	1				14
— 5 —P	— 5	4 ～ 5					16
— 6 —P	— 6	5 ～ 6					
— 7 —P	— 7	6 ～ 7					
D12— 4 —P	D12— 4	2.5～ 4	1.5	26	70	50	16
— 6 —P	— 6	4 ～ 6	2				20
— 8 —P	— 8	6 ～ 8					22
—10 —P	—10	8 ～10					
—12 —P	—12	10 ～12					
—13 —P	—13	11 ～13					

Wrench

Fig.1 Fig.2 Fig.3

CODE	HOLDER CODE	Fig.	L	B
TW—4	E32 -DTB7	1	100	4
—5	E40 -DTB7/12	2	153	5
	E50 -DTB7/12			
W —135DR	F63M-DTB7/12	3	132.5	5

Collet Holder (CTH/CTS)

E32 —CTH10 —55

E32 —CTS10 —50

Fig.1

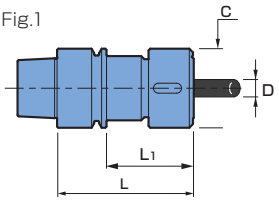
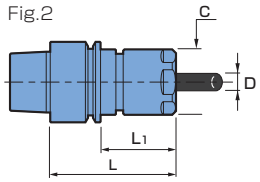


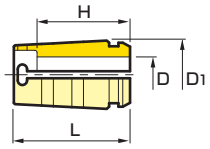
Fig.2



CODE	Fig.	φD	L	φC	L1	Kg
E32—CTH10—55	1	2.4～10	55	32	35	0.2
—CTS10—50 (※)	2		50	26	30	
E40—CTH10—55	1		55	32	35	0.4
E50—CTH10—60			60	36	34	0.7
—90			90		64	0.9
—CTH20—75		5.8～20	75	50	49	
F63—CTH10—60		2.4～10	60	36	34	0.9
—90			90		64	1.1
—CTH20—75		5.8～20	75	50	49	

■Option •Spring collet •Spanner
■Caution •※=Collapsibility of collet cannot use.
The holding diameter applies only to the reference diameter of collet.

Spring Collet

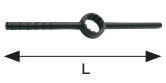


CODE		φD	L	φD1	H
Precision Collet	Standard Collet				
C10—D—P	C10—D	2.6～ 5 (0.2mm steps)	26	17.2	16
		5.2～ 5.8 (0.2mm steps)			18
		6 ～10 (0.2mm steps)			20
C20—D—P	C20—D	6 ～ 9.8 (0.2mm steps)	50	29.5	29
		10 ～15.8 (0.2mm steps)			33
		16 ～20 (0.2mm steps)			40

Wrench

Fig.1

Fig.2



CODE	Fig.	HOLDER CODE	L
FC—32	1	E32 - CTH10	120
—36		CTH10	208
—50		CTH20	281
RC—26	2	E32 - CTS10	240

SHRINK-FIT HOLDER

SLIMLINE

Related Products

PERIPHERAL

TOOL SET UP STATION

P.150

Working Table

6S DESK

Washing Machine of Holder and Cutter

CLEAN BOX

Cutting Tool Cover

TOOL CAP TCC type

P.151

TOOL SET UP STAND

P.152

TOOL SET UP STATION

See the general catalog for details

6S DESK

CODE 6SD – 01

"SEIRI" Sorting
"SEITON" Systematizing
"SEISOU" Sweeping
"SEIKETSU" Sanitizing
"SHITSUKE" Self-discipline
6S
5S + S Safety

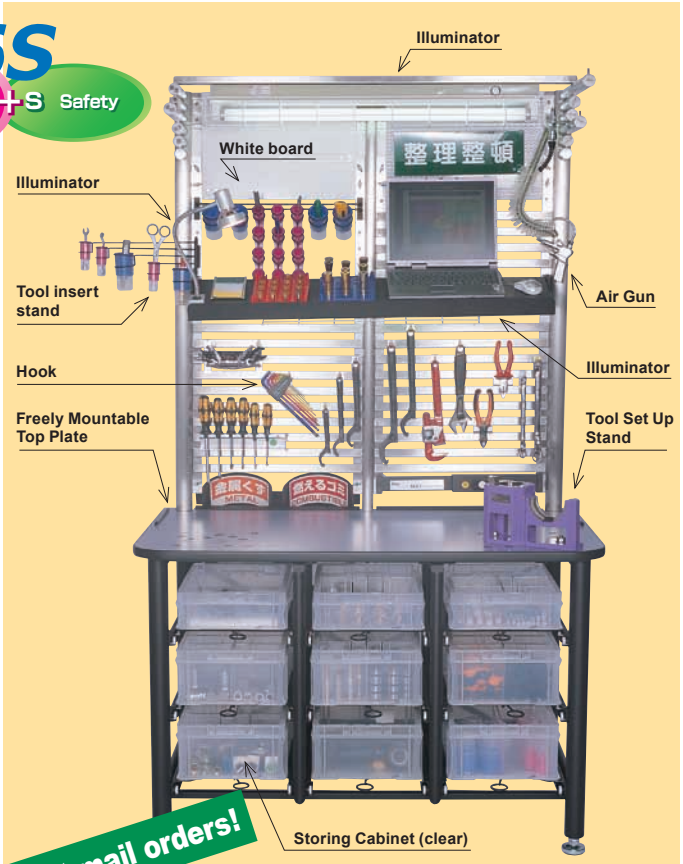
- Helps in the rapid implementation of the five S's in your factory.
- Ensures safe tool settings.
- Easy-to-assemble, simple, compact, prefabricated type.

Backside
- Dust Shooter
- Tool Cap Dispenser
- Hanger

Freely Removable Drawer

Freely mountable and interchangeable hooks

Tools and vices can be freely clamped/mounted.



We accept mail orders!

CLEAN BOX

CODE CBX – 01

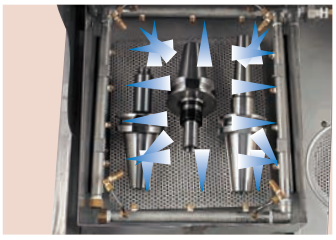
- Tools including cutters and jigs are washable with no need to breaking them down.
- Compact type with built-in sink
- No plumbing required
- Safe cleaning system using water
- Comes with a washing water heater for ensuring comfortable working conditions even in winter

Compact built-in sink

Washing shower equipped with automatic shutoff function

Hand washing

Automatic washing for nozzles at 18 locations



Tool holder/Collet/Nut/Wash cutting tools thoroughly to maintain their high precision

TOOL CAP TCC type

Cutting tool cover

Cutting tool cover that keeps the cutting tool visible, will not slip off or break, and is user-friendly

The tool is visible.

φ5.4～60

The cover can be cut to the require over all length.

Protects the cutting tool and is user-friendly.

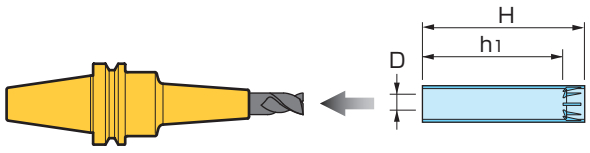
The cutting tool cover protects the user from injury at the time of work while protecting breakage of the cutting edge.

Not slip off

Cutter Case　　Tool Cap

TCC type Specification

CODE	φD	h1	H	Q'ty	List Price
TCC0607— 50	5.4～ 6.7	35	40	50	¥ 1,600
—100				100	¥ 2,400
—500				500	¥ 9,500
TCC0709— 50	6.8～ 8.9	35	40	50	¥ 2,100
—100				100	¥ 3,200
—500				500	¥12,500
TCC0911— 50	8.9～10.9	65	70	50	¥ 2,650
—100				100	¥ 4,000
—500				500	¥16,000
TCC1113— 50	10.9～13.4	65	70	50	¥ 3,150
—100				100	¥ 4,800
—500				500	¥19,000
TCC1418— 25	13.8～17.8	100	110	25	¥ 2,400
— 50				50	¥ 3,200
—250				250	¥10,750
TCC1822— 25	17.8～22.4	100	110	25	¥ 3,000
— 50				50	¥ 4,000
—250				250	¥13,500
TCC2228— 25	22.3～28	135	150	25	¥ 3,750
— 50				50	¥ 5,000
—250				250	¥19,000
TCC2836— 10	28.0～36	130	150	10	¥ 2,000
— 20				20	¥ 2,700
— 50				50	¥ 5,100
—200				200	¥18,000
TCC3646— 10	36.2～47	165	190	10	¥ 2,600
— 20				20	¥ 3,400
— 50				50	¥ 6,500
—200				200	¥22,800
TCC4760— 10	46.0～60	160	190	10	¥ 3,300
— 20				20	¥ 4,400
— 50				50	¥ 8,400
—200				200	¥29,600



Variety Set

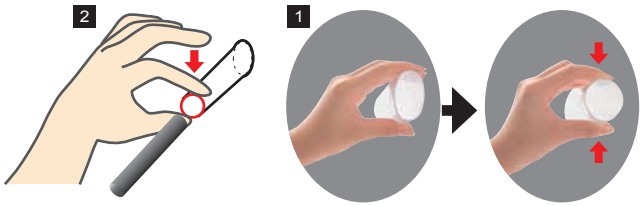
Each size comes in a set of two.

CODE	Q'ty	List Price
TCC—F	2 pieces per cutting tool over size for TCC0607 to 4760 (total of 20 pieces per set)	¥ 2,700

Usage

1 Hold the mouth of the tool cap vertically, and then press it so that its oval shape becomes round.

2 Once the mouth of the tool cap becomes round, push it into the cutting tool or tool.



TCA type —
The TCA-type cutting tool cover is used by attaching it to the tip of a tool holder.

TCB type —
This cutting tool cover is attached to the cutting tool.

General catalogue for further reference • • •

TOOL SET UP STAND

The setup time can be shortened.
Not only can you mount cutting tools simply and quickly without using other tools, but also clamping collets and pull stud bolts!

プチボール Petit Ball 40
BT40,CAT.40
DIN40

Freely set vertically or horizontally

マイキューブ MY CUBE 50
BT50,CAT50,DIN50

マイキューブ MY CUBE 100
HSK-A100

HF SERIES
BT30/HSK-A63/A40
A40S/E32/E50/F63

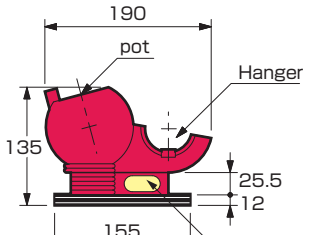
CODE	SHANK TYPE
PETIT BALL 40	BT40,CAT40,DIN40

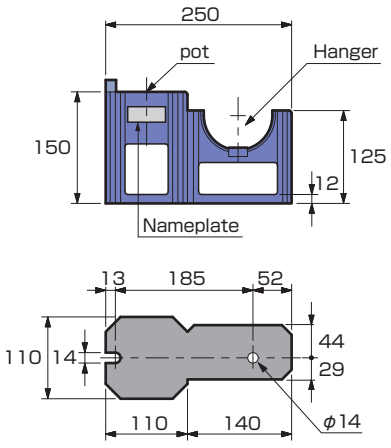
■Caution ●The installation bolt is not attached. Please use 2pcs of the M8 bolt when installing.

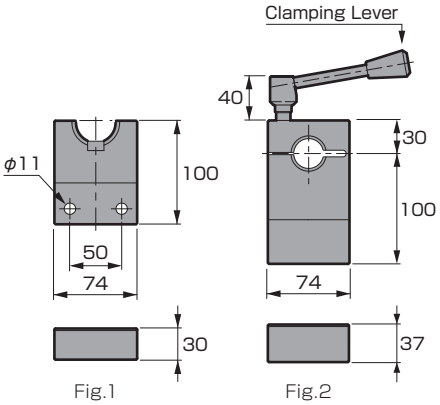
CODE	SHANK TYPE
MY CUBE 50	BT50,CAT50,DIN50
MY CUBE 100	HSK－A100

■Caution ●The installation bolt is not attached. Please use 2pcs of the M12 bolt when installing.

CODE	Fig.	SHANK TYPE
HF－BT30	1	BT30
－A40		HSK－A40
－A50		－A50
－A63		－A63
－A40S		－A40S
－E32	2	－E32
－E40		－E40
－E50		－E50
－F63		－F63







Clamping Slimline collet

Retention knob tightening

Nut tightening

Nut tightening
(Vices can be clamped)

SHRINK-FIT HOLDER

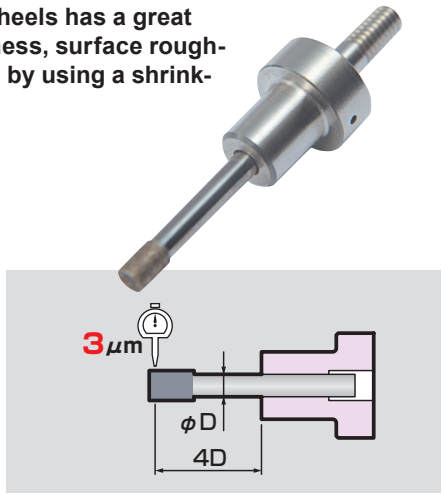
SLIMLINE

REFERENCE

Slimline for CBN electroplated grinding wheels with carbide shanks

The chucking precision of the grinding wheels has a great impact on the finishing precision (roundness, surface roughness, etc.). Precision is further improved by using a shrink-fitting quill.

■Caution ●Note that the deflection precision of the grinding wheel is greatly influenced by how accurately the shrink-fitting quill is attached to the grinding wheel spindle.



Comparison Data

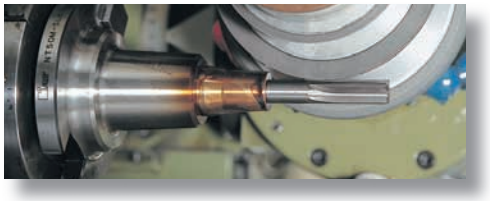
Measurement Items	Shrink-fit	Collet
Roundness	0.3 μm	0.6μm
Surface Roughness Ry	1.38μm	2.7μm

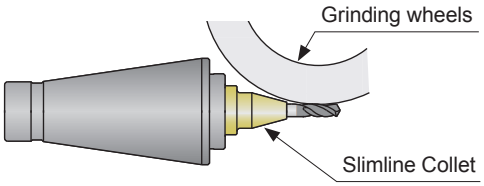
Cutting Condition

Work material	: SUJ 2
Diameter of machining	: φ 5
The type of grinding wheel	: ABE06 Grain size #140 manufactured by FSK
OD of grinding wheel × shaft diameter	: φ 3.5× φ 3
Work rotating speed	: 1,000min^{-1}
Spindle rotating speed	: 94,000min^{-1}
Cutting speed	: 1,033min^{-1}
Feed	: 1,500min^{-1}
Cutting feed	: 0.01m/min
Spark out	: 60sec.
Allowance in each machining step	: 0.005mm

Use of shrink-fitting holder (for tool grinding)

Superior accessibility to the grinding wheel enables more ideal tool grinding.
Highly accurate, rigid clamping improves the grinding precision of tools.
The precision of cutting tools is greatly improved when Slimline is used in re-sharpening purpose.



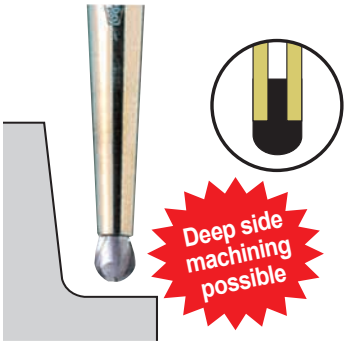


The carbide endmill for shrink fit tool holder

GX3000 The carbide endmill for shrink fit tool holder

Accessibility
High cost performance

※GX3000 is OSG's products.



Normal dimensional tolerance of fits (JIS B 0401)

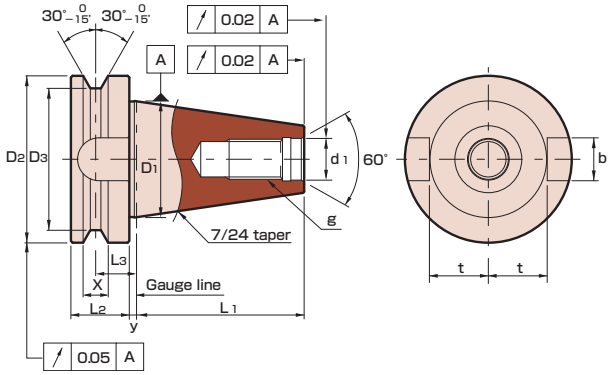
The class of dimension(mm)		The tolerance of the hole dimension(μm)						The tolerance of the shaft dimension(μm)					
More than ...	Less than	H4	H5	H6	H7	H8	H9	h4	h5	h6	h7	h8	h9
–	3	+3 0	+4 0	+6 0	+10 0	+14 0	+25 0	0 -3	0 -4	0 -6	0 -10	0 -14	0 -25
3	6	+4 0	+5 0	+8 0	+12 0	+18 0	+30 0	0 -4	0 -5	0 -8	0 -12	0 -18	0 -30
6	10	+4 0	+6 0	+9 0	+15 0	+22 0	+36 0	0 -4	0 -6	0 -9	0 -15	0 -22	0 -36
10	18	+5 0	+8 0	+11 0	+18 0	+27 0	+43 0	0 -5	0 -8	0 -11	0 -18	0 -27	0 -43
18	30	+6 0	+9 0	+13 0	+21 0	+33 0	+52 0	0 -6	0 -9	0 -13	0 -21	0 -33	0 -52
30	50	+7 0	+11 0	+16 0	+25 0	+39 0	+62 0	0 -7	0 -11	0 -16	0 -25	0 -39	0 -62

Technical data

Detail drawing of shank

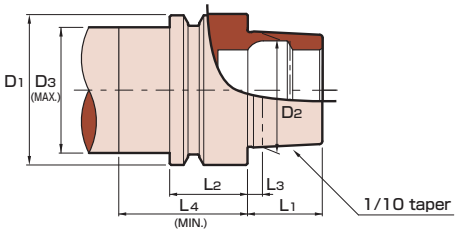
BT shank (Extracts from 403 MAS)

CODE	D_1	L_1 (±0.2)	D_2 (h8)	D_3	d_1 (H8)	L_2	L_3 (±0.1)	y (±0.4)	X (+0.1 0)	b (H12)	t (−0 −0.2)	g (H6)
BT30	31.75	48.4	46	38	12.5	20	13.6	2	8	16.1	16.3	M12
BT40	44.45	65.4	63	53	17	25	16.6		10		22.6	M16
BT50	69.85	101.8	100	85	25	35	23.2	3	15	25.7	35.4	M24



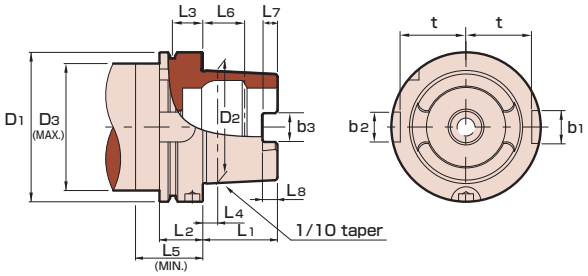
HSK-E/F shank (DIN 69893-5)

CODE	φ D_1	φ D_2	φ D_3	L_1	L_2	L_3	L_4	L_5
E25	25	19.006	20	13	10	2.5	20	7.21
E32	32	24.007	26	16	20	3.2	35	8.92
E40	40	30.007	34	20		4		11.42
E50	50	38.009	42	25	26	5	42	14.13
F63	63		52				43	



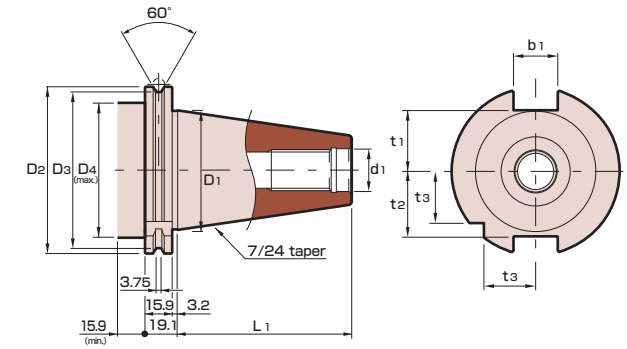
HSK-A shank (DIN 69893)

CODE	φ D_1	φ D_2	φ D_3	L_1	L_2	L_3	L_4	L_5	L_6	L_7	L_8	b_1	b_2	b_3	t
A 40	40	30.007	34	20	20	16	4	35	11.42	6	3.5	11	9	8.05	17
A 50	50	38.009	42	25	26	18	5	42	14.13	7.5	4.5	14	12	10.54	21
A 63	63	48.010	53	32			6.3		18.13	10	6	18	16	12.5	26.5
A100	100	75.013	88	50	29	20	10	45	28.56	15	10	22	20	20	44



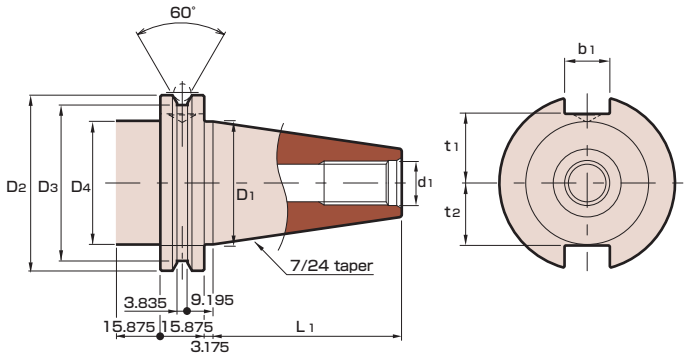
DIN shank (DIN69871-1)

CODE	φD_1	φD_2	φD_3	φD_4	L_1	L_3	b_1	d_1	t_1	t_2	t_3
DN40	44.45	63.55	56.25	50	68.4	3.75	16.1	17	22.8	25	18.5
DN50	69.85	97.5	91.25	80	101.75	6.495	25.7	25	35.5	37.7	30



CAT, shank

CODE	φD_1	φD_2	φ D_3	φ D_4	L_1	b_1	d_1	t_1	t_2
CT40	44.45	63.5	56.363	44.45	68.25	16.383	16.3	25.019	22.606
CT50	69.85	98.425	91.288	69.85	101.6	25.908	26.2	37.719	35.306



SI unit conversion table

Force

N	kgf
1	1.01972^{-1}
9.80665	1

Pressure

Pa	kgf/cm²
1	1.0197×10^{-5}
9.80665×10^{4}	1

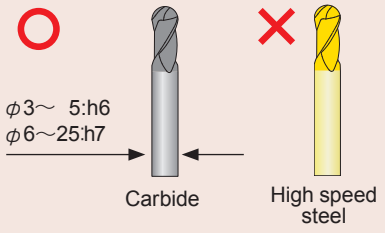
Stress

Pa	kgf/mm²
1	1.0197×10^{-7}
9.80665×10^{6}	1

⚠Instruction for use

Tools that can be used

Please use the carbide cutter.
No shrink release is possible for any tool for high speed steel.
A tool exceeding its tolerance can cause breakage or slippage.

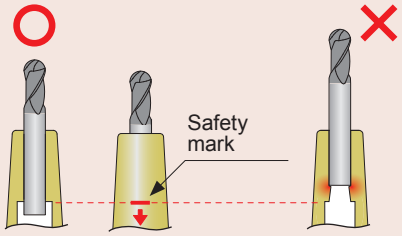


Take care to avoid burns

Because the metal becomes quite hot during heating operation, be sure to wear gloves.

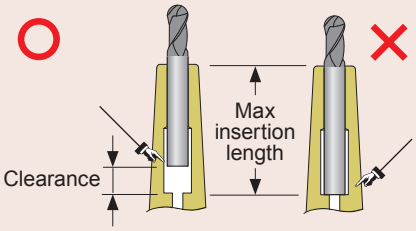
Safety mark

A short insertion length may cause the holder to be damaged when the cutter is inserted into it. Always insert the cutter shank beyond the safety mark.



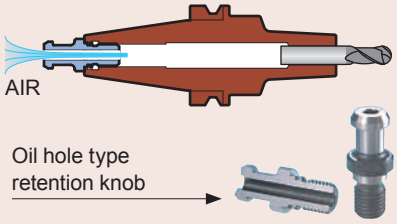
Max insertion length

Inserting the cutter all the way to the bottom of the holder may result in a poor precision. Please ensure the maximum insert length.



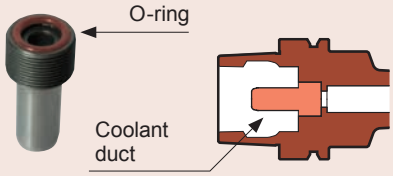
Retention knob(BT)

Use a retention knob that has perforations, or remove the retention knob and heat it. The typical retention knob has no vent to release air, preventing tools from being inserted.



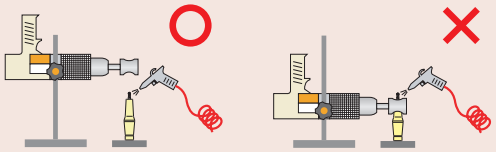
Coolant duct(HSK)

Remove the coolant duct before heating the holder, heating the holder with coolant duct attached, the o-ring will be damaged. A dummy duct is available for coolant shrinking and removing in place.



Cooling by air from outside

Do not directly apply air to the shrink-fitting heater when cooling the HRB-02S or HRB-01 using air from the outside. The fan in the heater will melt resulting in a breakdown.



Precautions for water-cooling

Water-cooling immediately after shrink fitting may result in burns due to the large quantity of steam generated. Be sure to set the shrink-fitting heater setting to COOL and cool the holder for at least one minute before water-cooling it.
Moisture left on the holder may lead to rust formation and damage to the holder, so be sure to completely remove all moisture.

User customization

■Do not change the overall length since a reduction in the holding length will result in a decrease in holding force and precision.

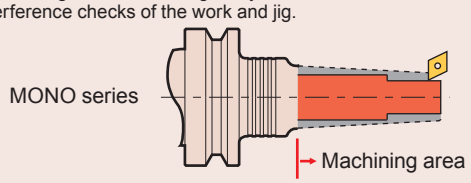
■Ensure that a thickness of at least 1.5 mm is maintained. To determine the dimensions to be machined, refer to the custom-machining dimension table in the instruction manual.

■For the machining range allowed for user customization, see the instruction manual.

■The carbide-type straight arbor cannot be user customized.

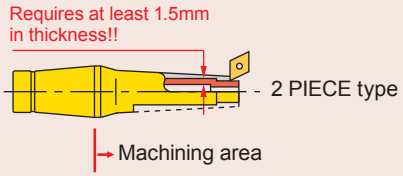
■When customizing flash-type (CF/SLFB type) holders, careful attention must be paid to the coolant-through holes in particular.

■On request, we also supply dimension drawings as CAD data (DXF format), which are useful for preparing additional machining drawings. Those drawings may also be used to carry out interference checks of the work and jig.



About custom-machining (turning)

1. Perform light cutting using a shallow cutting depth (0.1 to 0.2 mm).
2. During cutting, use water-soluble coolant and do not allow. The temperature of the object being cut to rise.
3. Use a stainless-use tool or positive tip tool.
4. The following machining conditions are recommended
   Cutting rate ..... 30 to 50 m/min
   Feed rate ..... 0.1 to 0.2 mm/rev
   Cutting depth ..... 0.1 to 0.2 mm
5. The rigidity of the main unit decreases after custom-machining. Use the jig under reduced cutting conditions.

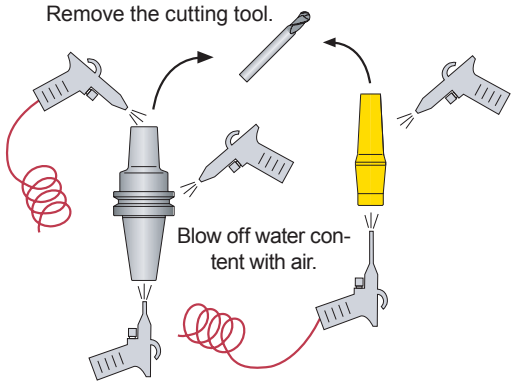


⚠Precautions for Rusting

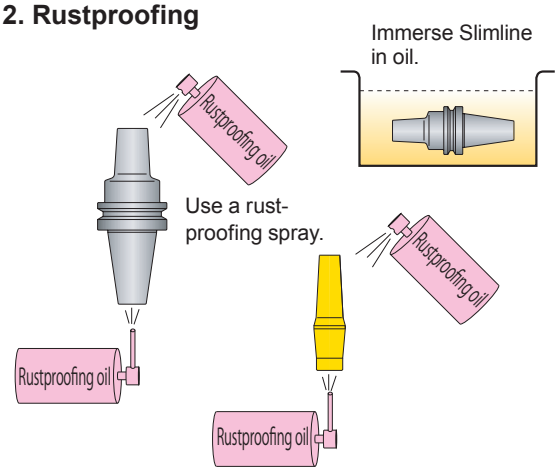
What should be done to prevent rusting?

·Iron rusting occurs if there are water content and air (oxygen). It can be prevented by removing water content by rustproofing or by ensuring that the metal is not directly exposed to air (oxygen).

1. Cleaning (removing water content)



2. Rustproofing



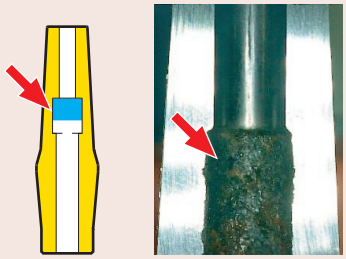
【How to care】

1. After use, blow off water content with air. Sufficiently blow air, in particular, into the deep ends of holes, small holes in the flush type Slimline, and the like. After Slimline has been cleaned with wash oil or a washing machine, blowing air is effective.
2. Heat Slimline with a shrink-fit heater and then remove the cutting tool.
3. After cleaning, spray rustproofing oil or immerse Slimline in rustproofing oil.
4. Prior to shrink-fit, sufficiently remove the rustproofing oil attached to Slimline.
   To remove the oil, a cleaner spray or solvent is useful.

Why does rust form?

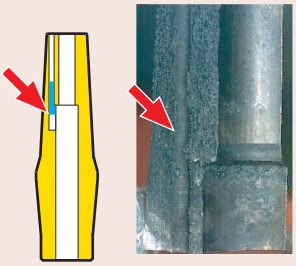
· Water in air adheres to Slimline. This water reacts with the metal and then rust forms.
· Since Slimline heats a holder, the oil on its surface is liable to evaporate and this makes rusting more likely to occur.

In particular, when coolant is passed through a holder or a collet in the spindle-through system, it remains deep inside the holder and induces rusting.

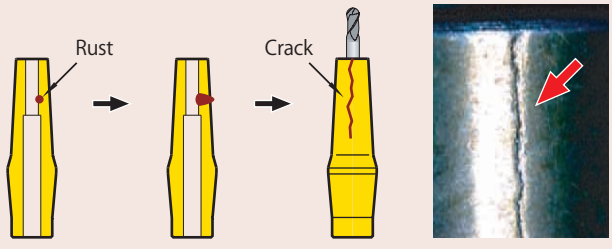


F-type【flush type】

Special care must be taken for the flush type Slimline because coolant is more likely to remain in its small holes.



What happens after rusting?



· Rust formed on a metal surface gradually corrodes deeper over time.
· If a tool is chucked in this state, the tool cannot be inserted into a hole or stress resulting from shrink fit will focus on the corroded part, making it more likely to crack.
· Continued use of Slimline in this state will decrease the clamping force, cause the tool to slip, or decrease the chucking accuracy to the extent that Slimline can no longer be used.

MST is always striving to improve the safety and quality of our products. Be sure to read the instruction manual that comes with the product thoroughly before using the system to use it safely and efficiently. In particular, pay attention to the cautions and warnings therein. Should any failure occur with the product, MST will repair it whenever possible.

G grade...Balancing value

■ Available for high speed machining ——— Pre-balanced design

During high-precision, high-speed machining, the machining center rotates the spindle several times faster than conventional ones (20,000 rpm, 30,000 rpm, 50,000 rpm or higher) and the feed rate is enhanced as well.
In other words, the holders suitable for high-speed machining should:

1. **Hold a cutting tool accurately with high clamping force during high-speed operation.**
2. **Be as compact (small and short) as possible.**
3. **Have superior balance properties at high-speed operation.**

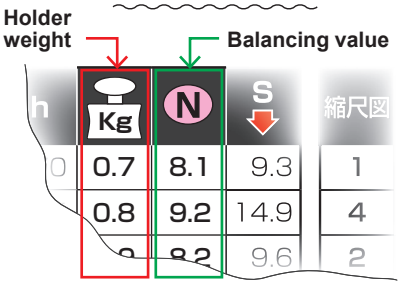
The above three points are important.

The third requirement, "balance properties," is addressed by MST Corporation based on the concept of "pre-balanced design." In the pre-balanced design, a holder is designed to achieve the highest and most precise axial symmetry possible in relation to the rotating shaft.
This method ensures a predetermined balance without the need for conventional corrections such as adding counterweights or chipping off the holder body to offset the unbalancing detected in a regular holder (for low-speed operation) by a balancing machine.

■ Balance value

Holders for high-speed machining include "balance value" and "holder weight" columns in the dimensions table.

CODE TABLE



■ G grade for high-speed machining with a machining center

Focusing on the balancing of the holder alone (enhancing the G grade of the holder alone) is not sufficient for operating the spindle of a machining center at high-speed.
This is because the total weight of the other components (spindle, pulling mechanism, cutting tool) is far more than the holder (10 times heavier or more). It is important to improve the balance properties of a rotating body by taking all its components into consideration.

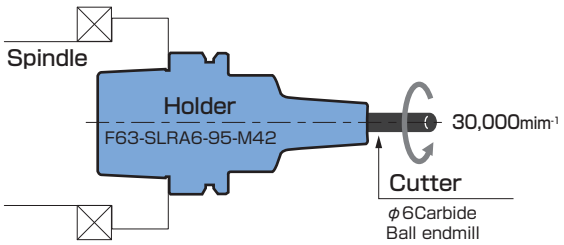
The total G grade of a rotating body at high-speed operation can be determined using the following method.

$$G\ \text{grade} = \frac{(\text{Spindle} + \text{Holder} + \text{Cutter})\ \text{Balancing value}\ (\text{g}\cdot\text{mm})}{(\text{Spindle} + \text{Holder} + \text{Cutter})\ \text{Weight}\ (\text{kg})} \times \frac{\text{Spindle rotation speed}}{9{,}550}$$

[Example]

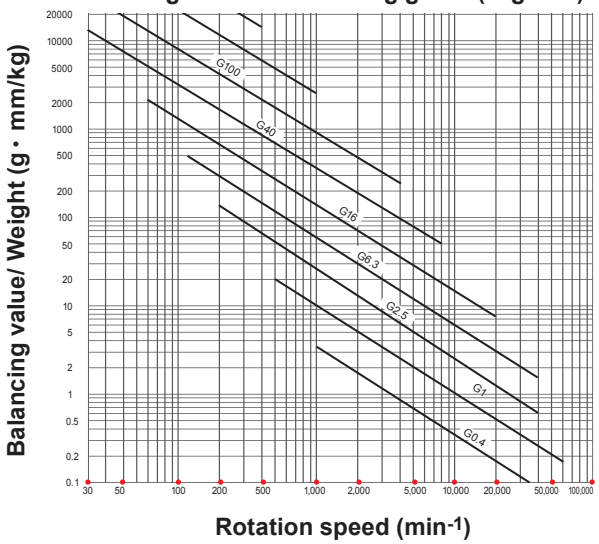
	Spindle	Holder	Cutter
Weight (kg)	10	0.8	0.02
Balancing value (g • mm)	6	1.9	0.2

$$G = \frac{(6 + 1.9 + 0.2)}{(10 + 0.8 + 0.02)} \times \frac{30{,}000}{9{,}550} = 2.35$$



■ Reference

Unbalancing in terms of tolerable residual ratio against the balancing grade (G grade)



Recommend various of G grade of a rotating body

G grade	G	Rotating body
G40	~17	The car wheel
G16	~16	The parts of agricultural machines The parts of truck
G 6.3	~6.3	Machine tools and aviation gas-turbine rotors after assembling general mechanical parts
G 2.5	~2.5	The spindle of machine tool Gas turbine Steam turbine
G 1	~1	The grinding wheel spindle of grinding machine
G 0.4	~0.4	The grinding wheel spindle of precise grinding machine Gyroscope

Rigidity of Slimline

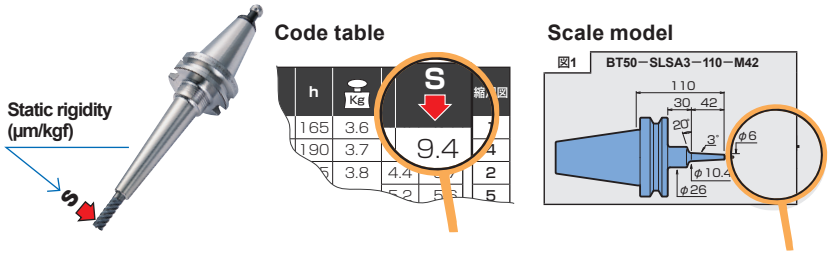
"Slimline" shrink-fit holders have a slim shape and work effectively, especially for narrow and deep machining that requires a longer tool overhang. The catalog contains "rigidity values," a criterion used for selecting cutting conditions and holders. Please make effective use of our holders by referring to the following data.

■How to obtain rigidity value S (deflection)

For example,
in case of BT50-SLSA3-110-M42

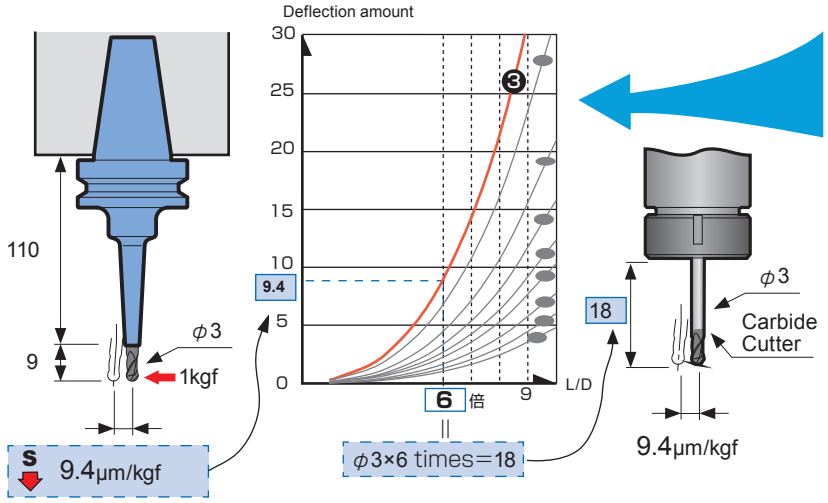
○Check the rigidity value S (deflection) S in the code table or reduced scale view in the catalog.

○The rigidity value S is the deflection of a holder with a cutter attached when a load of 1 kgf is applied horizontally to the edge of the cutter (a distance three times the cutter diameter). In this case, the deflection amount is 9.4 μm.



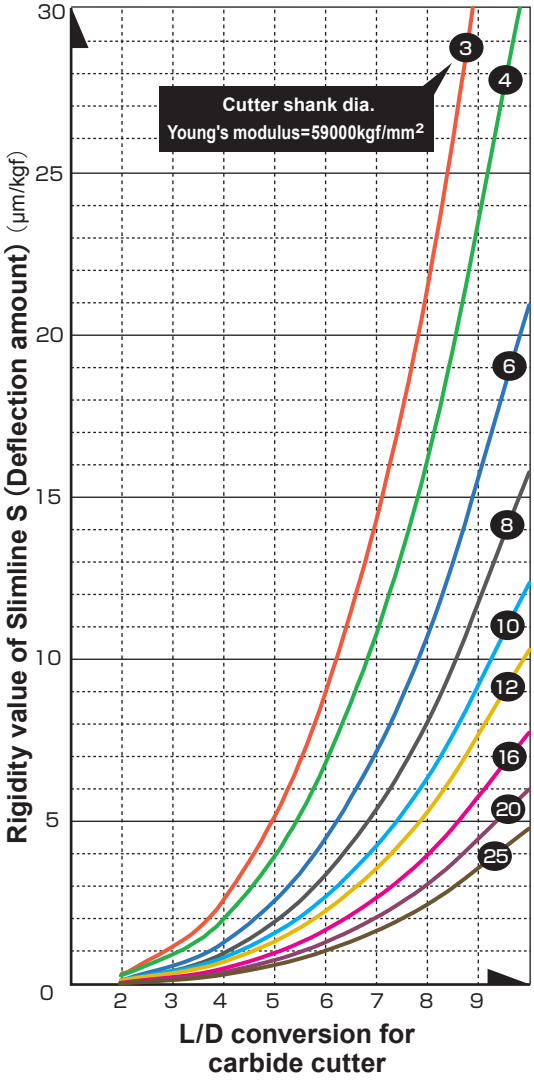
■Conversion from rigidity value S to overhang length of carbide cutter (L/D)

○The deflection is 9.4 μm/kgf. →Assign the value in [Relationship between deflection and overhang] (graph shown at the right) to obtain the L/D value.



∴ In other words, this holder has the same rigidity as one obtained when a carbide cutting tool with a diameter of 3 mm has an overhang of 18 mm (L/D ratio = 6 times).
The L/D ratio provides an easier way to determine rigidity than deflection.
As a general rule, rigidity is sufficient when L/D is ≤ 3 times and ordinary when it is ≤ 6 times.
An L/D higher than 6 requires very careful examination of the machining conditions.

【Relationship between deflection and overhang】



Static rigidity calcuration software for slimline

2 piece type
Straight arbor
Mono series
All holders are included

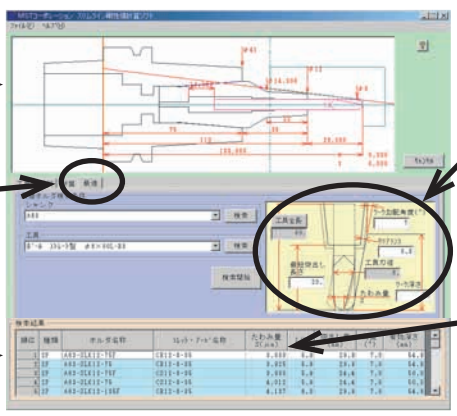
Available for free to all who request one

The Slimline rigidity calculation software provides an easy way to check both the rigidity of a Slimline holder with a tool attached and the possible interference with work pieces.

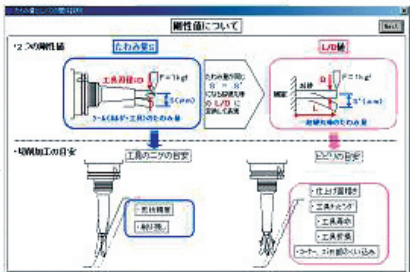
Showing of the main dimension

The most suitable Slimline holder with the highest rigidity for the shape of the work piece is automatically selected.

Holders are listed in order of increasing interference and decreasing rigidity.



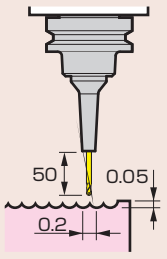
Enter a clearance (between work piece and tool/holder), limit on tool overhang (shortest length), and other specifications to set up the work piece shape (slope angle, depth).



BT40-SLK12-45
CF12-3-55

N : 20000 min^{-1}
F : 2000 mm
V : 25 m
f : 0.05 mm/flute

R0.2 Carbide ball endmill
2flutes



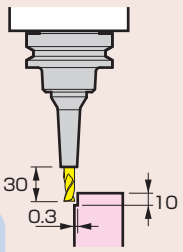
SKD61(HRC50°)

User's voice
Cutter life was extended almost double, because chucking accuracy was improved. Finishing surface of workpiece was improved.

BT40-SLK12-45
CR12-6-55

N : 15000 min^{-1}
F : 2400 mm
V : 188 m
f : 0.04 mm/flute

ϕ6 Carbide endmill
2flutes



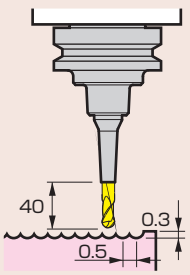
Sintering

Cutter life was extended almost double against a collet holder. Scratch on the cutting surface with up-cut operation has been disappeared due to increasing rigidity of a cutting tool, because of reducing cutter projection when using Slimline.

BT50-SLK12-75
CS12-10-55

N : 6000 min^{-1}
F : 6000 mm
V : 188 m
f : 0.5 mm/flute

R5 Carbide ball endmill
2flutes



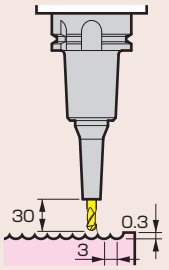
SKD11(HRC40°)

We achieved sufficient cutting surface.
Cutter life was extended about 3 times against using a collet holder.

A63-SLK12-75
CF12-6-55

N : 16000 min^{-1}
F : 3200 mm
V : 301 m
f : 0.1 mm/flute

R3 Carbide ball endmill
2flutes



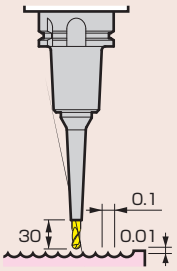
S55C(HRC28°)

Cutter life was extended about 3 times due to superior chucking accuracy. Slimline provides us great cutting surface, therefore, we could reduce hand-polishing time.

A63-SLK12-75
CS12-6-80

N : 20000 min^{-1}
F : 4000 mm
V : 377 m
f : 0.1 mm/flute

R3 Carbide ball endmill
2flutes



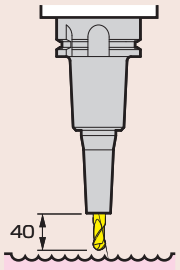
A7075

No necessity long time for checking interference. Spindle rotation and feed rate were increased 1.5 times. Cutter life was extended due to superior chucking accuracy.

A63-SLK12-75
CF12-10-55

N : 20000 min^{-1}
F : 6000 mm
V : 628 m
f : 0.15 mm/flute

R4 Carbide ball endmill
2flutes



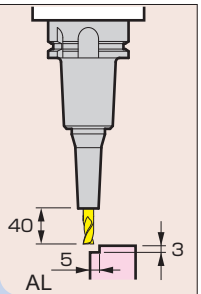
SKD11(HRC50°)

Slimline provides constant run-out accuracy. We achieved sufficient cutting surface, because of vibration free machining due to high rigidity for cross feed. Cutter life was extended 1.5 ~ 2 times against a collet holder.

A63-SLK12-75
CR12-10-55

N : 20000 min^{-1}
F : 6000 mm
V : 628 m
f : 0.15 mm/flute

ϕ10 Endmill
2flutes



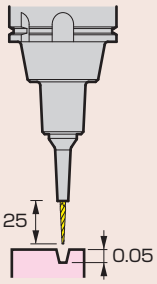
AL

Slimline achieves noise less running at high speed spindle rotation. No required long projection of cutting tool, because Slimline compact design provides us superior approach to cutting point without interference against work clamping devices.

A100-SLK12-105
CR12-4-55

N : 13000 min^{-1}
F : 700 mm
V : 61 m
f : 0.03 mm/flute

ϕ4 Carbide taper endmill (1°) 2flutes



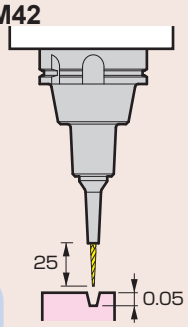
HPM7(HRC32°)

Cutter life was extended 2 times against a conventional collet holder due to superior chucking accuracy.

BT40-SLSA6-95-M42

N : 2000 min^{-1}
F : 100 mm
V : 38 m
f : 0.025 mm/flute

ϕ6 Carbide endmill
2flutes



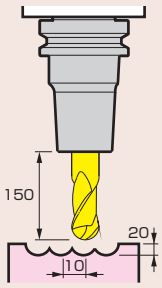
ADC12

Cutting surface and holding accuracy improved.

BT50-SLRB20-110-M42

N : 4500 min^{-1}
F : 4400 mm
V : 283 m
f : 0.489 mm/flute

R10 Carbide ball endmill
2flutes



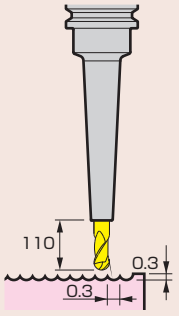
Plastic

We doubled the z feeding compared to conventional holder, but this holder still has enough rigidity.

BT40-SLSB12-180-M127

N : 2500 min^{-1}
F : 500 mm
V : 94 m
f : 0.1 mm/flute

R6 Carbide ball endmill
2flutes



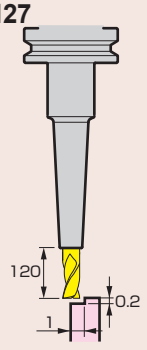
Gr

During the cutting process the vibration reduced, and the cutting surface was improved.

BT50-SLSB16-225-M127

N : 5600 min^{-1}
F : 2000 mm
V : 281 m
f : 0.179 mm/flute

ϕ16 Carbide endmill
2flutes



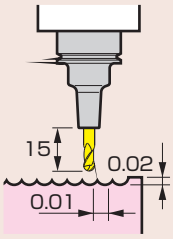
S55C

Holding accuracy was stabilized. Cutting surface and cutter life improved 2-3 times.

E40-SLRA6-50

N : 20000 min^{-1}
F : 1500 mm
V : 377 m
f : 0.038 mm/flute

R3 Carbide ball endmill
2 flutes



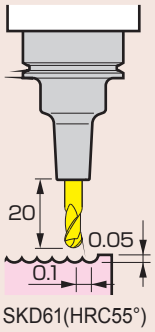
SKD11(HRC60°)

With conventional holder we could not have good surface finish. However with Slimline we could have great surface finish.

F63-SLSA4-75-M22

N : 16000 min^{-1}
F : 1200 mm
V : 100 m
f : 0.038 mm/flute

R1 Carbide ball endmill
2flutes



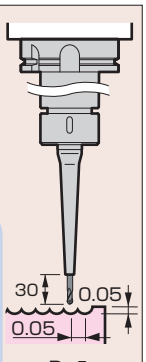
SKD61(HRC55°)

The cutter life extended because of great accuracy.

A100—CTH25—195
ST25—SLSA6—320

N : 5000 min^{-1}
F : 150 mm
V : 94 m
f : 0.015 mm/flute

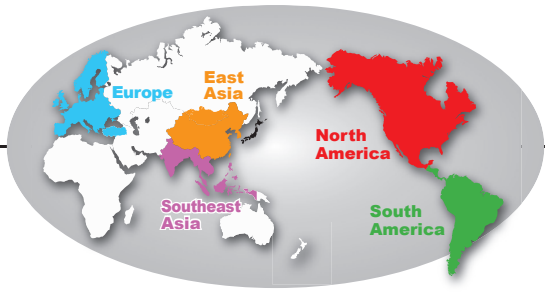
Carbide coated endmill
2flutes



P×5

The rigidity and accuracy of the Slimline system has been improved so that it only requires two components (maste holder and collet) for chucking a cutting tool while conventional systems require three different holders connected in series. The machining time has been reduced to 300 minutes from 360 minutes.

OVERSEAS NETWORK



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FAX 65-67733160
atech@pacific.net.sg

OSG ASIA PTE LTD.
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FAX 65-68444351
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FAX 66-2-328-8080
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FAX 66-2-706-5385
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FAX 66-2-530-8060

PRECISION TOOLS SERVICE (THAILAND) CO.,LTD.
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MR. NAOTO AOKI
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FAX 66-2-308-2471
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FAX 66-2-746-7274
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surapong@factorymax.co.th

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FAX 60-3-703-0775
yztsurumi@arc.net.my

PENANG
MR. SIEW
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FAX 60-4-3993025
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FAX 91-80-841-0538
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FAX 91-80-8393906
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SGS CARBIDE TOOL (UK) LTD.
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FAX 44-1189-795295
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OSG UK LTD.
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FAX 44-1708-349827

MITSUBISHI CARBIDE
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FAX 44-1827-312314
johnv@mhuk.com

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FAX 33-130664199
laurent.anty@doga.fr

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SCIONZIER
MR. ERIC ADNOT
☎ 33-4-5018-3027
FAX 33-4-5018-3028
mecadiffusion@free.fr

MMC METAL FRANCE
ORSAY
MR. ERIC ADNOT
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FAX 33-1 69 35 53 50
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FAX 49-2353-12943

HSC TECHNIK
SCHNELLDORF
MR. LANGOHR
☎ 49-7950-2132
FAX 49-7950-1302

MATSUURA MACHINERY GMBH
WIESBADEN
MR. BRUNN
☎ 49-6122/7803-32
FAX 49-6122/7803-33
brunn@matsuura.de

MMC HARTMETALL GMBH
MEERBUSCH
MR. RIKIHIKO NAGATA
☎ 49-2159-918957
FAX 49-2159-918940
nagata@mmchg.de

OSG GMBH
STUTTGART
MR. HIDEAKI OSAWA
☎ 49-711-5509360
FAX 49-711-55093650

GMN PAUL MULLER INDUSTRIE GMBH & CO.KG
NURNBERG
MR. DIETER WEISS
☎ 49-911-5691-235
FAX 49-911-5691-699
d.weiss@gmn.de

YAMAZEN CORP. KREFELD BRANCH
KREFELD
MR. KIMIO ENDO
☎ 49-2151-968-110
FAX 49-2151-968-100
endo@yamazen.com.cn

THD TECHNISCHER HANDEL-DEUTSCHLAND GMBH
WORRSTADT
MR. HIROAKI KIRIYAMA
☎ 49-6732-9379-0
FAX 49-6732-9379-29
info@thdgmbh.de

ITALY 3 number of distributors

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MR. MASSIMO BARUCCI
☎ 39-02 9377031
FAX 39-02 93589093

FEBAMETAL S.P.A.
TORINO
MR. COSTA
☎ 39-011 770 14 12
FAX 39-011 770 15 24
febametal@tin.it

OSG ITALIA SRL
TORINO
MR. VINCENZO RAGO
☎ 39-011-706680/874
FAX 39-011-7071402
vincenzo.rago@osg-italia.it

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TURNHOUT
MR. GELDHOF
☎ 32-14 40 18 30
FAX 32-14 43 88 80
info@diatool.be

OSG A.I.MO. S.A.
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☎ 32-10-230511
FAX 90-212-213-7119

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MR. ALCARAZ
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FAX 34-93-263-0326
ialcaraz@osg-ti.com

UTILTALL S.A.
BARCELONA
MR. SABATE
☎ 34-93-498-4465
FAX 34-93-308-6993
josep.sabate@utilcell.es

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MR.ALBERT BERECIARTUA
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FAX 34-94 453 82 25
info@jana-tools.com

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FAX 420-283-870-733
grumant@grumant.cz

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MR. PETR VRBA
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FAX 420-377-243-161
vrba@hofmeister.cz

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FAX 47-22 64 49 62

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MR. REHBINDER
☎ 358-9-8190950
FAX 358-9-81909550
jan.rehbinder@fmstools.inet.fi

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FAX 90-212-256-6215
info@form-teknik.com

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FAX 48-71-791 3809
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FAX 40-21-232-8002
adrian.totu@mazarom.ro

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FAX 351-244-575-359
carlos.alves@simplefer.pt

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FAX 1-847-882-9056
tomishii@vega-tool.com

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ymiura@ptservice.com

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FAX 1-905-632-8466
ken.batt@osgcanada.com

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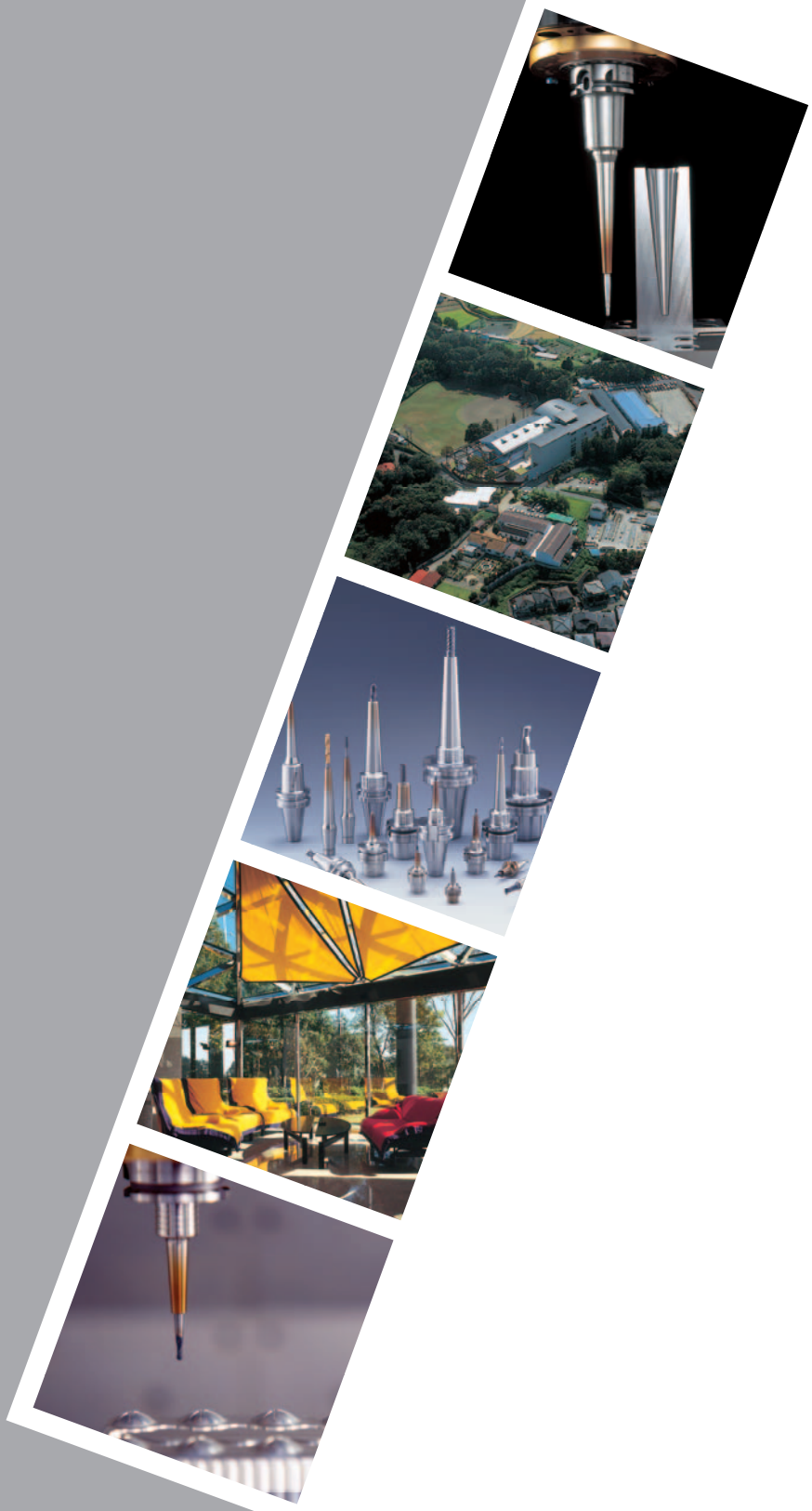

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