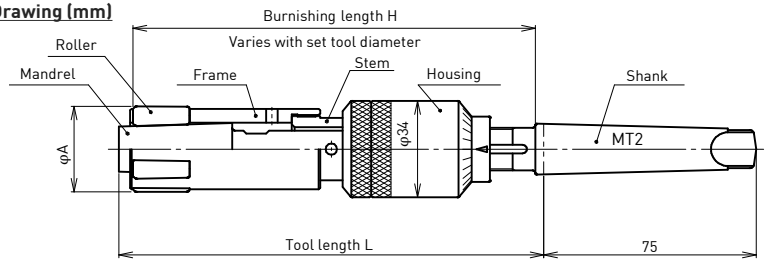
Superoll SH & SB selection chart (For hole size ø35 - ø74)

Hole size ø35 - ø44

Dimensional Drawing (mm)



Tool model		Tool diameter adjustment range A	Burnishing length H available burnishing length	Tool length L	Part No.						
					Housing	Roller			Mandrel	Stem	Shank
Through-hole	Blind-hole	Min. - Max.	Max. - Min.	mm	-	Through-hole	Blind-hole	Q'ty			
SH3500	SB3500	34.9 - 36.1	147 - 127.8 Varies with the set tool diameter	150	HA2	R014	B014	6	M027	E9	S02P (MT2)
SH3600	SB3600	35.9 - 37.1							M028		
SH3700	SB3700	36.9 - 38.1							M029		
SH3800	SB3800	37.9 - 39.1							M030		
SH3900	SB3900	38.9 - 40.1				R015	B015		M031	E10	
SH4000	SB4000	39.9 - 41.1							M030		
SH4100	SB4100	40.9 - 42.1							M031		
SH4200	SB4200	41.9 - 43.1							M032		
SH4300	SB4300	42.9 - 44.1							M033		
SH4400	SB4400	43.9 - 45.1							M034		

Specifying Tool model

SH ○○○○○

Tool model No. = Hole size x 100

SH: For through-hole
SB: For blind-hole

About the tool weight (Reference only)

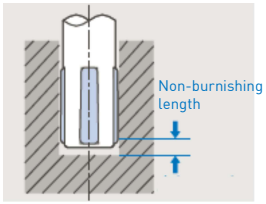
Tool model	Weight (kg)
SH(SB)3500 - 4400	0.8 - 1.0
SH(SB)4500 - 7400	1.4 - 2.7

*Please check the allowable tool weight for your driving machine before using the tool.
*Please contact us if a specific tool weight is required.

About tool selections

- Select Tool model within Tool diameter adjustment range A to suit a hole size.
- For requests about special burnishing length, tool length or shank specifications not included in the chart above, contact your nearest sales office by using the catalog inquiry sheet, or use the inquiry form on our website.

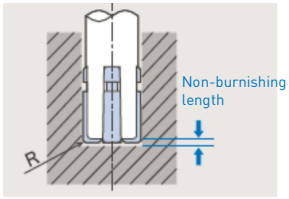
Non-burnishing length (Hole size ø35 – ø74)



* For blind-hole

Superoll SH

Non-burnishing length (mm)
3.8



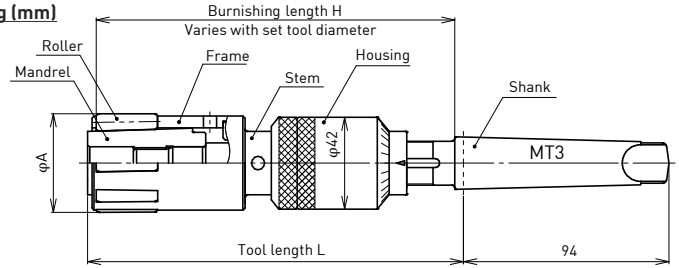
* Non-burnishing length can be reduced by using R0.3 type rollers.

Superoll SB

Roller	Non-burnishing length (mm)
Standard	1.8
R0.3	0.8

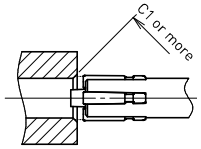
Hole size ø45 - ø74

Dimensional Drawing (mm)



Tool model		Tool diameter adjustment range A	Burnishing length H available burnishing length	Tool length L	Part No.						
					Housing	Roller			Mandrel	Stem	Shank
Through-hole	Blind-hole	Min. - Max.	Max. - Min.	mm	-	Through-hole	Blind-hole	Q'ty			
SH4500	SB4500	44.9 - 46.1	164 - 144.8 Varies with the set tool diameter	168	HA3	R014	B014	8	M035	E11	S03 (MT3)
SH4600	SB4600	45.9 - 47.1							M036		
SH4700	SB4700	46.9 - 48.1							M037		
SH4800	SB4800	47.9 - 49.1							M038		
SH4900	SB4900	48.9 - 50.1							M039		
SH5000	SB5000	49.9 - 51.1				R015	B015		M038	E12	
SH5100	SB5100	50.9 - 52.1							M039		
SH5200	SB5200	51.9 - 53.1							M040		
SH5300	SB5300	52.9 - 54.1							M041		
SH5400	SB5400	53.9 - 55.1							M042		
SH5500	SB5500	54.9 - 56.1				R016	B016		M041		
SH5600	SB5600	55.9 - 57.1							M042		
SH5700	SB5700	56.9 - 58.1							M043		
SH5800	SB5800	57.9 - 59.1							M044		
SH5900	SB5900	58.9 - 60.1							M045		
SH6000	SB6000	59.9 - 61.1							M046	E13	
SH6100	SB6100	60.9 - 62.1							M047		
SH6200	SB6200	61.9 - 63.1							M048		
SH6300	SB6300	62.9 - 64.1							M049		
SH6400	SB6400	63.9 - 65.1							M050		
SH6500	SB6500	64.9 - 66.1				R017	B017		M047		
SH6600	SB6600	65.9 - 67.1							M048		
SH6700	SB6700	66.9 - 68.1							M049		
SH6800	SB6800	67.9 - 69.1							M050	E14	
SH6900	SB6900	68.9 - 70.1							M051		
SH7000	SB7000	69.9 - 71.1							M052		
SH7100	SB7100	70.9 - 72.1							M053		
SH7200	SB7200	71.9 - 73.1							M054		
SH7300	SB7300	72.9 - 74.1							M055		
SH7400	SB7400	73.9 - 75.1							M056		

Precaution with R0.3 type rollers for Superoll SB type



When using R0.3 type rollers that reduce non-burnishing length of blind-holes, the hole entrance must be chamfered with a C1 or more to prevent interference between the roller tip and workpiece when inserting Superoll SB type.

Burnishing conditions (Reference)

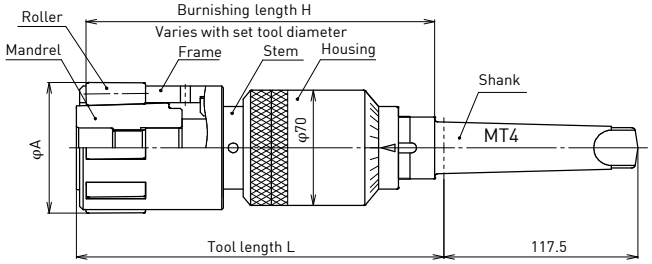
Hole size (mm)	Rotation speed (min^{-1})	Feed rate (mm/rev)	Torque (N•m)	Thrust (kN)
35-44	400- 800	0.3 - 1.0	2.5 - 25	1 - 8
45-74	300- 500	0.5 - 1.5	2.5 - 25	2 - 12

* Burnishing conditions are reference only, and do not guarantee that they will achieve the customers' required values.
* Actual burnishing conditions vary depending on the material and conditions before burnishing, so these values should be used as a reference.

Superoll SH & SB selection chart (For hole size ø75 - ø139)

Hole size ø75 - ø139

Dimensional Drawing (mm)



Tool model		Tool diameter adjustment range A		Burnishing length H (available burnishing length)		Tool length L	Part No.						
							Housing	Roller			Mandrel	Stem	Shank
Through-hole	Blind-hole	Min.	Max.	Max.	Min.	mm	-	Through-hole	Blind-hole	Q'ty			
SH7500	SB7500	74.9	76.1	217	197.8	222.5	HA4S	R018	B018	8	M057	E15	S04 (MT4)
SH7600	SB7600	75.9	77.1								M058		
SH7700	SB7700	76.9	78.1								M059		
SH7800	SB7800	77.9	79.1								M060		
SH7900	SB7900	78.9	80.1								M061		
SH8000	SB8000	79.9	81.1								M062		
SH8100	SB8100	80.9	82.1								M063		
SH8200	SB8200	81.9	83.1								M064		
SH8300	SB8300	82.9	84.1								M065		
SH8400	SB8400	83.9	85.1								M066		
SH8500	SB8500	84.9	86.1							10	M067	E16	
SH8600	SB8600	85.9	87.1								M068		
SH8700	SB8700	86.9	88.1								M069		
SH8800	SB8800	87.9	89.1								M070		
SH8900	SB8900	88.9	90.1								M071		
SH9000	SB9000	89.9	91.1								M072		
SH9100	SB9100	90.9	92.1	Varies with the set tool diameter							M073		
SH9200	SB9200	91.9	93.1								M074		
SH9300	SB9300	92.9	94.1								M075		
SH9400	SB9400	93.9	95.1								M076		
SH9500	SB9500	94.9	96.1								M077	E17	
SH9600	SB9600	95.9	97.1								M078		
SH9700	SB9700	96.9	98.1								M079		
SH9800	SB9800	97.9	99.1								M080		
SH9900	SB9900	98.9	100.1								M081		
SH10000	SB10000	99.9	101.1							12	M082		
SH10100	SB10100	100.9	102.1								M083		
SH10200	SB10200	101.9	103.1								M084		
SH10300	SB10300	102.9	104.1								M085		
SH10400	SB10400	103.9	105.1								M086		

Tool model		Tool diameter adjustment range A		Burnishing length H (available burnishing length)		Tool length L	Part No.						
							Housing	Roller			Mandrel	Stem	Shank
Through-hole	Blind-hole	Min.	Max.	Max.	Min.	mm	-	Through-hole	Blind-hole	Q'ty			
SH10500	SB10500	104.9	106.1	217	197.8	222.5	HA4S	R018	B018	12	M087	E18	S04 (MT4)
SH10600	SB10600	105.9	107.1								M088		
SH10700	SB10700	106.9	108.1								M089		
SH10800	SB10800	107.9	109.1								M090		
SH10900	SB10900	108.9	110.1								M091		
SH11000	SB11000	109.9	111.1								M092		
SH11100	SB11100	110.9	112.1								M093		
SH11200	SB11200	111.9	113.1								M094		
SH11300	SB11300	112.9	114.1								M095		
SH11400	SB11400	113.9	115.1								M096		
SH11500	SB11500	114.9	116.1								M097	E19	
SH11600	SB11600	115.9	117.1								M098		
SH11700	SB11700	116.9	118.1								M099		
SH11800	SB11800	117.9	119.1								M100		
SH11900	SB11900	118.9	120.1								M101		
SH12000	SB12000	119.9	121.1								M098		
SH12100	SB12100	120.9	122.1								M099		
SH12200	SB12200	121.9	123.1								M100		
SH12300	SB12300	122.9	124.1								M101		
SH12400	SB12400	123.9	125.1								M102		
SH12500	SB12500	124.9	126.1	Varies with the set tool diameter							M103	E20	
SH12600	SB12600	125.9	127.1								M104		
SH12700	SB12700	126.9	128.1								M105		
SH12800	SB12800	127.9	129.1								M106		
SH12900	SB12900	128.9	130.1								M107		
SH13000	SB13000	129.9	131.1								M108		
SH13100	SB13100	130.9	132.1								M109		
SH13200	SB13200	131.9	133.1								M110		
SH13300	SB13300	132.9	134.1								M111		
SH13400	SB13400	133.9	135.1								M112		
SH13500	SB13500	134.9	136.1								M113	E21	
SH13600	SB13600	135.9	137.1								M114		
SH13700	SB13700	136.9	138.1								M115		
SH13800	SB13800	137.9	139.1								M116		
SH13900	SB13900	138.9	140.1								M117		

Specifying Tool model

SH OOOOO

Tool model No. = Hole size x 100

SH: For through-hole
SB: For blind-hole

About the tool weight (Reference only)

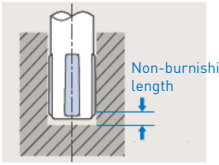
Tool model	Weight (kg)
SH(SB)7500 - 10400	5 - 7.4
SH(SB)10500 - 12400	7.5 - 9.4
SH(SB)12500 - 13900	9.5 - 11

*Please check the allowable tool weight for your driving machine before using the tool.
*Please contact us if a specific tool weight is required.

About tool selections

- **Select Tool model within Tool diameter adjustment range A to suit the hole size.**
- **For requests about special burnishing length, tool length or shank specifications not included in the chart above, contact your nearest sales office by using the catalog inquiry sheet, or use the inquiry form on our website.**

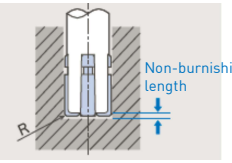
Non-burnishing length (Hole size ø75 - ø139)



* For burnishing blind-hole

Superoll SH

Non-burnishing length (mm)
5.8

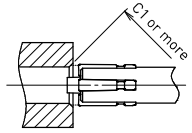


* Non-burnishing length can be reduced by using R0.3 type rollers.

Superoll SB

Roller	Non-burnishing length (mm)
Standard	1.8
R0.3	0.8

Precaution with R0.3 type rollers for Superoll SB type



When using R0.3 type rollers that reduce non-burnishing area of blind-holes, the hole entrance must be chamfered with a C1 or more to prevent interference between the roller tip and workpiece when inserting Superoll SB type.

Burnishing conditions (Reference)

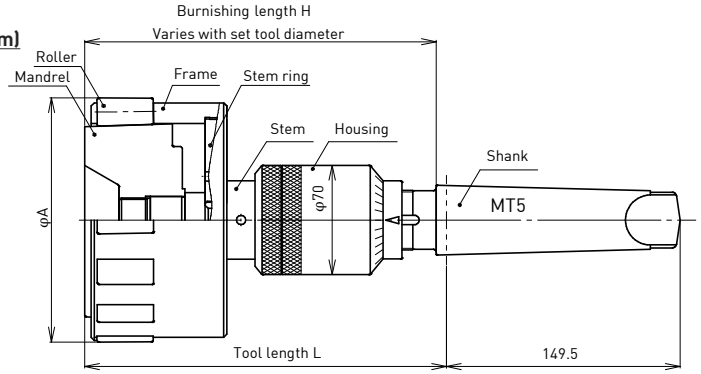
Hole size (mm)	Rotation speed (min^{-1})	Feed rate (mm/rev)	Torque (N·m)	Thrust (kN)
75-99	200-350	0.6 - 1.8	5 - 50	3 - 15
100-139	100-250	0.8 - 2.5	18 - 140	4.5 - 25

* Burnishing conditions are reference only, and do not guarantee that they will achieve the customers' required values.
* Actual burnishing conditions vary depending on the material and conditions before burnishing, so these values should be used as a reference.

Superoll SH & SB selection chart (For hole size ø140 - ø200)

Hole size ø140 - ø200

Dimensional Drawing (mm)



Tool model		Tool diameter adjustment range A	Burnishing length H Available burnishing length	Tool length L	Part No.						
					Housing	Roller			Mandrel	Stem	Shank
Through-hole	Blind-hole	Min. - Max.	Max. - Min.	mm	-	Through-hole	Blind-hole	Q'ty			
SH14000	SB14000	139.9 - 141.1	217 - 197.8 Varies with the set tool diameter	223.5	HA4H	R019	B019	14	M118	E21	S05 (MT5)
SH14100	SB14100	140.9 - 142.1							M119		
SH14200	SB14200	141.9 - 143.1							M120		
SH14300	SB14300	142.9 - 144.1							M121		
SH14400	SB14400	143.9 - 145.1							M122		
SH14500	SB14500	144.9 - 146.1							M123	E22	
SH14600	SB14600	145.9 - 147.1							M124		
SH14700	SB14700	146.9 - 148.1							M125		
SH14800	SB14800	147.9 - 149.1							M126		
SH14900	SB14900	148.9 - 150.1							M127		
SH15000	SB15000	149.9 - 151.1							M128		
SH15100	SB15100	150.9 - 152.1							M129		
SH15200	SB15200	151.9 - 153.1							M130		
SH15300	SB15300	152.9 - 154.1							M131		
SH15400	SB15400	153.9 - 155.1							M132		
SH15500	SB15500	154.9 - 156.1							M133	E23	
SH15600	SB15600	155.9 - 157.1							M134		
SH15700	SB15700	156.9 - 158.1							M135		
SH15800	SB15800	157.9 - 159.1							M136		
SH15900	SB15900	158.9 - 160.1							M137		
SH16000	SB16000	159.9 - 161.1				R020	B020		M134		
SH16100	SB16100	160.9 - 162.1							M135		
SH16200	SB16200	161.9 - 163.1							M136		
SH16300	SB16300	162.9 - 164.1							M137		
SH16400	SB16400	163.9 - 165.1							M138		
SH16500	SB16500	164.9 - 166.1							M139		
SH16600	SB16600	165.9 - 167.1							M140		
SH16700	SB16700	166.9 - 168.1							M141		
SH16800	SB16800	167.9 - 169.1							M142		
SH16900	SB16900	168.9 - 170.1							M143		

Tool model		Tool diameter adjustment range A	Burnishing length H Available burnishing length	Tool length L	Part No.						
					Housing	Roller			Mandrel	Stem	Shank
Through-hole	Blind-hole	Min. - Max.	Max. - Min.	mm	-	Through-hole	Blind-hole	Q'ty			
SH17000	SB17000	169.9 - 171.1	217 - 197.8 Varies with the set tool diameter	223.5	HA4H	R020	B020	14	M144	E24	S05 (MT5)
SH17100	SB17100	170.9 - 172.1							M145		
SH17200	SB17200	171.9 - 173.1							M146		
SH17300	SB17300	172.9 - 174.1							M147		
SH17400	SB17400	173.9 - 175.1							M148		
SH17500	SB17500	174.9 - 176.1							M149		
SH17600	SB17600	175.9 - 177.1							M150		
SH17700	SB17700	176.9 - 178.1							M151		
SH17800	SB17800	177.9 - 179.1							M152		
SH17900	SB17900	178.9 - 180.1							M153		
SH18000	SB18000	179.9 - 181.1							M154		
SH18100	SB18100	180.9 - 182.1							M155		
SH18200	SB18200	181.9 - 183.1							M156		
SH18300	SB18300	182.9 - 184.1							M157		
SH18400	SB18400	183.9 - 185.1							M158		
SH18500	SB18500	184.9 - 186.1							M159		
SH18600	SB18600	185.9 - 187.1							M160		
SH18700	SB18700	186.9 - 188.1							M161		
SH18800	SB18800	187.9 - 189.1							M162		
SH18900	SB18900	188.9 - 190.1							M163		
SH19000	SB19000	189.9 - 191.1							M164		
SH19100	SB19100	190.9 - 192.1							M165		
SH19200	SB19200	191.9 - 193.1							M166		
SH19300	SB19300	192.9 - 194.1							M167		
SH19400	SB19400	193.9 - 195.1							M168		
SH19500	SB19500	194.9 - 196.1							M169		
SH19600	SB19600	195.9 - 197.1							M170		
SH19700	SB19700	196.9 - 198.1							M171		
SH19800	SB19800	197.9 - 199.1							M172		
SH19900	SB19900	198.9 - 200.1							M173		
SH20000	SB20000	199.9 - 201.1							M174		

Specifying Tool model

SH ○○○○○

Tool model No. = Hole size x 100

SH: For through hole

SB: For blind hole

About the tool weight (Reference only)

Tool model	Weight (kg)
SH(SB)14000 - 15900	12 - 14.5
SH(SB)16000 - 17900	15 - 17.5
SH(SB)18000 - 20000	18 - 22

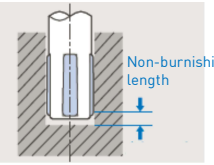
*Please check the allowable tool weight for your driving machine before using the tool.

*Please contact us if a specific tool weight is required.

About tool selections

- **Select Tool model within Tool diameter adjustment range A to suit the hole size.**
- **For requests about special burnishing length, tool length or shank specifications not included in the chart above, contact your nearest sales office by using the catalog inquiry sheet, or use the inquiry form on our website.**

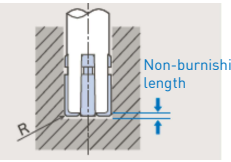
Non-burnishing area (Hole size ø140 - ø200)



Superoll SH

Non-burnishing length (mm)
5.8

* For burnishing blind-hole

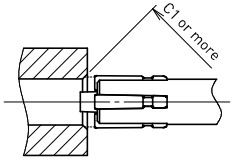


Superoll SB

Roller	Non-burnishing length length (mm)
Standard	1.8
R0.3	0.8

* Non-burnishing length can be reduced by using R0.3 type rollers.

Precaution with R0.3 type rollers for Superoll SB type



When using R0.3 type rollers that reduce non-burnishing area of blind-holes, the hole entrance must be chamfered with a C1 or more to prevent interference between the roller tip and workpiece when inserting Superoll SB type.

Burnishing conditions (Reference)

Hole size (mm)	Rotation speed (min^{-1})	Feed rate (mm/rev)	Torque (N·m)	Thrust (kN)
140-200	80- 150	1.2 - 3.0	30 - 250	6 - 35

* Burnishing conditions are reference only, and do not guarantee that they will achieve the customers' required values.

* Actual burnishing conditions vary depending on the material and conditions before burnishing, so these values should be used as a reference.