Nine9®

HIGH SPEED BORING BARS

- Cycle Time
- Roughness
- Position Accuracy
- True Roundness

Web

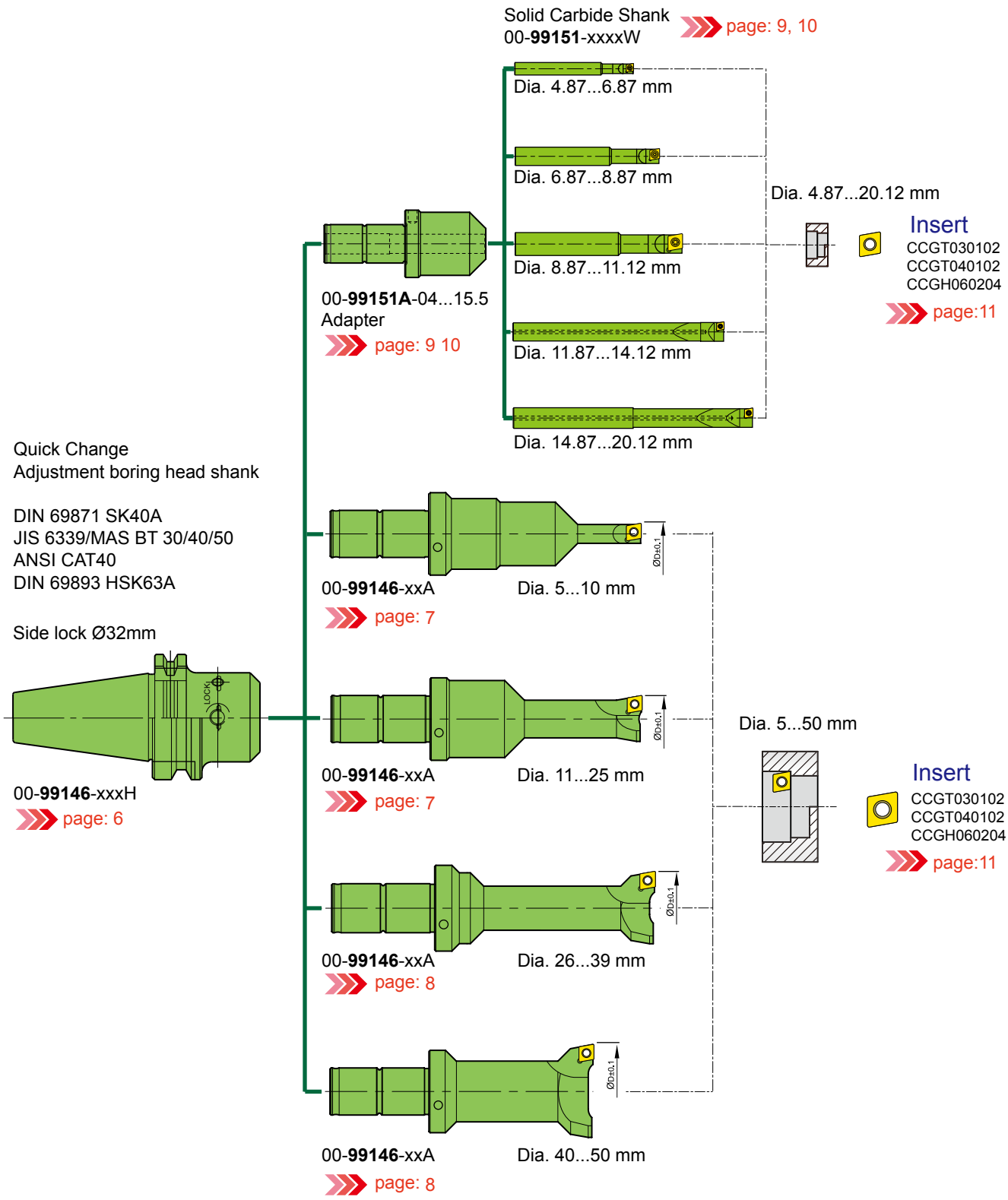
nine9.jic-tools.com.tw

Cat. 10

Program of Boring Bar System

Quick Change High Speed EMB Boring Bars

page: 2, 3



Program of Boring Bar System

EMB Boring Bars

page: 1

Side lock holders
Hydraulic chucks
Spring collet chucks

00-**99101**-07...25
00-**99121**-05...25

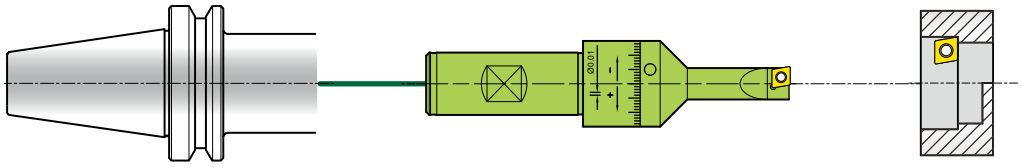
page: 4, 5

Dia. 5...25 mm

Insert

CCGT030102
CCGT040102
CCGH060204

page:11



Direct Adusting Boring Bar

page: 13, 14

Hydraulic chucks
Spring collet chucks

Extension Bar

Direct adjustment Boring head

Alloy Steel Shank
00-**99801**-xxS

page: 15

Solid Carbide Shank
00-**99801**-xxW

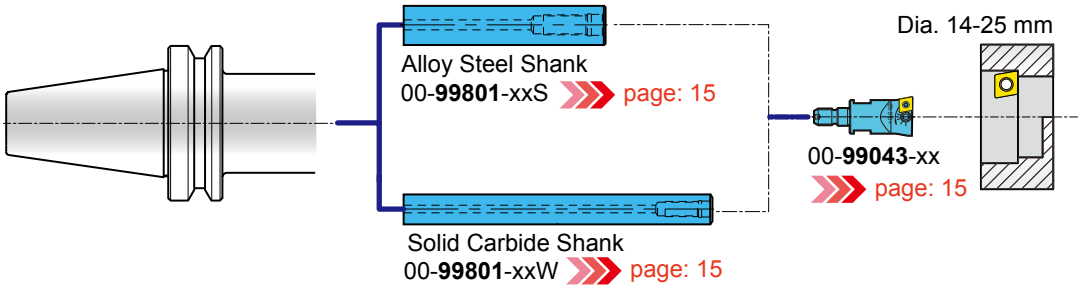
page: 15

Dia. 14-25 mm

00-**99043**-xx

page: 15

Insert
CCGH060204



Micro Adjustable Fine Boring Unit

page: 17, 18

Any available shank

Micro Adjustable Fine Boring Unit

Dia. 25.7-60.6 mm

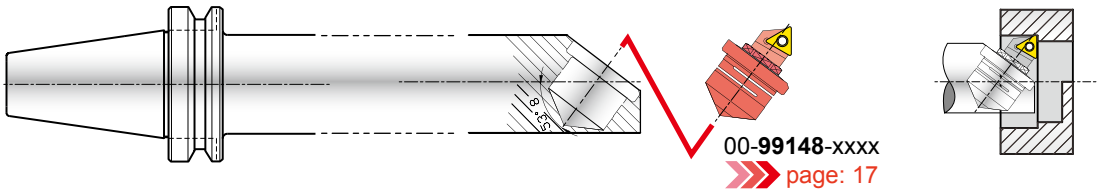
00-**99148**-xxxx

page: 17

Any ISO Insert

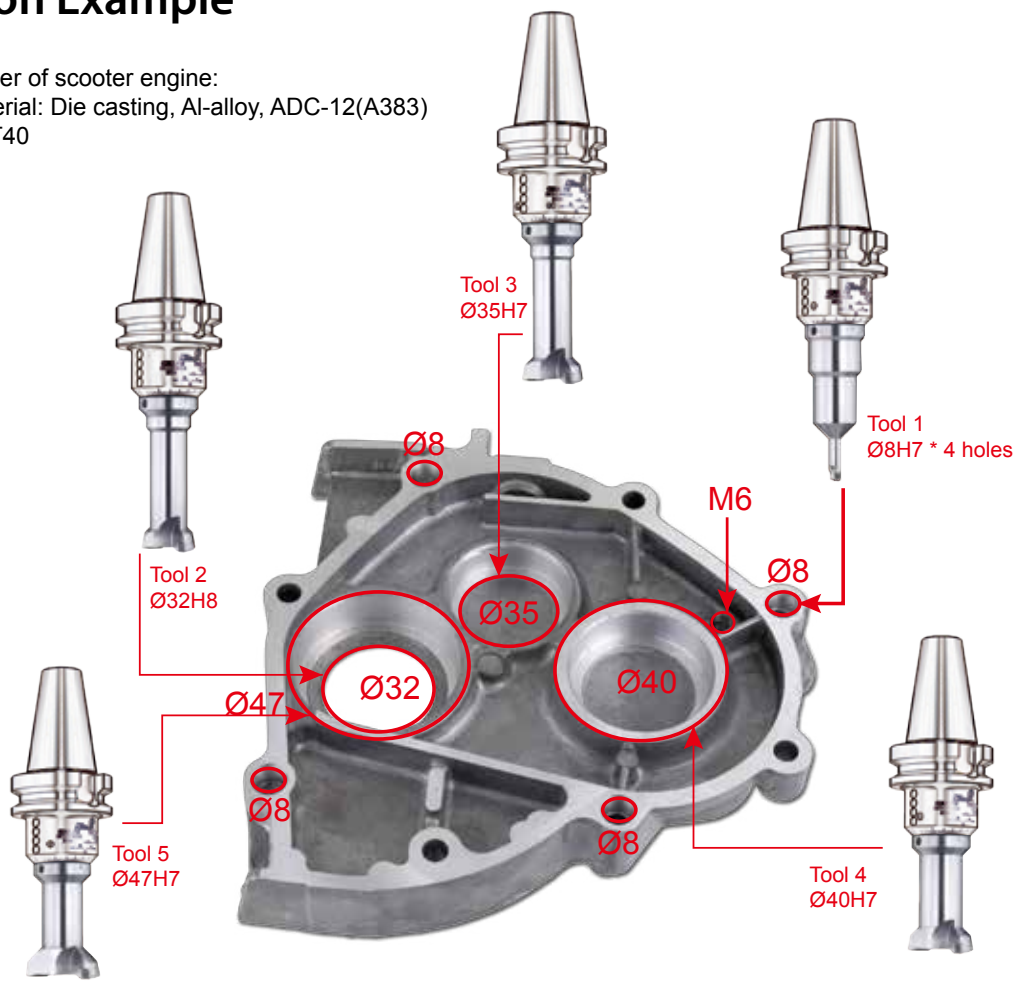
CC..06

TC..09
TC..11
TC..16



Application Example

- Machining a cover of scooter engine:
  Work piece material: Die casting, Al-alloy, ADC-12(A383)
  Spindle Size: BT40

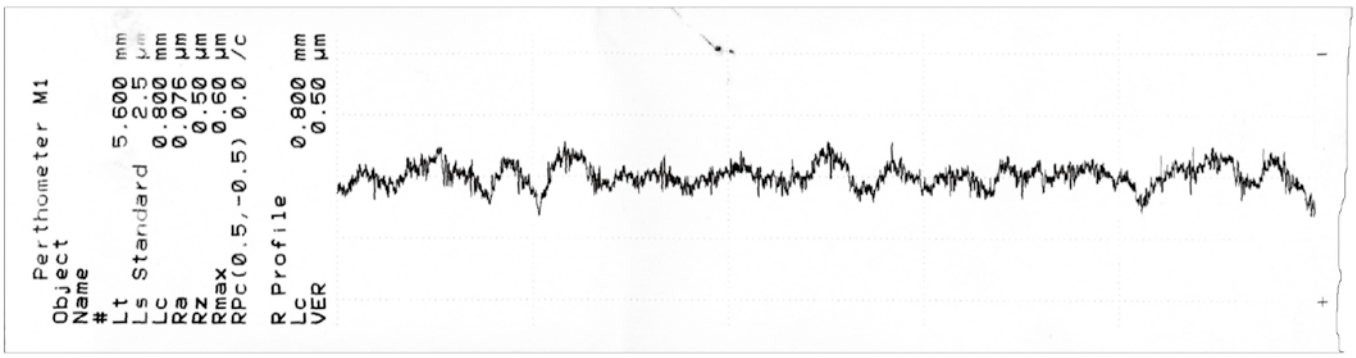


TOOL LIST by Nine9 Boring Bar 99146-series :

No.	Boring Bar	Grade of insert	Dia. mm	Depth	r.p.m.	F = mm/min.	Machining time
1	00-99146-08A	CCGT040102 NC30	Ø8H7	8 mm	8000	400	1.2 sec.
2	00-99146-32A	CCGT060202HP NC9031	Ø32H8	8 mm	2985	209	2.3 sec.
3	00-99146-35A		Ø35H7	12 mm	2730	191	3.8 sec.
4	00-99146-40A		Ø40H7	15 mm	2400	168	5.4 sec.
5	00-99146-47A		Ø47H7	15 mm	2030	142	6.4 sec.

Working Example

	Material	Vc m/min.	f mm/rev.	Roughness			Tool holder	Insert
				Ra	Rz	Rmax		
	Al alloy, 6061	150	0.2	0.076μm	0.50μm	0.6μm	99146-BT40-26A	CCGH0602U NC9096



Introduction of EMB Boring Bar

EMB boring bars are "Eccentrical Mechanism Boring bars" which can adjust to required diameter via an eccentrical mechanism. The boring bar is not at the center of the holder, but offset from the center.
Patent No:108599(Taiwan), ZL96201178.9(China)
I265836(Taiwan), ZL200510101469.5(China), US 7455487 B2(USA)

EMB Boring Bars Family

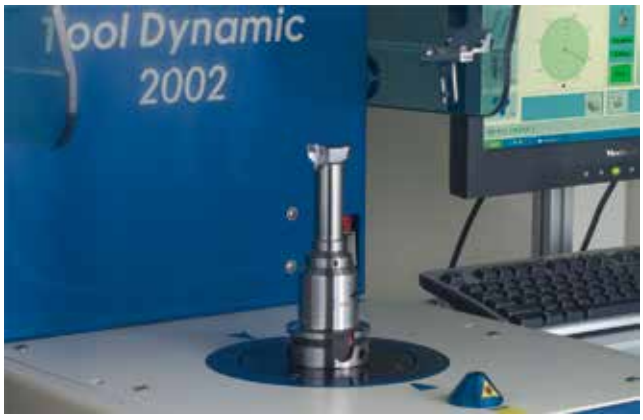
00-99101: 0.03 mm/div. adjustment range ±0.5
00-99121: 0.01 mm/div. adjustment range ±0.1
00-99146: 0.01 mm/div. adjustment range ±0.12
Ø5mm~Ø50mm boring bars are interchangeable.
G6.3, 10000 r.p.m.
00-99151: Deep hole boring 4 ~ 6XD

00-99101
00-99121

00-99146-BT30
00-99146-BT40
00-99146-BT50
00-99146-CAT40
00-99146-SK40
00-99146-HSK63A

00-99146-01-32HB

00-99151A-xxxxW



00-99146-xx
Interchangeable boring bar
Standard balanced grade
10000 r.p.m. G6.3
both of shank and bar.

USA Patent

Cycle Time | Roughness | Position Accuracy | True Roundness

Introduction of Quick Change High Speed EMB Boring Bar

Easy Handling

- Dimensions are easy to read. They are indicated on the tools and are easily adjustable on a tool presetter or in machining center.
- No backlash.
- Change the boring bar and set the boring dimension on the tool presetter in just one minute.

Interchangeable Boring Bars from Diameters of 5 mm to 50 mm

- This simple boring tool has minimal components.
- In minutes, the boring bar may be changed and the boring dimension set on the tool presetter.

Low Cost For Machining Small Holes

- The cost of this product is low compared to other micro adjustable boring heads.

High Speed

- Boring bar design ensures accurate high speed boring. Grade balance is G6.3 10000 r.p.m., all sizes are guaranteed.
- Surface speeds of carbide inserts up to 700 m/min.
- Combination bore / chamfer / facing tools can be ordered on request.

Procedures For Assembly

1. Use 4 mm allen-key to loosen locking screw M8, take care not to remove the screw.
2. Use 3 mm allen-key to loosen pre-load screw M6, take care not to remove the screw.
3. Remove the original boring bar and insert the new boring bar.
4. Tighten the M6 pre-load screw using the torque screwdriver with hex head key.
   (Recomended torque = 0.9~1.0 Nm)
5. Ensure the boring head and boring bar fit together securely.
6. Measure the boring diameter of the boring bar using tool presetter and adjust it to the required diameter.
7. Tighten the M8 locking screw using the torque screwdriver with hex head key (Recomended torque = 8~9Nm)

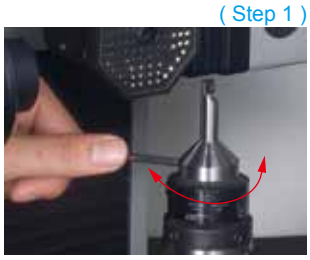
Introduction of Quick Change High Speed EMB Boring Bar

Procedures For Adjustment

On Tool Presetter

1. Loosen M8 locking screw.
2. Set the boring bar at the neutral position. (Step 1)
3. Measure the boring diameter using the tool presetter and compare with the required diameter. (Step 2)
4. If boring diameter is too big or too small, please put an allen-key into the adjusting driving hole. Turn to " + " to increase and turn to " - " to reduce boring diameter. (Step 3 and 4)
5. Tighten M8 locking screw.

(Step 1)

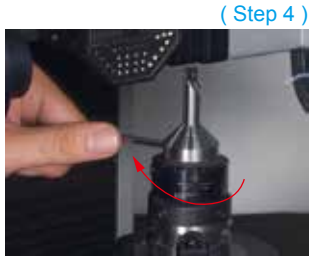


(Step 2)

(Step 3)

To Increase Diameter

(Step 4)



To Reduce Diameter

On Milling Machine And Machining Centers

1. Set the boring bar at the neutral position. (Step 1)
2. Tighten M8 locking screw.
3. Test cut on work piece, about 3-5mm deepth on the machine.
4. Measuring boring diameter of workpiece and compare with required diameter.
5. If boring diameter is too big or too small, loosen M8 locking screw, please put an allen-key into the adjusting driving hole. Turn to " + " to increase and turn to " - " to reduce boring diameter. (Step 2 and 3)
6. Tighten M8 locking screw. (Step 4)

(Step 1)

(Step 2)

To Increase Diameter

(Step 3)

To Reduce Diameter

(Step 4)

Video is also available on youtube

Cycle Time | Roughness | Position Accuracy | True Roundness

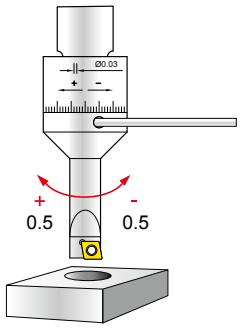
99101 EMB Boring Bars
0.03 mm/div.

Mechanical Design

- Adjusted by eccentric mechanism, it is simple and backlash free. (Patented in ROC Taiwan, patent no. 108599, PR China ZL96 2 01178.9)
- It can replace end mill and brazed tool bits.

Easy Handling

- Each division 0.03mm shown on the tools, they are adjustable on the tool presetter or machine easily.
- Total adjustment range ±0.5mm

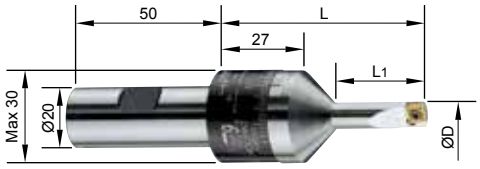


Economic

- Low cost, high efficiency.
- The indexable insert allows a variety of materials to be cut .

Application

- Minimum readout division is 0.03 mm, it is easy for setting up fine boring.
- Ideal as small hole boring tool with excellent accuracy.
- For fine boring operation on milling machines, machining centres and special purpose machines.



* H type with internal coolant can be ordered on request from Dia. 7mm. Ordering example: 00-99101-07H.
* Other sizes are available on request.

Ordering Code	Part No.		ØD	L1	L	Insert	Screw & Key
00-99101-07	SB20-0721-03	Adjustment range:±0.5mm Each Division 0.03mm	6.5-7.5	21	60	CCGT040102	NK-T6 NS-20036
00-99101-08	SB20-0824-03		7.5-8.5	24	63		
00-99101-09	SB20-0927-03		8.5-9.5	27	65	CCGH060204	NK-T7 NS-25045
00-99101-10	SB20-1030-03		9.5-10.5	30	68		
00-99101-11	SB20-1133-03		10.5-11.5	33	70		
00-99101-12	SB20-1236-03		11.5-12.5	36	73		
00-99101-13	SB20-1339-03		12.5-13.5	39	75		
00-99101-14	SB20-1442-03		13.5-14.5	42	78		
00-99101-15	SB20-1545-03		14.5-15.5	45	80		
00-99101-16	SB20-1648-03		15.5-16.5	48	83	CCGH060204	NK-T7 NS-25060
00-99101-17	SB20-1751-03		16.5-17.5	51	85		
00-99101-18	SB20-1850-03		17.5-18.5	50	82		
00-99101-19	SB20-1950-03		18.5-19.5	50	82		
00-99101-20	SB20-2050-03		19.5-20.5	50	82		
00-99101-21	SB20-2150-03		20.5-21.5	50	82		
00-99101-22	SB20-2250-03		21.5-22.5	50	82		
00-99101-23	SB20-2350-03		22.5-23.5	50	82		
00-99101-24	SB20-2450-03		23.5-24.5	50	82		
00-99101-25	SB20-2550-03		24.5-25.5	50	82		

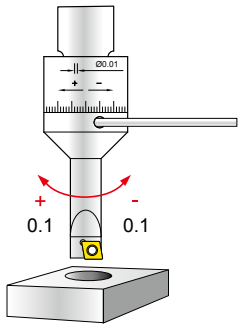
99121 EMB Boring Bars
0.01 mm/div.

Mechanical Design

- Adjusted by eccentric mechanism, it is simple and backlash free. (Patented in ROC Taiwan, patent no. 108599, PR China ZL96 2 01178.9)
- It can replace end mill and brazed tool bits.

Easy Handling

- Each division 0.01mm shown on the tools, they are adjustable on the tool presetter or machine easily.
- Total adjustment range ±0.1mm



Economic

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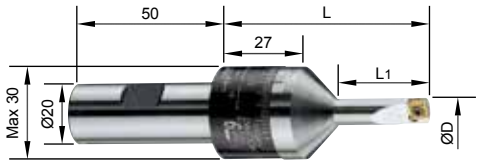


* H type with internal coolant can be ordered on request from Dia. 7mm. Ordering example: 00-99101-07H.
* Other sizes are available on request.

Ordering Code	Part No.		ØD	L1	L	Insert	Screw & Key
00-99121-05	SB20-0515-01		4.9-5.1	15	54	CCGT030102	NK-T6 NS-16030
00-99121-06	SB20-0618-01		5.9-6.1	18	57		
00-99121-07	SB20-0721-01		6.9-7.1	21	60	CCGT040102	NK-T6 NS-20036
00-99121-08	SB20-0824-01		7.9-8.1	24	63		
00-99121-09	SB20-0927-01		8.9-9.1	27	65	CCGH060204	NK-T7 NS-25045
00-99121-10	SB20-1030-01		9.9-10.1	30	68		
00-99121-11	SB20-1133-01		10.9-11.1	33	70		
00-99121-12	SB20-1236-01		11.9-12.1	36	73		
00-99121-13	SB20-1339-01	Adjustment range:±0.1mm	12.9-13.1	39	75		
00-99121-14	SB20-1442-01		13.9-14.1	42	78		
00-99121-15	SB20-1545-01	Each Division 0.01mm	14.9-15.1	45	80		
00-99121-16	SB20-1648-01		15.9-16.1	48	83	CCGH060204	NK-T7 NS-25060
00-99121-17	SB20-1751-01		16.9-17.1	51	85		
00-99121-18	SB20-1850-01		17.9-18.1	50	82		
00-99121-19	SB20-1950-01		18.9-19.1	50	82		
00-99121-20	SB20-2050-01		19.9-20.1	50	82		
00-99121-21	SB20-2150-01		20.9-21.1	50	82		
00-99121-22	SB20-2250-01		21.9-22.1	50	82		
00-99121-23	SB20-2350-01		22.9-23.1	50	82		
00-99121-24	SB20-2450-01		23.9-24.1	50	82		
00-99121-25	SB20-2550-01		24.9-25.1	50	82		

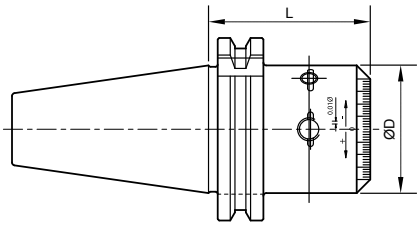
Cycle Time | Roughness | Position Accuracy | True Roundness

99146 Quick Change High Speed

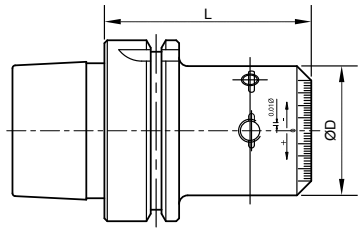
Boring Head Shank

- Adjustable range: +0.12 /-0.13 mm.
- Each adjustment division is 0.01 mm.
- Balance grade : G6.3 10000 r.p.m.

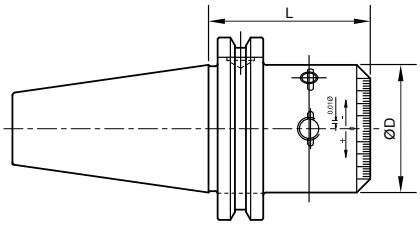
SK40



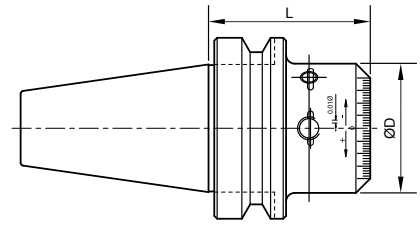
HSK63



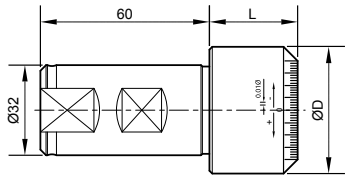
CAT40



BT



SB32



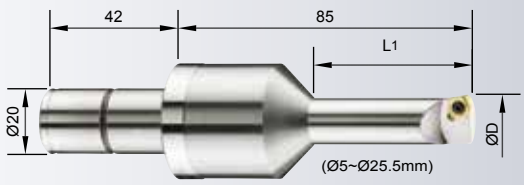
Ordering Code	Part No.	ØD	L
00-99146-SB32H	SB32-146-31	45	31.3
00-99146-BT30H	BT30-146-51	45	51.3
00-99146-BT40H	BT40-146-56	45	56.3
00-99146-BT50H	BT50-146-77	45	77.3
00-99146-CAT40H	CAT40-146-56	45	56.3
00-99146-HSK63AH	HSK63A-146-72	45	72
00-99146-SK40H	SK40-146-56	45	56.3

Cycle Time | Roughness | Position Accuracy | True Roundness

99146 Quick Change High Speed

Boring Bar Ø5~Ø25

- Alloy Steel Shank
- Boring Depth : L1, 2~3xD



* H type with internal coolant can be ordered on request from Dia. 10mm.
  Ordering example: 00-99146-1000SH.
* Other sizes are available on request.

Ordering Code	Part No.	ØD	L1	Insert
00-99146-0500S	C20-0500-10L	4.87~5.12	10.00	CCGT030102 NS-16030, NK-T6
00-99146-0600S	C20-0600-12L	5.87~6.12	12.00	
00-99146-0700S	C20-0700-14L	6.87~7.12	14.00	CCGT040102 NS-20036, NK-T6
00-99146-0800S	C20-0800-16L	7.87~8.12	16.00	
00-99146-0900S	C20-0900-18L	8.87~9.12	18.00	CCGT060204 CCFT060204 Screw: NS-25045 Key: NK-T7
00-99146-1000S	C20-1000-25L	9.87~10.12	25.00	
00-99146-1025S	C20-1025-25L	10.12~10.37	25.00	
00-99146-1050S	C20-1050-26L	10.37~10.62	26.25	
00-99146-1075S	C20-1075-26L	10.62~10.87	26.25	
00-99146-1100S	C20-1100-27L	10.87~11.12	27.50	
00-99146-1125S	C20-1125-27L	11.12~11.37	27.50	
00-99146-1150S	C20-1150-28L	11.37~11.62	28.75	
00-99146-1175S	C20-1175-28L	11.62~11.87	28.75	
00-99146-1200S	C20-1200-30L	11.87~12.12	30.00	
00-99146-1225S	C20-1225-30L	12.12~12.37	30.00	
00-99146-1250S	C20-1250-31L	12.37~12.62	31.25	
00-99146-1275S	C20-1275-31L	12.62~12.87	31.25	
00-99146-1300S	C20-1300-32L	12.87~13.12	32.50	
00-99146-1325S	C20-1325-32L	13.12~13.37	32.50	
00-99146-1350S	C20-1350-33L	13.37~13.62	33.75	
00-99146-1375S	C20-1375-33L	13.62~13.87	33.75	
00-99146-1400S	C20-1400-35L	13.87~14.12	35.00	
00-99146-1425S	C20-1425-35L	14.12~14.37	35.00	
00-99146-1450S	C20-1450-36L	14.37~14.62	36.25	
00-99146-1475S	C20-1475-36L	14.62~14.87	36.25	
00-99146-1500S	C20-1500-37L	14.87~15.12	37.50	
00-99146-1525S	C20-1525-37L	15.12~15.37	37.50	
00-99146-1550S	C20-1550-38L	15.37~15.62	38.75	
00-99146-1575S	C20-1575-38L	15.62~15.87	38.75	
00-99146-1600S	C20-1600-40L	15.87~16.12	40.00	CCGT060204 CCFT060204 Screw: NS-25060 Key: NK-T7
00-99146-1625S	C20-1625-40L	16.12~16.37	40.00	
00-99146-1650S	C20-1650-41L	16.37~16.62	41.25	
00-99146-1675S	C20-1675-41L	16.62~16.87	41.25	
00-99146-1700S	C20-1700-42L	16.87~17.12	42.50	

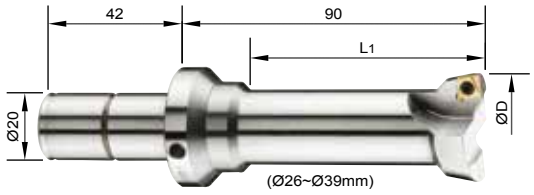
Ordering Code	Part No.	ØD	L1	Insert
00-99146-1725S	C20-1725-42L	17.12~17.37	42.50	CCGT060204 CCFT060204 Screw: NS-25060 Key: NK-T7
00-99146-1750S	C20-1750-43L	17.37~17.62	43.75	
00-99146-1775S	C20-1775-43L	17.62~17.87	43.75	
00-99146-1800S	C20-1800-45L	17.87~18.12	45.00	
00-99146-1825S	C20-1825-45L	18.12~18.37	45.00	
00-99146-1850S	C20-1850-46L	18.37~18.62	46.25	
00-99146-1875S	C20-1875-46L	18.62~18.87	46.25	
00-99146-1900S	C20-1900-47L	18.87~19.12	47.50	
00-99146-1925S	C20-1925-47L	19.12~19.37	47.50	
00-99146-1950S	C20-1950-48L	19.37~19.62	48.75	
00-99146-1975S	C20-1975-48L	19.62~19.87	48.75	
00-99146-2000S	C20-2000-50L	19.87~20.12	50.00	
00-99146-2025S	C20-2025-50L	20.12~20.37	50.00	
00-99146-2050S	C20-2050-50L	20.37~20.62	50.00	
00-99146-2075S	C20-2075-50L	20.62~20.87	50.00	
00-99146-2100S	C20-2100-50L	20.87~21.12	50.00	
00-99146-2125S	C20-2125-50L	21.12~21.37	50.00	
00-99146-2150S	C20-2150-50L	21.37~21.62	50.00	
00-99146-2175S	C20-2175-50L	21.62~21.87	50.00	
00-99146-2200S	C20-2200-50L	21.87~22.12	50.00	
00-99146-2225S	C20-2225-50L	22.12~22.37	50.00	
00-99146-2250S	C20-2250-50L	22.37~22.62	50.00	
00-99146-2275S	C20-2275-50L	22.62~22.87	50.00	
00-99146-2300S	C20-2300-50L	22.87~23.12	50.00	
00-99146-2325S	C20-2325-50L	23.12~23.37	50.00	
00-99146-2350S	C20-2350-50L	23.37~23.62	50.00	
00-99146-2375S	C20-2375-50L	23.62~23.87	50.00	
00-99146-2400S	C20-2400-50L	23.87~24.12	50.00	
00-99146-2425S	C20-2425-50L	24.12~24.37	50.00	
00-99146-2450S	C20-2450-50L	24.37~24.62	50.00	
00-99146-2475S	C20-2475-50L	24.62~24.87	50.00	
00-99146-2500S	C20-2500-50L	24.87~25.12	50.00	
00-99146-2525S	C20-2525-50L	25.12~25.37	50.00	
00-99146-2550S	C20-2550-50L	25.37~25.62	50.00	

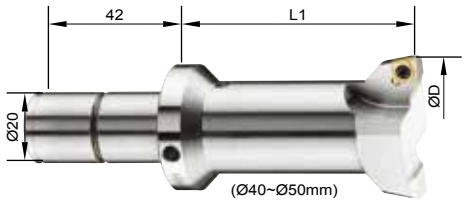
Cycle Time | Roughness | Position Accuracy | True Roundness

99146 Quick Change High Speed

Boring Bar Ø26~Ø50

- Alloy Steel Shank
- Boring Depth : L1, 2~3xD





Ø26~Ø39mm

* H type with internal coolant can be ordered on request. Ordering example: 00-99146-36AH.

Ordering Code	Part No.	ØD	L1	Insert
00-99146-26A	C20-2600-50L	25.87~26.12	50.00	CCGT060204 CCFT060204 Screw: NS-25060 Key: NK-T7
00-99146-27A	C20-2700-50L	26.87~27.12	50.00	
00-99146-28A	C20-2800-50L	27.87~28.12	50.00	
00-99146-29A	C20-2900-50L	28.87~29.12	50.00	
00-99146-30A	C20-3000-50L	29.87~30.12	50.00	
00-99146-31A	C20-3100-70L	30.87~31.12	70.00	
00-99146-32A	C20-3200-70L	31.87~32.12	70.00	
00-99146-33A	C20-3300-70L	32.87~33.12	70.00	
00-99146-34A	C20-3400-70L	33.87~34.12	70.00	
00-99146-35A	C20-3500-70L	34.87~35.12	70.00	
00-99146-36A	C20-3600-70L	35.87~36.12	70.00	
00-99146-37A	C20-3700-70L	36.87~37.12	70.00	
00-99146-38A	C20-3800-70L	37.87~38.12	70.00	
00-99146-39A	C20-3900-70L	38.87~39.12	70.00	

Ø40~Ø50mm

* H type with internal coolant can be ordered on request. Ordering example: 00-99146-45AH.

Ordering Code	Part No.	ØD	L1	Insert
00-99146-40A	C20-4000-70L	39.87-40.12	70.00	CCGT060204 CCFT060204 Screw: NS-25060 Key: NK-T7
00-99146-41A	C20-4100-70L	40.87-41.12	70.00	
00-99146-42A	C20-4200-70L	41.87-42.12	70.00	
00-99146-43A	C20-4300-70L	42.87-43.12	70.00	
00-99146-44A	C20-4400-70L	43.87-44.12	70.00	
00-99146-45A	C20-4500-70L	44.87-45.12	70.00	
00-99146-46A	C20-4600-70L	45.87-46.12	70.00	
00-99146-47A	C20-4700-70L	46.87-47.12	70.00	
00-99146-48A	C20-4800-70L	47.87-48.12	70.00	
00-99146-49A	C20-4900-70L	48.87-49.12	70.00	
00-99146-50A	C20-5000-70L	49.87-50.12	70.00	

High Speed Boring Bar Kit

Ordering Code	Contents	
00-99146-SB32H-05SET	SB32-146-31 Weldon Shank	Boring head shank: 1pc Boring bar: any 5 pcs from Ø5~Ø50 Key: 3~5 pcs Plastic box: 1pc
00-99146-BT30-05SET	BT30H Boring head shank	
00-99146-BT40-05SET	BT40H Boring head shank	
00-99146-BT50-05SET	BT50H Boring head shank	
00-99146-CAT40-05SET	CAT40H Boring head shank	
00-99146-SK40-05SET	SK40H Boring head shank	
00-99146-HSK63A-05SET	HSK63A Boring head shank	

(Insert is not included, please order seperately)

- Note: BT50 boring head shank is packed in a separate box.

Cycle Time | Roughness | Position Accuracy | True Roundness

99151 Deep hole boring 4~6XD

Mechanical Design

- Adjusted by eccentric mechanism, it is simple and backlash free.
  (Patented in ROC Taiwan, patent no. I265836, PR China 200510101469.5)
- It can replace end mill and brazed tool bits.

Easy Handling

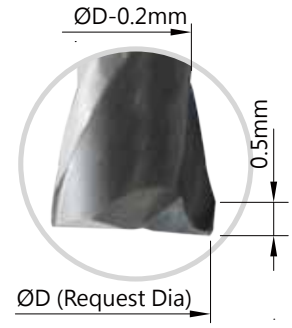
- Each division is 0.01mm, No back lash.
- 4~6xD boring depth, Good balance condition is maintained .

Economic

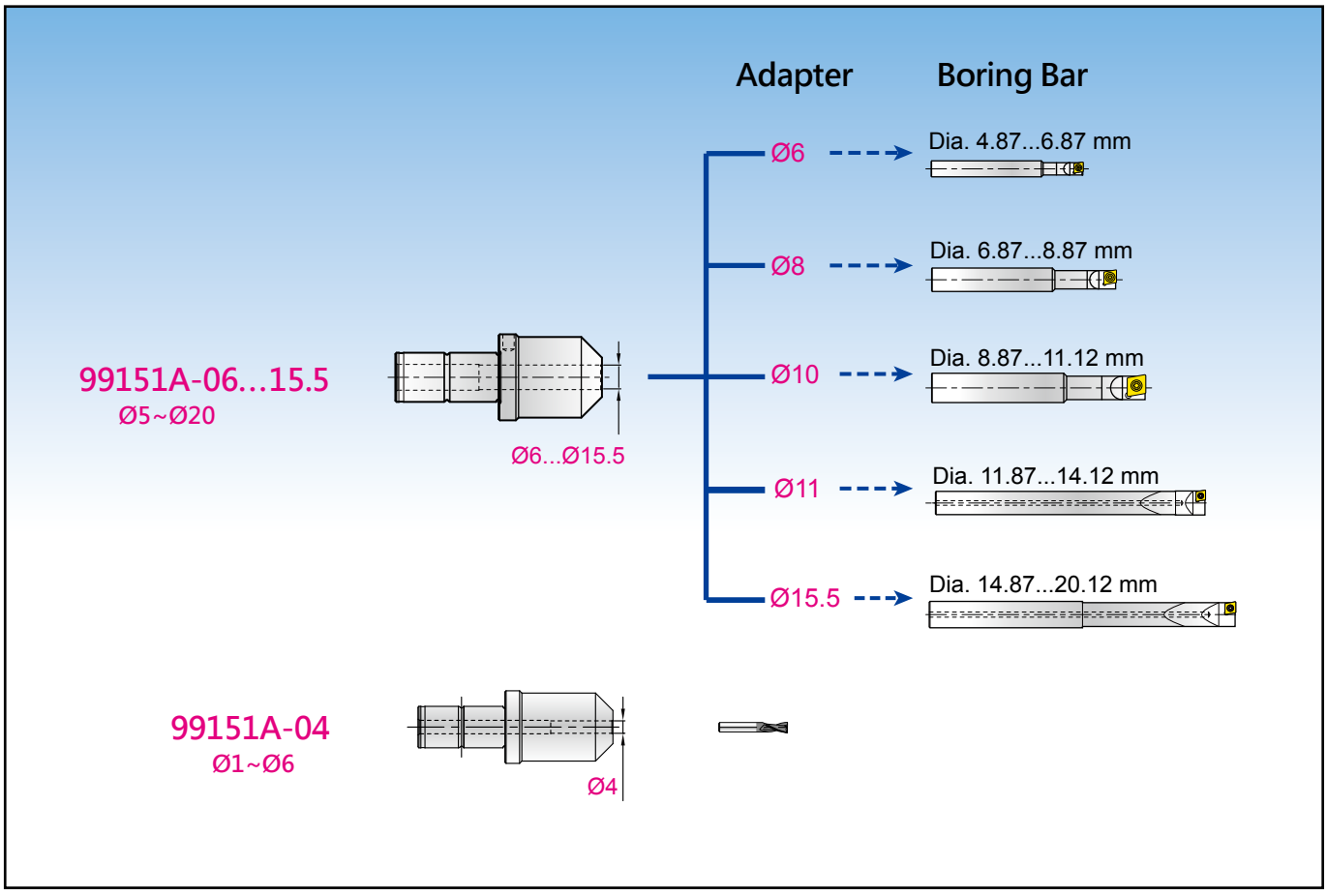
- Boring size below Ø6mm, using solid carbide end mill as a boring tool, modification is needed. Adjusting range +0.01/+0.1.
- Boring size above Ø5mm, using solid carbide shank, insert type. Adjusting range ±0.1.

Application

- Replace end mill or reamer in small hole boring.
- Apply for electronic parts and micro machining parts.



★ Cut down 0.2mm from original diameter, length is about 0.5mm count from the front edge. It is to avoid the interface while boring.



Cycle Time | Roughness | Position Accuracy | True Roundness

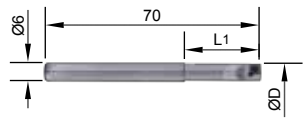
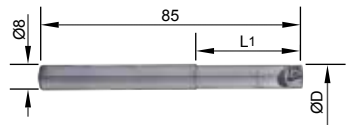
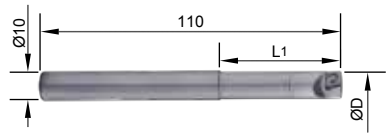
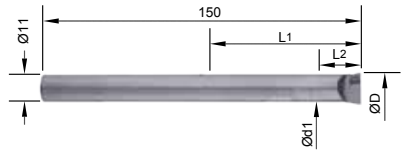
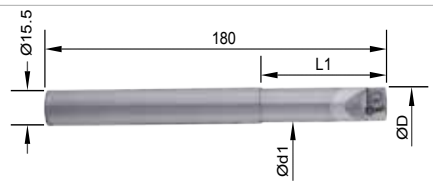
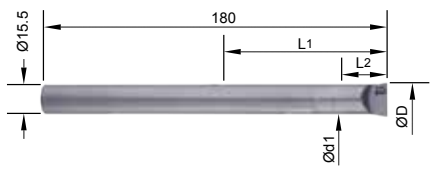
99151 Deep hole boring 4~6XD

Adapter

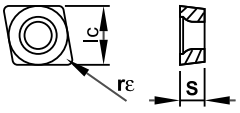
Ordering Code	Part No.	ØD	L
00-99151A-04	C20-ID04	4	49
00-99151A-06	C20-ID06	6	52
00-99151A-08	C20-ID08	8	49
00-99151A-10	C20-ID10	10	42
00-99151A-11	C20-ID11	11	21.5
00-99151A-15.5	C20-ID15.5	15.5	21.5

Boring Bar Ø4.87~Ø20.12

- Solid Carbide Shank
- Boring Depth : L1, 4~6xD

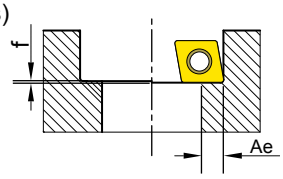
Ordering Code	Part No.	ØD	Ød	Ød1	L1	L2	L	Insert	Fig.
00-99151-0500W	C06-0500-20L	4.87~5.12	6	-	20.00	-	70	CCGT030102 Screw: NS-16030 Key:NK-T6	
00-99151-0525W	C06-0525-20L	5.12~5.37	6	-	20.00	-	70		
00-99151-0550W	C06-0550-22L	5.37~5.62	6	-	22.00	-	70		
00-99151-0575W	C06-0575-22L	5.62~5.87	6	-	22.00	-	70		
00-99151-0600W	C06-0600-24L	5.87~6.12	6	-	24.00	-	70		
00-99151-0625W	C06-0625-24L	6.12~6.37	6	-	24.00	-	70		
00-99151-0650W	C06-0650-26L	6.37~6.62	6	-	26.00	-	70		
00-99151-0675W	C06-0675-26L	6.62~6.87	6	-	26.00	-	70		
00-99151-0700W	C08-0700-28L	6.87~7.12	8	-	28.00	-	85	CCGT040102 Screw: NS-20036 Key:NK-T6	
00-99151-0725W	C08-0725-28L	7.12~7.37	8	-	28.00	-	85		
00-99151-0750W	C08-0750-30L	7.37~7.62	8	-	30.00	-	85		
00-99151-0775W	C08-0775-30L	7.62~7.87	8	-	30.00	-	85		
00-99151-0800W	C08-0800-32L	7.87~8.12	8	-	32.00	-	85		
00-99151-0825W	C08-0825-32L	8.12~8.37	8	-	32.00	-	85		
00-99151-0850W	C08-0850-34L	8.37~8.62	8	-	34.00	-	85		
00-99151-0875W	C08-0875-34L	8.62~8.87	8	-	34.00	-	85		
00-99151-0900W	C10-0900-36L	8.87~9.12	10	-	36.00	-	110	CCGT060204 CCFT060204 Screw: NS-25045 Key:NK-T7	
00-99151-0925W	C10-0925-36L	9.12~9.37	10	-	36.00	-	110		
00-99151-0950W	C10-0950-38L	9.37~9.62	10	-	38.00	-	110		
00-99151-0975W	C10-0975-38L	9.62~9.87	10	-	38.00	-	110		
00-99151-1000W	C10-1000-40L	9.87~10.12	10	-	40.00	-	110		
00-99151-1025W	C10-1025-40L	10.12~10.37	10	-	40.00	-	110		
00-99151-1050W	C10-1050-42L	10.37~10.62	10	-	42.00	-	110		
00-99151-1075W	C10-1075-42L	10.62~10.87	10	-	42.00	-	110		
00-99151-1100W	C10-1100-44L	10.87~11.12	10	-	44.00	-	110		
00-99151-1200W	C11-1200-150L	11.87~12.12	11	11	70.00	20	150	CCGT060204 CCFT060204 Screw: NS-25045 Key:NK-T7	
00-99151-1300W	C11-1300-150L	12.87~13.12	11	-	70.00	-	150		
00-99151-1400W	C11-1400-150L	13.87~14.12	11	-	70.00	-	150		
00-99151-1500W	C15.5-1500-180L	14.87~15.12	15.5	14	90.00	90	180		
00-99151-1600W	C15.5-1600-180L	15.87~16.12	15.5	15	90.00	90	180	CCGT060204 CCFT060204 Screw: NS-25060 Key:NK-T7	
00-99151-1700W	C15.5-1700-180L	16.87~17.12	15.5	-	100.00	-	180		
00-99151-1800W	C15.5-1800-180L	17.87~18.12	15.5	-	100.00	-	180		
00-99151-1900W	C15.5-1900-180L	18.87~19.12	15.5	-	100.00	-	180		
00-99151-2000W	C15.5-2000-180L	19.87~20.12	15.5	-	100.00	-	180		

Precisely Ground Inserts

Inserts		Description	CCGT030102	CCGT040102	CCGW040102	CCGH0602U	CCFT060204	CCFW060204	CCFT060204HP	CCMW060204
NC30		K20F, TiAlN coated, universal grade for casting iron, carbon steel, alloy steel, stainless steel.	•	•						
DM		PCD brazed, a polished and honed cutting edge for fine surface finished and longer tool life.			•					•
NC2032		K20F, AlTiN coated, for high speed cutting of casting iron.						•		
NC2033		K20F, TiAlN coated, good for carbon steel, alloy steel, stainless steel.					•			
NC9031		K20F, TiN coated, good for Al, Al-alloy, Copper and non ferrous metal.							•	
NC9036		K20F, DLC coated, long tool life. Good for Al, Al-alloy, Copper and non ferrous metal.	•	•			•			
U-NC9036		K20F, DLC coated. It's a super finishing insert with large corner radius for high feed rate for cutting Al, Al-alloy and non-ferrous metal.				•				
Dimension		lc	3.5	4.3	4.3	6.35	6.35	6.35	6.35	6.35
		S	1.4	1.8	1.8	2.38	2.38	2.38	2.38	2.38
		rε	0.2	0.2	0.2	-	0.4	0.4	0.4	0.4

Cutting Data

• Note: Super fine finishing insert U-NC9036 and DM with special specified cutting width 0.15mm.(Radius)
(see table below)



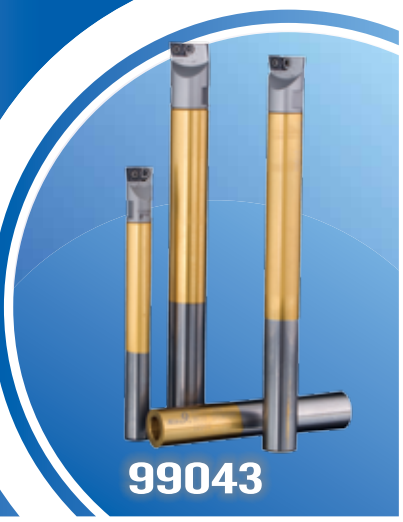
Formulas of spindle speed and feed rate :

Spindle speed $S = \frac{Vc \times 1000}{\pi \times D}$ r.p.m. Feed rate: f x S mm/min.

Material	Cutting conditions or surface finishes	Grade of insert		Ae Max mm	Cutting Speed Vc(m/min.)	feed rate f (mm/rev.)
Carbon Steel	Regular cutting	NC2033		0.5	120-150-200	0.05-0.07-0.10
	Interrupted cutting	NC30		0.3	100-120-140	0.04-0.05-0.08
Alloy Steel	Regular cutting	NC2033		0.5	100-120-140	0.05-0.07-0.10
	Interrupted cutting	NC30		0.3	80-100-120	0.04-0.05-0.08
Stainless Steel	Regular cutting	NC2033		0.5	80-100-120	0.05-0.07-0.10
	Interrupted cutting	NC30		0.3	70-80-100	0.05-0.07-0.10
Cast Iron	Regular cutting	NC2032	NC30	0.5	80-100-120	0.05-0.07-0.10
Brass, Bronze and Al-alloy Si >6%	Regular cutting	NC9036	NC9031	0.5	150-200-300	0.05-0.07-0.10
	Super mirror finish	U-NC9036		0.15	150-200-300	0.15-0.2-0.25
Al, Al-alloy, non-ferrous metal	Regular cutting	NC9036	NC9031	0.5	150-200-300	0.05-0.07-0.10
	Super finished	DM		0.3	500-1000-2000	0.05-0.07-0.10
	Super mirror finish	U-NC9036		0.15	150-200-300	0.15-0.20-0.25
Hardened Steel <HRC 50	Regular cutting	NC30		0.3	80-100-120	0.04-0.06-0.08

Direct Adusting Boring Bar

Introduction of Direct Adjusting Boring Bar



Direct Adjusting Boring Bar Family

00-99043 Screw Fit Boring Head
00-99801 Extension Bar

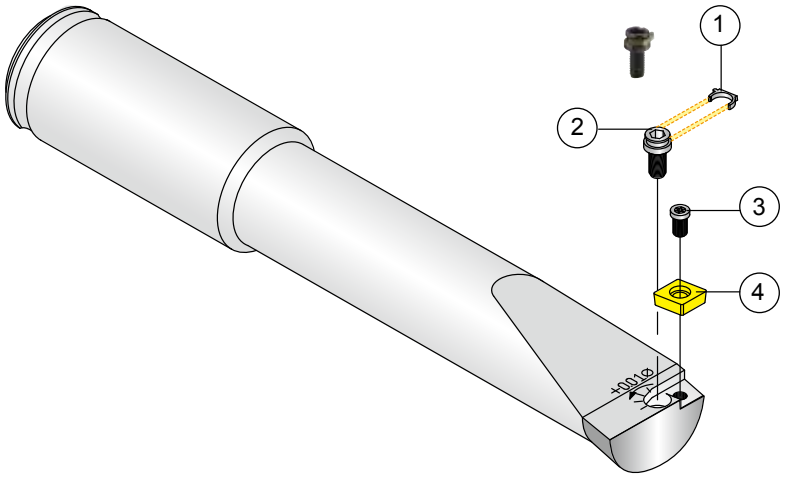
Screw Fit Boring Head

Extension Bar
Solid Carbide & Steel Shank

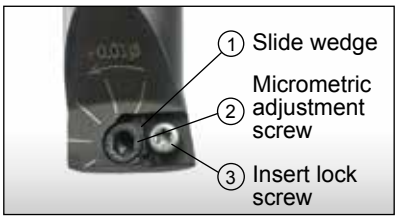
USA Patent

Feature

- Patented adjustment mechanism, to push insert directly by wedge and screw after clamped insert.
- The boring diameter is adjusted by pushiing the micrometric adjustment screw after the insert screw has been tightened.
- There is no backlash while adjusting boring diameter.



① Slide wedge
② Micrometric adjustment screw
③ Insert lock screw
④ Insert



The Patented tool structure applies bit angle variation to produce slight size variation in diametric direction. Excellent for applications on single size boring tools, deep hole boring tools, special tools, etc. It features easy control of μ accuracy.

Nine9®

Cycle Time | Roughness | Position Accuracy | True Roundness

Introduction of Direct Adjusting Boring Bar

Procedures of Setting Boring Diameter

1. Turn screw-2 clockwise to the bottom end before tighten the insert.

2. Tighten the insert by screw 1.
   (If you have tool presetter, follow step 3-5; if you don't, jump to step 6-9.)

3. Put the boring bar on the spindle of the tool presetter.

4. Measure the diameter of the boring bar by tool presetter; it should be smaller than nominal diameter. Adjusting the diameter of the boring bar by turning screw-2 counter-clockwise using the Allen-key to increase diameter until required diameter is achieved.

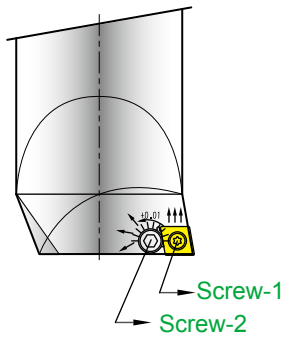
5. If the diameter has been adjusted too big, please loosen the screw-2, and then screw-1. Repeat step 2-4 until the required diameter is achieved.

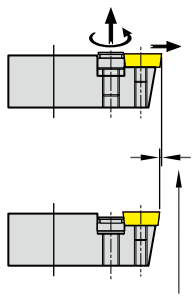
6. Put the boring bar on the machine spindle and make a test cut, about 5 mm deep. Measure hole diameter of the test cut.

7. Moving the boring bar to the tool diameter setter. The insert of the boring bar should touch the ceramic probe gently. Setting the dial gage to "zero" and adjust diameter by turning screw-2 counter-clockwise using the Allen key.

8. Read and note the "Adjusting amount" on the dial gage.
   Adjusting amount=(Nominal diameter-test cut diameter)/2 (mm or inch.)

9. Make test cut and measure again until required adjusting amount is achieved.





Adjusting Range 0.2 mm

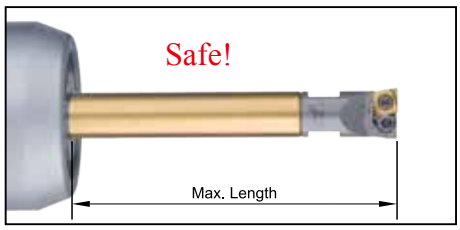
Adjusting boring diameter on the presetter.

Direction to increase boring diameter.

99043
99801

Screw Fit Boring head

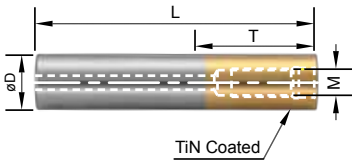
- Integrated with direct adjustment for fine boring, each division is Ø0.01mm.
- Total adjustment range: 0.2mm
- Extension bar is TiN coated to show the maximum usable boring length.



Order No.	Part No.	øD	L	M		Insert
00-99043-14	M6-FB14	13.9~14.1	25	M6xP1.0	99801-12	CCXX060204 Insert lock screw: NS-25045 Key:NK-T7 Adjustment screw: 99021-A
00-99043-15	M6-FB15	14.9~15.1	25	M6xP1.0	99801-12	
00-99043-16	M8-FB16	15.9~16.1	25	M8xP1.25	99801-14	CCXX060204 Insert lock screw: NS-25060 Key:NK-T7 Adjustment screw: 99021-A
00-99043-17	M8-FB17	16.9~17.1	25	M8xP1.25	99801-14	
00-99043-18	M8-FB18	17.9~18.1	25	M8xP1.25	99801-16	
00-99043-19	M8-FB19	18.9~19.1	30	M8xP1.25	99801-16	
00-99043-20	M10-FB20	19.9~20.1	30	M10xP1.5	99801-18	
00-99043-21	M10-FB21	20.9~21.1	30	M10xP1.5	99801-18	
00-99043-22	M10-FB22	21.9~22.1	30	M10xP1.5	99801-20	
00-99043-23	M10-FB23	22.9~23.1	30	M10xP1.5	99801-20	
00-99043-24	M10-FB24	23.9~24.1	30	M10xP1.5	99801-20	
00-99043-25	M10-FB25	24.9~25.1	30	M10xP1.5	99801-20	

Steel Extension Bar

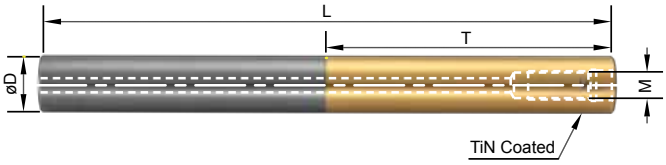
- Made by steel, hardened, TiN coated range is the maximum boring length.



Order No.	Part No.	øD	T	L	M	Assemble Torque
00-99801-12S	BC12-075M06S	12	25	75	M6xP1.0	11.8Nm
00-99801-14S	BC14-090M08S	14	30	90	M8xP1.25	28.6Nm
00-99801-16S	BC16-090M08S	16	35	90	M8xP1.25	28.6Nm
00-99801-18S	BC18-100M10S	18	40	100	M10xP1.5	56.7Nm
00-99801-20S	BC20-100M10S	20	40	100	M10xP1.5	56.7Nm
00-99801-25S	BC25-120M12S	25	50	120	M12xP1.75	99.0Nm

Solid Carbide Extension Bar

- Made by solid carbide, TiN coated range is the maximum boring length.



Order No.	Part No.	øD	T	L	M	Assemble Torque
00-99801-12W	BC12-100M06W	12	60	100	M6xP1.0	11.8Nm
00-99801-14W	BC14-120M08W	14	70	120	M8xP1.25	28.6Nm
00-99801-16W	BC16-150M08W	16	80	150	M8xP1.25	28.6Nm
00-99801-18W	BC18-150M10W	18	90	150	M10xP1.5	56.7Nm
00-99801-20W	BC20-200M10W	20	100	200	M10xP1.5	56.7Nm
00-99801-25W	BC25-200M12W	25	125	200	M12xP1.75	99.0Nm

Micro Adjustable Fine Boring Unit

EASY ADJUSTMENT

- High precision easy adjustment to accuracy of micron.
  Each division diameter 20μm,the adjusting diameter 2μm
- with sub-scale(except size 1)

UNIVERSAL APPLICATIONS

- Micro adjustable fine boring unit is designed for building single and
- multi-step boring bars according to different boring range and applications.
- Mounting position is identical to numbers of other brand in the market.

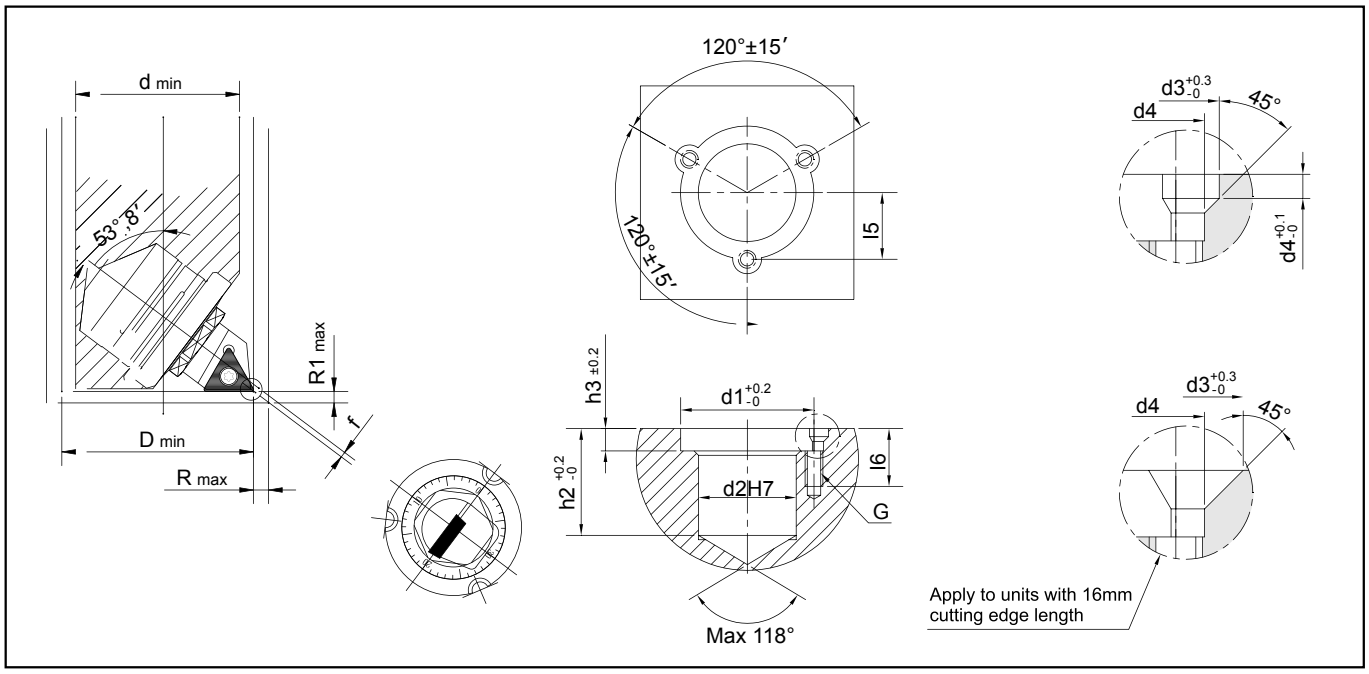
MECHANICAL DESIGN

- Thanks to springforce, backlash is eliminated over the entire adjustment range.
- Easy procedures of cartridge changing to avoid damage.

Micro Adjustable Fine Boring Unit

Angular Mounting 90°

- Insert to be used: CCMT, CCMW, CCGH, CCGT, CCGX, TCMT, TCMW, TCGT, TCGX
- Maximum range can be checked by end of spanner.



Ordering Code			Insert Radius	Dimensions / mm					Mounting Dimensions / mm									
				dmin	Dmin	Rmin	R1max	f	h2	h3	h4	d1	d2	d3	d4	G	l6	l5
99148-3106		06	0.2	22	25.7	2	1.5	0.40	11.5	2.8	1.6	19	16	4.6	3.2	M3	10	9.65 ±0.02
			0.4		25.4			0.40										
			0.8		24.8			0.45										
99148-3209	09		0.2	28.5	33.4	2.8	2.1	0.95	15.5	4	1.6	25	20	4.6	3.2	M3	10	12.5 ±0.02
			0.4		33.1			1.0										
			0.8		32.5			1.1										
99148-3311	11		0.2	38	42.9	4.8	3.6	1.15	24	5	1.8	30	22	6.5	4.3	M4	15	15.4 ±0.02
			0.4		42.6			1.2										
			0.8		42.0			1.3										
99148-3416	16		0.2	55	60.6	8	6	1.3	33	6.3	-	46	32	11.9	5.4	M5	20	23 ±0.02
			0.4		60.0			1.4										
			1.2		59.4			1.5										

Spare Parts For Setting And Clamping

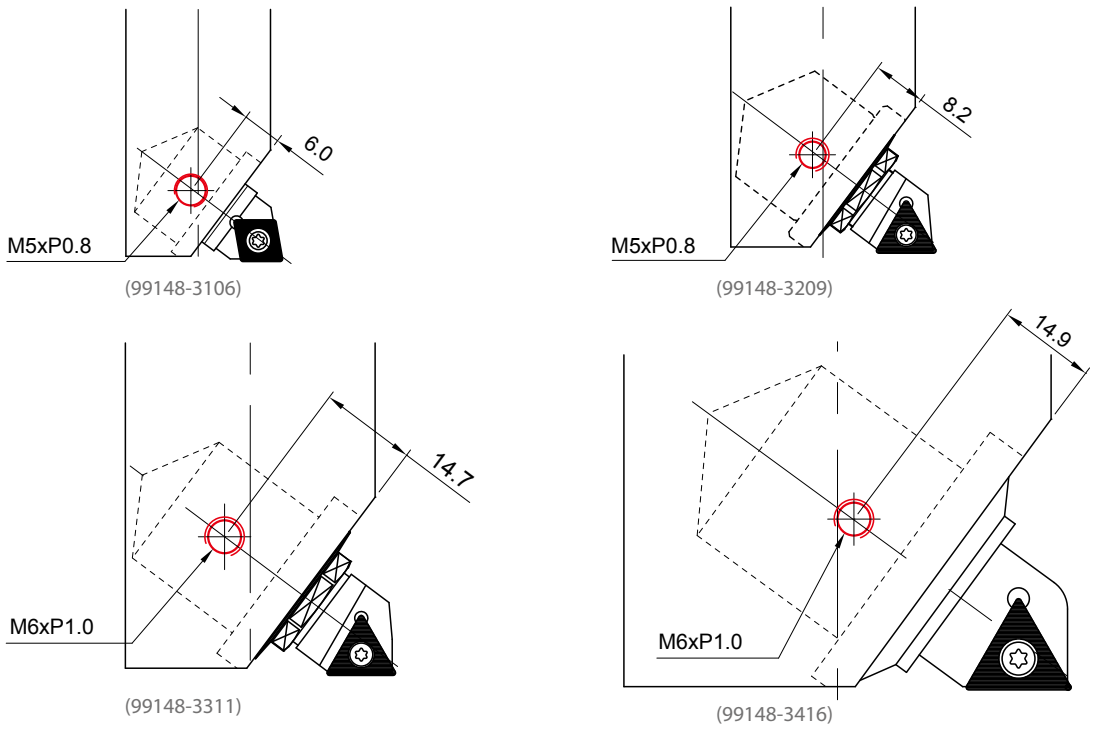
Item			Spanner	Mounting Screw	Insert Screw	Mounting Screw Key	Insert Screw Key	Mounting Screw Key
99148-3106		06	99148-3106-SP	99148-3106H	99148-3106I	NK-T9	NK-T7	-
99148-3209	09		99148-3209-SP	99148-3209H	99148-3209I	NK-T9	NK-T7	-
99148-3311	11		99148-3311-SP	99148-3311H	99148-3311I	NK-T15	NK-T7	-
99148-3416	16		99148-3416-SP	99148-3416H	99148-3416I	-	NK-T15	99148-3146-J

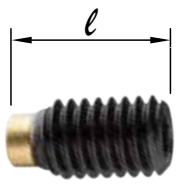
By add one screw to get greater precision

Advanced design

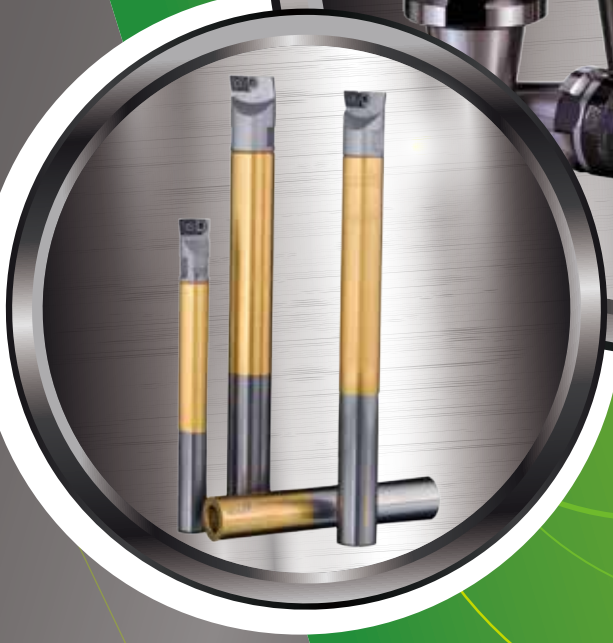
- The biggest advantage to add one brass-head set screw is to avoid any vibration when machining the bottom end of hole.
- It is to secure the MBU is well mounted in the pocket for stable boring process to get greater precision.
- Extend the tool life of boring insert.

Set screw position of boring head



Ordering Code	MBU Type	△	▽	Size	
				Illustration	ℓ
00-NSC-50085	99148-3106		06		8.5
00-NSC-50085	99148-3209	09			8.5
00-NSC-60115	99148-3311	11			11.5
00-NSC-60115	99148-3416	16			11.5

Notes



JIMMORE International Corp.

Distributor