



MILLING BORING SYSTEM



Milling Boring System

CONDITION OF BORING

Machining Material	ΦDia of Boring	A Type: Finish Machining A Type			D Type: Rough Machining D Type		
		Line Speed V(m/min)	Feed (mm/rev)	Depth of Cut (mm)	Line Speed V(m/min)	Feed (mm/rev)	Depth of Cut (mm)
Carbon Steel(S45C,S50C)	25-33	110-140	0.05-0.15	0.05-0.30	100-130	0.15-0.25	4.2
	32-42	115-150			105-140	0.15-0.30	5.7
	40-55			105-150	0.25-0.35	6.3	
	52-70		0.15-0.2		0.30-0.40		
	120-164				0.07-0.50		
	160-204						
Alloy Steel(SCM,SNCM)	25-33	100-130	0.05-0.15	0.05-0.30	90-120	0.15-0.25	4.2
	32-42	110-140			100-130	0.15-0.30	5.7
	40-55	110-150		0.06-0.35		0.20-0.30	6.3
	52-70		0.15-0.2			0.25-0.35	
	120-164					0.07-0.50	
	160-204						
Stainless Steel(SUS)	25-33	70-100	0.07-0.15	0.12-0.35	60-90	0.12-0.20	4.2
	32-42	80-110			70-100	0.15-0.25	5.7
	40-55			0.20-0.50		0.20-0.30	6.3
	52-70		0.1-0.20			0.25-0.35	
	120-164				0.25-0.75		
	160-204						
Cast Steel(FC)	25-33	70-100	0.07-0.15	0.12-0.35	60-110	0.20-0.30	4.2
	32-42	80-110				0.20-0.50	0.25-0.35
	40-55			0.12-0.2			0.30-0.40
	52-70		0.25-0.75				0.30-0.45
	120-164						
	160-204						
Aluminum Alloy(AC)	25-33	150-300	0.05-0.15	0.12-0.35	120-300	0.20-0.30	4.2
	32-42	150-360	0.10-0.20		150-370	0.25-0.35	5.7
	40-55			0.20-0.50		0.30-0.40	6.3
	52-70		0.10-0.25			0.30-0.45	
	120-164				0.25-0.75		
	160-204						
Special Steel(SKD61)	25-33	30-40	0.07-0.15	0.12-0.35	25-35	0.12-0.20	4.2
	32-42	40-45			30-40	0.15-0.25	5.7
	40-55			0.20-0.50		0.20-0.30	6.3
	52-70		0.10-0.2			0.25-0.35	
	120-164				0.25-0.75		
	160-204						



Milling Boring System

SPEED OF CUT AND POWER

Speed of Cut	$V = \frac{3.14 \times D \times N}{1000} \text{ (m/min)}$	V:Speed of Cut(m/min) D:ΦDia of Milling(mm)
Feed	$F = f \times Z \times N \text{ (MM/min)}$ $V = \frac{f}{Z \times N} \text{ (mm/tooth)}$	N:Rotating Speed(r.p.m) F:Table Feed(mm/min) Fz:Feed per Tooth(mm/tooth) Z:Tooth Number
Power	$W = \frac{Q \times K_s}{60 \times 102 \times \eta} \text{ (Km)}$ $Hp = \frac{W}{0.75} \text{ (Km)}$ $Q = \frac{L \times F \times d}{1000} \text{ (Km)} = \frac{d \times f \times V \times L \times z}{3.14 \times D}$	W:Power HP:Horse Power Needed Q:Output Volume L:Speed of Cut F:Table Feed(mm/min) d:Depth of Cut(mm) Ks:Non-Cutting Impedance η:Machinery Efficiency

Machining Material	Tensile Strength(kg/mm ²) & Rigidity	Non-Cutting Impedance for each feed(kg/mm ²)				
		0.1(mm/Tooth)	0.2(mm/Tooth)	0.3(mm/Tooth)	0.4(mm/Tooth)	0.5(mm/Tooth)
Mild Steel	520	2200	1950	1820	1700	1580
Sino Steel	620	1980	1800	1730	1600	1570
Hard Steel	720	2520	2200	2040	1850	1740
Tool Steel	670	1980	1800	1730	1700	1600
Tool Steel	770	2030	1800	1750	1700	1580
chrome-manganese steel	770	2300	2000	1880	1750	1660
chrome-manganese steel	630	2750	2300	2060	1800	1780
chrome-manganese steel	730	2540	2250	2140	2000	1800
chrome-manganese steel	600	2180	2000	1860	1800	1670
chromium nickel molybdenum steel	940	2000	1800	1680	1600	1500
chromium nickel molybdenum steel	HB352	2100	1900	1760	1700	1530
Cast Steel	520	2800	2500	2320	2200	2040
carbide cast steel	HRC46	3000	2700	2500	2400	2200
Preparation Castiron	360	2180	2000	1750	1600	1470
Gray Cast Steel	HB200	1750	1400	1240	1050	970
Brass	500	1150	950	800	700	630
(Al-Mg)Hard Alloy	160	580	480	400	350	320
(Al-Si) Hard Alloy	200	700	600		450	390

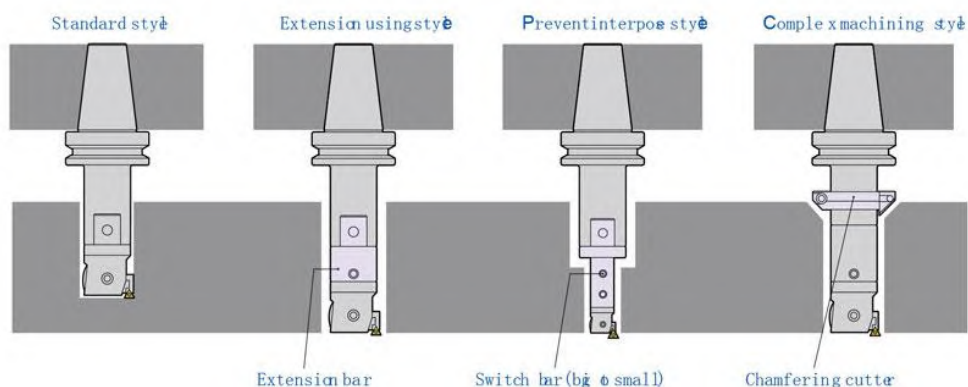
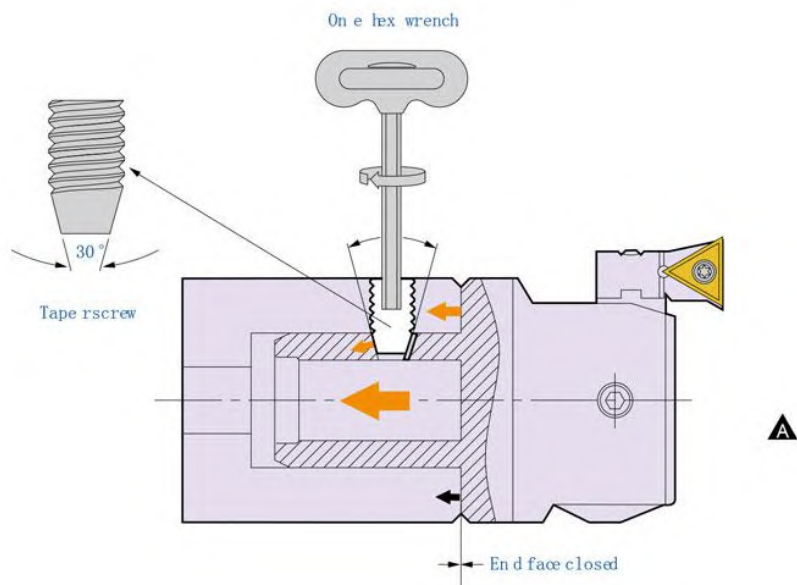


Milling Boring System

HCK MODULAR BORING BAR

HIGH PRECISION, BIG POWER AND EASY OPERATION--THE BEST CONNECTION

ON STYLE



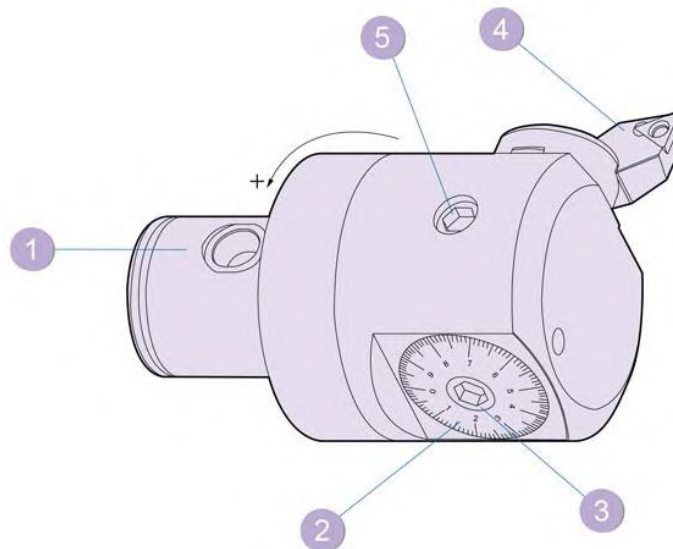
- To change settled force into axial pull with the 30 angle taper screw, so the end face of boring bar and holder touch closely. (Show as chart A)
- Modular designs can set on machining diameter and available process depth freely and easy for choosing. Reducing the cutter diameter of switch head (size) can not only assure the rigidity but also prevent interpose; then cooperating with chamfering machine, there is the most suitable boring bar in free combination. (show as chart B)
- Because the boring head and holder minutely connected, so we should setting cutting head separated, Then it can increase the job efficiency, reduce the labor intensity and colligation cost.



Milling Boring System

THE NAME OF THE MAIN PART OF PRODUCTS WITH CBH

- 1 CBH Stem
- 2 Micro Adjusting Knob
- 3 CBH Head
- 4 Blade Block
- 5 Fixed Screw



SEQUENCE OF USE

Please operate the following step (1–5) according to the diagram figured:

Step1.Loosening the fixed screws.

Step2.Rotating tune knob by clockwise to increase the processing diameter, the graduate is $\Phi 0.01\text{mm}$.

Step3.Rotating by anti-clockwise will decrease the processing diameter.

Step4.When adjusting the size of processing, please fine-tuning by the same direction to ensure mirco adjustment Precision.

Step5.When meet the demanded size, please use the proper force to lock the fasten screws.

NOTICES OF THE USER

1.Using in the processing range .

2.Do not rotate the adjustment knob when the slide is tightly locked, or the adjusting mechanism will be destroyed.

3.Please use special wrench to fix the slide, too much force will be seat shift, on the contrary, there will be accuracy of non-performing.

4.Our products use micro screws, mobile slide to rotate the adjustment knob. You should make sure the following notices and adjusting with great resistance or it can not move:

①Whether the fixed screw is loosened.

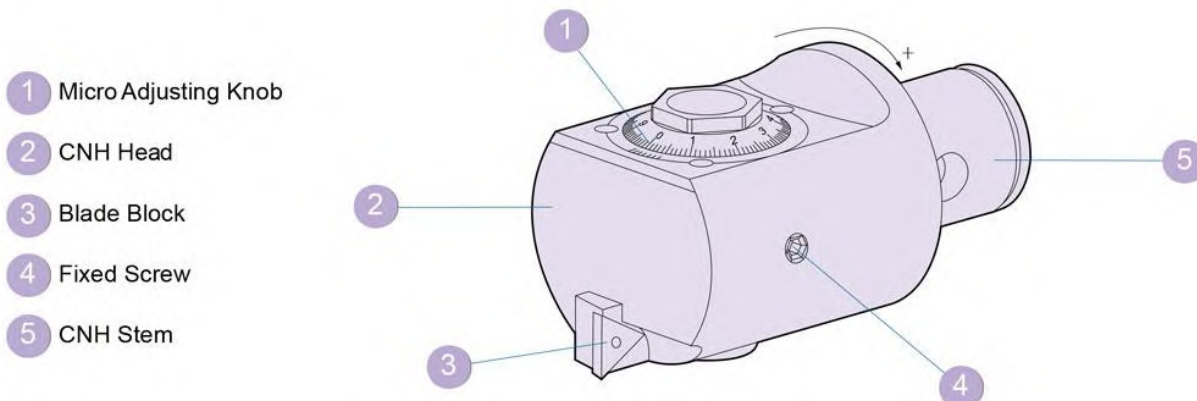
②Whether it is out of the adjustment range.

③Too much force will make cutting tools dead and the precision of boring head destroyed.



Milling Boring System

THE NAME OF THE MAIN PART OF PRODUCTS WITH CNH



SEQUENCE OF USE

Please operate the following step (1–5) according to the diagram figured:

Step1.Loosening the fixed screws.

Step2.Rotating tune knob by clockwise to increase the processing diameter, the graduate is $\Phi 0.01\text{mm}$.

Step3.Rotating by anti-clockwise will decrease the processing diameter.

Step4.When adjusting the size of processing, please fine-tuning by the same direction to ensure mirco adjustment Precision.

Step5.When meet the demanded size, please use the proper force to lock the fasten screws.

NOTICES OF THE USER

1.Using in the processing range .

2.Do not rotate the adjustment knob when the slide is tightly locked, or the adjusting mechanism will be destroyed.

3.Please use special wrench to fix the slide, too much force will be seat shift, on the contrary, there will be accuracy of non-performing.

4.Our products use micro screws, mobile slide to rotate the adjustment knob. You should make sure the following notices and adjusting with great resistance or it can not move:

①Whether the fixed screw is loosened.

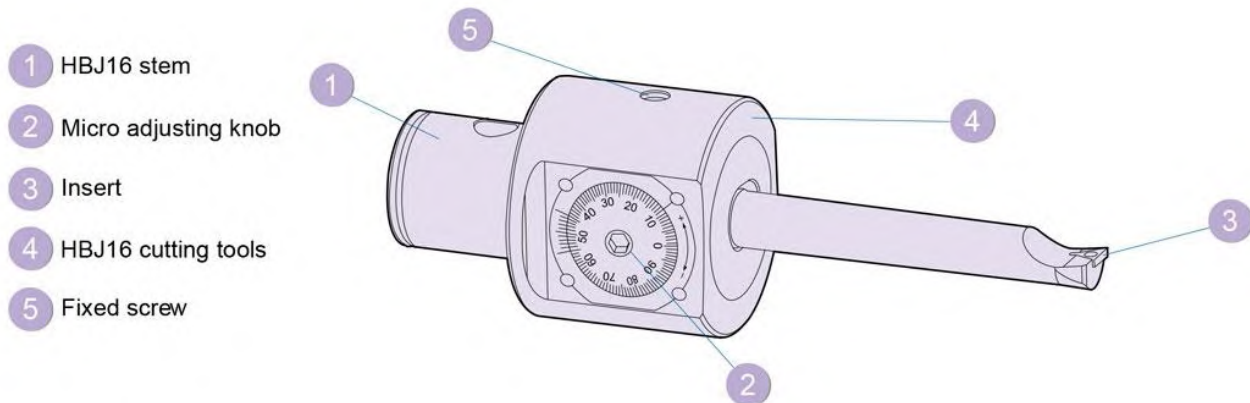
②Whether it is out of the adjustment range.

③Too much force will make cutting tools dead and the precision of boring head destroyed.



Milling Boring System

THE NAME OF THE MAIN PART OF PRODUCTS WITH DBJ16



SEQUENCE OF USE

Please operate the following step (1–6) according to the diagram figured:

Step1.Using special wrench to lock two M10 screws to fasten the cutting tools in the processing size range.

Step2.Loosening the fixed screws.

Step3.Rotating tune knob by clockwise to increase the processing diameter, the graduate is $\Phi 0.01\text{mm}$.

Step4.Rotating by anti-clockwise will decrease the processing diameter.

Step5.When adjusting the size of processing, please fine-tuning by the same direction to ensure mirco adjustment Precision.

Step6.When meet the demanded size, please use the proper force to lock the spindle orientation to make spindle fix into the substance.

NOTICES OF THE USER

1.Using in the processing range $\Phi 11\text{mm}$.

2.Do not rotate the adjustment knob when the slide is tightly locked, or the adjusting mechanism will be destroyed.

3.Please use special wrench to fix the slide with three M10 screws, too much force will be axis-oriented shift, on the contrary, there will be accuracy of non-performing.

4.Our products use micro screws, spindle orientation to rotate adjusting knob. You should make sure the following notices and adjusting with great resistance or it can not move:

①Whether the guiding shaft of the fixed screw is loosened.

②Whether it is out of the adjustment range.

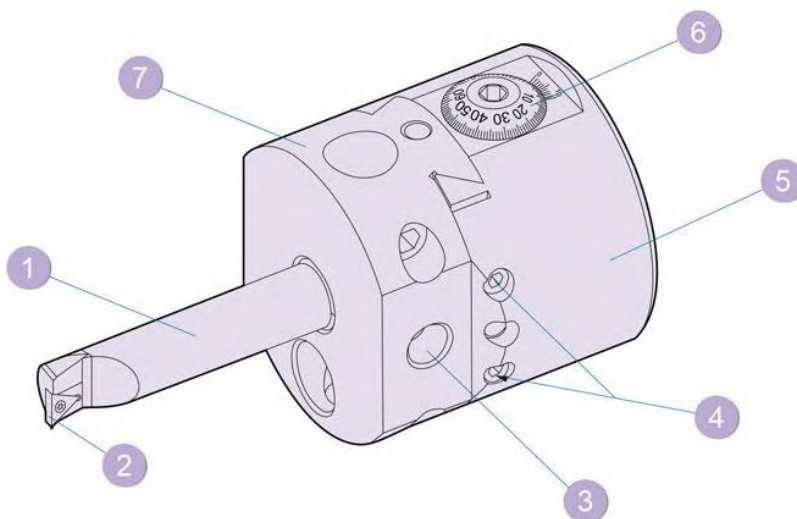
③Too much force will make cutting tools dead and the precision of boring head destroyed.



Milling Boring System

THE NAME OF THE MAIN PART OF PRODUCTS WITH NBH2084

- 1 NBH2084 Cutting Tools
- 2 Insert
- 3 Cutting ToolsFixed Screw
- 4 Slide Fixed Screw
- 5 Base
- 6 Micro Adjusting Knob
- 7 Head Slide



SEQUENCE OF USE

Please operate the following step (1–6) according to the diagram figured:

Step1.Fixing the cutting tools in the processing size range, using special wrench to rotate the screws.

Step2.Loosening the swallowtail solid groove, fixing with two screws.

Step3.Rotating tune knob by anti-clockwise to increase the processing diameter, the graduate is $\Phi 0.01\text{mm}$.

Step4.Rotating by clockwise will decrease the processing diameter.

Step5.When adjusting the size of processing, please fine-tuning by the same direction to ensure mirco adjustment Precision.

Step6.When meet the demanded size, please use the proper force to fasten two M8 screws of the boring then the slide can fixed to the block body.

NOTICES OF THE USER

1.Using in the range of processing.

2.Do not rotate the adjustment knob when the slide is tightly locked, or the adjusting mechanism will be destroyed.

3.Please use special wrench to fix the slide with two M8 screws, too much force will be seat shift, on the contrary, there will be accuracy of non-performing.

4.Our products use micro screws, mobile slide to rotate the adjustment knob. You should make sure the following notices and adjusting with great resistance or it can not move:

①Whether the guiding shaft of the fixed screw is loosened.

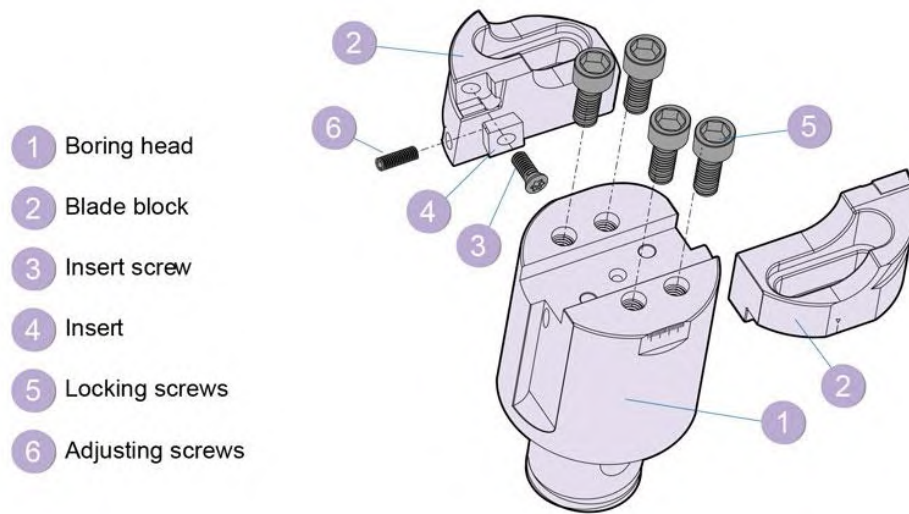
②Whether it is out of the adjustment range.

③Too much force will make screw stem and T nut dead, thus the slide will come off to undermine precision.



Milling Boring System

INSTRUCTIONS OF DBH DUAL BLADES MODULAR ROUGH BORING AND HBH INTERRUPTED ROUGH BORING

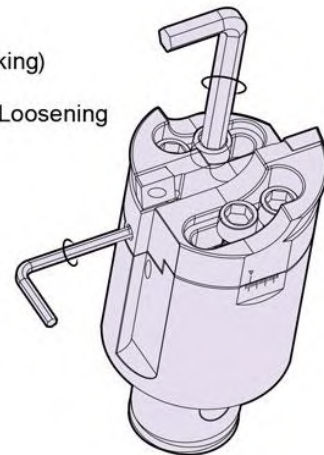


Step 1: Clockwise (Locking)

Step 3: Anticlockwise: Loosening

Step 2

Step 4



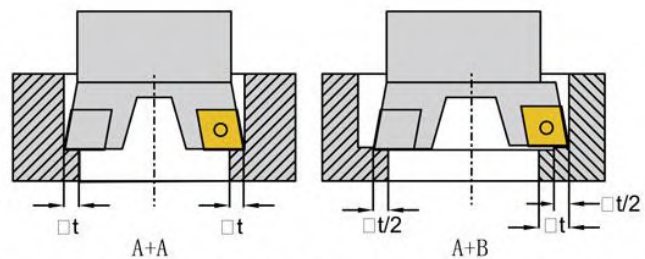
PROCESSING METHOD

1. During plain-blade cutting processing, i.e. equal height and dimension of A and B blade, the cutting feed is twice of single blade cutting. This method is suitable for cutting less output or easy cutting material such as cast iron, aluminum, or copper, etc.

2. During high-low cutting processing, i.e. unequal height of A and B blade, the cutting feed is same with single blade cutting. This method is suitable for cutting more output or hard cutting material such as steel, etc.

a. When A and B blade bearing be mutual exchanged side to form high-low blade, i.e. A blade bearing to match B matching face, B blade bearing to match A matching face.

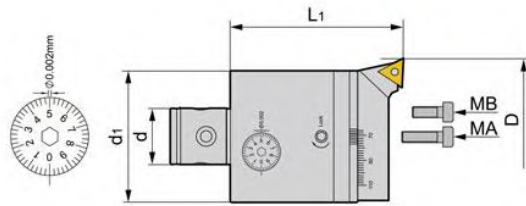
b. Be careful that the adjusted cutting output of high blade and low blade should be same. In that case the two sides cutting and counteractive will be balanced to prevent of resonance and damage from excessive force on single blade.





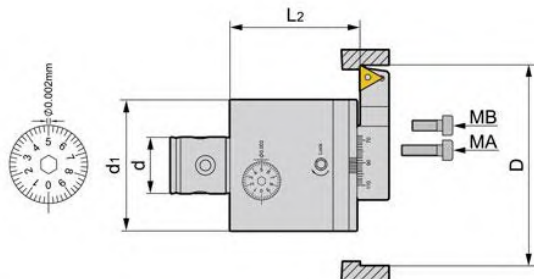
MILLING BORING SYSTEM - Micro Boring

FBH Micro-Finishing Cutter Fine Boring System



Code No.	Size(mm)		Boring Range	Modular Holder	Cutting Insert Holder	Weight
	d1	L1				
HCK2-FBH25-M	25	50	29-38	HCK2	MLTP2938	0.16
HCK3-FBH32-M	32	63	36-52	HCK3	MLTP3652	0.37
HCK4-FBH40-M	40	63	44-68	HCK4	MLTP4468	0.53
HCK5-FBH50-BM	50	80	57-90	HCK5	MLTP5790	1.05
HCK6-FBH63-BM	63	80	70-110	HCK6	MLTP70110	1.65
HCK6-FBH63-BM	63	80	110-150		MLTP110150	1.76

FBH Micro-Finishing Cutter For Reverse Fine Boring System

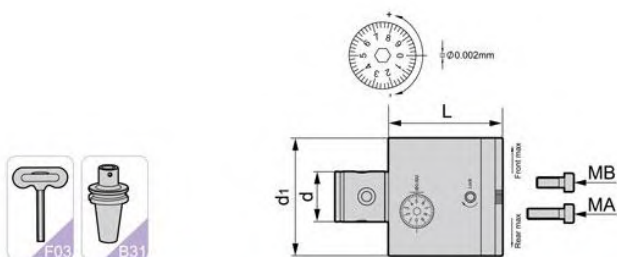


Code No.	Size(mm)		Boring Range	Modular Holder	Cutting Insert Holder	Weight
	d1	L1				
HCK2-FBH25-MK	25	42	29-38	HCK2	MLTP2938	0.16
HCK3-FBH32-MK	32	52	36-52	HCK3	MLTP3652	0.37
HCK4-FBH40-MK	40	53	44-68	HCK4	MLTP4468	0.53
HCK5-FBH50-BMK	50	63	57-90	HCK5	MLTP5790	1.05
HCK6-FBH63-BMK	63	63	70-110	HCK6	MLTP70110	1.65
HCK6-FBH63-BMK	63	63	110-150		MLTP110150	1.76



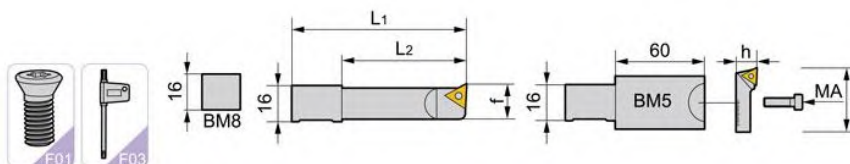
MILLING BORING SYSTEM - Micro Boring

Body For FBH Micro-Finishing Cutter Fine Boring



Code No.	Size(mm)			Front	Rear	MA Bolt	MB Bolt	Weight
	d1	d1	L					
HCK2-FBH25	14	25	42	1	1	ATH0512	-	0.15
HCK3-FBH32	18	32	52	2	2	ATH0612	-	0.35
HCK4-FBH40	22	40	53	2	2	ATH0612	-	0.50
HCK5-FBH50	28	50	63	2	2	BM8	-	0.92
HCK6-FBH63	36	63	63	4	4	BM8	ATH0816	1.52

FBH Micro-Finishing Cutting Bar

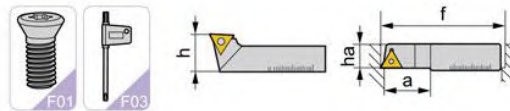


Code No.	Size(mm)		Boring Range	Boring Head	Insert	Screw	Wrench	Weight
	L1	L2						
HR1606-21	55	21	6-9	HCK5-FBH50 HCK6-FBH63	WBGT0601..L	M2	T6	0.04
HR1608-28	59	28	8-11		TBGT0601..L	M2	T6	0.04
HR1610-35	65	35	10-13		TPGH0902..L	M2.5	T8	0.05
HR1612-42	70	42	12-15					0.06
HR1614-50	77	50	14-17					0.07
HR1614-60	85	60	16-20					0.09
HR1614-65	88	65	20-24		TPGH1103..L	M3	T10	0.11
HR1614-68	91	68	24-28					0.12
BM5	60+MLTP2938 or MLTP4468 or MLTP5790					AHL0512	L4	0.25
BM8	+MLTP70110 or MLTP110150					AHL0820	L6	0.03



MILLING BORING SYSTEM - Micro Boring

FBH Micro-Finishing Cutting Insert Holder



Code No.	Size(mm)		Boring Range	Boring Head	Insert	Screw	Wrench	Weight
	h	f						
MLTP2938	11	27	29-38	HCK2-FBH25	TPGH0902..L	M2.5	T8	0.01
MLTP3652	13	35	36-52	HCK3-FBH32				0.02
MLTP4468	13	43	44-68	HCK4-FBH40				0.03
MLTP5790	20	54	57-90	HCK5-FBH50	TPGH1103..L	M3	T10	0.10
MLTP70110	20	66	70-110	HCK6-FBH63				0.10
MLTP110150	20	106	110-150	HCK6-FBH63				0.21

FBH Micro-Finishing Reverse Cutting Insert Holder

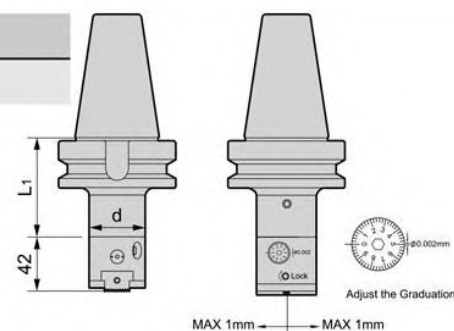
Code No.	Size(mm)			Boring Range	Boring Head	Insert	Screw	Wrench	Weight
	a	ha	f						
MRTP2938	6	11	27	29-38	HCK2-FBH25	TPGH0902..L	M2.5	T8	0.01
MRTP3652	10	11	35	36-52	HCK3-FBH32				0.02
MRTP4468	12	11	43	44-68	HCK4-FBH40				0.03
MRTP5790	14	15	54	57-90	HCK5-FBH50	TPGH1103..L	M3	T10	0.10
MRTP70110	16	15	66	70-110	HCK6-FBH63				0.10
MRTP110150	25	15	106	110-150	HCK6-FBH63				0.21



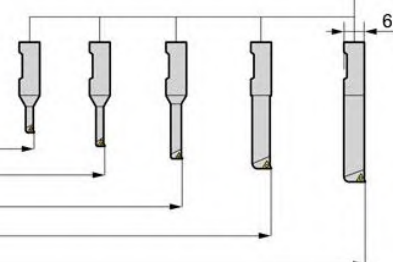
MILLING BORING SYSTEM - Micro Boring

HCK2-FBH25P Micro-Finishing Cutter Fine Boring System

Code No.	Size(mm)	Boring Range	Modular Holder	Weight
	L1			
BT30-HCK2-FBH25P	80	2-6	BT30-HCK2-80	0.71
BT40-HCK2-FBH25P	75	2-6	BT40-HCK2-75	1.30

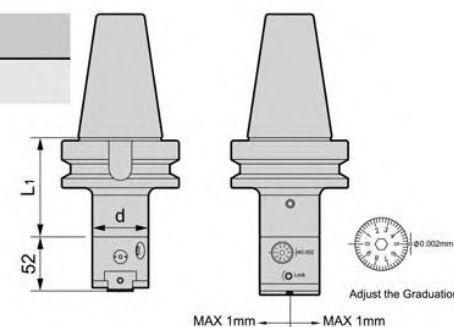


Cutting Bar	Boring Range	DM	Weight
TA0602-10	2-3.2	10	0.01
TA0603-16	3-4.2	16	0.01
TA0604-22	4-5.2	22	0.02
TA0605-28	5-6.2	28	0.02
TA0606-32	6-7.2	32	0.02

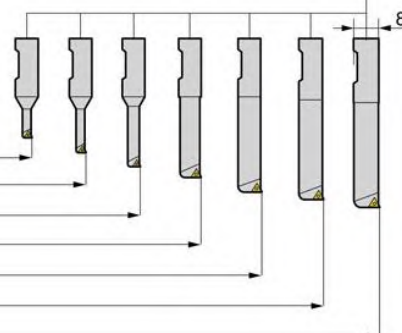


HCK3-FBH32P Micro-Finishing Cutter Fine Boring System

Code No.	Size(mm)	Boring Range	Modular Holder	Weight
	L1			
BT30-HCK3-FBH32P	80	2-8	BT30-HCK2-80	1.02
BT40-HCK3-FBH32P	80	2-8	BT40-HCK2-80	1.61



Cutting Bar	Boring Range	DM	Weight
TA0802-10	2-3.2	10	0.03
TA0803-16	3-4.2	16	0.03
TA0804-22	4-5.2	22	0.03
TA0805-28	5-6.2	28	0.04
TA0806-32	6-7.2	32	0.04
TA0807-36	7-8.2	36	0.04
TA0808-42	8-9.2	42	0.05



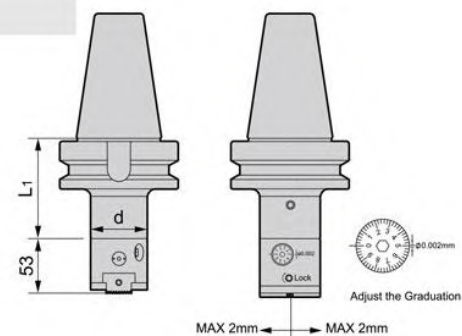


MILLING BORING SYSTEM - Micro Boring

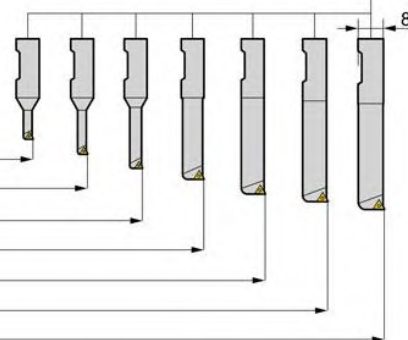
HCK4-FBH40P Micro-Finishing Cutter Fine Boring System



Code No.	Size(mm)	Boring Range	Modular Holder	Weight
	L1			
BT30-HCK4-FBH40P	70	2-8	BT30-HCK4-70	1.21
BT40-HCK4-FBH40P	70	2-8	BT40-HCK4-70	1.61



Cutting Bar	Boring Range	DM	Weight
CA0802-09	2-3.2	9	0.03
CA0803-16	3-4.2	16	0.03
CA0804-22	4-5.2	22	0.03
CA0805-27	5-6.2	27	0.04
CA0806-32	6-7.2	32	0.04
CA0807-37	7-8.2	37	0.04
CA0808-42	8-9.2	42	0.05



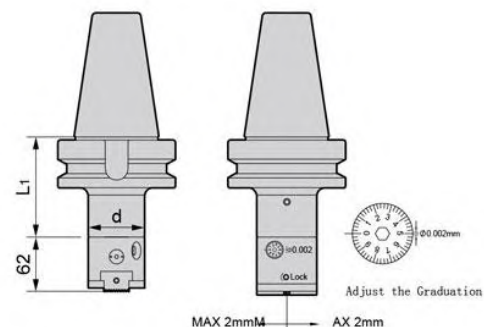


MILLING BORING SYSTEM - Micro Boring

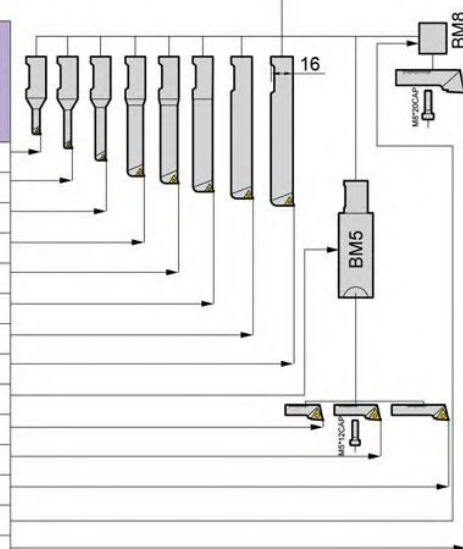
HCK5-FBH50P Micro-Finishing Cutter Fine Boring System



Code No.	Size(mm)	Boring range	Modular holder	Weight
	L1			
BT30-HCK5-FBH50P	70	6-90	BT30-HCK5-70	8.2
BT40-HCK5-FBH50P	80	6-90	BT40-HCK5-80	10.8
BT50-HCK5-FBH50P	90	6-90	BT40-HCK5-90	11.3



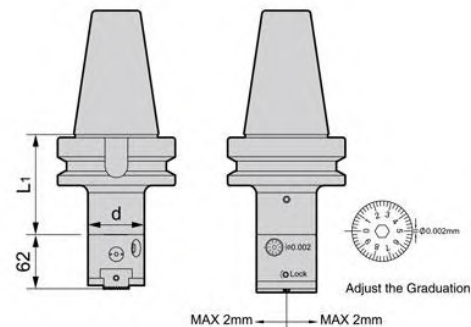
Cutting bar	Boring range	Depth L	Insert	Screw	Wrench	Weight
BR1606-21	6-9	21	WBG0601..L	M2	T6	0.04
BR1608-28	8-11	28	TBGT0601..L	M2	T6	0.04
BR1610-35	10-13	35				0.05
BR1612-42	12-15	42	TPGH0902..L	M2.5	T8	0.06
BR1614-50	14-17	50				0.07
BR1616-60	16-20	60				0.09
BR1620-65	20-24	65	TPGH1103..L	M3	T8	0.11
BR1624-68	24-28	68				0.12
BM5		60+MLTP2938 or MLTP3652 or MLTP4468			L4	0.25
MLTP2938	29-38	+10	TPGH0902..L	M2.5	T8	0.01
MLTP3652	36-52	+12				0.02
MLTP4468	44-68	+12				0.03
BM8		+MLTP5790			L6	0.03
MLTP5790	57-90	+20	TPGH1103..L	M3	T10	0.10





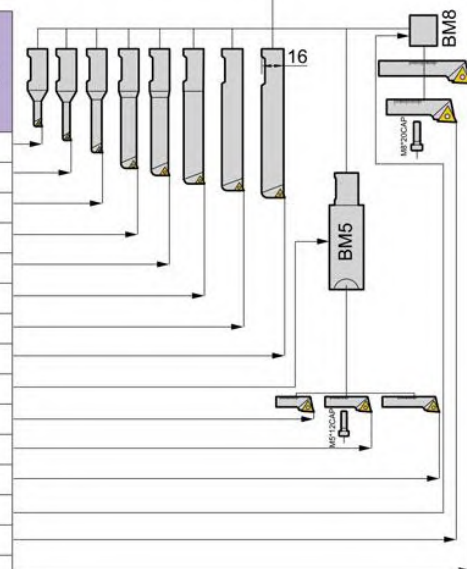
MILLING BORING SYSTEM - Micro Boring

HCK6-FBH63P Micro-Finishing Cutter Fine Boring System



Code No.	Size(mm)	Boring range	Modular holder	Weight
	L1			
BT30-HCK6-FBH63P	55	6-150	BT40-HCK6-55	8.2
BT40-HCK6-FBH63P	85	6-150	BT50-HCK6-85	10.8
BT50-HCK6-FBH63P	155	6-150	BT50-HCK6-155	11.3

Cutting bar	Boring range	Depth L	Insert	Screw	Wrench	Weight
BR1606-21	6-9	21	WBGT0601..L	M2	T6	0.04
BR1608-28	8-11	28	TBGT0601..L	M2	T6	0.04
BR1610-35	10-13	35				0.05
BR1612-42	12-15	42	TPGH0902..L	M2.5	T8	0.06
BR1614-50	14-17	50				0.07
BR1616-60	16-20	60				0.09
BR1620-65	20-24	65				TPGH1103..L
BR1624-68	24-28	68	0.12			
BM5		60+MLTP2938 or MLTP3652 or MLTP4468			L4	0.25
SRTP2938	29-38	+10	TPGH0902..L	M2.5	T8	0.01
SRTP3652	36-52	+12				0.02
SRTP4468	44-68	+12				0.03
BM8		+MLTP5790		AHL0820	L6	0.03
SRTP70110	70-110	+20	TPGH1103..L	M3	T10	0.10
SRTP110150	110-150	+20				0.21





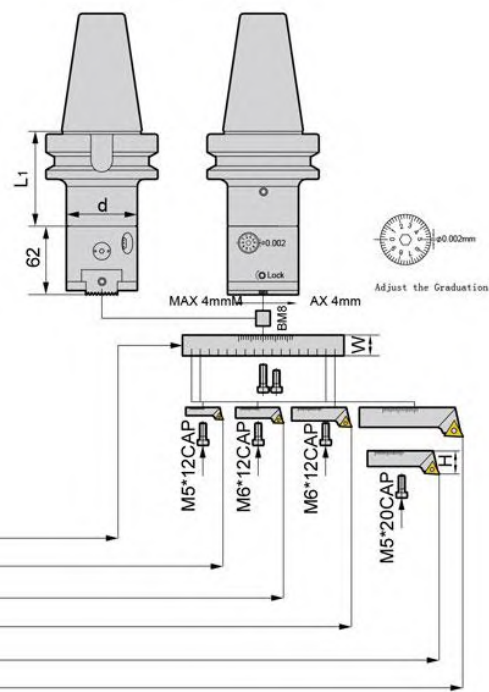
MILLING BORING SYSTEM - Micro Boring

HCK6-FBH63 Micro-Finishing Cutter Fine Boring System



Code No.	Size(mm)	Boring Range	Modular holder	Weight
	L1			
BT30-HCK6-FBH63	55	6-150	BT40-HCK6-55	8.2
BT40-HCK6-FBH63	85	6-150	BT50-HCK6-85	10.8
BT50-HCK6-FBH63	155	6-150	BT50-HCK6-155	11.3

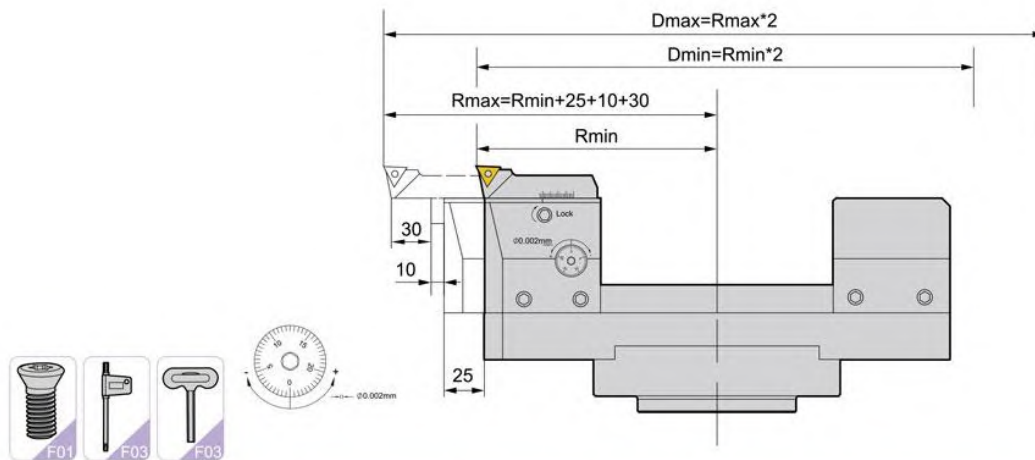
Code No.	Boring Range	Size(mm)	Weight
		H	
PS140-20	+BM8	20	0.43
MLTP2938	150-200	10	0.01
MLTP3652	160-210	12	0.02
MLTP4468	170-220	12	0.03
MLTP70110	140-240	19	0.10
MLTP110150	180-280	19	0.21





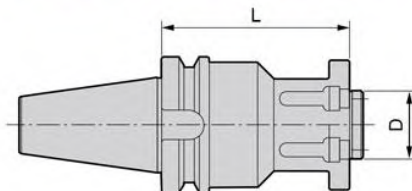
MILLING BORING SYSTEM - Micro Boring

FBH Large Diameter Modular Micro Boring Head



Code No.	Boring range	Micro-Finishing Cutter Fine Boring System					Boring range
		Extension Slid	Boring Heads Bar	Moudular Holder	Blance Holder	Cutting Insert Holder	
BST-FBH200-310	200-260	HST200	BST	HST200	HSP200	MLTP70110	9.7
BST-FBH200-310	250-310					MLTP110150	9.8
BST-FBH300-410	300-360					MLTP70110	11.7
BST-FBH300-410	350-410					MLTP110150	11.8
BST-FBH400-510	400-460					MLTP70110	13.7
BST-FBH400-510	450-510					MLTP110150	13.8
BST-FBH500-610	500-560					MLTP70110	15.7
BST-FBH500-610	550-610					MLTP110150	15.8
BST-FBH600-710	600-660					MLTP70110	17.7
BST-FBH600-710	650-710					MLTP110150	17.8
BST-FBH700-810	700-760					MLTP70110	19.7
BST-FBH700-810	750-810					MLTP110150	19.8
BST-FBH800-910	800-860					MLTP70110	21.7
BST-FBH800-910	850-910					MLTP110150	21.8

BST Boring Head Holder



BST Basic holder for roughness and precision boring bar
(Boring range > 200)

Code No.	Size(mm)		Weight
	D	L	
BT50-BST-100	50	100	5.7
BT50-BST-150		150	7.4
BT50-BST-200		200	8.8
BT50-BST-250		250	10.3
BT50-BST-300		300	11.3
BT50-BST-350		350	12.3



Technical drawing of a lock assembly. The drawing includes a side view of the lock body with dimensions L and d . A detail view shows the lock body with dimensions L_1 and L_2 , and a detail view of the lock cylinder with dimensions w and aw . The lock body is labeled "Micro mobile" and "Mobile". The lock cylinder is labeled "MA". The lock body is also labeled "Lock" and "0.02mm". The lock body is also labeled "MA" and "MA". The lock body is also labeled "e".

Code No.	Size(mm)			Weight
	d	L ₁	L ₂	
HST-600	600	261	266	9.40
HST-700	700	311	316	11.00
HST-800	800	361	366	12.60



MILLING BORING SYSTEM - Micro Boring

Body And Balance Holder For Diameter Finishing Cutter Fine Boring System



Code No.	Mobile	Micro Mobile	Boring Range	MA Bolt	Wrench	Weight
HSJ-200	25	10	ATH0816	L5,L6	3.00	
HSP-200	-	-		L6		

Cutting Insert Holders For ABH Adjustable Twin Roughing



Code No.	Size(mm)		Mobile	Insert	Screw	Wrench	Weight
	w	e					
MLTP70110	20	66	15	TPGS1103L	ATH0816	L6	0.10
MLTP110150		106	30				0.21

Reverse Cutting Insert Holders For ABH Adjustable Twin Roughing



Code No.	Size(mm)			Mobile	Insert	Screw	Wrench	Weight
	aw	wk	e					
MRTP70110	16	66	66	15	TPGH1103R	ATH0816	L6	0.10
MRTP110150	25	106	106	30				0.21

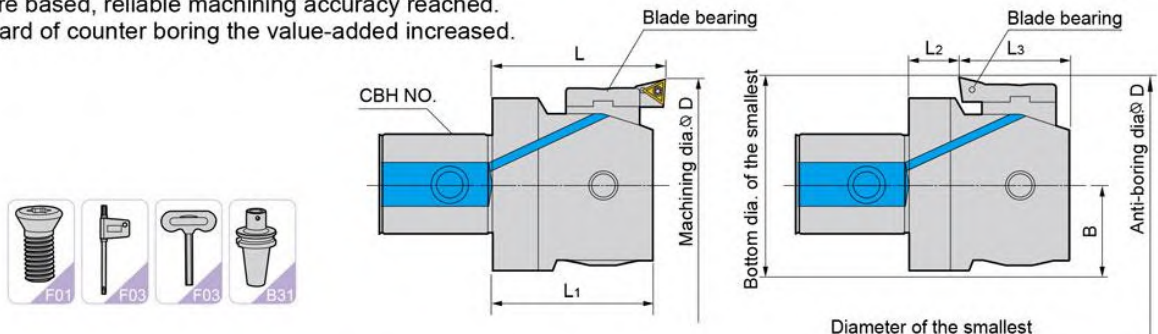


MILLING BORING SYSTEM - Micro Boring

CBH Micro Boring Head

Feature

- Center for the cold manths.
- Balancing structure based, reliable machining accuracy reached.
- Against the standard of counter boring the value-added increased.



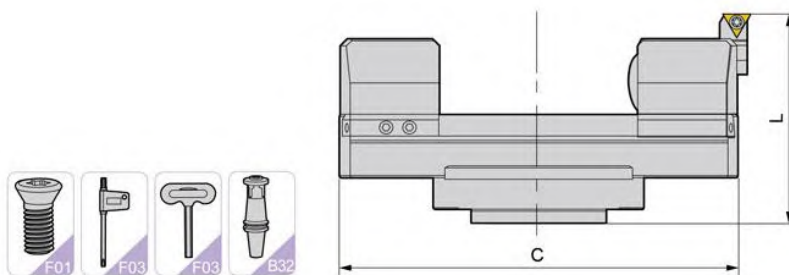
Code No.	Boring			Counter Boring				Modular Holder	Blade Bearing	Insert	Weight
	L1	L	Range	B	L2	L3	Range				
HCK1-CBH20-36	29.5	32.5	20-26	10	10.5	19	-	HCK1	CBH1-1	TP08	0.07
			25-31				30-31		CBH1-2		
			30-36				30-36		CBH1-3		
HCK2-CBH25-47	32.5	35.5	25-33	12.5	11.5	21	-	HCK2	CBH2-1	TP08	0.12
			32-40				36-40		CBH2-2		
			39-47				39-47		CBH2-3		
HCK3-CBH32-60	35	40	32-42	16	10	25	-	HCK3	CBH3-1	TP08	0.21
			41-51				46-51		CBH3-2		
			50-60				50-60		CBH3-3		
HCK4-CBH41-74	43	47	41-54	20	14	29	-	HCK4	CBH4-1	TC11	0.40
			50-63				53-63		CBH4-2		
			61-74				61-74		CBH4-3		
HCK5-CBH53-95	53	57	53-70	25.5	19	34	62-70	HCK5	CBH5-1	TC11	1.10
			65-82				65-82		CBH5-2		
			78-95				78-95		CBH5-3		
HCK6-CBH68-150	67.2	71	68-100	32.5	22	45.2	80-100	HCK6	CBH6-1	TC11	1.47
			94-126				94-126		CBH6-2		
			118-150				118-150		CBH6-3		
HCK7-CBH100-203	67.2	71	100-153	45.5	22	45.2	112-153	HCK6	CBH6-1	TC11	2.46
			126-179				126-179		CBH6-2		
			150-203				150-203		CBH6-3		

Code No.	Drawing of Shape	Boring Head	Code No.	Drawing of Shape	Boring Head	Code No.	Drawing of Shape	Boring Head
CBH1-1	 TP08	HCK1-CHB20-36	CBH4-1	 TP11	HCK4-CHB41-74	CBH4-1	 TC11	HCK4-CHB41-74
CBH1-2			CBH4-2			CBH4-2		
CBH1-3			CBH4-3			CBH4-3		
CBH2-1		HCK2-CHB25-47	CBH5-1		HCK5-CHB53-95	CBH5-1		HCK5-CHB53-95
CBH2-2			CBH5-2			CBH5-2		
CBH2-3			CBH5-3			CBH5-3		
CBH3-1		HCK3-CHB32-60	CBH6-1		HCK6-CHB68-150 HCK6-CHB110-203	CBH6-1		HCK6-CHB68-150 HCK6-CHB100-203
CBH3-2			CBH6-2			CBH6-2		
CBH3-3			CBH6-3			CBH6-3		



MILLING BORING SYSTEM - Micro Boring

CBH Large Diameter Modular Micro Boring Head



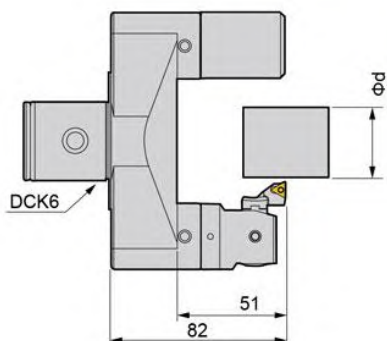
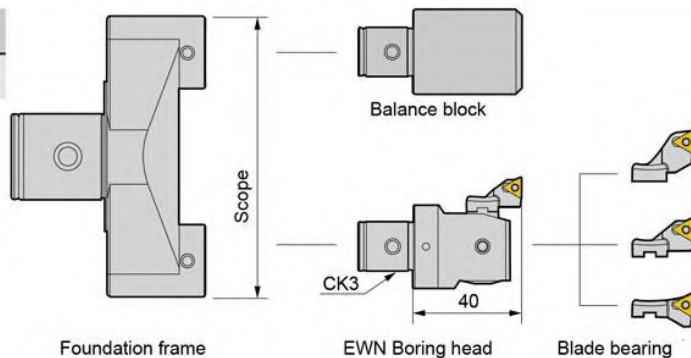
Code No.	Size(mm)		Boring Range	Modular Holder	Insert	Screw	Wrench	Total Weight
	C	L						
BST-CBH200310	180	130	200-310	BST	TP**0902	M2.5 M3	T8	9.7
BST-CBH300410	280		300-410					11.7
BST-CBH400510	380		400-510					13.7
BST-CBH500610	480		500-610					15.7
BST-CBH600710	580		600-710					17.7
BST-CBH700810	680		700-810					19.7
BST-CBH800910	780		800-910					21.7

Module	Code No.	Figure	Weight
Modular Holder	BT50-BST Series		-
Flange	BST-FL200		2.7
Extension Slide	HST200		3.4
	HST300		5.4
	HST400		7.4
	HST500		9.4
	HST600		11.4
	HST700		13.4
	HST800		15.4
Balance Weight	HBN300		1.6
Finish Head	CB200		
Suit Insert	TPGH080202/M2.2/T7, TPGH090204/M2.5/T8, TCMT110204/M2.5/T8, TPGH110304/M3/T15		



MILLING BORING SYSTEM - Micro Boring

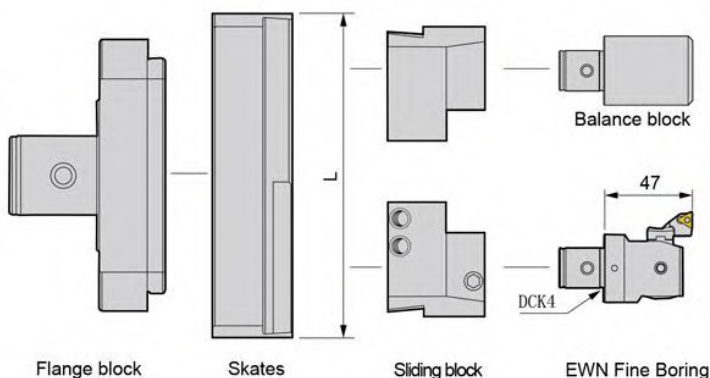
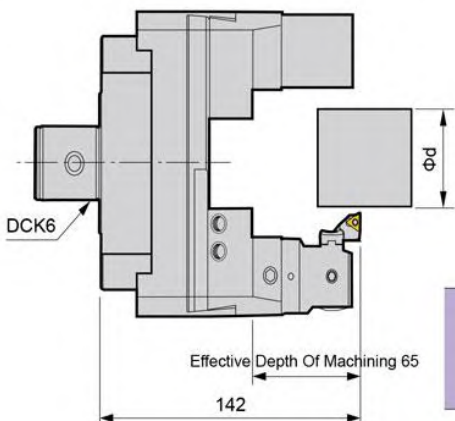
CBH-M Counter Boring Head



Range Ød	Foundation Frame	Boring Head	Balance Block	Balance Bearing	Insert
24-34	HCK6-2454-42 Range114	CBH32-60	HCK3-CBH	CBH3-3	TP08
34-44				CBH3-2	
44-54				CBH3-1	
52-62	HCK6-5282-42 Range142			CBH3-3	
62-72				CBH3-2	
72-82				CBH3-1	
80-90	HCK6-80110-42 Range170			CBH3-3	
90-100				CBH3-2	
100-110				CBH3-1	

Notice: 1. Excluding: boring head, balance block, blade block and insert. 2. REV.
3. The FWD when making boring machining.

CBH-L Counter Boring Head



Range Ød	Connection Plate	Horizontal Slide		Sliding Block	Boring Head	Balance Block
		Type	L			
13-101	HCK6-FL200	HST-200	180	CB200-HCK4	CBH41-74 Blade Bearing 4-1 Insert TC11	HCK4
100-201		HST-300	280			
200-301		HST-400	380			
300-401		HST-500	480			
400-501		HST-600	580			
500-601		HST-700	680			
600-701		HST-800	780			

Notice: 1. CBH boring head incidentals one blade bearing (CBH4-1), the insert should order to others.
2. When machining, the spindle should be a reversal.

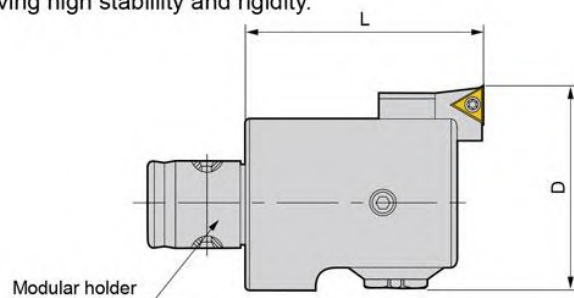


MILLING BORING SYSTEM - Micro Boring

CNH Micro Boring Head

Feature

- CNH finish boring is suitable for micro boring with working ranges from $\Phi 19.8\text{mm}$ to 202mm on diameter.
- 20-32: The dial has been graduated into 50 divisions, each of which is 0.02mm on diameter.
42-150: The dial has been graduated into 100 divisions, each of which is 0.01mm on diameter.
A dial is a sub-dial for finer adjustment.
- High precision internal lead screw with inner lubrication is free from the effects of chips, featuring high durability.
- Coolant nozzle easily cools the insert elongating its working life.
- Cartridge unit is housed in a square structure with two face support, proving high stability and rigidity.

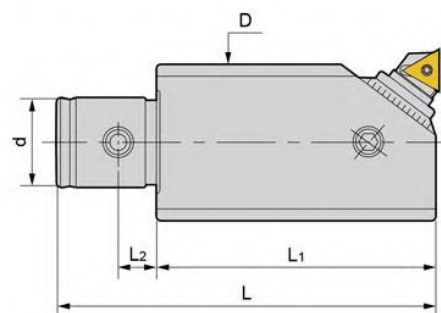


Code No.	Size(mm)	Boring Range	Modular Holder	Insert	Screw	Wrench
	L	D				
HCK1-CNH20-35	35	19.8-25.2	HCK1	TB**0601 TB**0802	M2 M2.5	T6 T8
HCK2-CNH25-40	40	24.8-32.2	HCK2			
HCK3-CNH32-40		31.8-42.2	HCK3			
HCK4-CNH42-50	50	41.8-55.2	HCK4	TB**0802 TB**0902	M2.5	T8
HCK5-CNH55-60	60	54.8-70.2	HCK5	TB**0902 TB**1103	M2.5 M3	T8
HCK6-CNH70-72	72	69.8-85.2	HCK6			
HCK6-CNH85-72		85-108				
HCK6-CNH106-72		106-152				
HCK6-CNH150-88		88				



MILLING BORING SYSTEM - Micro Boring

HCK-DYD Micro Boring Bar



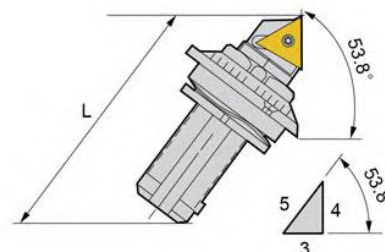
INCLINED MOUNTING TYPE

Code No.	Size(mm)					Boring Range	Modular Holder	Modular Boring	Insert
	D	d	L1	L2	L				
HCK1-DYD19	18	11	35	4.65	51	19-22.5	HCK1	M2-DYD19	TB**0601L
HCK1-DYD22	20					22-29.5		M2-DYD22	
HCK2-DYD29	25	14	45	62	61	29-41	HCK2	M3-DYD29	TB**1103L
HCK3-DYD38	35	18	70	7.5	90	38-50	HCK3	M5-DYD38	
HCK4-DYD48	41	22	60	9.5	86	48-65	HCK4	M5-DYD48	
HCK5-DYD62	54	28	80	12.4	110	62-90	HCK5	M7-DYD62	TB**16T3L
HCK6-DYD82	67	36	130	15	170	82-110	HCK6	M7-DYD82	
HCK6-DYD105	84					105-140		M9-DYD105	
HCK6-DYD135	98					135-175		M9-DYD135	

HCK-DYD Micro Boring Head

Feature

- The dial each of which is 0.02mm on diameter.

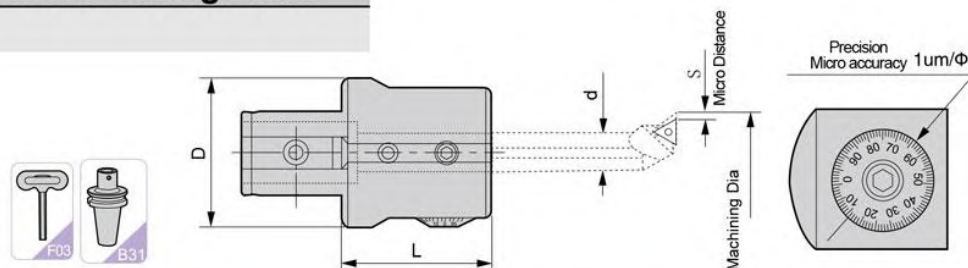


Code No.	Size(mm)	Boring Range	Insert
	L		
M2-DYD19	20.7	19-22.5	TP**0601L
M2-DYD22	23.5	22-29.5	
M3-DYD29	31.0	29-41	
M5-DYD38	40.0	38-50	TP**1103L
M5-DYD48	47.7	48-65	
M7-DYD62	63.5	62-90	
M7-DYD82	84	82-110	TP**16T3L
M9-DYD105	110	105-140	
M9-DYD135	136	135-175	



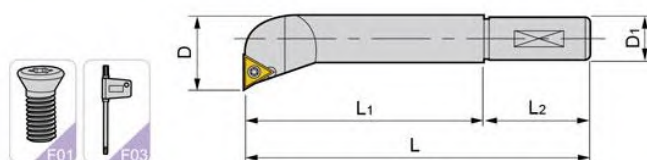
MILLING BORING SYSTEM - Micro Boring

HBJ-16 Small Diameter Micro Boring Head



Code No.	Size(mm)			Micro Distance	Precision Micro accuracy	Boring Range	Modular Holder	Weight
	D	d	L					
HBJ-16	63	16	50	6	0.01	8-50	HCK6	1.60

HBJ-16 Micro Boring Bar



Code No.	Size(mm)					Boring Range	Insert	Screw	Wrench	Weight
	D	D1	L1	L2	L					
HBJ1608-32	8		32		74	8-11	TB**0601L	M2	T6	0.06
HBJ1610-40	10		40		75	10-13				0.07
HBJ1612-53	12		53		88	12-17	TP**0902L	M2.5		0.08
HBJ1616-68	16	16	68	32	100	16-21				0.12
HBJ1620-83	20		83		118	20-26				0.16
HBJ1625-90	25					25-32				0.25
HBJ1630-90	30		90		122	30-42	TP**1103L	M3		0.30
HBJ1640-90	40					40-50				0.40

Outstretch of small diameter boring is better within 3 times of its diameter when in use.

HBJ-16 Micro Boring Set

(8PCS in one set) HBJ-16-8PCS	Code No.	
	HBJ-1608-32	HBJ-1620-83
	HBJ-1610-40	HBJ-1625-90
	HBJ-1612-53	HBJ-1630-90
	HBJ-1616-68	HBJ-1640-90

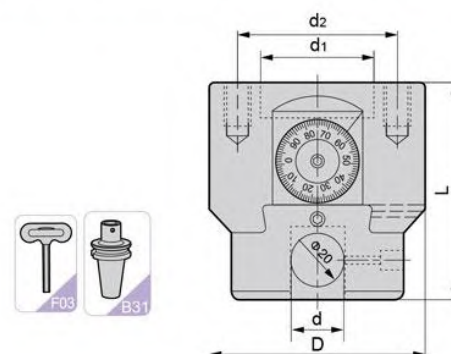
Code No.	Boring Range	Fittings
BT40-HBJ16-8PCS	8-500	1. One piece of HCK shank
BT50-HBJ16-8PCS		2. One HBJ micro boring head
		3. Eight micro boring bar HBJ16
		4. Four Wrench





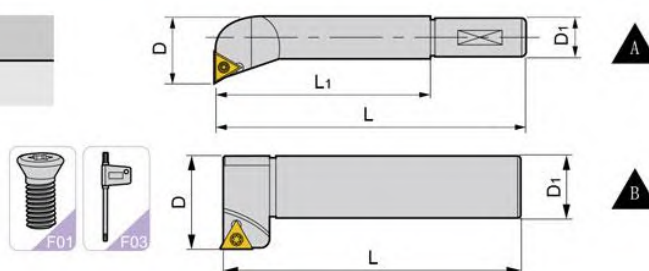
MILLING BORING SYSTEM - Micro Boring

NBH2084 Micro Boring Head



Code No.	Size(mm)					Boring Range	Micro Distance	Micro Accuracy (Dia)	Modular Holder
	D	d	d1	d2	L				
NBH2084S	84	20	35	60	80	8-280Coupling with boring bar	28	0.01	NBH-A.B

HBJ-20 Micro Boring Bar



Code No.	Figure	Size(mm)				Boring Range	Insert	Screw	Wrench	Weight
		D	D1	L1	L					
HBJ2008-32	A	8	20	32	74	8-11	TB**0601L	M2	T6	0.09
HBJ2010-40		10		40	75	10-13				0.1
HBJ2012-53	A	12	20	53	88	12-17	TP**0902L	M2.5	T8	0.11
HBJ2016-68		16		68	103	16-21				0.15
HBJ2020-83	A	20	20	83	115	20-26	TP**1103L	M3	T8	0.2
HBJ2025-96		25		96	131	25-135				0.3
HBJ2030-115		30		115	159	30-140				0.5
HBJ20120-L	B	30		-	97	120-280				0.25

NBH2084 Micro Boring Set

(8PCS in one set) HBJ-20-8PCS	Code No.	
	HBJ-20080-32	HBJ-2020-83
	HBJ-2010-40	HBJ-2025-96
	HBJ-2012-53	HBJ-2030-115
	HBJ-2016-68	HBJ-20120-L

Code No.	Boring Range	Fittings
BT40-NBH2084-8PCS	8-280	1. One piece of NBH2084 shank
BT50-NBH2084-8PCS		2. One NBH2084 micro boring head
		3. Eight micro boring bar HBJ16
		4. Four Wrench"

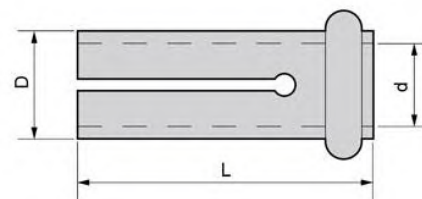




MILLING BORING SYSTEM - Micro Boring

HBJ Collet For Super Head Solid Caibide Boring Bar

Code No.	Size(mm)		
	D	d	L
HBJ16-8	16	8	37
HBJ16-10		10	
HBJ16-12		12	
HBJ16-14		14	



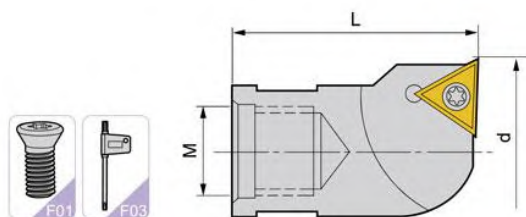
HT Anti-Shank Solid Carbide Boring Bar



Code No.	Size(mm)			Boring Range	Modular Boring
	D	L	M		
HT08-M5-100	8	100	M5	9-13	HEB09N
HT10-M6-110	10	110	M6	12-15	HEB12N
HT12-M6-120	12	120		14-17	HEB14N
HT14-M6-160	14	160		16-20	HEB16N
HT16-M10-160	16		M10	18-42	HEB18N HEB40N

The boring depth should be no more than 6 times of the hole.

HEB Indexable Boring Head

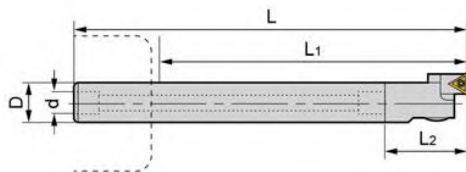


Code No.	Size(mm)			Boring Range	Insert	Screw	Wrench
	D	L	M				
HEB09	9	18	M5	9-10.5	TP**0802	M2.2-2.5-60	T6
HEB10.5	10.5			10.5-12			
HEB12	12	23	M6	12-14			
HEB14	14			14-16			
HEB16	16	27	M10	16-18			
HEB18	18			18-20			
HEB20	20			20-22			
HEB22	22			22-24			
HEB24	24			24-26			
HEB26	26			26-28			
HEB28	28			28-30			
HEB30	30			30-32			
HEB32	32			32-34			
HEB34	34			34-36			
HEB36	36			36-38			
HEB38	38			38-40			
HEB40	40			40-42			



MILLING BORING SYSTEM - Micro Boring

Super Hard Solid Tungsten Carbide Boring Bar

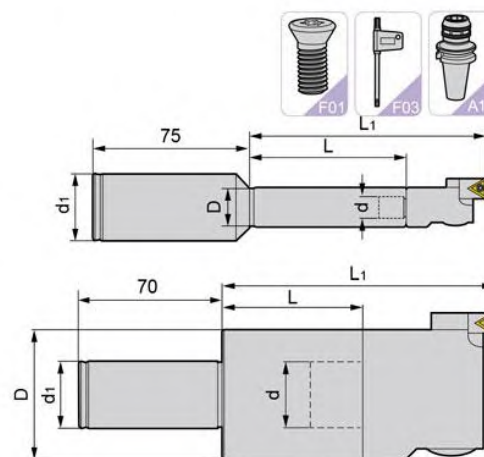


Code No.	Size(mm)				Modular Boring	Lengthen dia
	D	d	L1	L		
C19-HCK1-150	19	11	150	225	CBH20-35	19.8-25.2
C19-HCK1-200			200	275		
C24-HCK2-180	24	14	180	260	CBH25-40	24.8-32.2
C24-HCK2-240			240	320		
C32-HCK3-310	31	18	310	390	CBH32-40	31.8-42.2

C32 Straight Shank Boring Bar

Feature

- Super hard tungsten carbide boring bar made from high toughness compound is tough and durable, highly materializing features of super hardness, high rigidity and extra vibration resistance, most suitable for extra depth boring(10D).
- Standard internal coolant hole is built in every size of the bar, best for cooling and chip evacuation in deep hole boring.
- Featuring straight shank structure, the bar can be adjusted to different working lengths.
- On both ends of main body integrated are soldering holes. One hole will be superseded by the other upon breaking. This will reduce your cost and greatly increase the value of boring bar.

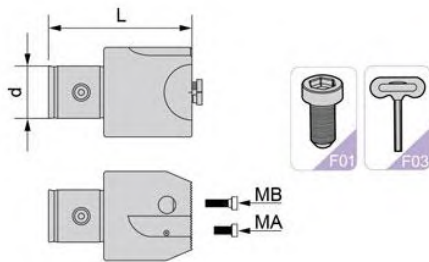


Code No.	Size(mm)					Modular Boring
	D	d	d1	L1	L	
C32-HCK1-075L	19	11	32	110	75	CBH20-35 DYD19 DYD22
C32-HCK2-070L	24	14			70	CBH25-40 CBH2533 DYD29
C32-HCK2-120L				160	120	
C32-HCK3-070L	31	18		110	70	CBH32-40 HBH3242 DYD38
C32-HCK3-120L				160	120	
C32-HCK4-060L	39	22		110	60	CBH42-50 HBH4055 DYD48
C32-HCK4-110L				160	110	
C32-HCK5-060L	50	28		120	60	CBH55-60 HBH5270 DYD62
C32-HCK5-120L				180	120	
C32-HCK6-060L	64	36		130	60	CBH70-70 CBH84-72 CBH106-72 CBH150-88 HBH6892 HBH90122 DYD82 DYD105 DYD135
C32-HCK6-120L				190	120	



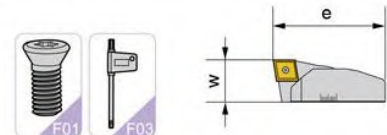
MILLING BORING SYSTEM - Rough Boring

Body For ABH Twin Cutter Roughing



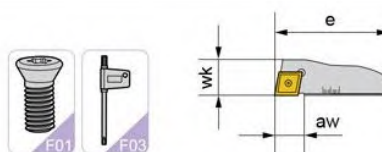
Code No.	Size(mm)		System	MA Bolt	MB Bolt	Weight
	d	L				
ABH25	14	40	25	M4×10	M4×18	0.15
ABH32	18	50	32	M5×10	M5×20	0.33
ABH40	22	48	40	M6×12	M6×20	0.48
ABH50	28	62	50	M6×14	M6×25	0.96
ABH63	36	58	63	M8×16	M8×30	1.54
ABH80	36	58	80	M8×16	M8×30	1.96

Cutting Insert Holders For ABH Adjustable Twin Roughing



Same Cutting Dimeter Insert Holder	Different Cutting Dimeter Insert Holder	Size(mm)			Boring Range	System	Insert	Screw	Wrench	Weight
		w	e	a						
HACC2936	HBCC2936	11.7	25	0.5-1 - 1-3	29-36	ABH25	CCMT0602	M2.5×6	T8	0.01
HACC3542	HBCC3541		30		35-42	ABH32				0.02
HACC3645	HBCC3645		32		36-45					0.02
HACC4453	HBCC4453		38		44-53					0.02
HACC4556	HBCC4556	15.6	40	0.5-1 - 1-4	45-56	ABH40	CCMT09T3	M4×8	T15	0.04
HACC5566	HBCC5566		46.5		55-66	0.05				
HACC5674	HBCC5674	17.6	48.5		56-74	ABH50				0.06
HACC7492	HBCC7492		62		74-92					0.09
HACC7090	HBCC7090	22.6	60	0.5-1 - 1-5	70-90	ABH63	CCMT1204	M5×10	T20	0.12
HACC90110	HBCC90110		78		90-110	ABH80				0.18
HACC90130	HBCC90130		79.5		90-130					0.18
HACC130170	HBCC130170		99.5		130-170					0.23

Reverse Cutting Insert Holders For ABH Adjustable Twin Roughing

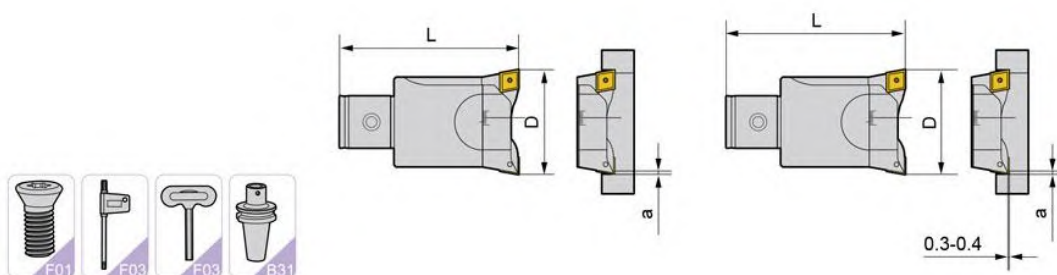


Cutting insert holder	Size(mm)				Boring Range	System	Apron	Insert	Screw	Wrench	Weight
	aw	wk	e	a							
HKCC2936	4	11	25	0.5-3	29-36	ABH25	APR25	CCMT0602	A25055	T8	0.01
HKCC3542	7	11	30		35-42	ABH32	APR32				0.02
HKCC3645	5	11	32		36-45						0.02
HKCC4453	9	11	38		44-53	0.02					
HKCC4556	5	15	40	0.5-4	45-56	ABH40	APR40	CCMT09T3	A40080	T15	0.04
HKCC5566	12	15	46.5		55-66	ABH50	APR50				0.05
HKCC5674	11	17	48.5		56-74						0.07
HKCC7492	17	17	62		74-92	0.09					
HKCC7090	12	22	60	0.5-5	70-90	ABH63	APR63	CCMT1204	A50100	T20	0.13
HKCC90110	22	22	78		90-110						0.18
HKCC90130	24	22	79.5		90-130	ABH80	APR80				0.18
HKCC130170	24	22	99.5		130-170						0.25



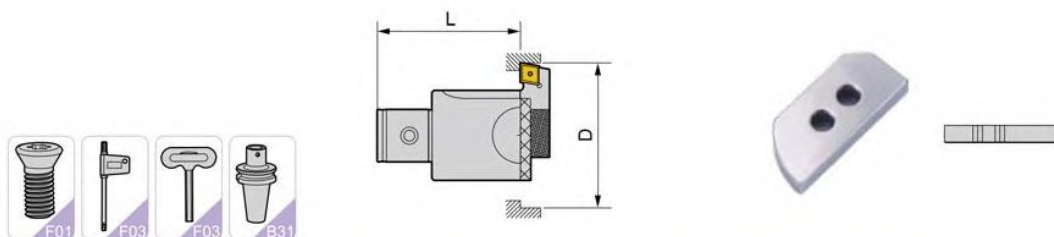
MILLING BORING SYSTEM - Rough Boring

ABH Rough Boring Head System Modular Holder



Code No.	Size(mm)		Boring Range D	Modular Holder	Cutting Insert Holder		Weight
	D	L					
HCK2-ABH25	25	50	29-36	HCK2	HACC2936	DDCC2936	0.17
HCK2-ABH25			35-42		HACC3542	DDCC3542	0.19
HCK3-ABH32	32	63	36-45	HCK3	HACC3645	DDCC3645	0.37
HCK3-ABH32			44-53		HACC4453	DDCC4453	0.37
HCK4-ABH40	40	63	45-56	HCK4	HACC4556	DDCC4556	0.56
HCK4-ABH40			55-66		HACC5566	DDCC5566	0.58
HCK5-ABH50	50	80	56-74	HCK5	HACC5674	DDCC5674	1.10
HCK5-ABH50			74-92		HACC7492	DDCC7492	1.14
HCK6-ABH63	63	80	70-90	HCK6	HACC7090	DDCC7090	1.78
HCK6-ABH63			90-110		HACC90110	DDCC90110	1.90
HCK6-ABH80			90-130		HACC90130	DDCC90130	2.30
HCK6-ABH80			130-170		HACC130170	DDCC130170	2.44

ABH Rough Boring Head Reverse System Modular Holder



Code No.	Size(mm)		Boring Range D	Modular Holder	Reverse cutting insert holder	Apron for reverse	Weight
	D	L					
HCK2-ABH25	25	50	29-36	HCK2	HKCC2936	APR25	0.17
HCK2-ABH25			35-42		HKCC3542		0.18
HCK3-ABH32	32	63	36-45	HCK3	HKCC3645	APR32	0.36
HCK3-ABH32			44-53		HKCC4453		0.36
HCK4-ABH40	40	63	45-56	HCK4	HKCC4556	APR40	0.54
HCK4-ABH40			55-66		HKCC5566		0.55
HCK5-ABH50	50	80	56-74	HCK5	HKCC5674	APR50	1.07
HCK5-ABH50			74-92		HKCC7492		1.09
HCK6-ABH63	63	80	70-90	HCK6	HKCC7090	APR63	1.74
HCK6-ABH63			90-110		HKCC90110		1.79
HCK6-ABH80			90-130		HKCC90130	APR80	2.23
HCK6-ABH80			130-170		HKCC130170		2.30

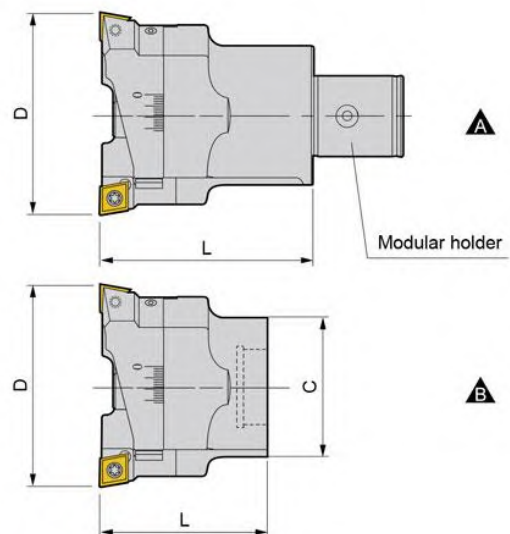


MILLING BORING SYSTEM - Rough Boring

HBH Modular Rough Boring Head

Feature

- The head is suitable for single bit boring, twin-bit boring and step boring with working diameter from $\Phi 25$ to 122 for modular HCK, $\Phi 120$ to 910 for modular BST.
- New cartridge style with built-up rib. The pressure imposed on both cartridges counteracts producing highest rigidity and cutting efficiency, most suitable for a variety of borings.
- Boring head can be easily adjusted to different boring needs for machining on demand. Boring depth can be extended by tool connection.
- Clear side division provides a convenient adjustment without using a tool pre-setter.
- Most suitable for boring on various machine centers or boring mill. Universal design accepts inserts of any brands, which will reduce tool grinding and greatly improve boring performance.
- Patented step boring design, suitable for both level boring and step boring.
- Boring heads over $\Phi 120$ mm feature direct module, simple structure and high rigidity.

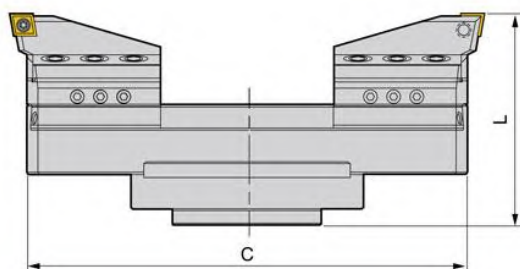


Code No.	Figure	Size(mm)		Boring Range D	Modular Holder	Insert	Screw	Wrench
		C	L					
HCK2-HBH2533-C	A	24	45	25-33	HCK2	CC**0602	M2.5	T8
HCK3-HBH3242-T	A	31	55	32-42	HCK3	TC**1102	M2.5	T8
HCK3-HBH3242-C	A	31	55	32-42	HCK3	CC**0602	M2.5	T8
HCK4-HBH4055-T	A	39	65	40-55	HCK4	TC**16T3	M4	T15
HCK4-HBH4055-C	A	39	65	40-55	HCK4	CC**09T3	M4	T15
HCK5-HBH5270-T	A	50	75	52-70	HCK5	TC**16T3	M4	T15
HCK5-HBH5270-C	A	50	75	52-70	HCK5	CC**09T3	M4	T15
HCK6-HBH6892-T	A	64	85	68-92	HCK6	TC**16T3	M5	T20
HCK6-HBH6892-C	A	64	85	68-92	HCK6	CC**1204	M5	T20
HCK6-HBH90122-T	A	64	100	90-122	HCK6	TC**2204	M5	T20
HCK6-HBH90122-C	A	64	100	90-122	HCK6	CC**1204	M5	T20
BST-HBH120164-T	B	95	95	120-164	BT50-BST	TC**2204	M5	T20
BST-HBH120164-C	B	95	95	120-164	BT50-BST	CC**1204	M5	T20
BST-HBH160204-T	B	95	95	160-204	BT50-BST	TC**2204	M5	T20
BST-HBH160204-C	B	95	95	160-204	BT50-BST	CC**1204	M5	T20

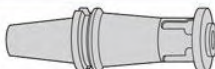


MILLING BORING SYSTEM - Rough Boring

HBH Large Diameter Modular Rough Boring



Code No.	Size(mm)		Boring Range	Modular Holder	Insert	Screw	Wrench	Total Weight
	C	L						
BSTHBH200310	180	130	200-310	BST	(blade bearing option) HB200-C12 HB200-T16 HB200-T22 HB200-S12	M5	T20	9.7
BSTHBH300410	280		300-410					11.7
BSTHBH400510	380		400-510					13.7
BSTHBH500610	480		500-610					15.7
BSTHBH600710	580		600-710					17.7
BSTHBH700810	680		700-810					19.7
BSTHBH800910	780		800-910					21.7

Module	Code No.		Figure	Weight
Modular Holder	BT50-BST Series			-
Flange	BST-FL200			2.7
Extension Slide	HST200			3.4
	HST300			5.4
	HST400			7.4
	HST500			9.4
	HST600			11.4
	HST700			13.4
	HST800			15.4
Clamp Base	DS200			0.98
Height Setting Shim	DS201			0.05
Insert Setting And Applicable Insert	HB200-C12	CC1204		0.68
	HB200-T16	TC16T3		
	HB200-T22	TC2204		
	HB200-S12	SC1204		



MILLING BORING SYSTEM - Rough Boring

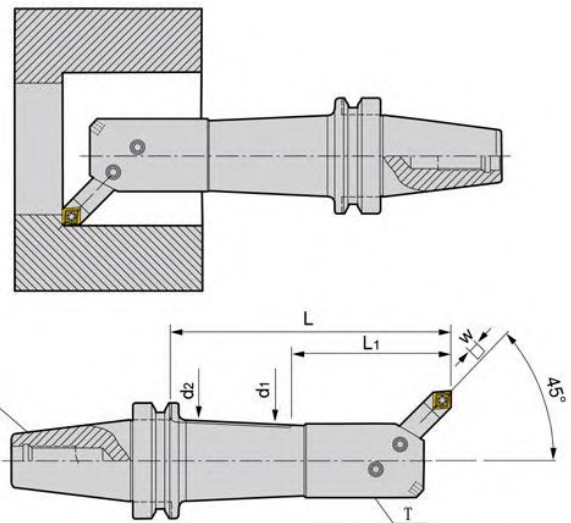
BSA 45° Rough Boring Bar

Feature

- 4 corner joining cutter or Indexable cutting tools also can be choice.
- Specially for blind hole.



7:24AT3



Code No.	Size(mm)				Boring Range	W	Screw T	Weight
	d1	d2	L1	L				
BT40BSA25-120	20	22	35	90	25-38	8	M6	1.2
BT40BSA30-150	24	26	40	120	30-42	8	M6	1.4
BT40BSA38-165	30	33	50	135	38-52	10	M8	1.7
BT40BSA42-165	34	37	60	167	42-56	10	M8	2.0
BT40BSA50-165	40	44	65	137	50-65	13	M8	2.3
BT40BSA62-180	50	56	80	152	62-90	16	M10	2.4
BT40BSA72-180	60	66	95	152	72-110	19	M10	3.9
BT40BSA90-180	75	80	110	257	90-125	19	M10	5.2
BT50BSA25-135	20	22	35	92	25-38	8	M6	4.2
BT50BSA30-165	24	26	40	122	30-42	8	M6	4.4
BT50BSA38-180	30	33	50	137	38-52	10	M8	4.8
BT50BSA42-210	34	37	60	167	42-56	10	M8	5.0
BT50BSA50-180	40	44	65	137	50-65	13	M8	5.4
BT50BSA50-240	40	44	65	197	50-65	13	M8	5.7
BT50BSA62-195	50	56	80	152	62-90	16	M10	6.2
BT50BSA62-270	50	56	80	227	62-90	16	M10	7.6
BT50BSA72-195	60	66	95	152	72-110	19	M10	7.0
BT50BSA72-285	60	66	95	242	72-110	19	M10	9.3
BT50BSA90-210	75	80	110	267	90-125	19	M10	9.2
BT50BSA90-300	75	80	110	257	90-125	19	M10	12.3
BT50BSA105-195	90	94	130	152	105-160	25	M12	10.7
BT50BSA105-285	90	94	130	242	105-160	25	M12	15

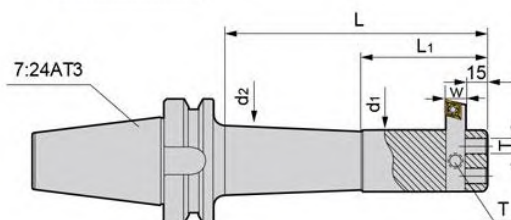
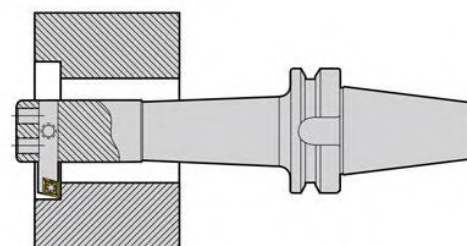


MILLING BORING SYSTEM - Rough Boring

BSB 90°Rough Boring Bar

Feature

- Suitable for accidented hole neck or roughness workpieces.
- 4 corner joining cutter or Indexable cutting tools also can be choice.
- can be used for boring, and back boring machining.

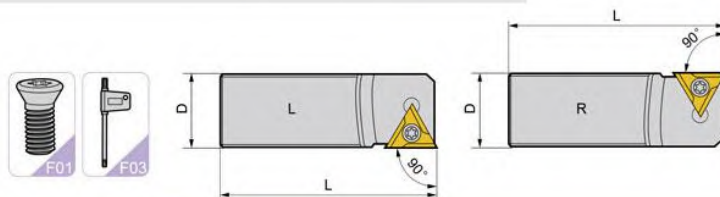


Code No.	Size(mm)				Boring Range	W	Screw T	Weight
	d1	d2	L1	L				
BT40BSB25-120	20	22	35	90	25-52	8	M6	1.2
BT40BSB38-150	30	33	55	120	38-70	10	M8	1.7
BT40BSB50-165	40	44	70	135	50-90	13	M10	2.5
BT40BSB62-180	50	56	80	150	62-115	16		3.6
BT40BSB90-180	75	-	-		90-150	19		M12
BT50BSB25-135	20	22	35	92	25-52	8	M6	4.3
BT50BSB38-180	30	33	55	137	38-70	10	M8	4.9
BT50BSB50-480	40	44	70		50-90	13	M10	5.5
BT50BSB50-240			197	5.8				
BT50BSB62-195	50	56	80	62-115	16	6.4		
BT50BSB62-270			227			7.8		
BT50BSB72-195	60	66	95	72-135	19	M12	7.3	
BT50BSB72-285			242				9.6	
BT50BSB90-210	75	80	115	90-150			9.7	
BT50BSB90-300			257				12.8	
BT50BSB105-195	90	90	-	105-190	25		11.4	
BT50BSB105-285		94	135				242	15.7



MILLING BORING SYSTEM - Rough Boring

TBS Hole Boring Indexable Cutting Tools

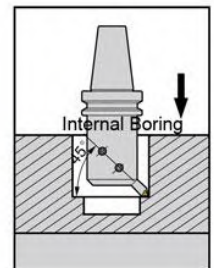


T90 FIT FOR BSB BORING BAR

Code No.	Size(mm)		Boring Range	Insert	Screw	Wrench
	D	L				
TBS910-36-L/R	10	36	38-50	TP**0902	M2.5	T8
TBS910-45-L/R		45	50-70			
TBS913-48-L/R	13	48	50-70	TP**1103	M3	T8
TBS913-65-L/R		65	70-90			
TBS916-60-L/R	16	60	62-90	TP**1603	M4	T15
TBS916-80-L/R		80	90-115			
TBS919-70-L/R	19	70	72-105	TP**1603	M4	T15
TBS919-90-L/R		90	105-135			
TBS919-85-L/R		85	90-115			
TBS919-105-L/R		105	115-150			
TBS215-100-L/R	25	100	105-140	TP**1603	M4	T15
TBS215-135-L/R		130	140-190			

Feature

-TBS cutter is suit for precision and moderate machining.



T45 FIT FOR BSB BORING BAR

Code No.	Size(mm)		Boring Range	Insert	Screw	Wrench
	D	L				
TBS410-45	10	45	38-52	TP**0902	M2.5	T8
TBS410-50		50	42-56			
TBS413-60	13	60	50-65	TP**1103	M3	T8
TBS416-75	16	75	62-90			
TBS419-90	19	90	72-110	TP**1603	M4	T15
TBS419-115		115	90-125			
TBS425-130	25	130	105-160	TP**1603	M4	T15

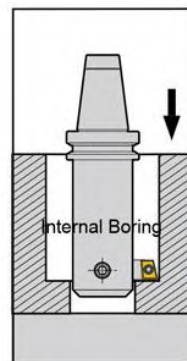
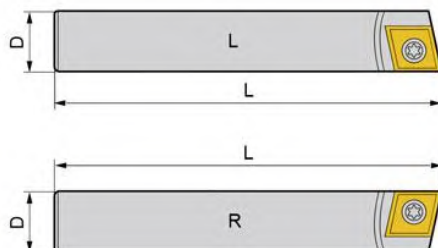


MILLING BORING SYSTEM - Rough Boring

CBS Hole Boring Indexable Cutting Tools

Feature

-it suit for heavy cutting machining.



C90 FIT FOR BSB BORING BAR

Code No.	Size(mm)		Boring Range	Insert	Screw	Wrench
	D	L				
CBS908-23-L/R	8	23	25-38	CC**0602	M2.5	T8
CBS908-30-L/R		30	38-52			
CBS910-36-L/R	10	36	38-50			
CBS910-45-L/R		45	50-70			
CBS913-48-L/R	13	48	50-70	CC**09T3	M4	T15
CBS913-65-L/R		65	70-90			
CBS916-60-L/R	16	60	62-90			
CBS916-80-L/R		80	90-115			
CBS919-70-L/R	19	70	72-105	CC**1204	M5	T20
CBS919-90-L/R		90	105-135			
CBS919-85-L/R		85	90-115			
CBS919-105-L/R		105	115-150			
CBS925-100-L/R	25	100	105-140			
CBS925-135-L/R		135	140-190			

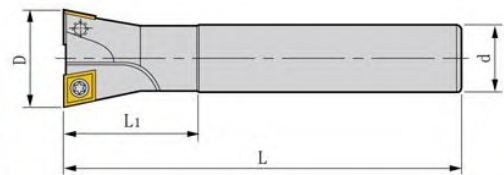
C45 FIT FOR BSA BORING BAR

Code No.	Size(mm)		Boring Range	Insert	Screw	Wrench
	D	L				
CBS408-30	8	30	25-38	CC**0602	M2.5	T8
CBS408-35		35	30-42			
CBS410-45	10	45	38-52			
CBS410-50		50	42-56			
CBS413-60	13	60	50-6509	CC**09T3	M4	T15
CBS416-75	16	75	62-90			
CBS419-115	19	115	90-125	CC**1204	M5	T20
CBS425-130	25	130	105-160			



MILLING BORING SYSTEM - Rough Boring

SB Twin-Bit Rough Boring Head Rbh



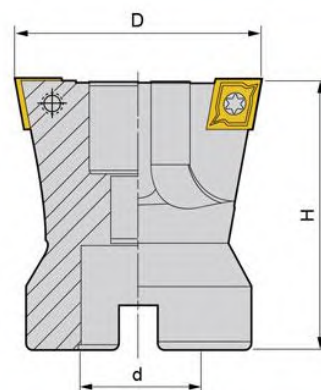
Code No.	Teeth	Size(mm)				Insert	Screw	Wrench
		D	d	L1	L			
SBC16-TB15-110	2	14.7	16	60	110	CCMT060204	M2.5	T8
SBC16-TB16-110		15.7						
SBC16-TB17-110		16.7						
SBC16-TB18-110		17.7						
SBC16-TB19-110		18.7						
SBC16-TB20-110		19.7	20	40	120			
SBC20-TB21-120		20.7						
SBC20-TB22-120		21.7						
SBC20-TB23-120		22.7						
SBC20-TB24-120		23.7						
SBC20-TB25-120		24.7						
SBC20-TB26-120	2	25.7	20	40	120	CCMT09T308	M4	T15
SBC20-TB27-120		26.7						
SBC20-TB28-120		27.7						
SBC25-TB25-160	2	24.7	25	100	160	CCMT060204	M2.5	T8
SBC25-TB30-160	2	29.7	25	50	160	CCMT09T308	M4	T15
SBC25-TB30-190					190			
SBC25-TB32-160		31.7			160			
SBC25-TB35-160		34.7						
SBC25-TB37-160		36.7						
SBC25-TB40-160		39.7			230			
SBC32-TB35-230		34.7						
SBC32-TB40-250		39.7	250					
SBC32-TB42-200		41.7	200					
SBC32-TB45-200		44.7						
SBC32-TB47-200		46.7						
SBC32-TB50-200		49.7						

SUITABLE:HITACHI INSERT



MILLING BORING SYSTEM - Rough Boring

MC Fixed Twin-Bit Rough Boring Head



Code No.	Teeth	Size(mm)			Insert	Screw	Wrench
		D	d	H			
MC22-45	2	44.7	22	50	CCMT09T308	M4	T15
MC22-50		49.7					
MC22-55		54.7					
MC22-60		59.7					
MC27-60		64.7					
MC27-65		69.7					
MC27-70		74.7					
MC27-75		79.7					
MC27-80		84.7					
MC27-85		89.7					
MC27-90		94.7					
MC27-95		99.7					
MC27-100		104.7					
MC32-105		109.7					
MC32-110		114.7					
MC32-115		119.7					
MC32-120		124.7					
MC32-125		129.7					
MC32-130							

SUITABLE:HITACHI INSERT

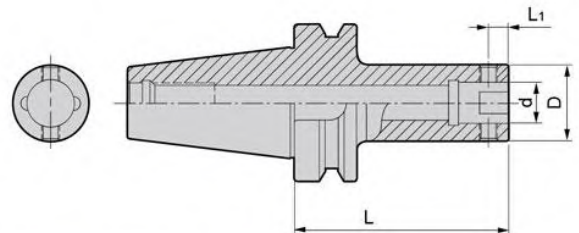


MILLING BORING SYSTEM - Boring Head Holder

HCK Boring Head Bar

Feature

- The whole bar with through holes, be useful to coolant and anti-shank.
- Be suitable for all "ck" series.
- Side lock screw is at right angles to key slot, to make sure that the replacing holders in CNC machine are always in phase.
- When side lock screw fastened, please use lube oil in order not to fasten the screw while too much strength is for torsion.



Code No.	Size(mm)				Screw
	D	d	L1	L	
BT30HCK1-55	19	11	5.05	55	M5
BT30HCK1-70				70	
BT30HCK2-80	24	14	6.62	80	M6
BT30HCK3-80				8	
BT30HCK4-70	39	22	10	70	M8
BT30HCK5-70				13	M10
BT30HCK6-60	64	36	16	60	M12
BT40HCK1-100				100	M5
BT40HCK1-130	19	11	5.05	130	
BT40HCK2-75				75	M6
BT40HCK2-100	24	14	6.62	100	
BT40HCK2-130				130	M8
BT40HCK3-80	31	18	8	80	
BT40HCK3-100				100	M10
BT40HCK3-135	64	36	16	135	
BT40HCK4-70				70	M12
BT40HCK4-100	39	22	10	100	
BT40HCK4-150				150	M5
BT40HCK5-60	50	28	13	60	
BT40HCK5-80				80	M6
BT40HCK5-100	64	36	16	100	
BT40HCK5-150				150	M8
BT40HCK6-55	19	11	5.05	55	
BT40HCK6-100				100	M10
BT40HCK6-150	24	14	6.62	150	
BT50HCK1-115				115	M12
BT50HCK1-145	31	18	8	145	
BT50HCK2-105				105	M5
BT50HCK2-135	39	22	10	135	
BT50HCK2-165				165	M6
BT50HCK3-110	64	36	16	110	
BT50HCK3-140				140	M8
BT50HCK3-170	50	28	13	170	
BT50HCK4-100				100	M10
BT50HCK4-160	19	11	5.05	160	
BT50HCK4-205				205	M12
BT50HCK5-90	24	14	6.62	90	
BT50HCK5-165				165	M5
BT50HCK5-210	31	18	8	210	
BT50HCK5-270				270	M6

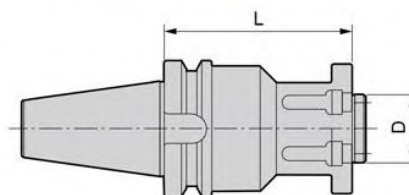


MILLING BORING SYSTEM - Boring Head Holder

Code No.	Size(mm)				Screw
	D	d	L1	L	
BT50HCK6-85	64	36	16	85	M12
BT50HCK6-155				155	
BT50HCK6-215				215	
BT50HCK6-250				250	
BT50HCK6-300				300	
BT50HCK6-350				350	

BST Boring Heads Bar

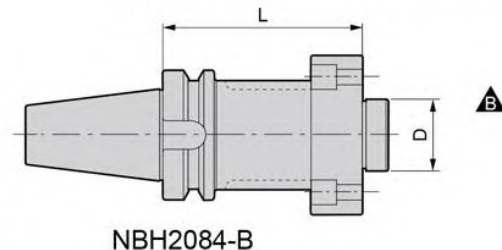
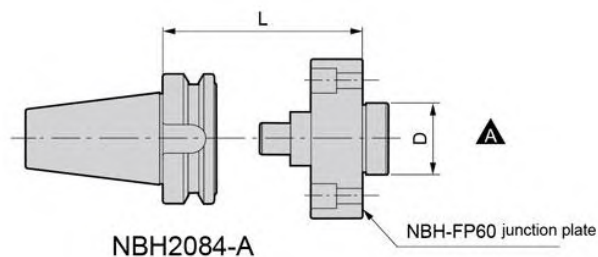
Code No.	Size(mm)	
	D	L
BT50-BST-100	50	100
BT50-BST-150		150
BT50-BST-200		200
BT50-BST-250		250
BT50-BST-300		300
BT50-BST-350		350



NBH2084 Boring Heads Bar

Code No.	Size(mm)	
	D	L
BT40-NBH-A50	35	50
BT50-NBH-A50		50
NBH-FP60		Junction Plate
BT40-NBH-B100		100
BT50-NBH-B100		100

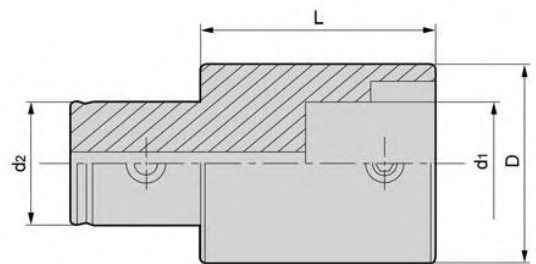
Code No.	Size(mm)	
	D	L
BT50-NBH-B165	35	165
BT50-NBH-B200		200
BT50-NBH-B250		250
BT50-NBH-B300		300





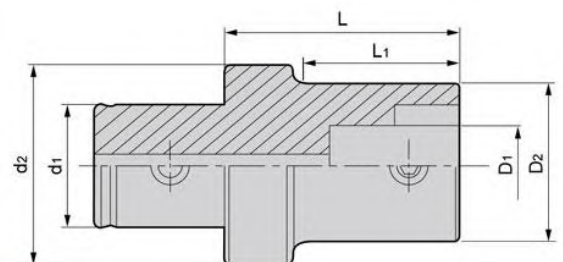
MILLING BORING SYSTEM - Boring Head Holder

HCK Equal Diameter Extension Adapter



Code No.	Size(mm)				Weight
	D	d1	d2	L	
HCK1-1-30	19	11	1	30	0.07
HCK2-2-30	24	14	14		0.1
HCK3-3-30	31	18	18		0.15
HCK4-4-45	39	22	22	45	0.4
HCK4-4-60				60	
HCK5-5-60	50	28	28	90	0.8
HCK5-5-90				60	
HCK6-6-60	64	36	36	60	1.4
HCK6-6-100				100	

HCK Reducing Change Adapter (Big To Small)

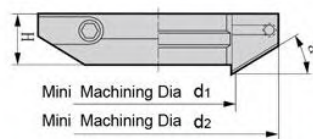


Code No.	Size(mm)						Weight
	D	D1	d1	d2	L1	L	
HCK2-1-36	11	19	14	-	30	36	0.1
HCK3-1-41			18	31		41	0.15
HCK3-2-37	14	24			25		
HCK4-1-58	11	19	22	39	40	58	0.3
HCK4-2-50	14	24			36	50	
HCK4-3-50	18	31			37		
HCK5-1-60	11	19	28	50	40	60	0.45
HCK5-2-54	14	24			35	54	
HCK5-2-74					55	74	0.5
HCK5-3-47	18	31			29	47	
HCK5-3-72					54	72	0.6
HCK5-4-42	22	39			25	42	0.5
HCK5-4-67					50	67	0.7
HCK6-1-70	11	19			36	64	40
HCK6-2-63	14	24	45	63			0.7
HCK6-2-93			75	93			0.8
HCK6-3-56	18	31	39	56			0.75
HCK6-3-96			79	96			0.95
HCK6-4-51	22	39	35	51			0.85
HCK6-4-101			85	101			1.3
HCK6-5-41	28	50	25	41			0.85
HCK6-5-91			75	91			1.45



MILLING BORING SYSTEM - Boring Head Holder

HCK Chamfering Cutter

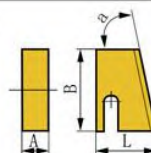


Code No.	Size(mm)			Modular Holder	Insert
	d1	d2	H		
CR1-35	20	35	13	HCK1	CB1-45 CB1-30
CR2-42	25	42	15	HCK2	
CR3-49	32	49		HCK3	
CR4-57	41	57		HCK4	
CR5-90	53	90	25	HCK5	CB2-45 CB2-30
CR6-104	68	104		HCK6	
CR7-138	98	138			
CR8-160	120	160			

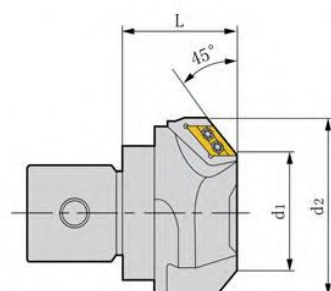
1. One insert with 45 angle is needed in HCK chamfering cutter. 2. The insert material is type M carbide.

Code No.	Size(mm)				Modular Holder
	L	A	B	a	
CB1-35	23.5	4	9	45°	HCK1-4
CB2-45	43	8	20		HCK5-6
CB1-30	27.5	4	9	30°	HCK1-4
CB2-30	52	8	20		HCK5-6

DCK insert



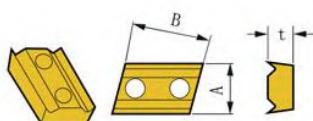
HCK Chamfering Head



Code No.	Teeth	Size(mm)			Modular Holder	Insert	Screw
		d1	d2	L			
HCK-B2-C0525	1	5	25	25	HCK2	CW1206A	M2
HCK-B4-C1040	2	10	40	35	HCK4	CW1909A	M3
HCK-B5-C3060	3	30	60	40	HCK5		
HCK-B5-C50100	3	50	100	65	HCK6	CW3115A	M5

The head is sold with 10 pieces insert screws and one wrench.

Exclusive Insert



Code No.	Size(mm)			Screw
	A	B	t	
CW1206A	6.35	12.7	2.7	M2
CW1909A	9.525	4.5	4.5	M3
CW3115A	15.875	7.0	7.0	M5



MILLING BORING SYSTEM - Boring Head Holder

Tool Presetter



Code No.	Size(mm)	Range Of Measurement	Resolution	Accessories Of Test Bar	Power Source	Weight
HK-300	860×560×990	Diameter (X axis) 300mm Highly(Z axis) 30-300mm	X axis 0.005mm Z axis 0.005mm	Standard Accessories BT50 Optional BT40/BT30	AC110V/220V 50HZ/60HZ	102
HK-400	930×600×950	Diameter (X axis) 400mm Highly(Z axis)30-400mm				108
HK-600	1070×680×1050	Diameter (X axis) 600mm Highly(Z axis)30-600mm				125