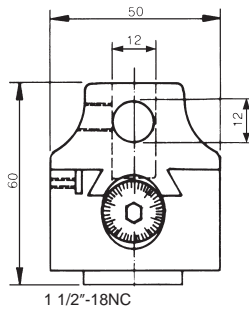




ORDER NO. VBC-2



**1 SCALE 0.01 mm**  
**0.02 mm per Ø**

Here is a small head that will be in constant demand in any shop.

Note the wide base bearing surface that assures maximum rigidity even when the bar holder is in an off-set position. This wide base design is a recent Criterion innovation that increases bearing surfaces by 50% over the older models.

A 1/2" double hole bar holder with a 1/2" cross hole is available.

The unit has a 1 1/2"-18NC threaded back and also features a direct reading dial screw.

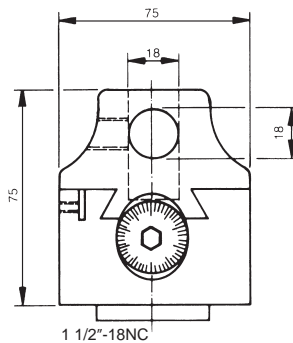
## SPECIFICATION

BORING CAPACITY Ø10-Ø100

ORDER NO.	ACTUAL SIZE	OVERALL LENGTH	BORING BAR HOLE SIZE	CENTER DIST BETWEEN HOLES.	CROSS HOLE DIA	OFFSET	WEIGHT (kg)	CODE NO.
VBC-2(l)	2"Dia.	2-7/16"	1/2"	5/8"	1/2"	5/8"	0.7	3401-301
VBC-2(m)	50	62	12	15	12	15	0.8	3401-302



ORDER NO. VBC-3



**1 SCALE 0.01 mm**  
**0.02 mm per Ø**

Here is a sturdy unit of extended boring range, capable of peeling off heavy roughing cuts as well tool of extreme sensitivity. The use of a wide-base barholder resting securely on the body, eliminates the need for a separate side plate. You will notice it has now become an integral part of the body.

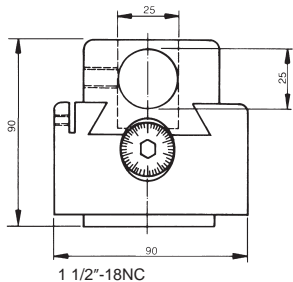
The direct reading adjusting screw is ground after hardening and a plainly marked dial face in non-reflecting satin chrome allows easy reading and adjustments of .0005 or less.

All Criterion Boring Heads have threaded backs for use with a variety of shanks. This model takes a 1-1/2"-18NC threaded shank.

## SPECIFICATION

BORING CAPACITY Ø10-Ø220

ORDER NO.	ACTUAL SIZE	OVERALL LENGTH	BORING BAR HOLE SIZE	CENTER DIST BETWEEN HOLES.	CROSS HOLE DIA	OFFSET	WEIGHT (kg)	CODE NO.
VBC-3(l)	3"Dia.	3.5/32"	3/4"	15/16"	3/4"	1"	2	3401-303
VBC-3(m)	75	80	18	23	18	25	2	3401-304



**1 SCALE 0.01 mm**  
**0.02 mm per Ø**

This is a bigger boring head which can be put on a large machine to process more as you want. The radius of boring hole can reach on about Ø 400mm long by a boring bar of 160mm.

All Criterion Boring Heads have threaded backs for use with a variety of shanks. This model takes a 1-1/2"-18NC threaded shank.

## SPECIFICATION

BORING CAPACITY Ø10-Ø250

ORDER NO.	ACTUAL SIZE	OVERALL LENGTH	BORING BAR HOLE SIZE	CENTER DIST BETWEEN HOLES.	CROSS HOLE DIA	OFFSET	WEIGHT (kg)	CODE NO.
VBC-4(l)	4"Dia.	3-1/2"	1"	1-1/4"	1"	1"	4	3401-305
VBC-4(m)	100	90	25	32	25	25	4	3401-306



# Boring Head Shank C-Type

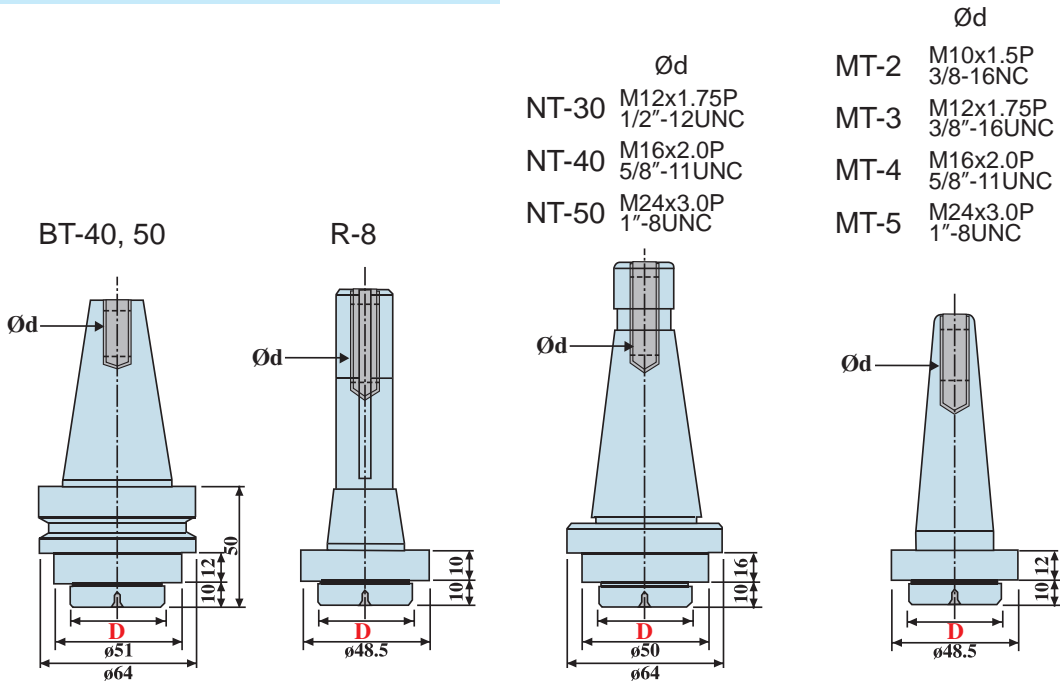


FOR VBHC-TYPE  
AND BC-2, BC-3, BC-4  
BORING HEAD



D: 1 1/2"-18UNC

The shanks are made tor for C-type boring head use.  
Also it can be replaced from time to time.



ORDER NO.	VBC-R8	VBC-NT30	VBC-NT40	VBC-MT2	VBC-MT3	VBC-MT4	VBC-MT5
WEIGHT (KG)	0.4	0.7	1.3	0.39	0.6	0.9	1.6
CODE NO.	3401-210	3401-211	340-212	3401-209	3401-213	3401-214	3401-215

ORDER NO.	VBC-BT40	VBC-BT50	VBC-C20	VBC-SK40	VBC-BT30	VBC-SK50
WEIGHT (KG)	1.4	3.97	0.4	1.28	1.1	1.3
CODE NO.	3401-216	3401-217	3401-219	3401-222	3401-223	3401-224



# Boring Head Set C-Type



1 SCALE 0.01 mm  
0.02 mm per Ø

• Boring Bar  
PAGE C83



VBHC-BC2 SET TYPE



MAX. BORING DEPTH 50 mm

Here is a sturdy unit of extended boring range, capable of peeling off heavy roughing cuts as well as a tool of extreme sensitivity.

The use of a wide base bar holder, resting securely on the body, eliminates the need for a separate side plate. You will note this has now become an integral part of the body.

The direct reading adjusting screw is ground after hardening and a plainly marked dial face in nonreflecting satin chrome allows easy reading and adjustments of 0.01 or less.

All Criterion Boring Heads have threaded backs for use with a variety of shanks. This model takes a 1-1/2"-18 threaded shank.

SHANK SIZE: NT-30,40,50, MT-3,4,5,R8



VBHC-BC3 SET TYPE

## BORING CAPACITY Ø10~Ø110



ORDER NO.	WEIGHT (kgs)	CODE NO.
VBHC-R-8-BC-2	2	3401-150
VBHC-MT-2-BC-2	1.66	3401-149
VBHC-MT-3-BC-2	1.9	3401-151
VBHC-MT-4-BC-2	2.1	3401-152
VBHC-NT-30-BC-2	2.2	3401-153
VBHC-NT-40-BC-2	2.8	3401-154
VBHC-BT-30-BC-2	2.65	3401-155
VBHC-BT-40-BC-2	2.65	3401-156
VBHC-BT-50-BC-2	5.65	3401-157
VBHC-C-20-BC-2	1.75	3401-158
VBHC-SK-40-BC-2		3401-174
VBHC-SK-50-BC-2		3401-176

## BORING CAPACITY Ø10~Ø220



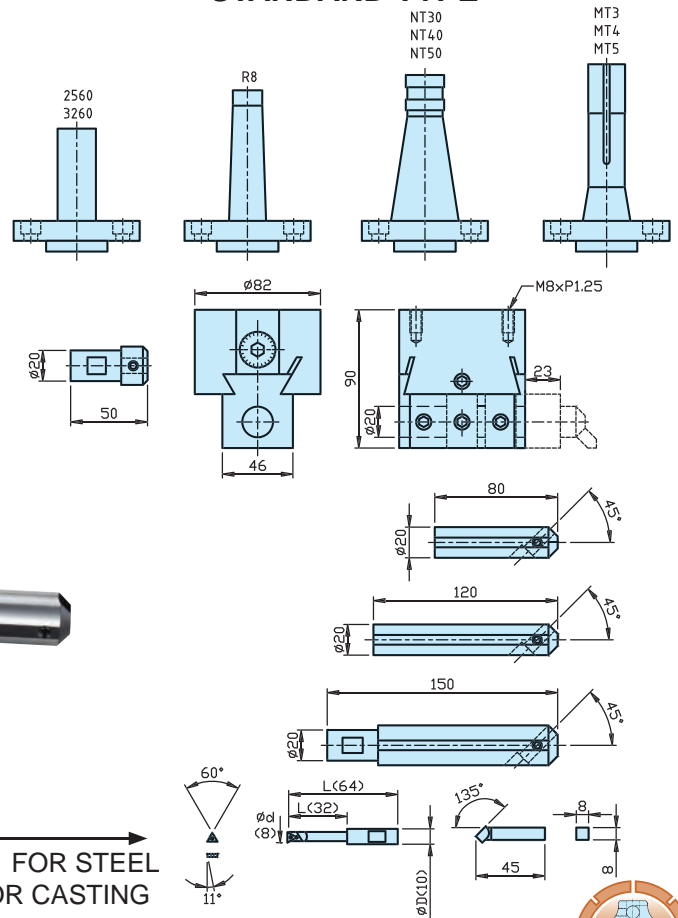
ORDER NO.	WEIGHT (kgs)	CODE NO.
VBHC-R-8-BC-3	4.2	3401-160
VBHC-MT-2-BC-3	4	3401-148
VBHC-MT-3-BC-3	4	3401-161
VBHC-MT-4-BC-3	4.3	3401-162
VBHC-NT-30-BC-3	4.1	3401-163
VBHC-NT-40-BC-3	4.7	3401-164
VBHC-NT-50-BC-3	6.9	3401-165
VBHC-BT-30-BC-3	4.34	3401-166
VBHC-BT-40-BC-3	4.7	3401-167
VBHC-BT-50-BC-3	7.7	3401-168
VBHC-C-20-BC-3	4	3401-169
VBHC-SK-40-BC-3		3401-175
VBHC-SK-50-BC-3		3401-177

# Boring Head Sets



## STANDARD TYPE

• Boring Bar  
PAGE C83



INSERT NO. →  
TBGT060102L-W-T1200A FOR STEEL  
TBGT060102L-W-G11 FOR CASTING  
"SUMITOMO" BRAND



### 1 SCALE 0.005 mm, 0.01 mm per Ø Processing Range Ø10 ~ Ø240 mm

Simple, extremely rigid construction, Finest materials and craftsmanship are employed to combine strength, flexibility and accuracy in a tool of unique design. 2 vertical boring tool holes: one centered and one offset. One cross hole for greater versatility and capacity. Dependable adjustment --- far spread graduation for closer reading. Perfectly balanced for high speed operation. Precision ground & hardened shank are integrating with the head for routing and smoother operation.



MT-3, 4, 5  
NT-30, 40, 50  
BT-40, 50  
SK-40, 50  
C-25, 32

### FULL SET

ORDER NO.	SHANK TYPE	DRAWBAR THREAD		Weight (kgs)	CODE NO.
		S.A.E	METRIC		
VBH-102	MT-3		M12X1.75P	5.9	3401-101
VBH-103	MT-4		M16X2.0P	6.1	3401-102
VBH-104	MT-5		M20X3.0P	7	3401-103
VBH-105	R-8	7/16" ~20UNF		5.9	3401-104
VBH-106	NT-30	1/2"-12W or 1/2"-13W	M12X1.75P	5.8	3401-105
VBH-107	NT-40	5/8"-11W	M16X2.0P	6	3401-106
VBH-108	NT-50	1"-8W	M24X3.0P	8.9	3401-107
VBH-109	BT-40	-	M16X2.0P	7.1	3401-108
VBH-110	SK-40	-	M16X2.0P	6.8	3401-109
VBH-111	C-25			5.7	3401-110
VBH-112	BT-50		M24X3.0P	9.4	3401-111
VBH-113	SK-50		M24X3.0P	5.9	3401-112
VBH-114	C-32			5.9	3401-113

### SHANK FOR BORING HEAD

ORDER NO.	VBH-MT3	VBH-MT4	VBH-MT5	VBH-R8
WEIGHT (KG)	0.6	1.2	2.1	1
CODE NO.	3401-120	3401-121	3401-122	3401-123

ORDER NO.	VBH-NT30	VBH-NT40	VBH-NT50	VBH-BT40
WEIGHT (KG)	1.1	1.2	3.9	1.9
CODE NO.	3401-124	3401-125	3401-126	3401-127

ORDER NO.	VBH-SK40	VBH-C25	VBH-BT50	VBH-SK50
WEIGHT (KG)	1.9	1.5	3.1	3.98
CODE NO.	3401-128	3401-129	3401-130	3401-131



# Universal Boring And Facing Master Head



**BORING CAPACITY Ø5-Ø250**  
**FOR VERTICAL HOLE BORING IS Ø110**

**1 SCALE 0.01 mm per Ø**

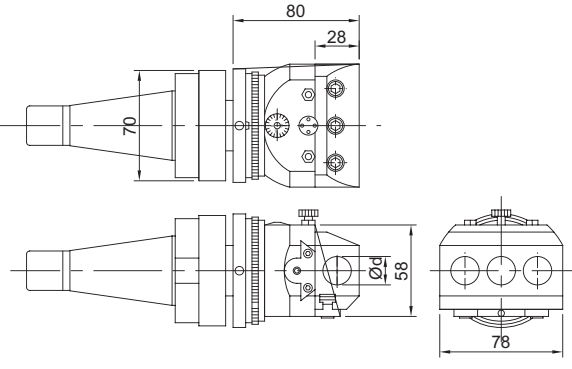


VBHU



• Boring Bar  
 PAGE C83

ORDER NO.	SHANK TYPE	DRAWBAR THREAD		Weight (kg)	CODE NO.
		S.A.E	METRIC		
VBHU-202	MT-3	1/2"-12W	M12X1.5P	6	3401-001
VBHU-203	MT-4	5/8"-11W	M16X2.0P	6.3	3401-002
VBHU-204	MT-5	1"-8W	M24X3.0P	7	3401-003
VBHU-205	R-8	7/16"-20UNF	n/a	6.2	3401-004
VBHU-206	NT-30	1/2"-12W	M12X1.75P	6	3401-005
VBHU-207	NT-40	5/8"-11W	M16X2.0P	6.2	3401-006
VBHU-208	NT-50	1"-8W	M24X3.0P	8.5	3401-007
VBHU-209	BT-40		M16X2.0P	6.9	3401-008
VBHU-210	C-25			4.5	3401-009
VBHU-211	SK-40		M16X2.0P	5.6	3401-010
VBHU-212	SK-50		M24X3.0P	8.3	3401-011
VBHU-213	BT-50		M24X3.0P	9.7	3401-012
VBHU-214	C-20			6	3401-013



**SPECIFICATION VBHU**

Unit:mm

ACTUAL SIZE	OVERING BAR HOLE SIZE	BORING BAR HOLE SIZE	CENTER DIST BETWEEN HOLES.	CROSS HOLE DIA	OFFSET
78	100	18	23	18	15

It is construction with precision parts, freedom of selection feeding quantity, auto feed and stop. Processing range from 5mm to 250mm.

Stop Rod  
BP-17

Square Bit(HSS) BP-18

Clamping Sleeve	
metric	D
BP-7	Ø10
BP-8	Ø12

Allen Key	
	A
BP-14	4
BP-15	5
BP-16	6

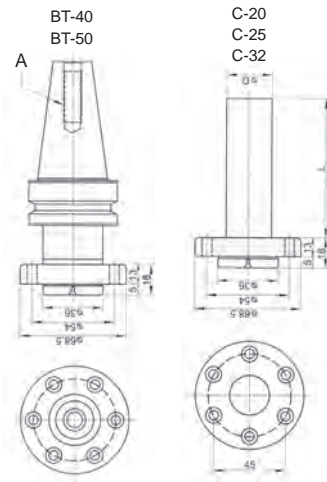
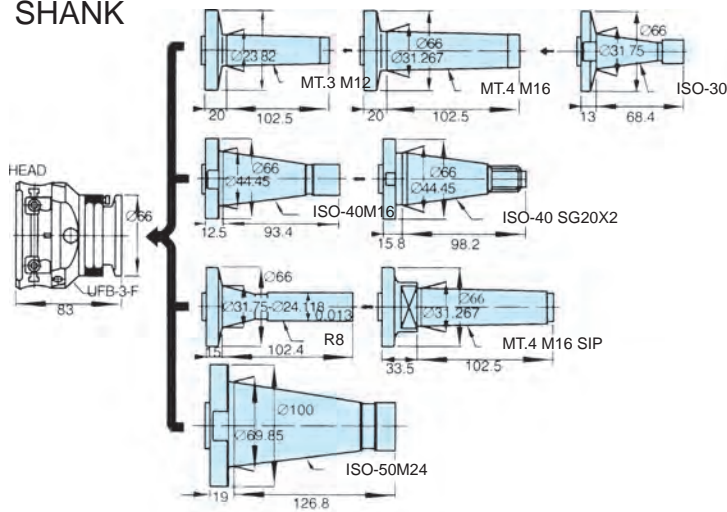
Boring Bar	
metric	L
BP-21	104

Boring Bar	
metric	L
BP-1	90
BP-2	120

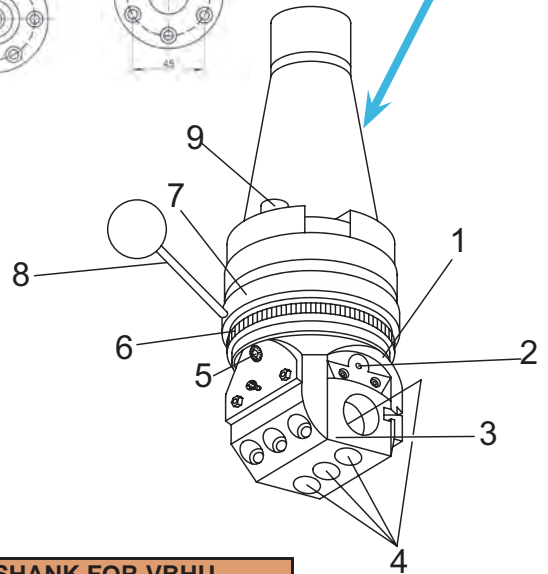
Boring Bar	
metric	ØxL
BP-9	Ø18x90
BP-10	Ø10x80
BP-11	Ø10x70
BP-12	Ø10x60



## SHANK

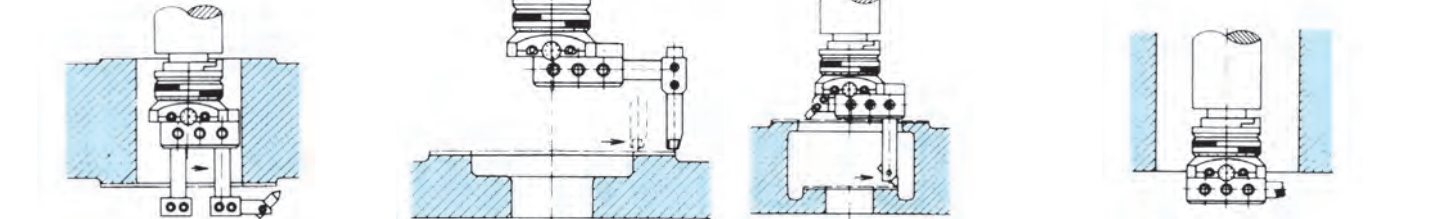
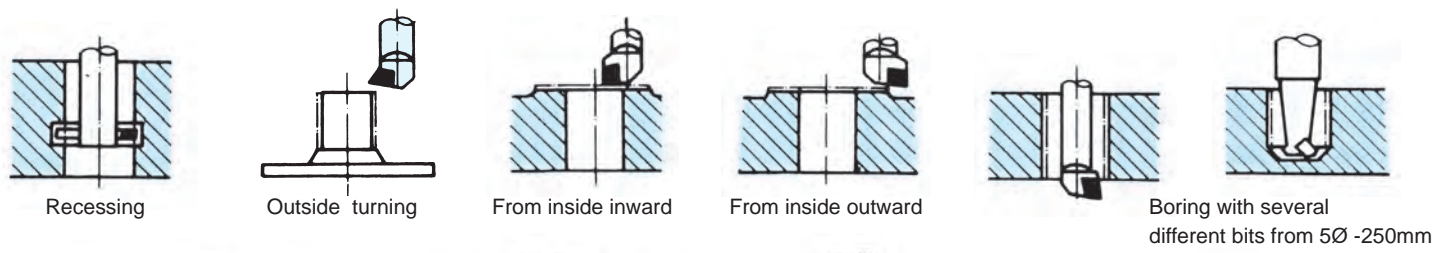


SHANK CHANGEABLE

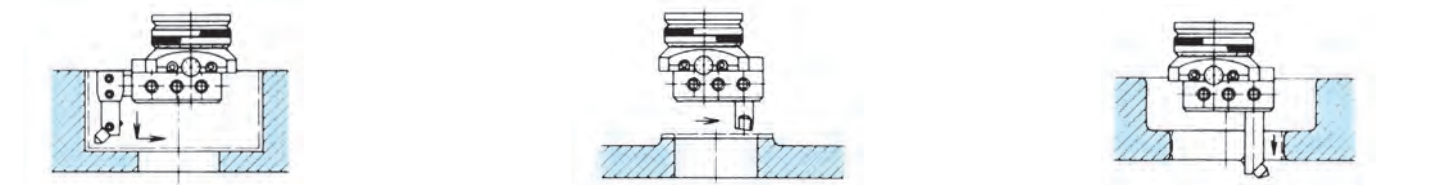


Main part of the universal boring heads is the body(1), in which the tool slide (3) moves on dovetail guideways. The tool slide is provided with holes for accommodation of tools and tool holders(4). In boring holes or turning external cylindrical surfaces, the tool is adjusted with the aid of the graduated dial for fine setting of tool slide(5), one division of which means a change in diameter of bored hole by .0005". On the types rapid adjustment of the tool slide(3) can be produced by rotating the graduated dial for quick adjustment of the tool slide(2). During recessing, turning of front or rear facings or similar jobs calling for automatic transverse feed movement to the tool slide, the preselected feed movement to the tool slide is engaged with the aid of the engagement ring (6). After setting of tool, the automatic transverse feed movement to the tool slide is started by braking of the brake ring(7), by means of the handle(8). The clutch(9) provides for tripping of the automatic feed movement when cutting resistance increases or when the trip dog is approached. Mechanism of the boring heads has a lubrication circuit delivering oil from two lubricators to all friction surfaces. All parts are hardened and working surfaces are ground.

SHANK FOR VBHU-		
MT-3	MT-4	MT-5
NT-30	NT-40	NT-50
R-8		
C-20	C25	C-32
BT-40		BT-50
	SK-40	SK-50



Facing of the reverse side by using boringbar holders contained in attachment. Facing of large ø with long boringbar holder reinforced by rings and draw in screw. Facing in two areas with one boringbar and boringbar holder. Because of the small construction of the facing and boring heads deep bores can be made. In this case the boring bit is fixed directly in the side.



Boring and facing with short boringbar holder and a boringbar. Facing with bit fixed directly in slide. Boring with long boringbar.



# High Precision Boring Head Set



**NEW**

1 SCALE 0.005 mm  
0.01 mm per Ø  
BORING CAPACITY Ø8-Ø280

• Boring Bar  
PAGE C83



Clampin<sup>f</sup> Screw For  
Boring Head  
Clamping Screw For  
Boring Bar

## VBH 2084

- Good for high speed, high precision boring work.
- Made of tool steel, high rigidity, no deformation.
- Each dividing scale is 0.005 mm, total stroke: 27 mm. For Ø diameter is 0.01 mm
- Can choose any taper (BT40, BT50, SK40, SK50) shank.
- Include 8 boring bars, range Ø8 ~ Ø280 mm.
- Boring bar size = Ø20 x 8 pcs
- Insert locking screw 8 x 3 = 24 pcs
- Wrench x 6 pcs
- Hexa 6 wrench x 1 pcs



## SET TYPE

ORDER NO.	SHANK TYPE	DRAWBAR	THREAD	Weight (kgs)	CODE NO.
		S.A.E	METRIC		
VBH2084-R8	R-8	7/16"-20UNF	n/a	6.6	3320-491
VBH2084-NT30	NT-30	1/2"-12W	M12X1.75P	6.6	3320-492
VBH2084-NT40	NT-40	5/8"-11W	M16X2.0P	7	3320-493
VBH2084-NT50	NT-50	1"-8W	M24X3.0P	9	3320-494
VBH2084-BT40	BT-40		M16X2.0P	8	3320-495
VBH2084-BT50	BT-50		M24X3.0P	10.4	3320-496
VBH2084-SK40	SK-40		M16X2.0P	8	3320-497
VBH2084-SK50	SK-50		M24X3.0P		3320-501
VBH2084-MT3	MT-3		M12X1.5P	6.6	3320-498
VBH2084-MT4	MT-4		M16X2.0P	7	3320-499
VBH2084-MT5	MT-5		M24X3.0P	8	3320-500

## BORING BAR FOR BORING HEAD

BORING BAR	RANGE d	DEPTH m	SHANK L	INSERT	SCREW	WRENCH
BRB2008-32	8-11	32	80	TBGT060102L SUMITOMO	TS2001	T6
BRB2010-40	10-13	40	80			
BRB2012-53	12-17	53	85	TPGH090204L MITSUBISHI	TS2504	T8
BRB2016-68	16-21	68	100			
BRB2020-83	20-130	83	115	TPGH110304L MITSUBISHI	TS3005	T10
BRB2025-96	25-135	96	135			
BRB2030-115	30-140	115	154			
BRB2035-97-L	120-280	14	99			

# Micro Boring Head Set



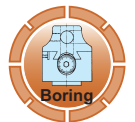
I Scale 0.002 mm Boring diameter from Ø6 - Ø154mm

**NEW**

● Boring Bar  
PAGE C83



- Processing range Ø6-154 mm.
- Precisely ground and hardened shank integrating with boring head for routing and smooth operation.
- Please keep boring head clean and lubricated constantly.
- Easy & Simple operation.
- Complete set.
- Fine adjustment.
- Luxury box.
- Material : tool steel



## SET TYPE

ORDER NO.	Boring Range Ø	Shank	L	Pcs/SET	Weight (kgs)	CODE NO.
VBH55-BT40	6-154	BT40-VBK5-75	75	18		3320-470
VBH55-BT50		BT50-VBK5-105	105	18		3320-471

## INCLUDING ACCESSORIES : BORING BAR SIZE FOR SET TYPE

Boring Bar		Range	Insert	Screw	Wrench
BR1606A-21		Ø6 - Ø9	WBGT060102	Ø3 x M2	T6
BR1608A-28		Ø8 - Ø11	TBGT060102	Ø2.7 x M2	T6
BR1610A-35		Ø10 - Ø13			
BR1612A-42		Ø12 - Ø15	TPGT090204	M2.5	T8
BR1614A-50		Ø14 - Ø17			
BR1616A-60		Ø16 - Ø20			
BR1620A-65		Ø20 - Ø24			
BR1624A-68		Ø24 - Ø28			
C16-BRM-SP27		Ø27 - Ø40			
C16-BRM-SP35		Ø35 - Ø50			
C16-BRM-SP45		Ø45 - Ø68			
CB-M10-SP55		Ø55 - Ø80			
CB-M10-SP68		Ø68 - Ø104			
CB-M10-SP100		Ø100 - Ø154			





# Micro Boring Head Set



I Scale 0.002 mm Boring diameter from Ø6 - Ø204mm

**NEW**

• Boring Bar  
PAGE C83



- Processing range Ø6-204 mm.
- Precisely ground and hardened shank integrating with boring head for routing and smooth operation.
- Please keep boring head clean and lubricated constantly.
- Easy & Simple operation.
- Complete set.
- Fine adjustment.
- Luxury box.
- Material : tool steel



## SET TYPE

ORDER NO.	Boring Range Ø	Shank	L	Pcs/SET	Weight (kgs)	CODE NO.
VBH68-BT40	6-204	BT40-VBK6-65	65	19		3320-476
VBH68-BT50		BT50-VBK6-95	95	19		3320-477

## INCLUDING ACCESSORIES : BORING BAR SIZE FOR SET TYPE

Boring Bar		Range	Insert	Screw	Wrench
BR1606A-21		Ø6 - Ø9	WBGT060102	Ø3 x M2	T6
BR1608A-28		Ø8 - Ø11	TBGT060102	Ø2.7 x M2	T6
BR1610A-35		Ø10 - Ø13			
BR1612A-42		Ø12 - Ø15	TPGT090204	M2.5	T8
BR1614A-50		Ø14 - Ø17			
BR1616A-60		Ø16 - Ø20			
BR1620A-65		Ø20 - Ø24			
BR1624A-68		Ø24 - Ø28			
C16-BRM-SP27		Ø27 - Ø40			
C16-BRM-SP35		Ø35 - Ø50			
C16-BRM-SP45		Ø45 - Ø68			
CB-M10-SP68		Ø68 - Ø104			
CB-M10-SP100		Ø100 - Ø154			
CB150-RCM100-SP100		Ø150 - Ø204			



# High Precision Boring Head Set



**NEW**

1 SCALE 0.005 mm

0.01 mm per Ø

BORING CAPACITY Ø8-Ø46

• Boring Bar  
PAGE C83



Clamping Screw For Boring Bar

## VBH 620

- Good for high speed, high precision boring work.
- Made of tool steel, high rigidity, no deformation.
- Each dividing scale is 0.005 mm, total stroke: 6 mm. For Ø diameter is 0.01 mm
- Can choose any taper (BT40, BT50, SK40, SK50) shank.
- Include 8 boring bars, range Ø8 ~ Ø46 mm.
- Boring bar size = Ø16 x 8 pcs
- Insert locking screw 8 x 3 = 24 pcs
- Wrench x 6 pcs
- 4 mm T wrench x 1 pcs



## SET TYPE

ORDER NO.	SHANK TYPE	DRAWBAR	THREAD	Weight (kgs)	CODE NO.
		S.A.E	METRIC		
VBH620-NT40	NT-40	5/8"-11W	M16X2.0P	6.5	3320-480
VBH620-NT50	NT-50	1"-8W	M24X3.0P	7.8	3320-481
VBH620-BT40	BT-40		M16X2.0P	6.5	3320-482
VBH620-BT50	BT-50		M24X3.0P	8	3320-483
VBH620-SK40	SK-40		M16X2.0P	6.5	3320-484
VBH620-SK50	SK-50		M24X3.0P	7.8	3320-485

## BORING BAR FOR BORING HEAD

BORING BAR	RANGE d	DEPTH m	SHANK L	INSERT	SCREW	WRENCH
BRB1608-32	8-11	32	80	TBGT060102L	TS2001	T6
BRB1610-40	10-13	40	80			
BRB1612-53	12-15	53	85	TPGH090204L	TS2504	T8
BRB1616-68	16-21	68	100			
BRB1620-83	20-26	83	115	TPGH110304L	TS3005	T10
BRB1625-90	25-31	90	122			
BRB1630-90	30-36	90	122			
BRB1640-90	40-46	90	122			



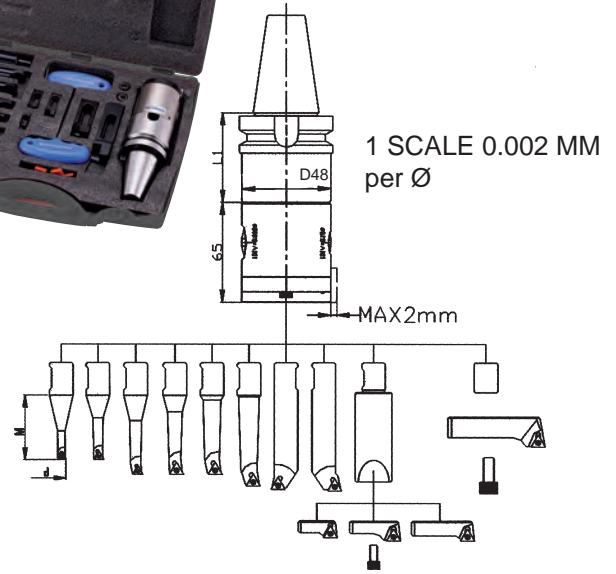
# Precision Finish Boring Head Sets



Boring diameter Ø 6-90 mm

**NEW**

• Boring Bar  
PAGE C83



- Processing range Ød 6-90 mm.
- This slim set allows customer to process boring work in the narrow space with high precision.
- Precisely ground and hardened shank integrating with boring head for routing and smooth operation.
- Please keep boring head clean and lubricate constantly.



## SET TYPE

## VBHD SHANK

ORDER NO.	Boring Range Ø	Shank	L1	Head Dia. ØD	PCS/SET	CODE NO.	ORDER NO.	L	WEIGHT	CODE NO.
VBHD-BT-30	6-90	BT30-VCK4-45	45	48	14 PCS/SET	3320-450	BT30-VCK4-45	45		3320-450S
VBHD-BT-40		BT40-VCK4-60	60			3320-451	BT40-VCK4-60	60		3320-451S
VBHD-BT-50		BT50-VCK4-75	75			3320-452	SK40-VCK4-65	65		3320-453S
VBHD-SK-40		SK40-VCK4-65	65			3320-453	SK50-VCK4-75	75		3320-454S
VBHD-SK-50		SK50-VCK4-75	75			3320-454	NT40-40-VCK4-60	60		3320-455S
VBHD-NT-40		NT40-40-VCK4-60	60			3320-455	NT50-50-VCK4-60	60		3320-456S
VBHD-NT-50		NT50-50-VCK4-60	60			3320-456	HSK63A-VCK4-75	75		3320-457S
VBHD-HSK63A		HSK63A-VCK4-75	75			3320-457	HSK100A-VCK4-75	75		3320-458S
VBHD-HSK100A		HSK100A-VCK4-75	75			3320-458				

## ACCESSORIES: BORING BAR SIZE FOR SET TYPE

Boring Bar	Range d	Depth m	Insert	Screw	Wrench	Feed mm/REV.
BR-1606-20	6-9	20	WBGT060102L	TS2	T6	0.05-0.1
BR-1608-28	8-11	28	TBGT060102L			0.05-0.1
BR-1610-36	10-13	36	TBGT060104L			0.07-0.15
BR-1612-42	12-15	42	TPGT090202L	TS25	T8	0.05-0.1
BR-1614-50	14-17	50				
BR-1616-60	16-20	60	TPGT090204L			0.07-0.15
BR-1620-63	20-24	63				
BR-1624-64	24-28	64				
BM5		60+SRTP2838/SRTP3652/SRTP4470		M5 X15 CAP	4	0.05-0.1
SRTP2838	28-38	+10	TPGT090202L	TS25	T8	
SRTP3652	36-52	+12				
SRTP4470	44-70	+12	TPGT090204L			
BM8				M8 X 15 CAP	6	0.07-0.15
SRTP58-90	58-90	+20	TPGT090204L	TS25	T8	

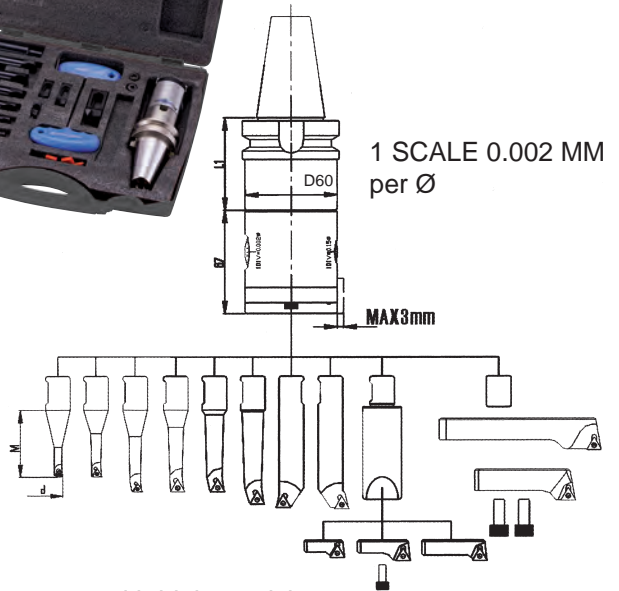


# Precision Finish Boring Head Sets



Boring diameter Ø 6-150 mm

• Boring Bar  
PAGE C83



- Processing range Ød 6-150 mm.
- This slim set allows customer to process boring work in the narrow space with high precision.
- Please keep boring head clean and lubricate constantly.
- Precisely ground and hardened shank integrating with boring head for routing and smooth operation.



BORING HEAD SETS

## SET TYPE

ORDER NO.	Boring Range Ø	Shank	L1	Head Dia. ØD	PCS/SET	CODE NO.
VBHE-BT-40	6-150	BT40-VCK5-60	60	60	15 PCS/SET	3320-460
VBHE-BT-50		BT50-VCK5-75	75			3320-461
VBHE-SK-40		SK40-VCK5-65	65			3320-462
VBHE-SK-50		SK50-VCK5-75	75			3320-463
VBHE-NT-40		NT40-40-VCK5-60	60			3320-464
VBHE-NT-50		NT50-50-VCK5-75	75			3320-465
VBHE-HSK63A		HSK63A-VCK5-75	75			3320-466
VBHE-HSK100A		HSK100A-VCK5-75	75			3320-467

## VBHE SHANK

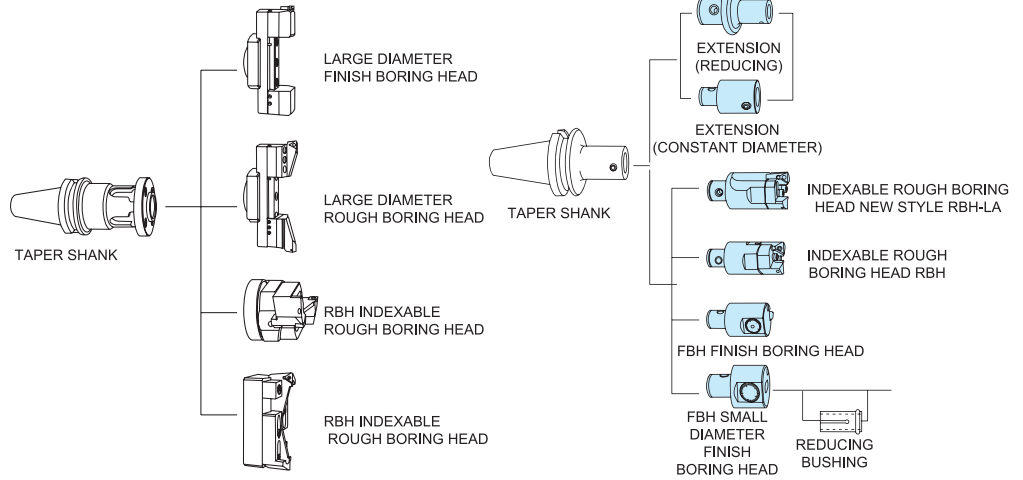
ORDER NO.	L	WEIGHT	CODE NO.
BT40-VCK5-60	60		3320-460S
BT50-VCK5-75	75		3320-461S
SK40-VCK5-65	95		3320-462S
SK50-VCK5-75	75		3320-463S
NT40-40-VCK5-60	60		3320-464S
NT50-50-VCK5-75	75		3320-465S
HSK63A-VCK5-75	75		3320-466S
HSK100A-VCK5-75	75		3320-467S

## ACCESSORIES: BORING BAR SIZE FOR SET TYPE

Boring Bar	Range d	Depth m	Insert	Screw	Wrench	Feed mm/REV.
BR-1606-20	6-9	20	WBGT060102L	TS2	T6	0.05-0.1
BR-1608-28	8-11	28	TBGT060102L			0.05-0.1
BR-1610-36	10-13	36	TBGT060104L			0.07-0.15
BR-1612-42	12-15	42	TPGT090202L	TS25	T8	0.05-0.1
BR-1614-50	14-17	50				
BR-1616-60	16-20	60				
BR-1620-63	20-24	63	TPGT090204L			0.07-0.15
BR-1624-64	24-28	64				
BM5		60+SRTP2838/SRTP3652/SRTP4470		M5 X15 CAP	4	
SRTP2838	28-38	+10	TPGT090202L	TS25	T8	0.05-0.1
SRTP3652	36-52	+12				
SRTP4470	44-70	+12				TPGT090204L
BM8				M8 X 15 CAP	6	
SRTP70110	70-110	+20	TPGT090202L	TS25	T8	0.05-0.1
SRTP110150	110-150	+20	TPGT090204L			0.07-0.15



# Modular Boring Systems

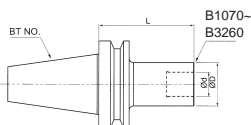
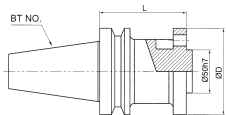


## Taper Shank For Boring Heads Series BS70,100,200,300,400 Taper Shank For Boring Heads Series B1070~B6230

### BS70~400 SERIES



### B1070~6230 SERIES



ORDER NO.	Length (L)	External Diameter (D)	Applicable Boring Heads	Weight (kgs)	CODE NO.
VT-BT30-B1070	70	19	FBB20	0.5	3320-214
VT-BT30-B2080	80	24	VRB25 ; FBB25	0.6	3320-215
VT-BT30-B3080	80	31	VRB32 ; FBB32	0.7	3320-216
VT-BT30-B4070	70	39	VRB40 ; FBB40 ; FBB44	0.8	3320-217
VT-BT30-B5060	60	50	VRB52 ; FBB52 ; FBB55	0.8	3320-218
VT-BT30-B6060	60	64	VRB68 ; VRB90 ; FBB68 FBB100 ; FBB150 ; FBB66	1.0	3320-219
VT-BT40-B1075	75	19	FBB20	1.2	3320-220
VT-BT40-B2085	85	23	VRB25 ; FBB25	1.2	3320-221
VT-BT40-B3095	95	30	VRB32 ; FBB32	1.45	3320-222
VT-BT40-B4085	85	38	VRB40 ; FBB40 ; FBB44	1.5	3320-223
VT-BT40-B5075	75	50	VRB52 ; FBB52 ; FBB55	1.8	3320-225
VT-BT40-B6065	65	64	VRB68 ; VRB90 ; FBB68 FBB100 ; FBB150 ; FBB66	2.15	3320-227
VT-BT40-BS70	70	95	VRB120 ; FBB200 VRB120 and above; FBB200 and above	3.2	3320-228
VT-BT50-B1115	115	19	FBB20	3.5	3320-229
VT-BT50-B2110	110	23	VRB25 ; FBB25	4	3320-230
VT-BT50-B3125	125	30	VRB32; FBB32	4.4	3320-232
VT-BT50-B4115	115	38	VRB40; FBB40; FBB44	4.8	3320-234
VT-BT50-B4175	175			5.2	3320-235
VT-BT50-B5105	105	50	VRB52; FBB52; FBB55	5.4	3320-236
VT-BT50-B5180	180			6.2	3320-237
VT-BT50-B5240	240			6.4	3320-238
VT-BT50-B6095	95	64	VRB68 ; VRB90 ; FBB68 FBB100 ; FBB150 ; FBB66	5.9	3320-239
VT-BT50-B6170	170			6.5	3320-240
VT-BT50-B6230	230			6.9	3320-241
VT-BT50-BS100	100	95	VRB120 VRB120 and above; VRB200 - 500; large diameter boring heads series FBB200-500	5.71	3320-242
VT-BT50-BS200	200			8.79	3320-244
VT-BT50-BS300	300			11.25	3320-246
VT-BT50-BS400	400			19.3	3320-247









# Large Diameter 2 Inserts Rough Boring VERTEX®

Modular Style For Diameter Over 200 mm  
Boring  $\phi$ D range from  $\phi$ 200- $\phi$ 1,250 mm



- ※Insert Not Included
- ※RB200C12 / RB200T16 / RB200T22 / RB200S12  
ARE FOR VRB200 ~ VRB900
- ※Arbor is not included

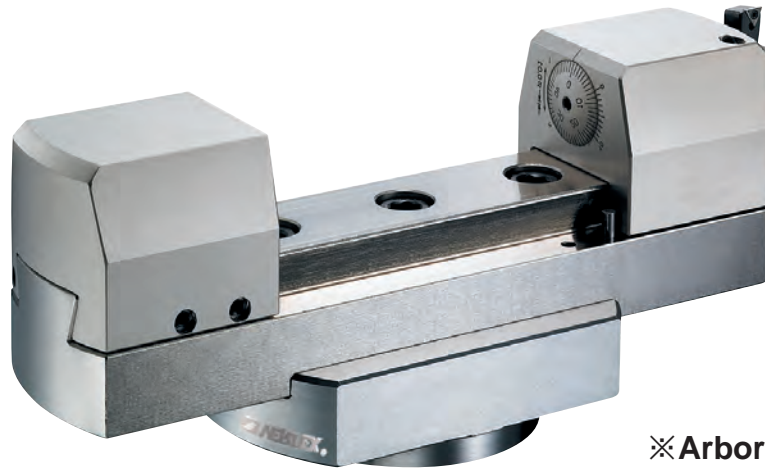
Boring Head Type	ORDER NO.	VRB200	VRB300	VRB400	VRB500	VRB600	VRB900	
	Length	130	130	130	130	150	150	
	(kgs) Total Weight Steel/Alloy	9.5	11.5	13.5	15.5	33	43	
	D(mm) Boring Diameter Range	200-310	300-410	400-510	500-610	600-900	900-1200	
Module	Taper Shank		BT50-BS				BT50-FMA-47.625	
	Flange (kgs)Weight Steel/Alloy		BR200 2.7				BR600	BR900
						8.8kg	13.5kg	
	Extension Slide		RST200	RST300	RST400	RST500	RST300 x2pcs	RST400 x2pcs
	(kg)Weight Steel/Alloy		3.4 kg	5.4 kg	7.4 kg	9.4 kg	10.8 kg	14.8 kg
	Clamp Base (kg)Weight		RS200 0.98 kg					
	Height Setting Shim (kg)Weight		RS201 0.05 kg					
	Insert Holder		RB200C12		RB200T16	RB200T22		RB200S12
	Applicable Insert		CCMT120404		TCMT16T304	TCMT220404		SCMT120404
	(kg)Weight		0.68 kg					
CODE NO.		3320-250	3320-251	3320-252	3320-253	3320-254	3320-255	



# Enlargeable Finish Boring Head








Modular Style For Diameter Over 200 mm  
Boring  $\phi D$  from  $\phi 200$ - $\phi 1,250$  mm



※ Arbor is not included

BORING SYSTEM

Boring Head Type	ORDER NO.	VFB200	VFB300	VFB400	VFB500	VFB600	VFB900	
	Length	130	130	130	130	150	150	
	(kgs) Total Weight Steel/Alloy	7	7.8	8.6	9.4	15.8	22.1	
	D(mm) Boring Diameter	200-310	300-410	400-510	500-610	600-900	900-1200	
Module	Taper Shank		BT50-BS				BT50-FMA-47.625	
	Flange (kg)Weight Steel/Alloy		BR200 2.7 kg				BR600 8.8kg	BR900 13.5kg
	Extension Slide		RST200	RST300	RST400	RST500	RST300 x2pcs	RST400 x2pcs
	(kgs)Weight		1.1 kg	1.9 kg	2.7 kg	3.5 kg	3.8 kg	5.4 kg
	Balance Weight (kg)Weight		RBN200 1.6 kg					
	Finish Head (kgs)Weight		CB200 1.6 kg					
	Applicable Insert		TP08/ $\phi 3.2 \times M2/T6$ , TP09/ $M2.5/T8$ , TC11/ $M2.5/T8$					
	CODE NO.		3320-260	3320-261	3320-262	3320-263	3320-264	3320-265

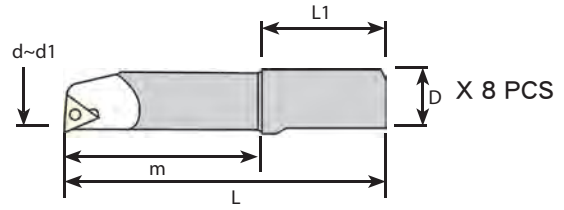


# Insert Type Boring Bar



ORDER NO. BBAR-D16 CODE NO.6004-071

※ All inserts are floating price.  
Contact us before ordering from F1~F49



## BORING BAR FOR BORING HEAD

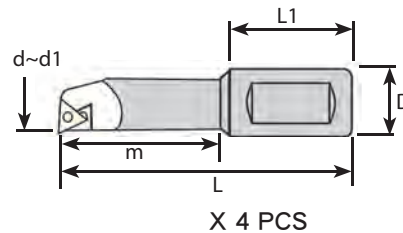
8 PCS/SET

BORING BAR	SHANK D.	RANGE d~d1	DEPTH m	L1	SHANK L. L	INSERT	FIXING UNIT	WRENCH	WEIGHT (kg)
BRB1608-32	16	8-11	32	32	80	TBGT060102L	TS2001	T6	2
BRB1610-40	16	10-13	40	32	80	TPGH090204L	TS2504	T8	
BRB1612-53	16	12-15	53	32	85				
BRB1616-68	16	16-21	68	32	100	TPGH110304L	TS3005	T10	
BRB1620-83	16	20-26	83	32	115				
BRB1625-90	16	25-31	90	32	122				
BRB1630-90	16	30-36	90	32	122				
BRB1640-90	16	40-46	90	32	122				



# Insert Type Boring Bar

ORDER NO. BBAR-D18A CODE NO.6004-072A



## BORING BAR FOR BORING HEAD

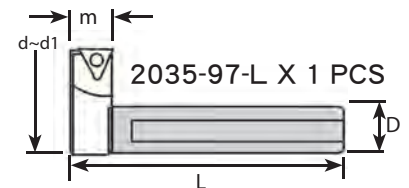
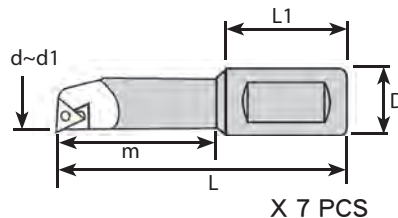
4 PCS/SET

BORING BAR	SHANK D.	RANGE d~d1	DEPTH m	L1	SHANK L. L	INSERT	FIXING UNIT	WRENCH	WEIGHT (kg)
BRB1810-40	18	10-13	40	32	80	TBGT060102L	TS2001	T6	1.0
BRB1812-53	18	12-17	53	32	88	TPGH090204L	TS2504	T8	
BRB1816-68	18	16-21	68	32	104				
BRB1820-83	18	20-130	83	32	118	TPGH110304L	TS3005	T10	



# Insert Type Boring Bar

ORDER NO. BBAR-D20 CODE NO.6004-073



## BORING BAR FOR BORING HEAD

8 PCS/SET

BORING BAR	SHANK D.	RANGE d~d1	DEPTH m	L1	SHANK L. L	INSERT	FIXING UNIT	WRENCH	WEIGHT (kg)
BRB2008-32	20	8-11	23	32	80	TBGT060102L	TS2001	T6	2.65
BRB2010-40	20	10-13	40	32	80	TPGH090204L	TS2504	T8	
BRB2012-53	20	12-17	53	32	85				
BRB2016-68	20	16-21	68	32	100	TPGH110304L	TS3005	T10	
BRB2020-83	20	20-130	83	32	115				
BRB2025-96	20	25-135	96	32	135				
BRB2030-115	20	30-140	115	32	154				
BRB2035-97-L	20	120-280	14		99				





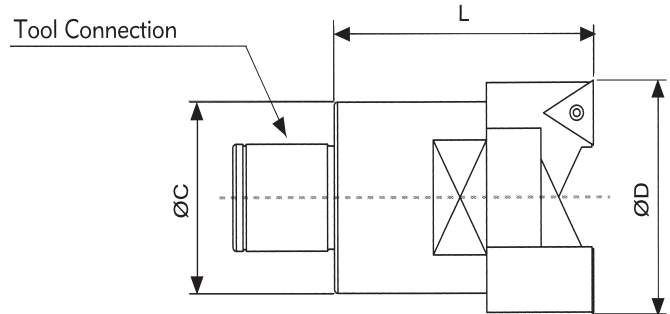
# Changeable 2 Inserts Rough Boring Head VRB



VMH-SYSTEM

Boring diameter from  $\varnothing 25$ - $\varnothing 350$ mm

※Adjustable



- C ◆
- INSERT STYLE -T ▲
- S ■

BORING SYSTEM

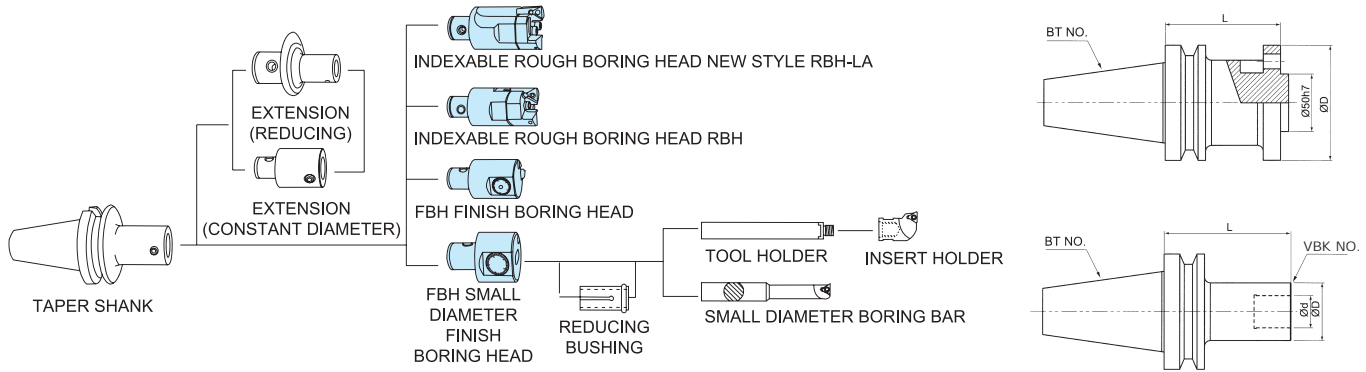
	ORDER NO.	Tool connection	D(mm) Boring Range		L (mm)	C (mm)	Insert	Weight (g)	CODE NO.
	VRB25-33C	B2080	25	33	45	24	CCMT060204	0.15	3320-270
	VRB32-42C	B3080	32	42	55	31	CCMT060204	0.3	3320-271
	VRB32-42T						TCMT110204		3320-272
	VRB40-55C	B4070	40	55	65	39	CCMT09T304	0.5	3320-273
	VRB40-55T						TCMT16T304		3320-274
	VRB40-55S						SCMT09T304		3320-275
	VRB52-70C	B5060	52	70	75	50	CCMT09T304	1	3320-276
	VRB52-70T						TCMT16T304		3320-277
	VRB52-70S						SCMT09T304		3320-278
	VRB68-92C	B6065	68	92	85	64	CCMT120408	2	3320-279
	VRB68-92T						TCMT16T304		3320-280
	VRB68-92S						SCMT120404		3320-281
	VRB90-122C	B6065	90	122	100	80	CCMT120408	2.9	3320-282
	VRB90-122T						TCMT220408		3320-283
	VRB90-122S						SCMT120404		3320-284
	VRB120-164C	VT-BT40-BS70 VT-BT50-BS100 VT-BT50-BS200 VT-BT50-BS300 VT-BT50-BS400	120	164	95	100	CCMT120408	3.8	3320-285
	VRB120-164T						TCMT220408		3320-286
	VRB120-164S						SCMT120404		3320-287
	VRB160-204C		160	204		130	CCMT120408	4.8	3320-288
	VRB160-204T						TCMT220408		3320-289
	VRB160-204S						SCMT120404		3320-290
	VRB200-300C	VT-BT40-BS70 VT-BT50-BS100 VT-BT50-BS200 VT-BT50-BS300 VT-BT50-BS400	200	300	95	170	CCMT120408	6.5	3320-291A
	VRB200-300T						TCMT220408		3320-292A
	VRB200-300S						SCMT120404		3320-293A
	VRB300-400C		300	400		260	CCMT120408	10	3320-297A
	VRB300-400T						TCMT220408		3320-298A
	VRB300-400S						SCMT120404		3320-299A



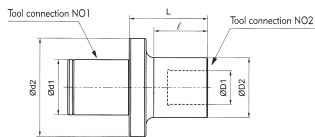
# Taper Shank For Boring Heads Series



Modular Boring Systems



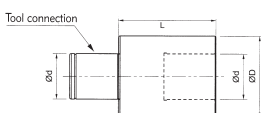
## Extension (Reduced)



ORDER NO.	d1	d2	D1	D2	L	ℓ	Applicable Boring Heads	Weight (kg)	CODE NO.
VBQ2-1-36	14	24	11	19	36	30	FBB20	0.1	3320-301
VBQ3-1-41	18	31			41	30	FBB20	0.15	3320-302
VBQ3-2-37			14	24	37	25	VRB25 ; FBB25	0.15	3320-303
VBQ4-1-58	22	39	11	19	58	40	FBB20	0.3	3320-304
VBQ4-2-50			14	24	50	36	VRB25 ; FBB25	0.3	3320-305
VBQ4-3-50			18	31	50	37	VRB32 ; FBB32	0.35	3320-306
VBQ5-1-60	28	50	11	19	60	40	FBB20	0.45	3320-307
VBQ5-2-54			14	24	54	35	VRB25 ; FBB25	0.45	3320-308
VBQ5-2-74			74	55	VRB25 ; FBB25	0.5	3320-309		
VBQ5-3-47			18	31	47	29	VRB32 ; FBB32	0.5	3320-310
VBQ5-3-72			72	54	VRB32 ; FBB32	0.6	3320-311		
VBQ5-4-42			22	39	42	25	VRB40 ; FBB40	0.5	3320-312
VBQ5-4-67			67	50	VRB40 ; FBB40	0.7	3320-313		
VBQ6-1-70	36	64	11	19	70	40	FBB20	0.9	3320-314
VBQ6-2-63			14	24	63	45	VRB25 ; FBB25	0.7	3320-315
VBQ6-2-93					93	75	VRB25 ; FBB25	0.8	3320-316
VBQ6-3-56			18	31	56	39	VRB32 ; FBB32	0.75	3320-317
VBQ6-3-96					96	79	VRB32 ; FBB32	0.95	3320-318
VBQ6-4-51					22	39	51	35	VRB40 ; FBB40
VBQ6-4-101			101	85			VRB40 ; FBB40	1.3	3320-320
VBQ6-5-41			28	50	41	25	VRB52 ; FBB52	0.85	3320-321
VBQ6-5-91					91	75	VRB52 ; FBB52	1.45	3320-322



## Extension (Constant Diameter)



ORDER NO.	d	D	L	Applicable Boring Heads	Weight (kg)	CODE NO.
VBQ1-1-30	11	19	30	FBB20	0.07	3320-323
VBQ2-2-30	14	24	30	VRB25 ; FBB25	0.1	3320-324
VBQ3-3-30	18	31	30	VRB32 ; FBB32	0.15	3320-325
VBQ4-4-45	22	39	45	VRB40 ; FBB40 ; FBB44	0.4	3320-326
VBQ5-5-60	28	50	60	VRB52 ; FBB52 ; FBB55	0.8	3320-327
VBQ6-6-60	36	64	60	VRB68/VRB90 ; FBB68, 100, 150 ; FBB66	1.4	3320-328



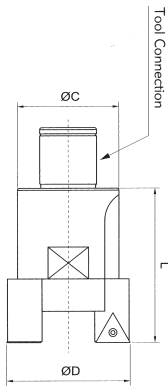
# Changeable 2 Inserts Rough Boring Head VRB-L VERTEX®

※Adjustable

Boring range from  $\varnothing 25\text{mm}$  to  $\varnothing 1250\text{mm}$ ;  
a variety of tool holders and boring heads are for your selection.



	ORDER NO.	Tool connection	D(mm) Boring Range	L (mm)	C (mm)	Insert	Weight (g)	CODE NO.
	VRB25-35LC	B2080	25~35	50	24	CCMT060204	0.15	3320-340
	VRB32-45LC	B3080	32~45	60	31	CCMT060204	0.3	3320-341
	VRB32-45LT					TCMT110204		3320-342
	VRB40-55LC	B4070	40~55	74	39	CCMT09T304	0.6	3320-343
	VRB40-55LT					TCMT16T304		3320-344
	VRB40-55LS					SCMT09T304		3320-345
	VRB52-75LC	B5060	52~75	80	50	CCMT09T304	1	3320-346
	VRB52-75LT					TCMT16T304		3320-347
	VRB52-75LS					SCMT09T304		3320-348
	VRB68-100LC	B6065	68~100	90	66	CCMT120408	2.5	3320-349
	VRB68-100LT					TCMT16T304		3320-350
	VRB68-100LS					SCMT120404		3320-351
	VRB90-130LC	B6065	90~130	100	88	CCMT120408	3.1	3320-352
VRB90-130LT	TCMT16T304					3320-353		
VRB90-130LS	SCMT120404					3320-354		
	VRB120-164LC	VT-BT40-BS70 VT-BT50-BS100 VT-BT50-BS200 VT-BT50-BS300 VT-BT50-BS400	120~164	95	100	CCMT120408	3.8	3320-355
	VRB120-164LT					TCMT220408		3320-356
	VRB120-164LS					SCMT120404		3320-357
	VRB160-204LC		160~204		130	CCMT120408	4.8	3320-358
	VRB160-204LT					TCMT220408		3320-359
	VRB160-204LS					SCMT120404		3320-360
	VRB200-310L	FMA-47.625	200~310	130	180	Optional Inserts CCMT120408 TCMT16T304 TCMT220408 SCMT120404	9.5	3320-361
	VRB300-410L		300~410		280		11.5	3320-362
	VRB400-510L		400~510		380		13.5	3320-363
	VRB500-610L		500~610		480		15.5	3320-364
	VRB600-900L		600~900		580		23	3320-365
	VRB900-1200L		900~1200		680		32	3320-366

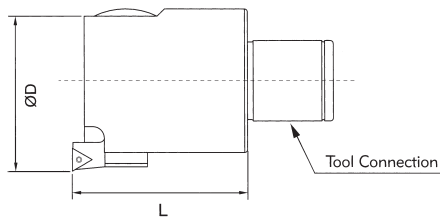


BORING SYSTEM

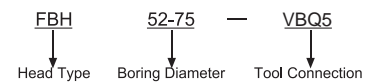


## FBB Finish Boring Head

Boring diameter from  $\varnothing 20\text{-}\varnothing 1250\text{mm}$



### Ordering Example



### FEATURES:

- FBH finish boring head is suitable for finish boring with working ranges from  $\varnothing 20\text{mm}$  to  $\varnothing 1250\text{mm}$  on diameter.
- The dial has been graduated into 50 divisions, each of which is 0.01mm on diameter. Available is a sub-dial for finer adjustment.
- High precision internal lead screw with inner lubrication is free from the effects of chip, featuring high durability.
- Coolant nozzle easily cools the insert and prolongs insert's working life.
- Cartridge unit is housed in a square structure with two face support, proving high stability and rigidity.

ORDER NO.	Tool Connection	ØD Boring Range	length	Weight (kg)	Insert/Clamping/Screw	CODE NO.
FBB20	B1070	20-26	35	0.1	TPGH080204/Ø2.7xM2/T6	3320-370
FBB25	B2080	25-33	40	0.2		3320-371
FBB32	B3080	32-42		0.3		3320-372
FBB40	B4070	40-55	50	0.5	TPGH080204/Ø3.2xM2/T6	3320-373
FBB52	B5075	52-75	60	1		3320-374
FBB68	B6065	68-102	70	2		3320-375
FBB100	B6065	100-152		2.9		3320-376
FBB150	B6065	150-202		4.2		3320-377



# FBB Finish Boring Head



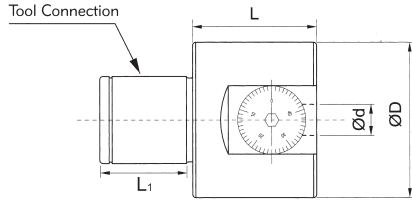
Boring diameter from Ø3 - Ø40 mm



**BORING CAPACITY**  
 FBB44 Ø8 - Ø20 m/m  
 FBB55 Ø12 - Ø40 m/m  
 FBB66 Ø8 - Ø40 m/m

### FEATURES:

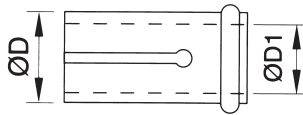
- Available are three different styles enabling small diameter boring from Ø8mm to Ø40mm. Boring range can be within Ø3mm to Ø10mm if small diameter solid carbide boring bar has been employed.
- The dial has been graduated into 50 divisions, each of which is 0.01mm in diameter. Available is a subdial for finer adjustment.
- High precision internal lead screw with inner lubrication is free from the effects of chip, featuring high durability.
- Cartridge unit is housed in a square structure with two face support, proving high stability and rigidity.



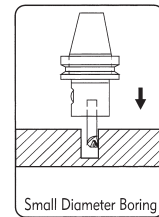
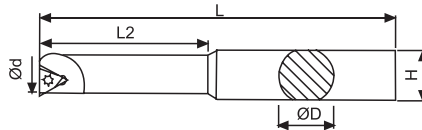
ORDER NO.	Tool Connection	Ød Internal Diameter	ØD External Dimeter	L length	L1	mm feed	Weight (kg)	CODE NO.
<b>FBB44</b>	B4070	10	39	32	Ø22x24L	0-2	0.4	3320-390
<b>FBB55</b>	B5060	12	50	40	Ø28x30L	0-3.5	0.8	3320-391
<b>FBB66</b>	B6065	16	64	50	Ø36x40L	0-5	1.4	3320-392

### BORING BAR SLEEVE FOR FBB66

ORDER NO.	D mm	D1 mm	Applicable Carbide Tool Holder	CODE NO.
<b>EC1608</b>	16	8	ST08-5M	3320-393
<b>EC1610</b>	16	10	ST10-6M	3320-394
<b>EC1612</b>	16	12	ST12-6M	3320-395



# Small Diameter Boring Head FBB44



### FOR FBB44 BORING CAPACITY FROM Ø8 - Ø20 MM

ORDER NO.	ØD mm	Ød mm	L mm	L2 mm	H mm	Insert	Clamp Screw	Wrench	CODE NO.
<b>BRB1008-32</b>	10	8	64	32	9	TBGT060104 KYOCERA	M2	T6	3320-400
<b>BRB1010-40</b>		10	72	40					3320-401
<b>BRB1012-45</b>		12	77	27		TPGB090204 KYOCERA	M2.5	T8	3320-402
<b>BRB1016-45</b>		16	77	27					3320-403
<b>BRB1020-45</b>		20	77	27		TPGB090204 KYOCERA	M2.5	T8	3320-404
<b>BRB10-5PCS/SET</b>	BRB1008-32 BRB1010-40 BRB1012-45 BRB1016-45 BRB1020-45								3320-405

### FOR FBB66 BORING CAPACITY FROM Ø8 - Ø40 MM

ORDER NO.	ØD mm	Ød mm	L mm	L2 mm	H mm	Insert	Clamp Screw	Wrench	CODE NO.
<b>BRB1608-32</b>	16	8	74	32	15	TBGT060104 KYOCERA	M2	T6	3320-406
<b>BRB1610-40</b>		10	75	40					3320-407
<b>BRB1612-53</b>		12	85	53		TPGB090204 KYOCERA	M2.5	T8	3320-408
<b>BRB1616-68</b>		16	100	68					3320-409
<b>BRB1620-83</b>		20	115	83		TPGB090204 KYOCERA	M2.5	T8	3320-410
<b>BRB1625-90</b>		25	122	90					3320-411
<b>BRB1630-90</b>		30	122	90					3320-412
<b>BRB1640-90</b>		40	122	90					3320-413
<b>BRB16-8PCS/SET</b>	BRB1608-32 BRB1610-40 BRB1612-53 BRB1616-68 BRB1620-83 BRB1625-90 BRB1630-90 BRB1640-90								3320-414



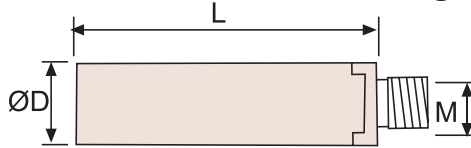
# Carbide Shank Holder



Small Diameter Modular Boring Bar

Boring diameter from

Ø8 - Ø16 mm

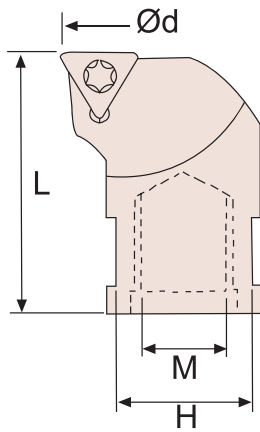


ORDER NO.	L mm	D mm	M mm	Applicable Insert Holder	Applicable Bushing	CODE NO.
ST08-5M-100	100	8	M5	IH09, IH10.5	EC1608	3320-420
ST10-6M-110	110	10	M6	IH12	EC1610	3320-421
ST12-6M-120	120	12		IH14, IH16	EC1612	3320-424
ST16-10M-160	160	16	M10x1.25P	IH18, IH20, IH22, IH24 IH26, IH28, IH30, IH32 IH34, IH36, IH38, IH40	---	3320-426



# Insert Holder For Carbide Shank Holder

Boring diameter from Ø9 - Ø40 mm



ORDER NO.	d(mm)	H(mm)	L(mm)	M(mm)	Insert	Clamping Screw	Wrench	CODE NO.
IH09	9	7	18	M5	TPGT080204L SUMITOMO	Ø3.2xM2	T6	3320-430
IH10.5	10.5	7	23	M6				3320-431
IH12	12	8						3320-432
IH14	14	10						3320-433
IH16	16	10						3320-434
IH18	18	14	27	M10x1.25P				3320-435
IH20	20	14						3320-436
IH22	22	14						3320-437
IH24	24	14						3320-438
IH26	26	14						3320-439
IH28	28	14						3320-440
IH30	30	14						3320-441
IH32	32	14						3320-442
IH34	34	14						3320-443
IH36	36	14						3320-444
IH38	38	14	3320-445					
IH40	40	14	3320-446					



# VRB Changeable 2 Inserts Rough Boring Head

Boring diameter from Ø25 - Ø500 mm



- The head is suitable for single bit boring, twin-bit boring and step boring with working diameter from Ø25 mm to Ø350 mm on diameter.
- 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 mills. 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.



# Changeable 2 Inserts Rough Boring Head VRB 200~900

Boring diameter from Ø25 - Ø204 mm



- Thickened cartridge with higher rigidity.
- Coolant nozzle easily cools the insert elongating its working life.
- Completed with chip pocket, improving chip flow of deep boring.
- Clamp plate solidifies cartridges and head, upgrading cutting rigidity.
- Patented step boring design; suitable for both level boring and step boring.



# Enlargeable Modular Rough Boring Head With Diameter Over Ø200mm

Boring diameter from Ø200 - Ø2,000 mm



- This type is suitable for large diameter boring with ranges from 200 mm to 810 mm.
- The structure includes common flange and extension slide for both rough and finish boring heads. Adjustment range is within 110 mm on diameter.
- Options of various inserts for rough boring of different materials and boring styles.
- Available is the horizontal slide made of Aluminum alloy to reduce total weight.
- Options of external boring kit with boring range from Ø20mm to Ø300mm.