

BASE-HOLDER

Q26 type base holder can be used for various combinations.
Ideal for low volume production on manual machine with wide variety of boring sizes.
We recommend that you also use the Q42 base holder on #50 M/C.

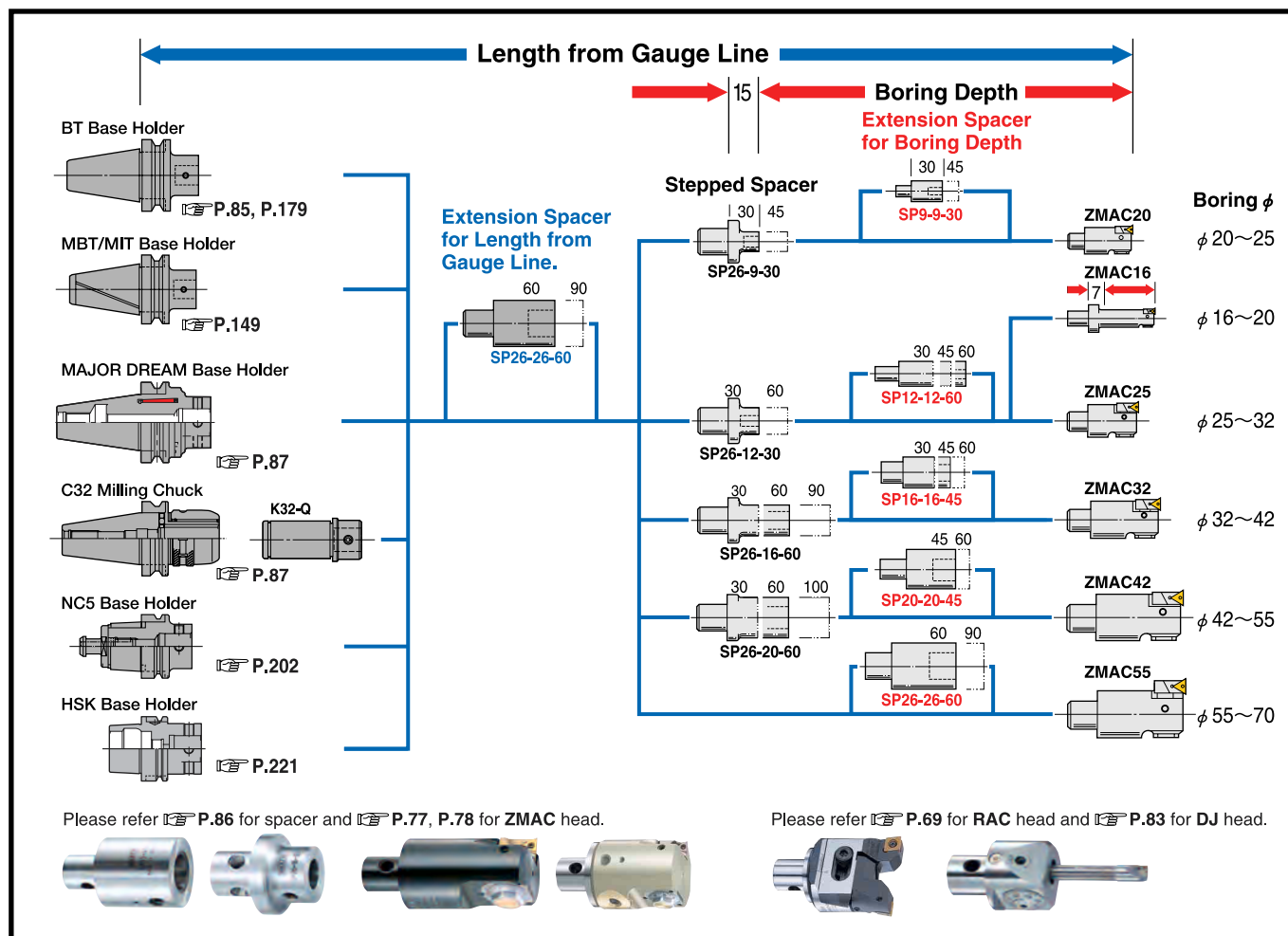
Spacer & Head

The extensive range of heads & spacers allow the correct selection to suit your boring applications.

Method of Selection for Modular ZMAC Boring Arbors

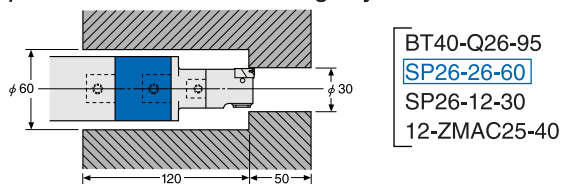
Firstly, select a head, spacer and stepped spacer from boring diameter and depth.
Then select base holder and SP26 extension spacer by the length from gauge line.

No Micro Vibration due to Double-Contact Support of Cartridge.
Long Tool-Life & High Accuracy.

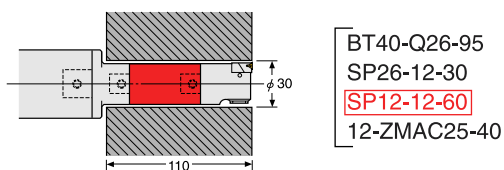


Extension Spacer

Example of small diameter boring in a deep recess using the largest diameter extension spacer in order to maintain rigidity.

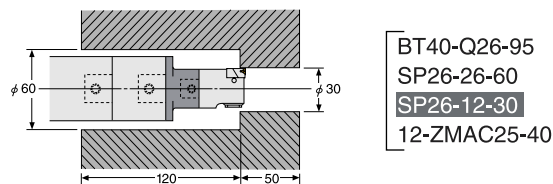


Example of deep hole boring using the extension spacer with the same diameter as head.



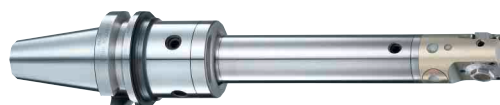
Stepped Spacer

Example of small diameter boring in deep recess using stepped spacer with the same diameter as head.



A1 Spacer

The combination of A1 spacer and ZMAC head is recommended when L/D is less than 6 times.



ZMAC BORING ARBOR (ZMAC)

NIKKEN

Boring for Finishing



ZMAC

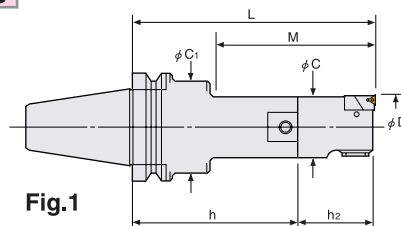


Fig.1

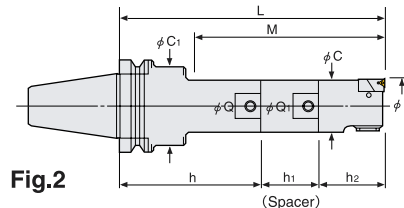


Fig.2

ZMAC16

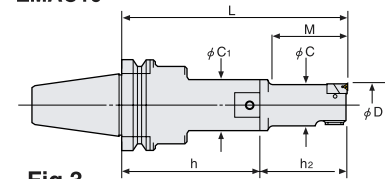


Fig.3

ZMAC100, 140

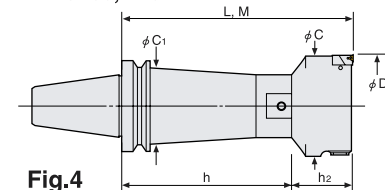


Fig.4

Code No. of the insert tip   are shown.

TAPER	Code No.	Boring Range D	Boring Depth M	C	C ₁	Shank Code No.	Extension Spacer Code No.			Weight (kg)	Fig.
								Head No.	Insert No.		
								BT No.-Q-h			
No.40	BT40-ZMAC16 -125 (IT40) -135	15.9～20.2	38	15	24	BT40-Q12- 80	—	12-ZMAC16-45	3MP-C,B	1.9	3
	48		12-ZMAC16-55					1.9			
	-ZMAC20 -120	19.8～25.2	45	19	30	-Q 9- 80	9-ZMAC20-40	1.9		1	
	-135		-Q 9- 95N			1.9					
	-150		-Q 9- 80			2.0		2			
	-ZMAC25 -120	24.8～32.2	52	24	35	-Q12- 80	12-ZMAC25-40	2.0		1	
	-150		-Q12-110			2.1					
	-165		-Q12- 80			2.1		2			
	-ZMAC32 -150	31.8～42.2	77	31	42	-Q16- 95	16-ZMAC32-55	4MP-C,B		2.5	1
	-180		-Q16-125			2.7					
	-195		-Q16- 95			2.7			2		
	-ZMAC42 -150	41.8～55.2	97	40	50	-Q20- 80	20-ZMAC42-70	6MP-C,B	3.0	1	
	-180		-Q20-110			3.2					
	-210		-Q20- 80			3.5			2		
	-ZMAC55 -165	54.8～70.2	135	53	50	-Q26- 95	26-ZMAC55-70		3.9	1	
	-210		-Q26-140			4.6					
	-225		-Q26- 95			4.6			2		
	-ZMAC70 -165	69.8～85.2	165	67	64	-Q34- 95	34-ZMAC70-70		5.4	1	
	-180		-Q34-110			5.8					
	-225		-Q34- 95			6.8			2		
	-ZMAC85 -195	84.8～100.2	195	83	62	-Q42- 95	—		42-ZMAC85-100		9.0

★MIN. dial readout : ZMAC25 & smaller is 0.02mm on diameter. ZMAC32 and larger are 0.01mm on diameter.

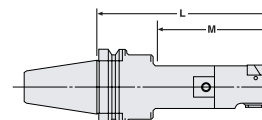
★ "C" grade (Coated) insert for Steel, Stainless & Cast Iron is supplied as Standard with the head (Smooth boring & Long tool life).  Please refer  P.96 for cutting condition. We would recommend "B" grade (CBN) insert for Hardened Steel & High Speed boring of Cast Iron.

★Please refer  P.85 for Shank & Spacer, and  P.77, P.78 for Head.

★For Centre Through Tool Coolant type, please add "C" at the end of Code No. e.g. BT40-ZMAC55-165C.

★For BT30, modular connection system is applied. Please refer  P.85 for Base Holder.

★When L length is required longer than standard, please specify boring depth M.



Boring Arbor with Extension Spacer



ZMAC for Multi-Stage Boring Bar

Please contact us for the special boring bar.



High Pressure Coolant Through Tool

ZMAC BORING ARBOR (ZMAC)

NIKKEN

■ With ZMAC $\times$ Boring Head
Please add "AA" at the end of Code No.
e.g. BT40-ZMAC42-150AA



ZMAC $\times$

Diameter can be adjusted easily and quickly by new handle with wrench.



Unlock

Adjust diameter

Lock

Code No. of the insert tip   are shown.

TAPER	Code No.	Boring Range D	Boring Depth M	C	C ₁	Shank Code No.	Extension Spacer Code No.			Weight (kg)	Fig.	
								Head No.	Insert No.			
						BT No.-Q-h	Q-Q ₁ -h ₁	Q- Min.D -h ₂				
No.50	BT50-ZMAC16 -140	15.9～20.2	38	15	24	BT50-Q12- 95	—	12-ZMAC16-45	3MP-C,B	4.7	3	
	(IT50) -150		48					12-ZMAC16-55		4.7		
	-ZMAC20 -150	19.8～25.2	45	19	40	-Q 9-110	9-ZMAC20-40	4.8		1		
	-165		67			-Q 9-125N		4.8				
	-180		75			-Q 9-110		SP9-9-30		4.9	2	
	-ZMAC25 -135	24.8～32.2	52	24	44	-Q12- 95	—	12-ZMAC25-40		4.8	1	
	-165		90			-Q12-125				4.8		
	-180		97			-Q12- 95				SP12-12-45	4.9	2
	-ZMAC32 -180	31.8～42.2	77	31	50	-Q16-125N	—	16-ZMAC32-55	4MP-C,B	5.5	1	
	-210		110			-Q16-155				5.6		
	-225		122			-Q16-125N				SP16-16-45	5.7	2
	-ZMAC42 -180	41.8～55.2	97	40	60	-Q20-110	—	20-ZMAC42-70		6.0	1	
	-195		130			-Q20-125				6.0		
	-225		142			-Q20-110				SP20-20-45	6.4	2
	-240		157			SP20-20-60				6.5		
	-ZMAC55 -210	54.8～70.2	117	53	65	-Q26-140	—	26-ZMAC55-70		7.5	1	
	-240		182			-Q26-170N			7.6			
	-270		177			-Q26-140			SP26-26-60	8.1	2	
	-ZMAC70 -240	69.8～85.2	190	67	80	-Q34-170	—	34-ZMAC70-70	10.0	1		
	-270		220			-Q34-200			10.6			
	-300		250			-Q34-170			SP34-34-60	11.5	2	
	-ZMAC85 -225	84.8～100.2	182	83	83	-Q42-125	—	42-ZMAC85-100	6MP-C,B	12.5	1	
	-290		247			-Q42-190				15.0		
	-315		272			-Q42-125				SP42-42-90	16.0	2
	-ZMAC100-225	99.5～140.5	225	95	98	-Q42-125	—	42-ZMAC100-100		12.4	4	
	-290		290			-Q42-190				15.1		
	-325		325			-Q42-225A				17.8		
	-375		375			-Q42-275A				20.5		
	-425		425			-Q42-325A				23.2		
	-ZMAC140-225	139.5～180.5	225	135	98	-Q42-125	—	42-ZMAC140-100	13.8			
	-290		290			-Q42-190			16.5			
	-325		325			-Q42-225A			19.2			
	-375		375			-Q42-275A			21.9			
	-425		425			-Q42-325A			24.6			

★MIN. dial readout : ZMAC25 & smaller is 0.02mm on diameter. ZMAC32 and larger are 0.01mm on diameter.
★When L length is required longer than standard, please specify boring depth M. ★For Centre Through Tool Coolant type, add "C" at the end of Code No. e.g. BT50-ZMAC55-210C.
★ "C" grade (Coated) insert for Steel, Stainless&Cast Iron is supplied as Standard with the head (Smooth boring & Long tool-life).  P.98
We would recommend "B" grade (CBN) insert for Hardened Steel & High Speed boring of Cast Iron. Please refer  P.96 for cutting condition.
★Please refer  P.85 for Shank & Spacer, and  P.77, P.78 for Head.

ZMAC BORING ARBOR (ZMAC-R)

NIKKEN

Boring for Semi-Finishing – ZMAC-R



ZMAC-R

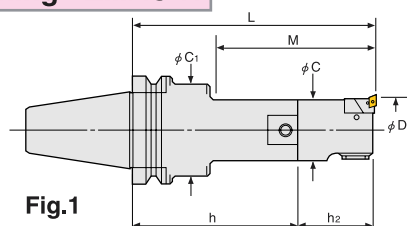


Fig.1

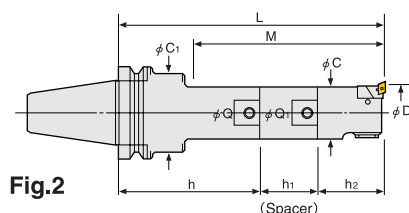


Fig.2

ZMAC100, 140

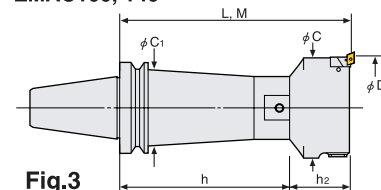


Fig.3

Code No. of the insert tip  are shown.

TAPER	Code No.	Boring Range D	Boring Depth M	C	C1	Shank Code No.	Extension Spacer Code No.			Weight (kg)	Fig.			
								Head No.	Insert No.					
								BT No.-Q-h				Q-Q1-h1	Q- Min.D -h2	
No.40	BT40-ZMAC32R -150 (IT40) -180 -195	31.8～42.2	77 110 122	31	42	BT40-Q16- 95 -Q16-125 -Q16- 95	— SP16-16-45	16-ZMAC32R-55	CC06-C	2.5 2.7 2.7	1 2			
	-ZMAC42R -150 -180 -210		41.8～55.2			97 130 157	-Q20- 80 -Q20-110 -Q20- 80			— SP20-20-60		20-ZMAC42R-70	3.0 3.2 3.5	1 2
	-ZMAC55R -165 -210 -225					54.8～70.2	135 180 195			-Q26- 95 -Q26-140 -Q26- 95			— SP26-26-60	
	-ZMAC70R -165 -180 -225	69.8～85.2		165 180 225	-Q34- 95 -Q34-110 -Q34- 95		— SP34-34-60	34-ZMAC70R-70		5.4 5.8 6.8	1 2			
	-ZMAC85R -195		84.8～100.2	195	83		62			-Q42- 95		—	42-ZMAC85R-100	9.0

★MIN. dial readout : ZMAC25 & smaller is 0.02mm on diameter. ZMAC32 and larger are 0.01mm on diameter.

★ "C"grade (Coated) insert for Steel, Stainless & Cast Iron is supplied as Standard with the head (Smooth boring & Long tool-life).  P.76 Please refer  P.96 for cutting condition.

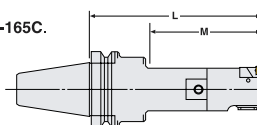
We would recommend "B"grade (CBN) insert for Hardened Steel & High Speed boring of Cast Iron.

★Please refer  P.85 for Shank & Spacer, and  P.77, P.78 for Head.

★For Centre Through Tool Coolant type, please add "C" at the end of Code No. e.g. BT40-ZMAC55-165C.

★For BT30, modular connection system is applied. Please refer  P.85 for Base Holder.

★When L length is required longer than standard, please specify boring depth M.



Boring Arbor with Extension Spacer



ZMAC for Multi-Stage Boring Bar

Please contact us for the special boring bar.



High Pressure Coolant Through Tool

ZMAC BORING ARBOR (ZMAC-R)

NIKKEN

Insert Tip for ZMAC-R

●:best ○:good

Material	Steel	●	
	Stainless Steel	●	
	Cast Iron	○	●
	Aluminium		
	High Speed finish for Cast Iron		
	Hardened Steel		
	High Speed finish for Aluminium		

Please add the grade indication into ○, and add the insert tip material indication at the end off the Code No. e.g. CC12-C8 (AC630M)

There is the CBN insert tip which both corners can be used. Please refer P.98 for ISO code of the insert tip.



Applicable Arbor	Dimension	Code No.	Grade Material Nose R	C	
				AC630M	AC410K
ZMAC32R, ZMAC42R, ZMAC55R		CC06-○4	0.4	●	●
		CC06-○8	0.8	●	●
ZMAC70R, ZMAC85R		CC08-○4	0.4	●	●
		CC08-○8	0.8	●	●
ZMAC100R, ZMAC140R		CC12-○4	0.4	●	●
		CC12-○8	0.8	●	●

Code No. of the insert tip are shown.

TAPER	Code No.	Boring Range D	Boring Depth M	C	C ₁	Shank Code No.	Extension Spacer Code No.			Weight (kg)	Fig.
						BT No.-Q-h	Q-Q ₁ -h ₁	Head No.	Insert No.		
								Q- Min.D -h ₂			
No.50	BT50-ZMAC32R -180	31.8～42.2	77	31	50	BT50-Q16-125N	—	16-ZMAC32R-55	CC06-C	5.5	1
	(IT50) -210		110			-Q16-155				5.6	
	-225		122			-Q16-125N				SP16-16-45	5.7
	-ZMAC42R -180	41.8～55.2	97	40	60	-Q20-110	—	20-ZMAC42R-70		6.0	1
	-195		130			-Q20-125				6.0	
	-225		142			-Q20-110				SP20-20-45	6.4
	-240		157			SP20-20-60	6.5				
	-ZMAC55R -210	54.8～70.2	117	53	65	-Q26-140	—	26-ZMAC55R-70	7.5	1	
	-240		182			-Q26-170N			7.6		
	-270		177			-Q26-140			SP26-26-60	8.1	2
	-ZMAC70R -240	69.8～85.2	190	67	80	-Q34-170	—	34-ZMAC70R-70	CC08-C	10.0	1
	-270		220			-Q34-200				10.6	
	-300		250			-Q34-170				SP34-34-60	11.5
	-ZMAC85R -225	84.8～100.2	182	83	83	-Q42-125	—	42-ZMAC85R-100		12.5	1
	-290		247			-Q42-190				15.0	
	-315		272			-Q42-125				SP42-42-90	16.0
	-ZMAC100R-225	99.5～140.5	225	95	98	-Q42-125	—	42-ZMAC100R-100	CC12-C	12.4	3
	-290		290			-Q42-190				15.1	
	-325		325			-Q42-225A				17.8	
	-375		375			-Q42-275A				20.5	
	-425		425			-Q42-325A				23.2	
	-ZMAC140R-225	139.5～180.5	225	135	98	-Q42-125	—	42-ZMAC140R-100		13.8	
	-290		290			-Q42-190				16.5	
	-325		325			-Q42-225A				19.2	
	-375		375			-Q42-275A				21.9	
	-425		425			-Q42-325A				24.6	

★MIN. dial readout : ZMAC25 & smaller is 0.02mm on diameter. ZMAC32 and larger are 0.01mm on diameter.

★When L length is required longer than standard, please specify boring depth M.

★For Centre Through Tool Coolant type, add "C" at the end of Code No. e.g. BT50-ZMAC55-210C.

★ "C" grade (Coated) insert for Steel, Stainless&Cast Iron is supplied as Standard with the head (Smooth boring & Long tool-life). P.76

We would recommend "B" grade (CBN) insert for Hardened Steel & High Speed boring of Cast Iron. Please refer P.96 for cutting condition.

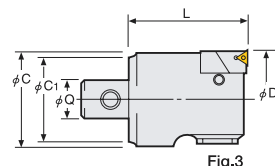
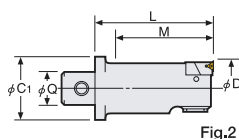
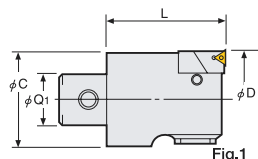
★Please refer P.85 for Shank & Spacer, and P.77, P.78 for Head.

BT

MODULAR TYPE ZMAC BORING HEAD

NIKKEN

ZMAC Triangular Insert type head



Head No.	Boring Range D	Boring Depth M	Coupling Dia. Q	Remarks					Weight (Kg)
				C	C ₁	Unit No.	Insert No.	Fig.	
12-ZMAC 16- 45	15.9~20.2	38	12	15	24	M 2HZ- 16	3MP-C,B	2	0.4
12-ZMAC 16- 55		48							0.4
9-ZMAC 20- 40	19.8~25.2	40	9	19	—	M 2HZ- 20	4MP-C,B	1	0.4
12-ZMAC 25- 40	24.8~32.2		12	24		M 3HZ- 25			0.5
16-ZMAC 32- 55	31.8~42.2	55	16	31		M 4HZ- 32	0.7		
20-ZMAC 42- 70	41.8~55.2	70	20	40		M 5HZ- 42	6MP-C,B		1.1
26-ZMAC 55- 70	54.8~70.2		26	53	M 5HZ- 55	1.2			
34-ZMAC 70- 70	69.8~85.2	100	34	67	M 7HZ- 70	2.0			
42-ZMAC 85-100	84.8~100.2		42	83	M10HZ- 85	4.3			
42-ZMAC100-100	99.5~140.5	95		83	M10HZ-100	4.9			
42-ZMAC140-100	139.5~180.5	135			M10HZ-140	6.3			

★MIN. dial read out: ZMAC25 and smaller is 0.02mm on dia.

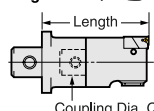
ZMAC32 and larger is 0.01mm on dia.

★The above boring ranges are based on heads with Nose/R 0.2 insert.

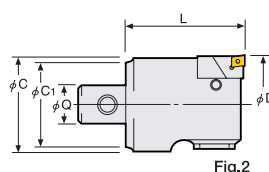
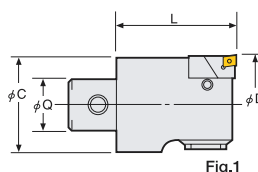
★ "C" grade (Coated) insert for Steel, Stainless & Cast Iron is supplied as Standard with the head (Smooth boring & Long toolLife).  P.98 Please refer  P.96 for cutting condition. We would recommend "B" grade (CBN) insert for Hardened Steel & High Speed boring of Cast Iron.

★For Centre Through Tool Coolant type, please add "C" at the end of Code No. e.g. 26-ZMAC55-70C

★Code No. of the set with SP26 stepped spacer is Q26-Coupling Dia.-ZMAC○-Length e.g. Q26-20-ZMAC42-100



ZMAC- R Rhomboid Insert type head



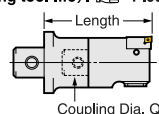
Head No.	Boring Range D	Boring Depth M	Coupling Dia. Q	Remarks					Weight (Kg)
				C	C1	Unit No.	Insert No.	Fig.	
16-ZMAC 32R - 55	31.8~42.2	55	16	31	—	M 4HZ- 32R	CC06-C	1	0.7
20-ZMAC 42R - 70	41.8~55.2	70	20	40		M 5HZ- 42R			1.1
26-ZMAC 55R - 70	54.8~70.2		26	53		M 5HZ- 55R	1.2		
34-ZMAC 70R - 70	69.8~85.2	34	67	M 7HZ- 70R		CC08-C	2.0		
42-ZMAC 85R -100	84.8~100.2	100	42	83	M10HZ- 85R		4.3		
42-ZMAC 100R -100	99.5~140.5			95	83	M10HZ-100R	CC12-C	2	4.9
42-ZMAC 140R -100	139.5~180.5			135		M10HZ-140R			6.3

★MIN. dial read out: ZMAC25 and smaller is 0.02mm on dia.

ZMAC32 and larger is 0.01mm on dia.

★ "C" grade (Coated) insert for Steel, Stainless & Cast Iron is supplied as Standard with the head (Smooth boring & Long toolLife).  P.98 Please refer  P.96 for cutting condition. ★For Centre Through Tool Coolant type, please add "C" at the end of Code No. e.g. 26-ZMAC55R-70C

★Code No. of the set with SP26 stepped spacer is Q26-Coupling Dia.-ZMAC○-Length e.g. Q26-20-ZMAC42R-100

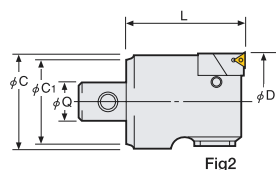
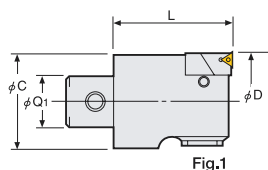


MODULAR TYPE ZMAC& BORING HEAD

NIKKEN

For High Speed/Deep Hole Boring

ZMAC&  Triangular Insert type head



Head No.	Boring Range D	Boring Depth M	Coupling Dia. Q	Remarks					Weight (Kg)
				C	C ₁	Unit No.	Insert No.	Fig.	
12-ZMAC 25- 40AA	24.8~32.2	40	12	24	—	M 3HZ- 25	3MP-C,B	1	0.4
16-ZMAC 32- 55AA	31.8~42.2	55	16	31		M 4HZ- 32	4MP-C,B		0.5
20-ZMAC 42- 70AA	41.8~55.2	70	20	40		M 5HZ- 42	6MP-C,B		0.8
26-ZMAC 55- 70AA	54.8~70.2		26	53		M 5HZ- 55			0.7
34-ZMAC 70- 70AA	69.8~85.2		34	67		M 7HZ- 70			1.1
42-ZMAC 85-100AA	84.8~100.2	100	42	83		M10HZ- 85			2.3
42-ZMAC100-100AA	99.5~140.5			95	83	M10HZ-100		2.8	
42-ZMAC140-100AA	139.5~180.5			135		M10HZ-140	3.1		

★MIN. dial read out: ZMAC25 and smaller is 0.02mm on dia.

ZMAC32 and larger is 0.01mm on dia.

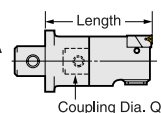
★The above boring ranges are based on heads with Nose/R 0.2 insert.

★ "C" grade (Coated) insert for Steel, Stainless & Cast Iron is supplied as Standard with the head (Smooth boring & Long tool-life).  P.98 Please refer  P.96 for cutting condition.

We would recommend "B" grade (CBN) insert for Hardened Steel & High Speed boring of Cast Iron.

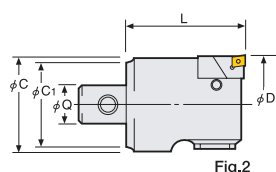
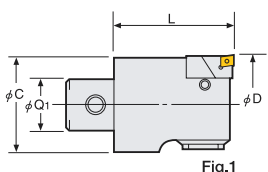
★Centre Through Tool Coolant function is available as standard.

★Code No. of the set with SP26 stepped spacer is Q26-Coupling Dia.-ZMAC○-Length AA e.g. Q26-20-ZMAC42-100AA



For High Speed/Deep Hole Boring

ZMAC& - R  Rhomboid Insert type head



Head No.	Boring Range D	Boring Depth M	Coupling Dia. Q	Remarks					Weight (Kg)
				C	C1	Unit No.	Insert No.	Fig.	
16-ZMAC 32R - 55AA	31.8～42.2	55	16	31	—	M 4HZ- 32R	CC06-C	1	0.5
20-ZMAC 42R - 70AA	41.8～55.2	70	20	40		M 5HZ- 42R			0.8
26-ZMAC 55R - 70AA	54.8～70.2		26	53		M 5HZ- 55R			0.7
34-ZMAC 70R - 70AA	69.8～85.2		34	67		M 7HZ- 70R	CC08-C		1.1
42-ZMAC 85R -100AA	84.8～100.2	100	42	83	M10HZ- 85R	2.3			
42-ZMAC 100R -100AA	99.5～140.5			95	83	M10HZ-100R	CC12-C	2	2.8
42-ZMAC 140R -100AA	139.5～180.5			135		M10HZ-140R			3.1

★MIN. dial read out: ZMAC25 and smaller is 0.02mm on dia.

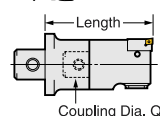
ZMAC32 and larger is 0.01mm on dia.

★ "C" grade (Coated) insert for Steel, Stainless & Cast Iron is supplied as Standard with the head (Smooth boring & Long tool-life).  P.98 Please refer  P.96 for cutting condition.

We would recommend "B" grade (CBN) insert for Hardened Steel & High Speed boring of Cast Iron.

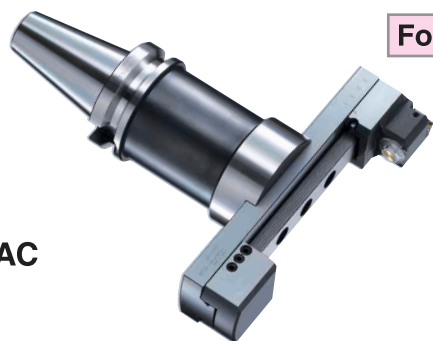
★Centre Through Tool Coolant function is available as standard.

★Code No. of the set with SP26 stepped spacer is Q26-Coupling Dia.-ZMAC○-Length AA e.g. Q26-20-ZMAC42R-100AA



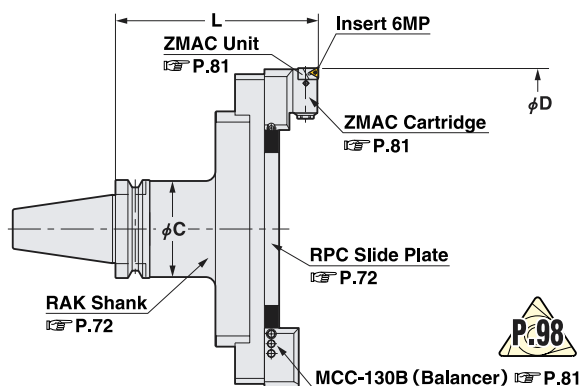
BALANCE-CUT BAC BORING ARBOR for LARGE DIA.

NIKKEN



For Finishing

BAC



Boring Dia: ϕ 130~595mm

TAPER	Code.No	D MIN.～MAX.	L	C	RAK Shank Code No.	PPC Plante No	Cartridge (Balancer)	Weight (Kg)	
No.40	BT40-BAC130-205	130～195	205	61	BT40-RAK-130	RPC-130	MCCZ-130 (MCC-130B) Insert 6MP	7.0	
	(IT40)-BAC180-205	180～245				-180		8.0	
No.50	BT50-BAC130-185	130～195	185	90	BT50-RAK-110A	RPC-130		10.0	
	(IT50) -235		235		-160A			12.7	
	-285		285		-210A			15.4	
	-335		335		-260A			18.1	
	-385		385		-310A			20.8	
	-435		435		-360A			23.5	
	-485		485		-410A			26.2	
	-BAC180-185		180～245		185			-RAK-110A	RPC-180
	-235	235			-160A	13.3			
	-285	285			-210A	16.0			
	-335	335			-260A	18.7			
	-385	385			-310A	21.4			
	-435	435			-360A	24.1			
	-485	485			-410A	26.8			
	-BAC230-185	230～295			185	-RAK-110A		RPC-230	
	-235		235		-160A	14.0			
	-285		285		-210A	16.7			
	-335		335		-260A	19.4			
	-385		385		-310A	22.1			
	-435		435		-360A	24.8			
	-485		485		-410A	27.5			
	-BAC280-185		280～345		185	-RAK-110A			RPC-280
	-235	235			-160A	14.6			
	-285	285			-210A	17.3			
	-335	335			-260A	20.0			
	-385	385			-310A	22.7			
	-435	435			-360A	25.4			
	-485	485			-410A	28.1			
	-BAC330-210*	330～395			210 (220*)	98		BT50-RAK330-125 I T50-RAK330-135	
	-BAC380-210*	380～445	-380						17.0
	-BAC430-210*	430～495	-430						18.0
	-BAC480-210*	480～545	-480						19.0
	-BAC530-210*	530～595	-530						20.0

★ "C" grade (Coated) Inserts are supplied as standard. P.98 Please refer P.96 for cutting condition.

★ Unit "M5HZ-55" is provided as standard, please refer P.72 for Shank (RAK) and Plate (RPC).

★ Shank, Plate and Cartridge are delivered in separate packages.

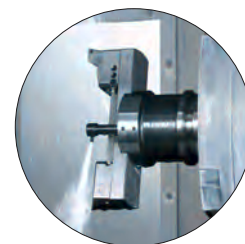
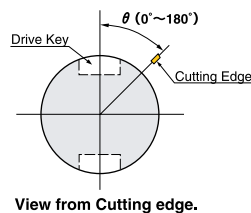
★ When ordering, please let us know machine maker and model no. to avoid the interference with tool magazine of ATC.

★ The location of cutting edge is same as drive key in standard.

The different location is available, please specify θ in Code No. e.g. BT50-BAC180-235 (90°)

★ The boring arbors marked * with IT50, L (gauge length) is 220. e.g. IT50-BAC330-220

★ For centre through tool coolant type, please add "-C" at the end of Code No. e.g. BT50-BAC130-185-C

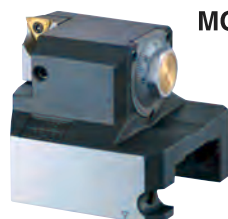


High Pressure Coolant
Through Tool

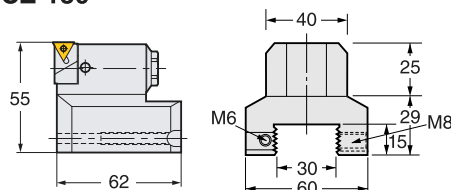
Accessories for Balance-Cut BAC

Balance-Cut MAC type cartridge for large dia.

MAC type Balancer for Balance-Cut large dia.



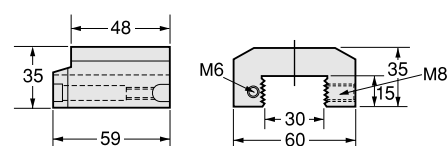
MCCZ-130



0.8Kg



MCC-130B



0.6Kg

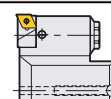
Accessories	ZMAC Unit	Insert Tip	Clamp Bolt	Wrench for Insert	Lock Screw	Adjust Screw	Set Screw (M8)	L-Wrench for M815 Belt	Adjust Wrench	Adjustment Handle	Applicable RPC Plate
Code No.	M5HZ-55	6MP-C	M2577	T8	M366	M540	M815	M4	M3	M5HZL	RPC-130,180,230,280,330,380,430,480,530

★Please refer P.72 for RPC Plate.

★Set Code No. is **S.MCCZ-130**.

★M5HZ-55R with **CC06-C** insert tip is available. Please specify code No. **MCCZ-130R**.

★6MP-C insert tip is supplied as standard. P.98 Please refer P.96 for cutting condition.



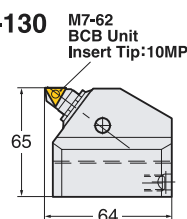
Accessories for Balance-Cut BCB

Balance-Cut BCB type cartridge for large dia.

MAC type Balancer for Balance-Cut large dia.



BCB-130



0.9Kg



MCC-130B

Accessories	BCB Unit	Insert Tip	Clamp Bolt	Wrench for Insert	Lock Screw	Adjust Screw	Set Screw (M8)	L-Wrench for M815 Belt	Adjust Wrench	Adjustment Handle	Applicable RPC Plate
Code No.	M7-62	10MP-T	M67	20S	B357, B367	M540	M815	M4	M3	M397	RPC-130,180,230,280,330,380,430,480,530

★Please refer P.72 for RPC Plate.

★Set Code No. is **S.BCB-130**.

★10MP-T insert tip is supplied as standard. P.98 Please refer P.96 for cutting condition.

BASE HOLDER for MODULAR TYPE (BT Shank)

NIKKEN

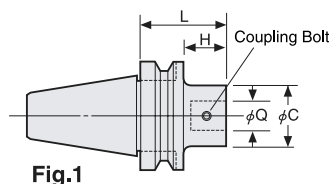


Fig.1

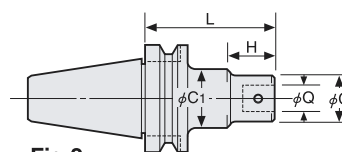


Fig.2

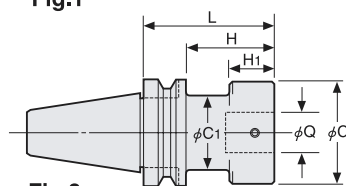


Fig.3

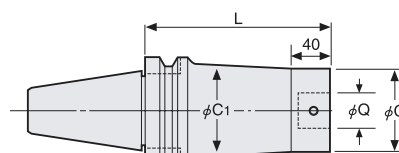


Fig.4

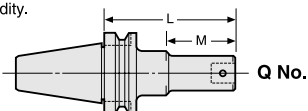
TAPER	Code No.	Coupling Dia Q	L	C	C ₁	H	H ₁	Coupling Bolt No.	Fig.	Weight (kg)	
No.30	BT30-Q 9- 50	9	50	19	30	20	—	B19	2	0.5	
	-Q12- 65	12	65	24	—	40		B12	1	0.5	
	-Q16- 50	16	50	31		25		B16		0.5	
	-Q20- 50	20	50	40		26		B20		0.5	
	-Q26- 40	26	40	50	45	18	6	B26N	3	0.5	
No.40	BT40-Q 9- 80	9	80	19	30	5	—	B19	2	1.2	
	- 95N	12	95	24	35	27		B12		1.2	
	-Q12- 80		80			12				1.2	
	- 110	110	31	42	50	B16		1.3			
	-Q16- 95	95			22			1.5			
	- 125	125	55	1.6							
	-Q20- 80	20	80	40	50	27		B20		1.5	
	- 110	110	60	1.7							
	-Q26- 50	26	50	50	-	20		B26N	1	1.1	
	- 95		95			65				1.8	
	- 140		140			110				2.4	
	-Q34- 95	34	95	64	62	68		55	B34	3	2.2
	- 110	110	83	70		2.6					
	-Q42- 95	42	95	83	68	55	B42	2.8			
No.50	BT50-Q 9- 110	9	110	19	40	5	—	B19	2	4.1	
	- 125N	12	125	24	44	27		B12		4.1	
	-Q12- 95		95			12				4.0	
	- 125	125	31	50	50	B16		4.0			
	-Q16- 125N	125			22			4.5			
	- 155	155	55	4.6							
	-Q20- 110	20	110	40	60	27		B20		4.6	
	- 125	125	60	4.5							
	-Q26- 65	26	65	50	65	27		B26N	1	3.7	
	- 140		140			47			2	5.3	
	- 170N		170			112			5.4		
	-Q34- 140	34	140	64	80	102			B34	1	5.6
	- 170		170			120				2	6.5
	- 200		200			150				7.1	
	-Q42- 125	42	125	83	-	87		B42	1	6.5	
	- 190	190	152	9.1							
	-Q42- 225A	42	225	83	98	-			B42	4	12.9
	- 275A		275								15.6
	- 325A		325								18.3
	- 375A		375								21.0

★ ϕC of Q26 base holder has been increased from 45mm to 50mm due to improvement of its rigidity.

★All base holders have a centre through-tool coolant hole.

★The Coupling screw & wrench are supplied as standard.

★When L length is required longer than standard, please specify the boring depth M.



BASE HOLDER for MODULAR TYPE (BT Shank)

NIKKEN

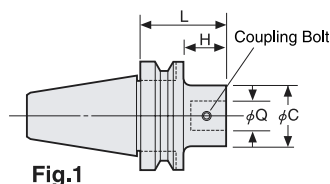


Fig.1

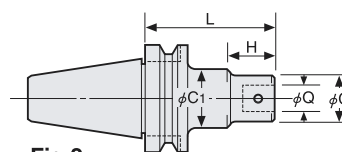


Fig.2

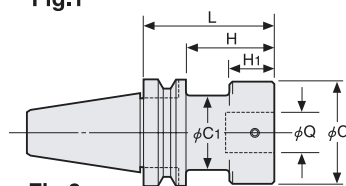


Fig.3

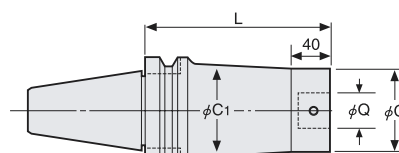


Fig.4

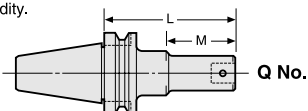
TAPER	Code No.	Coupling Dia Q	L	C	C1	H	H1	Coupling Bolt No.	Fig.	Weight (kg)
No.30	BT30-Q 9- 50	9	50	19	30	20	-	B19	2	0.5
	-Q12- 65	12	65	24	-	40		B12	1	0.5
	-Q16- 50	16	50	31		25		B16		0.5
	-Q20- 50	20	50	40		26		B20		0.5
	-Q26- 40	26	40	50	45	18	6	B26N	3	0.5
No.40	BT40-Q 9- 80	9	80	19	30	5	-	B19	2	1.2
	- 95N		95			27				1.2
	-Q12- 80	12	80	24	35	12		B12		1.2
	- 110		110			50				1.3
	-Q16- 95	16	95	31	42	22		B16		1.5
	- 125		125			55			1	1.6
	-Q20- 80	20	80	40	50	27		B20		1.5
	- 110		110			60				1.7
	-Q26- 50		50			20				1.1
	- 95	26	95	50	-	65		B26N		1.8
	- 140		140			110			3	2.4
	-Q34- 95	34	95	64	62	68	55	B34		2.2
	- 110		110			83	70			2.6
	-Q42- 95	42	95	83		68	55	B42		2.8
No.50	BT50-Q 9- 110	9	110	19	40	5	-	B19	2	4.1
	- 125N		125			27				4.1
	-Q12- 95	12	95	24	44	12		B12		4.0
	- 125		125			50				4.0
	-Q16- 125N	16	125	31	50	22		B16		4.5
	- 155		155			55				4.6
	-Q20- 110	20	110	40	60	27		B20	1	4.6
	- 125		125			60				4.5
	-Q26- 65		65			27				3.7
	- 140	26	140	50	65	47		B26N	2	5.3
	- 170N		170			112			2	5.4
	-Q34- 140		140			102				5.6
	- 170	34	170	64	80	120		B34		6.5
	- 200		200			150				7.1
	-Q42- 125	42	125	83	-	87			1	6.5
	- 190		190			152				9.1
	-Q42- 225A		225					B42		12.9
	- 275A		275						4	15.6
	- 325A	42	325	83	98	-				18.3
	- 375A		375							21.0

★ ϕC of Q26 base holder has been increased from 45mm to 50mm due to improvement of its rigidity.

★All base holders have a centre through-tool coolant hole.

★The Coupling screw & wrench are supplied as standard.

★When L length is required longer than standard, please specify the boring depth M.





MDQ

Photo shows with A1 spacer
and ZMACX head.

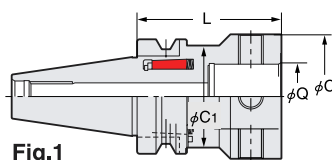


Fig.1

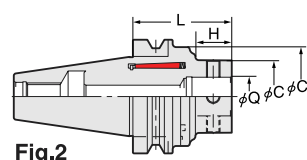


Fig.2

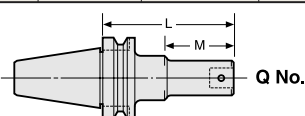
TAPER	Code No.	Q	L	C	C1	H	Weight (kg)	ZMAC Boring Range	Fig
No.30	NBT30-MDQ26- 60	26	60	50	50	37.5	-	16~70	1
No.40	NBT40-MDQ26- 65	26	65	50	54	30.0	1.3	16~70	2
No.50	NBT50-MDQ26- 80	26	80	50	87	22.0	4.6	16~70	2
	-MDQ34- 90	34	90	64	87	32.0	4.9	16~85	
	-MDQ42-100	42	100	83	87	45.0	5.7	16~180	

★All base holders are used for centre through tool coolant.

★Coupling bolt and wrench are supplied as standard.

★ZMACX head is recommended to use with the MAJOR DREAM base holder for anti-vibration.

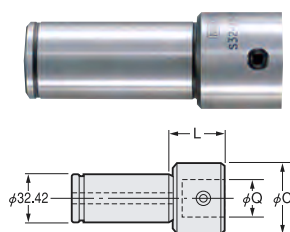
★When L length is required longer than standard, please specify the boring depth M and Q No.



Q No.

MODULAR TYPE STRAIGHT SHANK

K-Q



ZMAC Head P.77



RAC Head P.69



DJ Head P.83

Code No.	Coupling Dia.	C	L	Coupling Bolt.	Weight (Kg)
	Q				
K32-Q 9-20	9	19	20	B19	0.4
-40			40		0.5
-Q12-20	12	24	20	B12	0.4
-60			60		0.6
-Q16-20	16	31	20	B16	0.5
-55			55		0.7
-Q20-40	20	40	40	B20	0.7
-Q26-40	26	50		B26N	0.8
K42-Q26-40				B26N	1.2

★All straight shank base holders are used for centre through tool coolant.

CHANFERING CUTTER for Modular System

CAF

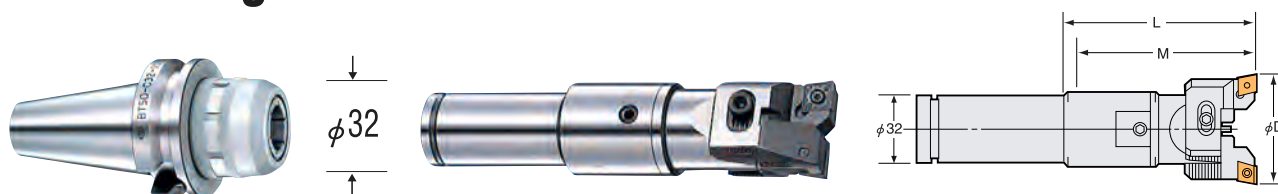


Code No.	Coupling Dia.	Chamfering Dia.	Code No.	Coupling Dia.	Chamfering Dia.
CAF 9- 32	9	20~32	CAF20- 60	20	42~60
CAF12- 38	12	25~38	CAF26- 85A	26	56~85
CAF16- 45	16	33~45	CAF34-110	34	70~110

★Chamfering angle is 45°

Straight Shank BALANCE CUT BORING BAR

NIKKEN



K-RAC

You can use following boring tools with C32 Milling Chuck. It is convenient for Various/Small Volume Productions. Use with Straight Shank ZMAC Boring Bar.



Code. No.	Boring Range D	Boring Depth M	Shank Code No.	Head No.	Insert No.	Weight (kg)
K32-RAC25- 75E	25~ 32	70	K32-Q12-20	12-RAC25- 55E	CC07-C	0.8
-115E		93	-Q12-60			0.9
-RAC32- 75E	32~ 45	70	-Q16-20	16-RAC32- 55E	CC08-C	1.1
-110E		105	-Q16-55			1.3
-RAC43-110E	43~ 55		-Q20-40	20-RAC43- 70E	CC12-C	1.7
-RAC53-110E	53~ 70		-Q26-40	26-RAC53- 70E		1.8
-RAC70-110E *	70~ 100			26-RAC70- 70E		1.9

★Balance cut boring bar on above table is the boring bar with the cartridges (E) for steel, stainless and cast iron. "C" grade (Coated) insert tip is supplied as standard. P.62

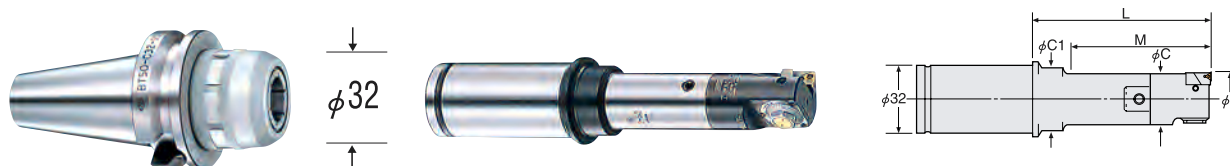
★Boring bar with the cartridges for heavy duty boring of iron and cast iron P.64, for aluminium (A) P.66 and for through hole and multi sheets (K). P.68
Please refer P.95 for cutting condition.

★Shank (P.87) and head (P.69) are delivered in separate packages.

★For centre through tool coolant type except **K32-RAC70-110E** marked *, please add "C" at the end of Code No. e.g. **K32-RAC53-110E-C**

Straight Shank Z MAC BORING BAR

NIKKEN



K-ZMAC

You can use following boring tools with C32 Milling Chuck. It is convenient for Various/Small Volume Productions.

Code No.	Boring Range D	Boring Depth M	C	C ₁	Shank Code No.					Weight (kg)		
						Head No.	Insert No.	Head No.	Insert No.			
K32-ZMAC16- 65	15.9～20.2	38	15	-	K32-Q12-20	12-ZMAC16-45	3MP-C,B	-	-	0.5		
- 75		48				12-ZMAC16-55				0.5		
-ZMAC20- 60	19.8～25.2	55	19	-Q 9-20	9-ZMAC20-40	6MP-C,B				16-ZMAC32R-55	CC06-C	0.6
- 80		63										-Q 9-40
-ZMAC25- 60	24.8～32.2	55	24	-Q12-20	12-ZMAC25-40							0.6
-100		83										-Q12-60
-ZMAC32- 75	31.8～42.2	70	31	-	-Q16-20		16-ZMAC32-55	4MP-C,B	20-ZMAC42R-70			0.9
-110		105			-Q16-55							6MP-C,B
-ZMAC42-110	41.8～55.2	40	-	-Q20-40	20-ZMAC42-70	1.5						
-ZMAC55-110	54.8～70.2			53	-	-Q26-40	26-ZMAC55-70	1.6				

★All Codes shown are for Heads with Triangular Inserts.

For Heads with Rhomboid Inserts, please add "R" to the Code No. e.g.) **K32-ZMAC32 R -75**

★MIN. dial read out: **ZMAC25** and smaller is 0.02mm on dia. **ZMAC32** and larger is 0.01mm on dia.

★ "C" grade (coated) Insert for Steel, Stainless and Cast Iron is supplied as standard with the Head. (Smooth Boring and Long tool-life) Please refer P.96 for cutting condition.

We would recommend "B" grade (CBN) Insert for Hardened Steel and High Speed Boring of Cast Iron.

★For Centre Through Tool Coolant type, please add "C" at the end of Code No. e.g. **K32-ZMAC42-110C**.

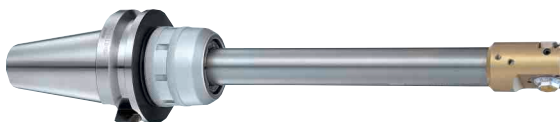
Straight Shank DEEP HOLE ZMACX BORING BAR

NIKKEN

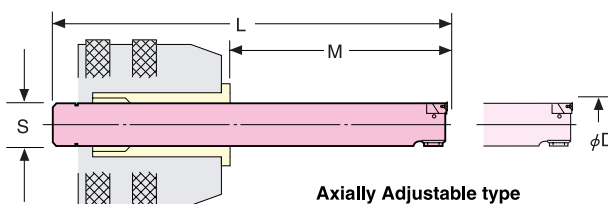
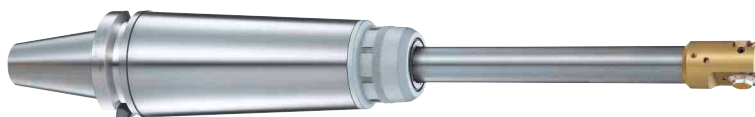
Axially Adjustable and **Solid Carbide**



For Deep Hole Boring



For Deep Hole Boring with Extended Gauge Length



Axially Adjustable type

ZMACX32 and ZMACX42 are the centre through tool coolant type with ZMACX head as standard.



S-ZMACX

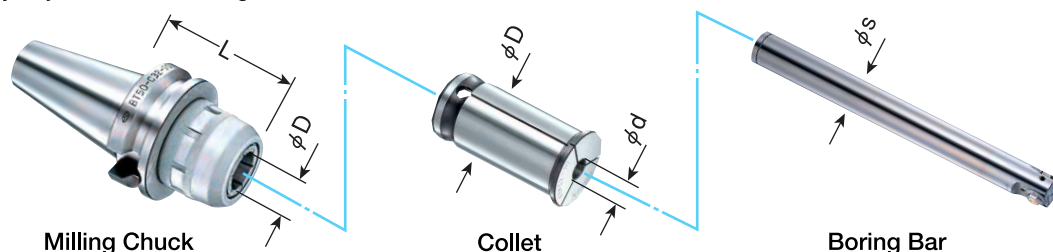
Code. No.	Boring Range D	Boring Depth M	L	S	Unit No.	Insert No.	Weight (kg)	Suitable Holder	
								Chuck	KM Collet
S12-BCBX12.7- 95	12.7~14.5	50~95	130	12	M1-12.7	1MP-T	0.2	BT40-C32 BT50-C32	KM32-12
S13-BCBX14.5-105	14.5~19.5	50~105	135	13	M1-14.5				-13
S15-ZMACX16-120	15.9~20.2	65~120	150	15	M2HZ-16	3MP-C, B	0.3		-15
S19-ZMACX20-150	19.8~25.2	100~150	180	19	M2HZ-20		0.6		-19
S24-ZMACX25-190	24.8~32.2	140~190	220	24	M3HZ-25		1.3		-24
S30-ZMACX32-260C	31.8~42.2	190~260	290	30	M4HZ-32	4MP-C, B	2.6		-30
S32-ZMACX42-330C	41.8~55.2	260~330	360	32	M5HZ-42	6MP-C, B	3.8		—

★T grade (Cermet) insert tip or "C" grade (Coated) insert tip is supplied as standard for BCBX or ZMACX respectively. P.98 Please refer P.96 for cutting condition.
★Centre Through Tool Coolant type is available. Please add "C" at the end of Code No. e.g. S24-ZMACX25-190C

Deep Hole Boring Operation with combination of Milling Chuck, Collet and S-ZMACX Boring Bar.

Ultra Deep Hole Boring MAX.L/D=8 times with Carbide Solid Boring Bar

Axially Adjustable with Milling Chuck



TAPER	Milling Chuck Code No.	Collet
No.40	BT40 -C20- 70, 90, 105, 120	KM20
	-C25- 70, 90, 120	KM25
	-C32- 85, 105, 120	KM32
No.50	BT50 -C20-105, 135, 165, 180	KM20
	-C25-105, 135, 165	KM25
	-C32- 90, 105, 120, 135, 165	KM32
	-C42- 95, 105, 120, 135, 165	KM42

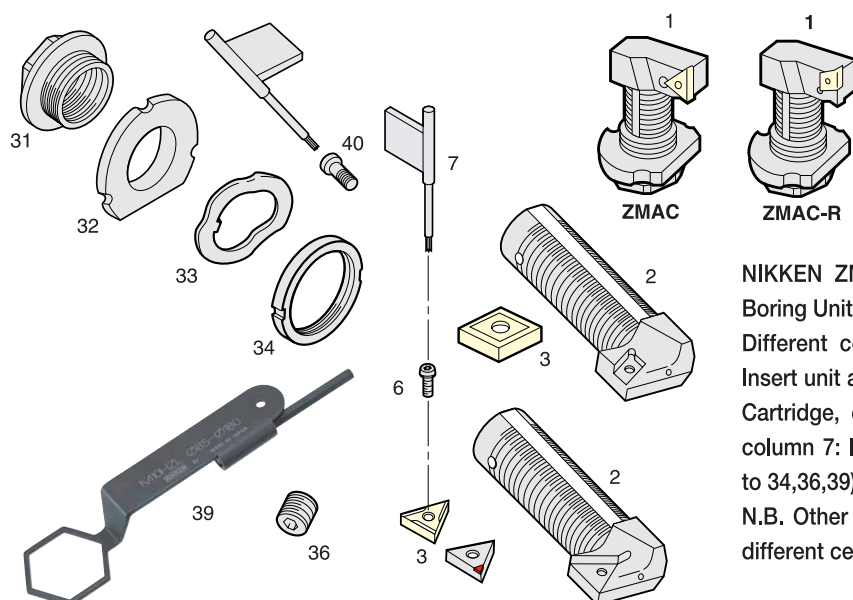
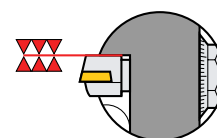
KM Collet No.
KM20-12
-13
KM25-12
-13
-15
KM32-12
-13
-15
-19
-24
-30
—

Deep Hole Boring Bar Code No.
S12-BCBX12.7- 95
S13-BCBX14.5-105
S12-BCBX12.7- 95
S13-BCBX14.5-105
S15-ZMACX16-120
S12-BCBX12.7- 95
S13-BCBX14.5-105
S15-ZMACX16-120
S19-ZMACX20-150
S24-ZMACX25-190
S30-ZMACX32-290C
S32-ZMACX42-360C

★KM42-12, 13, 15, 19, 24 are also available.

ZMAC UNIT PARTS LIST

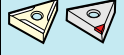
NIKKEN



NIKKEN ZMAC Boring Heads come complete with ZMAC Boring Unit. See below part No. for spares.

Different codes for the Triangular Insert unit & Rhomboid Insert unit are shown below : column 1: Boring unit, column 2: Cartridge, column 3: Insert, column 6: Insert clamp screw, column 7: Insert clamp handle, but all other parts(column 31 to 34,36,39) are common to both.

N.B. Other manufacturers ISO Standard Insert Tip may have different centre hole diameters.

 Boring Range	1	2	3	6	7	31	32	33	34	36	39	40
	ZMAC Unit	Cartridge	Triangular Insert	Insert Clamp Screw	Insert Clamp Handle	Dial Ring	Lock Flange	Wave Spring	Preload Nut	Lock Screw	Adjustment Handle	Unit Clamp Bolt
												
15.9～20.2	M 2HZ- 16	M 2HZ- 16C	3MP-C,B	M2045	T6	9M216D	9M216L	9M216W	9M216P	M361	M 2HZL-A	M2045
19.8～25.2	M 2HZ- 20	M 2HZ- 20C				9M220D	9M220L			M362	M 2HZL-B	
24.8～32.2	M 3HZ- 25	M 3HZ- 25C				4MP-C,B	M2070	T6	9M325D	9M325L	M333	9M325P
31.8～42.2	M 4HZ- 32	M 4HZ- 32C	9M432D	9M432L	M334				M344	M365	M 4HZL	
41.8～55.2	M 5HZ- 42	M 5HZ- 42C	6MP-C,B	M2577 (M2562D)*	T8				9M542D	9M542L	M335	9M542P
54.8～70.2	M 5HZ- 55	M 5HZ- 55C						M336				
69.8～85.2	M 7HZ- 70	M 7HZ- 70C				9M770D	9M770L	M337	9M770P	M360	M 7HZL	M3090
84.8～100.2	M10HZ- 85	M10HZ- 85C				9M108D	9M108L	M330	9M108P	M367	M10HZL	M4012
99.5～140.5	M10HZ-100	M10HZ-100C								M368		
139.5～180.5	M10HZ-140	M10HZ-140C								M369		

★Each Unit and Cartridge are supplied without Insert Tip.

★Cartridge for base forming of bore is an option. Please specify the diameter and width of base forming.

★For Diamond Insert Tip (6MP-D), M2562D* must be used.

★Cartridge can not be supplied alone, please order ZMAC unit.



Special cartridge example for necking is available. Please contact us with the work piece drawing.

The cartridge head can be exchanged itself for the head bigger equal to ZMAC42.

Boring Range	1	2	3	6	7
	ZMAC Unit	Cartridge	Rhomboid Insert	Insert Clamp Screw	Insert Clamp Handle
31.8~42.2	M 4HZ- 32R	M 4HZ- 32RC	CC06-C	M2560	T8
41.8~55.2	M 5HZ- 42R	M 5HZ- 42RC		M2577	
54.8~70.2	M 5HZ- 55R	M 5HZ- 55RC			
69.8~85.2	M 7HZ- 70R	M 7HZ- 70RC	CC08-C	M4090	T15
84.8~100.2	M10HZ- 85R	M10HZ- 85RC		M4012	
99.5~140.5	M10HZ-100R	M10HZ-100RC	CC12-C	M5012	T15
139.5~180.5	M10HZ-140R	M10HZ-140RC			

★Each Unit and Cartridge are supplied without Insert Tip.

★Cartridge can not be supplied alone, please order ZMAC unit.

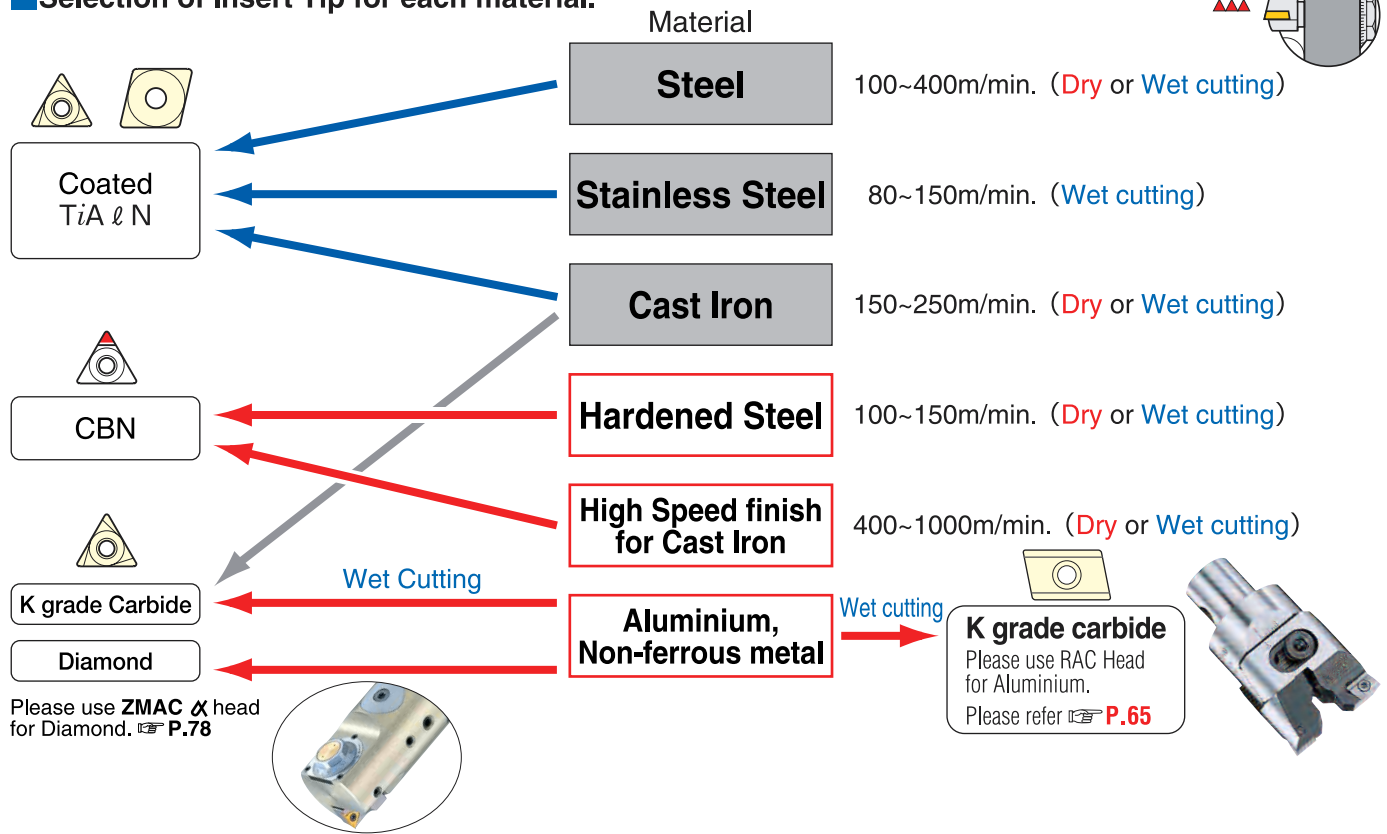
Detach
Attach

- Loosen head clamp bolt after boring diameter is set to little larger than the MIN. boring diameter.
- Insert the head into cartridge, then tighten head clamp bolt temporary.
- Loosen side lock bolt.
- Rotate the dial ring 0.2~0.3mm to minus direction.
- Tighten head clamp bolt by pushing the head to the support portion of the main body.

ZMAC BORING SYSTEM CUTTING DATA

NIKKEN

Selection of Insert Tip for each material.



Recommended cutting Speed ◎...Best ○...Good —...Unsuitable

Insert		SS41	S55C	SCM	SKD	SC	FC,FCD	SUS	AL,ALC	Hardened Steel			Inter- rupted Cutting
Code No.	Grade									SCM	SKD	SUJ	
	C Coated	100~400	150~400	150~400	80~150	80~150	150~250	80~150	-	-	-	-	◎
	E P10	60~100	60~100	80~120	40~100	60~100	-	40~80	-	-	-	-	◎
	F K10	-	-	-	-	-	60~130	-	400~1000	-	-	-	◎
	T Cermet	200~400	200~400	200~400	80~150	80~150	-	120~180	-	-	-	-	○
	B CBN	-	-	-	-	-	300~800	-	-	100~150	70~100	120~150	○
	D Diamond	-	-	-	-	-	-	-	400~2000	-	-	-	-
	C Coated Carbide M	100~400	150~400	150~400	80~150	80~150	150~250	80~150	-	-	-	-	◎
	Coated Carbide K	100~400	150~400	150~400	80~150	80~150	150~250	80~150	-	-	-	-	○

- ★Existing Inserts (Cermet,P grade Carbide & K grade Carbide) are available.
- ★The cutting speed is recommended to be reduced to 50% for the interrupted cutting.
- ★When L/D is longer, the insert tip with small Nose R is recommended.
- ★When L/D is longer, the feed rate at the entrance is recommended to be reduced to 60 to 70%.

Recommended Cutting Condition (removal,feed)

Boring Range	Type								
		Best Condition		MAX. Condition		Best Condition		MAX. Condition	
		Removal mm./φ	Feed mm/rev.	Removal mm./φ	Feed mm/rev.	Removal mm./φ	Feed mm/rev.	Removal mm./φ	Feed mm/rev.
φ16~20	ZMAC16	0.2~0.4	0.05~0.07	1.0	0.1				
φ20~25	ZMAC20	0.2~0.4	0.05~0.07	1.5	0.1				
φ25~32	ZMAC25	0.2~0.4	0.05~0.07	2.0	0.1				
φ32~42	ZMAC32	0.2~0.4	0.05~0.08	2.0	0.2	1.0~3.0	0.1~0.15	5.0	0.2
φ42~55	ZMAC42	0.2~0.5	0.05~0.08	4.0	0.2	1.0~3.0	0.1~0.15	5.0	0.2
φ55~70	ZMAC55	0.2~0.5	0.05~0.08	4.0	0.2	1.0~3.0	0.1~0.15	5.0	0.2
φ70~85	ZMAC70	0.2~0.8	0.05~0.1	4.0	0.25	1.0~4.0	0.1~0.2	8.0	0.25
φ85~	ZMAC85~	0.2~0.8	0.05~0.1	4.0	0.25	1.0~4.0	0.1~0.2	8.0	0.25

In case of CBN insert, reduce L/D as small as possible : MAX. 3 times.
Stock removal on diameter.
D<32mm : less than 0.25mm
D>32mm : less than 0.3mm

Feed per rev. depends on Nose/R and accuracy required.

Logical Surface Finish : $\frac{(\text{Feed per rev.})^2}{8 \times \text{Nose/R}}$

NIKKEN INSERT TIP (EXCLUSIVE FOR BORING ARBOR) (1)

NIKKEN

BT

Material	Steel	●	●		●	●							
	Stainless Steel	●	●		●								
	Cast Iron	●	●	●				●	●				
	Aluminium								●				
	High Speed finish for Cast Iron									●			
	Hardened Steel									●			
	High Speed finish for Aluminium											●	

For the Boring of Large Diameter and Short Depth, the use of insert with large nose radius is recommended. The smaller nose radius inserts are ideal for smaller diameter boring or finishing operation.

Applicable Arbor	Dimension	Code No.	Grade	Material NOSE R	C				T		E		F-NB*2 w/o breaker		F		B		D	
					PV90*1	T2000Z	AC630M	AC410K	NS530	TN90	ST10P	H1	KBN10B	KPD010						
BCB12.7, BCB14.5		1MP-○2	0.2	●*1						●	●		●							
BCB19, BCB22, BCB29		3MS-○2	0.2	●*1						●	●	●*2	●	●						
ZMAC16, ZMAC20, ZMAC25 for DJ Bit		3MP-○2	0.2		●				●		●	●*2	●							
		3MP-○4	0.4		●										●		●			
ZMAC32		4MP-○2	0.2		●				●		●	●*2	●							
		4MP-○4	0.4		●							●*2			●				●	
ZMAC42 - ZMAC140 BCB38, BCB48 DJ Bit, MCCZ130 BAC130 - BAC530		6MP-○2	0.2	●	●				●		●	●*2	●						●*4	
		6MP-○4	0.4	●	●				●		●	●*2	●	●					●*4	
		6MP-○8	0.8	●	●				●		●	●*2	●	●					●*4	
DAC C type BCB62, BCB82, BCB100		10MP-○2	0.2	●*1							●	●*2	●							
		10MP-○4	0.4	●*1							●	●*2	●							
		10MP-○8	0.8	●*1							●	●*2	●	●						
J10-5, J16-5		CC03-○2	0.2	●																
ZMAC32R, ZMAC42R, ZMAC55R		CC06-○4	0.4			●	●													
		CC06-○8	0.8			●	●													
RAC025		CC07-○4	0.4			●	●													
		CC07-○8	0.8			●	●													
ZMAC70R, ZMAC85R, RAC25, RAC32		CC08-○4	0.4			●	●													
		CC08-○8	0.8			●	●													
RAC43 - RAC530 (Eccentric Bolt Type)		CN08-○8	0.8			●														
ZMAC100R, ZMAC140R, RAC43E - RAC100E		CC12-○4	0.4			●	●													
		CC12-○8	0.8			●	●													

*Minimum quantity of CBN and Diamond: 1pcs, All other insert tip: 10pcs

*1 "C (PV90)" is unified from "T".

*2 "-NB" (w/o breaker) is recommended for cast iron.

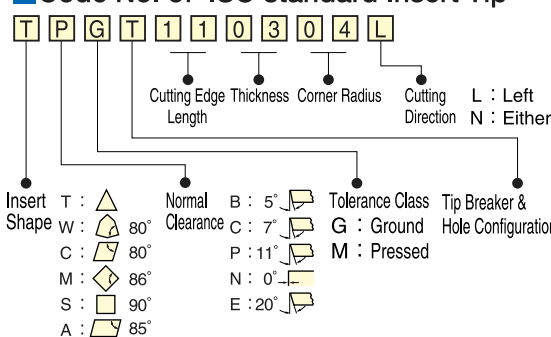
*3 Hole diameter of 6MP is $\phi 2.8$ mm. M2562D (Optional tip clamp bolt) is required for the ISO standard insert tip with the hole diameter of $\phi 3.3 \sim \phi 3.5$ mm.

*4 M2562D is necessary for 6MP-D (Diamond), because of the hole diameter is different.

*The ISO code No. surrounded with () is the Nikken original insert tip.

Please add the grade indication into ○, and add the insert tip material indication at the end off the Code No.
e.g. 6MP-C4 (PV90), 6MP-F4-NB (H1)

Code No. of ISO standard Insert Tip



NIKKEN INSERT TIP (EXCLUSIVE FOR BORING ARBOR) (2)



Material	Steel	●	●			
	Stainless Steel	●				
	Cast Iron			●		
	Aluminium			●		
	High Speed finish for Cast Iron				●	
	Hardened Steel				●	
		Cermet (w/o coating)	Carbide P	Carbide K	CBN	
		Grade	T	E	F	B
		Material	T12A	ST10P	HTi10	KBN10B
Applicable Arbor	Dimension	Code No.	NOSE R			
BCB29		3P-○2	0.2	●	●	●
BCB38, BCB48		5P-○4	0.4	●	●	●
BCB62, BCB82		7P-○4	0.4	●	●	●
		7P-○8	0.8		●	●
BCB100		10P-○4	0.4	●	●	●
		10P-○8	0.8		●	●

★Minimum quantity of CBN: 1pcs, All other insert tip: 10pcs
★The ISO code No. surrounded with () is the Nikken original insert tip.

Please add the grade indication into ○, and add the insert tip material indication at the end off the Code No. e.g. 10P-T4 (T12A)

Grade & Material

Grade	Grade Indication	Insert Tip Material Indication	Specification
Coated Cermet	C	PV90	Applicable for the midium roughing and finishing on the steel. Very stable cutting with coolant to be improved the heat resistance and the impact resistance.
		T2000Z	ZX coated suitable for the high speed finishing on the steel with long insert life. Very fine surface finish to be improved the impact resistance and the fracture resistance.
		AC630M	Very tough carbide M (base material) with the super FF coated. Excellent for the impact resistance and the fracture resistance for the stainless steel
Coated Carbide M		AC410K	Very tough carbide K (base material) with the super FF coated. Very stable cutting for the ductile cast iron and normal cast iron.
Cermet (w/o coating)	T	TN90	Applicable for the roughing and finishing on the steel. Very stable cutting to be improved the heat resistance and the impact resistance.
		NS530	The general material for the steel and the cast iron with the heat resistance and the toughness.
		T12A	Applicable for the roughing and finishing on the steel. Very stable cutting to be improved the heat resistance and the impact resistance.
Carbide P	E	ST10P	Applicable for the middle to high speed cutting on the steel and the steel casting.
Carbide K	F	H1	Excellent wear resistance and applicable for the cast iron, non-ferrous metal and the non-metal.
		HTi10	Toughness and the excellent wear resistance. Applicable for the cast iron, non-ferrous metal and the non-metal.
		KW10	Stable wear resistance and the fracture resistance. Applicable for the cast iron, non-ferrous metal and the non-metal.K10
CBN	B	KBN10B	Excellent for the fracture resistance and wear resistance. Suitable for the high performance and high accuracy cutting on the harden steel
Diamond	D	KPD010	Suitable for the high speed cutting on the aluminium and the non-metal. Applicable for the cutting on the carbide, ceramics, glass fibere and the plastic also.

3LOCK ZMAC BORING ARBOR

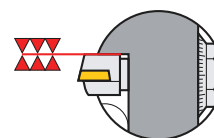
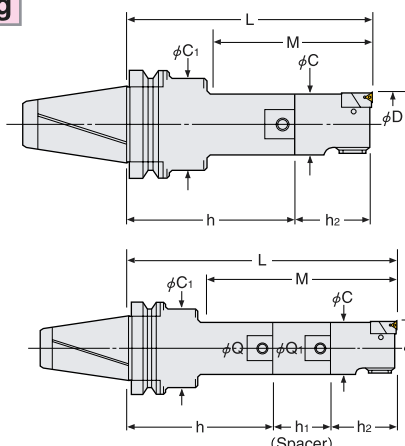
NIKKEN

Boring for Finishing

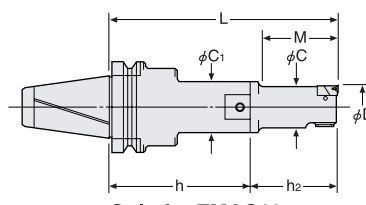


ZMAC

Photo shows ZMAC α .



No Micro Vibration due to Double-Contact Support of Cartridge. Long Tool-Life & High Accuracy.



Only for ZMAC16

All codes shown are for heads with triangular inserts For heads with rhomboid inserts please add the letter "R" to the code No. e.g. MBT40-ZMAC32 R -150

TAPER	Code No. MBTNo.- Min.D - L	Boring Range D	Boring Depth M	Coupling Dia M	C	C1	P.98		Weight (kg)
							Head No. Q- Min.D -h2	Insert No.	
No.40	MBT40-ZMAC 16-125, 135	15.9~20.2	38, 48	12	15	24	12-ZMAC16-45, 55	3MP-C,B	1.9, 1.9
	-ZMAC 20-120, 135, 150	19.8~25.2	45, 67, 75	9	19	30	9-ZMAC20-40		1.9, 1.9, 2.0
	-ZMAC 25-120, 150, 165	24.8~32.2	52, 90, 97	12	24	35	12-ZMAC25-40		2.0, 2.1, 2.1
	-ZMAC 32-150, 180, 195	31.8~42.2	77, 110, 122	16	31	42	16-ZMAC32-55	4MP-C,B	2.5, 2.7, 2.7
	-ZMAC 42-150, 180, 210	41.8~55.2	97, 130, 157	20	40	50	20-ZMAC42-70	6MP-C,B	3.0, 3.2, 3.5
	-ZMAC 55-165, 210, 225	54.8~70.2	135, 180, 195	26	53	50	26-ZMAC55-70		3.9, 4.6, 4.6
	-ZMAC 70-165, 180, 225	69.8~85.2	165, 180, 225	34	67	64	34-ZMAC70-70		5.4, 5.8, 6.8
	-ZMAC 85-195	84.8~100.2	195	42	83	62	42-ZMAC85-100		9.0
No.50	MBT50-ZMAC 16-140, 150	15.9~20.2	38, 48	12	15	24	12-ZMAC16-45, 55	3MP-C,B	4.7, 4.7
	-ZMAC 20-150, 165, 180	19.8~25.2	45, 67, 75	9	19	40	9-ZMAC20-40		4.8, 4.8, 4.9
	-ZMAC 25-135, 165, 180	24.8~32.2	52, 90, 97	12	24	44	12-ZMAC25-40		4.8, 4.8, 4.9
	-ZMAC 32-180, 210, 225	31.8~42.2	77, 110, 122	16	31	50	16-ZMAC32-55	4MP-C,B	5.5, 5.6, 5.7
	-ZMAC 42-180, 195, 225, 240	41.8~55.2	97, 130, 142, 157	20	40	60	20-ZMAC42-70	6MP-C,B	6.0, 6.0, 6.4, 6.5
	-ZMAC 55-210, 240, 270	54.8~70.2	117, 182, 177	26	53	65	26-ZMAC55-70		7.5, 7.6, 8.1
	-ZMAC 70-240, 270, 300	69.8~85.2	190, 220, 250	34	67	80	34-ZMAC70-70		10.0, 10.6, 11.5
	-ZMAC 85-225, 290, 315	84.8~100.2	182, 247, 272				42-ZMAC85-100		12.5, 15.0, 16.0
	-ZMAC100-225, 290*	99.5~140.5	225, 290	42	83	83	42-ZMAC100-100		13.8, 16.5
	-ZMAC140-225, 290*	139.5~180.5					42-ZMAC140-100		14.6, 17.3

★ MIN. dial readout : ZMAC25 & smaller is 0.02mm on diameter. ZMAC32 and larger are 0.01mm on diameter.

★ "C" grade (Coated) insert for Steel, Stainless & Cast Iron is supplied as Standard with the head(Smooth boring & Long tool-life).

We would recommend "B" grade (CBN) insert for Hardened Steel & High Speed boring of Cast Iron. Please refer P.96 for cutting condition.

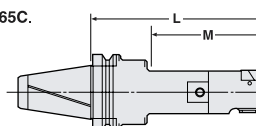
★ Please refer P.149 for Shank, and P.86 for Spacer, and P.77 for Head.

★ For Centre Through Tool Coolant type, please add "C" at the end of Code No. e.g. MBT40-ZMAC55-165C.

★ When L length is required longer than standard, please specify boring depth M.

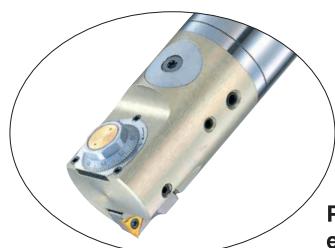
★ * : MBT50-ZMAC100-325, 375, 425, 475 are also available.

MBT50-ZMAC140-325, 375, 425, 475



High Pressure Coolant Through Tool

High Speed Boring ZMAC α
Special Hardened Light Alloy Metal Head with Balancing for Anti-Vibration.
MAX12,000min⁻¹



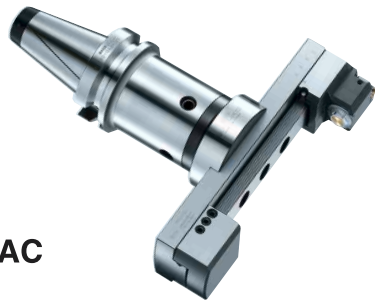
ZMAC for Multi-Stage Boring Bar
Please contact us for the special boring bar.



Photo. shows NC5 shank.

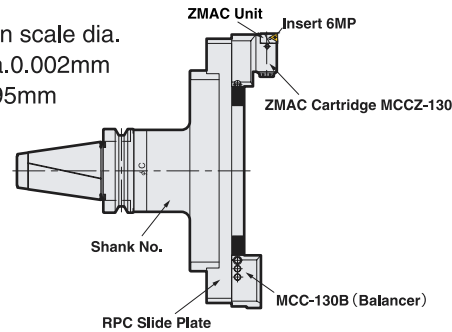
Please add "AA" at the end of Code No. for the boring arbor with ZMAC α head. P.76
e.g. MBT40-ZMAC42-150AA

3LOCK BALANCE-CUT BAC BORING ARBOR for LARGE DIA. NIKKEN



BAC

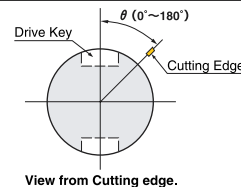
- Min. dial read out: main scale dia. 0.02mm, sub scale dia. 0.002mm
- Boring Dia: ϕ 130~595mm



Boring Dia: ϕ 130~595mm for Finishing.

TAPER	Code.No	D MIN.~MAX.	L	C	Shank No.	RPC Plate No	Cartridge (Balancer)	Weight (kg)
No.40	MBT40 -BAC130-205	130~195	205	61	MBT40-RAK-130	RPC-130	MCCZ-130 (MCC-130B)	6.8
	(MIT40) -BAC180-205	180~245				-180		7.8
No.50	MBT50 -BAC130-185, 235, 285	130~195	185, 235, 285	90	MBT50-RAK-110A, -160A, -210A	RPC-130	MCCZ-130 (MCC-130B) Insert Tip 6MP	13.0, 14.5, 17.5
	(MIT50) -BAC180-185, 235, 285	180~245				-180		13.5, 15.0, 18.0
	-BAC230-185, 235, 285	230~295				-230		14.0, 15.5, 18.5
	-BAC280-185, 235, 285	280~345				-280		14.5, 16.0, 19.0
	-BAC330-210*	330~395	210 (220*)	98	MBT50-RAK330-125 MIT50-RAK330-135	RPC-330		16.2
	-BAC380-210*	380~445				-380		16.5
	-BAC430-210*	430~495				-430		17.5
	-BAC480-210*	480~545				-480		18.5
	-BAC530-210*	530~595				-530		19.5

- ★ "C" grade (Coated) Inserts are supplied as standard. Please refer P.96 for cutting condition.
- ★ Unit "MSHZ-55" is provided as standard, please refer P.72 for Shank (RAK) and Plate (RPC).
- ★ Shank, Plate and Cartridge are delivered in separate packages.
- ★ When ordering, please let us know machine maker and model no. to avoid the interference with tool magazine of ATC.
- ★ The location of cutting edge is same as drive key in standard.
- ★ The different location is available, please specify θ in Code No. e.g. MBT50-BAC180-235 (90°)
- ★ The boring arbors marked * with MIT50, L (gauge length) is 220. e.g. MIT50-BAC330-220

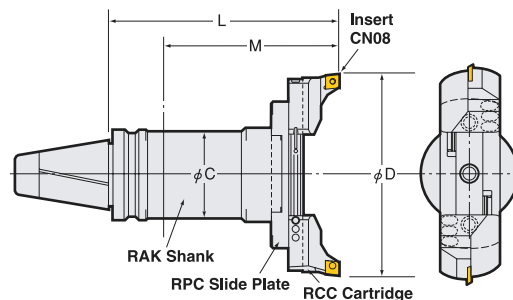


3LOCK BALANCE-CUT RAC BORING ARBOR for LARGE DIA. NIKKEN



RAC

- With slight adjust screw
- Boring Dia: ϕ 130~580mm



Boring Dia: ϕ 130~580mm for Roughing.

TAPER	Code.No	D MIN.~MAX.	L	C	Shank No.	RPC Plate No	Cartridge No. for Large dia.	Weight (kg)
No.40	MBT40 -RAC130-205	130~180	205	61	MBT40-RAK-130	RPC-130		6.8
	(MIT40) -RAC180-205	180~230				-180		7.8
No.50	MBT50 -RAC130-185, 235, 285	130~180	185, 235, 285	90	MBT50-RAK-110A, -160A, -210A	RPC-130	For Heavy Duty Boring of Iron and Cast Iron RCC-130 x2 Insert Tip CN08	11.3, 12.8, 15.8
	(MIT50) -RAC180-185, 235, 285	180~230				-180		11.8, 13.3, 16.3
	-RAC230-185, 235, 285	230~280				-230		12.3, 13.8, 16.8
	-RAC280-185, 235, 285	280~330				-280		12.8, 14.3, 17.3
	-RAC330-210*	330~380	210 (220*)	98	MBT50-RAK330-125 MIT50-RAK330-135	RPC-330		15.5
	-RAC380-210*	380~430				-380		16.5
	-RAC430-210*	430~480				-430		17.5
	-RAC480-210*	480~530				-480		18.5
	-RAC530-210*	530~580				-530		19.5

- ★ The Code No. on above table are the boring arbors with RCC-130 cartridge (Insert tip: CN08) the Heavy Duty Boring of Iron and Cast Iron. Please refer P.95 for cutting condition.
- ★ Boring arbor with cartridges & insert for Steel, Stainless Steel and Cast Iron (E), for Aluminum (A) and for Through Hole & Multi Sheets (K) are available. Please refer P.72 for cartridges. e.g. MBT50-RAK130-185E
- ★ Please refer P.72 for Shank (RAK) and Plate (RPC).
- ★ Shank, Plate and Cartridge are delivered in separate packages.
- ★ When ordering, please let us know machine maker and model no. to avoid the interference with tool magazine of ATC.
- ★ The location of cutting edge is same as drive key in standard.
- ★ The different location is available, please specify θ in Code No. e.g. MBT50-RAC180-235 (90°)
- ★ The boring arbors marked * with MIT50, L (gauge length) is 220. e.g. MIT50-RAC330-220

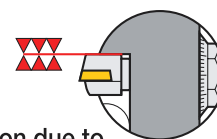
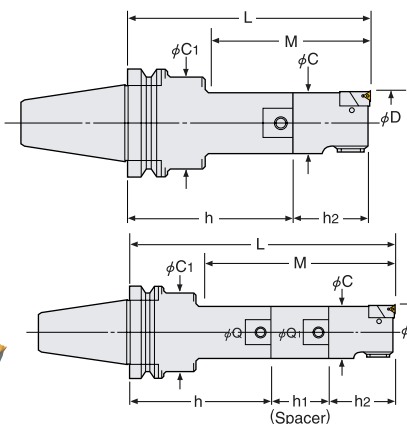
2LOCK ZMAC BORING ARBOR

NIKKEN

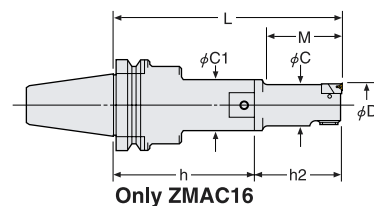
Boring for Finishing



ZMAC



No Micro Vibration due to Double-Contact Support of Cartridge. Long Tool-Life & High Accuracy.



All codes shown are for heads with triangular inserts For heads with rhomboid inserts please add the letter "R" to the code No. e.g. NBT40-ZMAC32 R -150

TAPER	Code No.	Boring Range D	Boring Depth M	Cupling Dia Q	C	C ₁			Weight (kg)
	Head No.						Insert No.		
	NBTNo.- Min.D - L Q- Min.D -h ₂								
No.40	NBT40-ZMAC 16-125, 135	15.9~20.2	38, 48	12	15	24	12-ZMAC16-45, 55	3MP-C,B	1.9, 1.9
	(NIT40)-ZMAC 20-120, 135, 150	19.8~25.2	45, 67, 75	9	19	30	9-ZMAC20-40		1.9, 1.9, 2.0
	-ZMAC 25-120, 150, 165	24.8~32.2	52, 90, 97	12	24	35	12-ZMAC25-40		2.0, 2.1, 2.1
	-ZMAC 32-150, 180, 195	31.8~42.2	77, 110, 122	16	31	42	16-ZMAC32-55	4MP-C,B	2.5, 2.7, 2.7
	-ZMAC 42-150, 180, 210	41.8~55.2	97, 130, 157	20	40	50	20-ZMAC42-70	6MP-C,B	3.0, 3.2, 3.5
	-ZMAC 55-165, 210, 225	54.8~70.2	135, 180, 195	26	53		26-ZMAC55-70		3.9, 4.6, 4.6
	-ZMAC 70-165, 180, 225	69.8~85.2	165, 180, 225	34	67		64		34-ZMAC70-70
	-ZMAC 85-195	84.8~100.2	195	42	83	62	42-ZMAC85-100		9.0
No.50	NBT50-ZMAC 16-140, 150	15.9~20.2	38, 48	12	15	24	12-ZMAC16-45, 55	3MP-C,B	4.7, 4.7
	(NIT50)-ZMAC 20-150, 165, 180	19.8~25.2	45, 67, 75	9	19	40	9-ZMAC20-40		4.8, 4.8, 4.9
	-ZMAC 25-135, 165, 180	24.8~32.2	52, 90, 97	12	24	44	12-ZMAC25-40		4.8, 4.8, 4.9
	-ZMAC 32-180, 210, 225	31.8~42.2	77, 110, 122	16	31	50	16-ZMAC32-55	4MP-C,B	5.5, 5.6, 5.7
	-ZMAC 42-180, 195, 225, 240	41.8~55.2	97, 130, 142, 157	20	40	60	20-ZMAC42-70	6MP-C,B	6.0, 6.0, 6.4, 6.5
	-ZMAC 55-210, 240, 270	54.8~70.2	117, 182, 177	26	53	65	26-ZMAC55-70		7.5, 7.6, 8.1
	-ZMAC 70-240, 270, 300	69.8~85.2	190, 220, 250	34	67	80	34-ZMAC70-70		10.0, 10.6, 11.5
	-ZMAC 85-225, 290, 315	84.8~100.2	182, 247, 272	42	83	83	42-ZMAC85-100		12.5, 15.0, 16.0
	-ZMAC100-225, 290 *	99.5~140.5	225, 290				42-ZMAC100-100		13.8, 16.5
	-ZMAC140-225, 290 *	139.5~180.5					42-ZMAC140-100		14.6, 17.3

★ MIN. dial readout : ZMAC25 & smaller is 0.02mm on diameter. ZMAC32 and larger are 0.01mm on diameter.

★ "C" grade (Coated) insert for Steel, Stainless & Cast Iron is supplied as Standard with the head (Smooth boring & Long tool-life). P.98 Please refer P.96 for cutting condition. We would recommend "B" grade (CBN) insert for Hardened Steel & High Speed boring of Cast Iron.

★ Please refer P.85 for Shank & Spacer, and P.77, P.78 for Head.

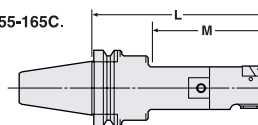
★ For Centre Through Tool Coolant type, please add "C" at the end of Code No. e.g. BT40-ZMAC55-165C.

★ For BT30, modular connection system is applied. Please refer P.85 for Base Holder.

★ When L length is required longer than standard, please specify boring depth M.

★ * : NBT50-ZMAC100-325, 375, 425, 475 are also available.

NBT50-ZMAC140-325, 375, 425, 475

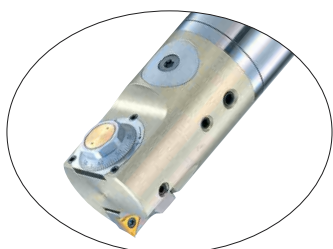


High Pressure Coolant Through Tool

High Speed Boring ZMAC

Special Hardened light alloy metal head with balancing for preventing from high frequency vibration.

Ultra high speed boring: MAX.12,000min⁻¹



ZMAC for Multi-Stage Boring Bar

Please contact us for the special boring bar.



Photo. shows NC5 shank.

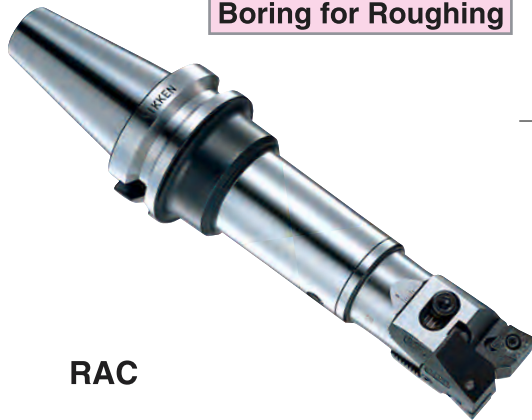
Please contact us for your application with the boring diameter. P.78

e.g. NBT40-ZMAC42-150AA
Boring dia.: φ43.5mm

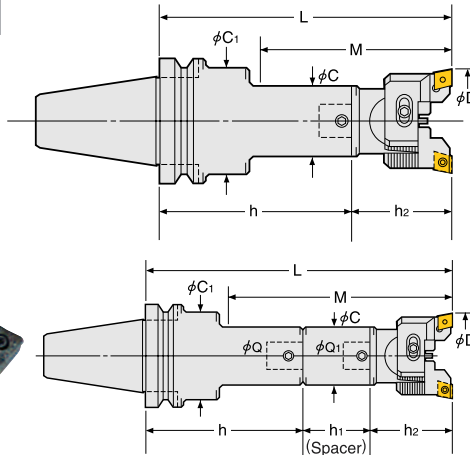
2LOCK BALANCE-CUT BORING ARBOR

NIKKEN

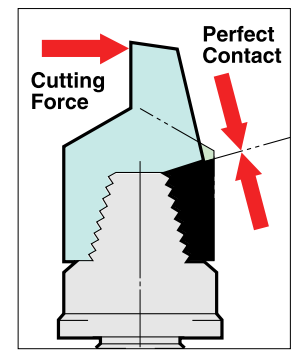
Boring for Roughing



RAC



Power of Shoulder Support



TAPER	Code No.	Boring Range D	Boring Depth M	Coupling Dia Q	C	C1	P.62		Weight (kg)
							Head No.	Tip No.	
							Q- Min.D -h2		
No.40	NBT40-RAC 25-135E, 165E, 180E	25~32	67, 105, 112	12	24	35	12-RAC 25- 55E	CC07-C	2.0, 2.1, 2.1
	(NIT40)-RAC 32-150E, 180E, 195E	32~45	77, 110, 122	16	31	42	16-RAC 32- 55E	CC08-C	2.4, 2.6, 2.6
	-RAC 43-150E, 180E, 210E	43~55	97, 130, 157	20	40	50	20-RAC 43- 70E	CC12-C	2.7, 2.9, 3.2
	-RAC 53-165E, 210E, 225E	53~70	135, 180, 195	26	50		26-RAC 53- 70E		2.5, 3.3, 3.2
	-RAC 70-180E, 195E, 240E	70~100	180, 195, 240	34	64	64	34-RAC 70- 85E		4.8, 5.2, 6.2
	-RAC100-195E	100~130	195	42	83	62	42-RAC100-100E		6.8
No.50	NBT50-RAC 25-150E, 180E, 195E	25~32	67, 105, 112	12	24	44	12-RAC 25- 55E	CC07-C	4.7, 4.9, 4.8
	(NIT50)-RAC 32-180E, 210E, 225E	32~45	77, 110, 122	16	31	50	16-RAC 32- 55E	CC08-C	5.4, 5.6, 5.6
	-RAC 43-180E, 195E, 225E, 240E	43~55	97, 130, 142, 157	20	40	60	20-RAC 43- 70E	CC12-C	5.7, 5.8, 6.1, 6.2
	-RAC 53-210E, 240E, 270E	53~70	117, 182, 177	26	50	65	26-RAC 53- 70E		6.9, 7.0, 7.6
	-RAC 70-255E, 285E, 315E	70~100	205, 235, 265	34	64	80	34-RAC 70- 85E		9.5, 9.9, 10.9
	-RAC100-225E, 290E, 325E *	100~130	225, 290, 325	42	83	83	42-RAC100-100E		12.5, 12.5, 16.5

★ "C" grade (Coated) inserts are supplied as standard with the head. P.62 Please refer P.93 for cutting condition.

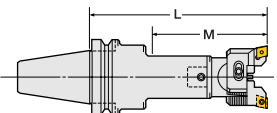
★ Please refer P.179 for base holder, P.86 for spacer and P.67 for head.

★ For centre through tool coolant type, please add "-C" at the end of Code No. e.g. NBT40-RAC53-165-C

★ Cartridges & Insert tips for the Heavy Duty Boring of Iron and Cast Iron (No letter), for Aluminum (A), and for Through Hole & Multiple Sheets (K) are available. Please refer P.69 for cartridges. Please add the letter "No letter", "A" or "K" at the end of Code No. e.g. NBT40-RAC53-165A

★ *: NBT50-RAC100-375E, 425E and 475E are also available.

Code No. of RAC25 and RAC32 with CC inserts are changed to RAC25E and RAC32E. Please refer P.61, P.62



2LOCK MAJOR DREAM HOLDER BASE HOLDER for MODULAR TYPE

NIKKEN



MDQ

Photo shows with A1 spacer and ZMACX head.

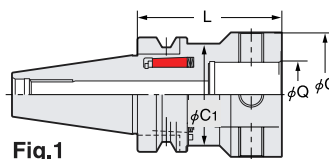


Fig.1

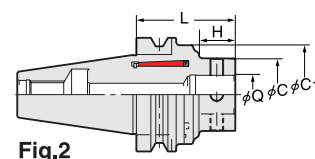


Fig.2

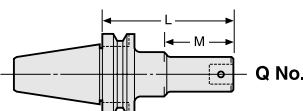
TAPER	Code No.	Q	L	C	C1	H	Weight (kg)	ZMAC Boring Range	Fig
No.30	NBT30-MDQ26- 60	26	60	50	50	37.5	-	16~70	1
No.40	NBT40-MDQ26- 65	26	65	50	54	30.0	1.3	16~70	2
No.50	NBT50-MDQ26- 80	26	80	50	87	22.0	4.6	16~70	2
	(NIT50)-MDQ34- 90	34	90	64	87	32.0	4.9	16~85	
	-MDQ42-100	42	100	83	87	45.0	5.7	16~180	

★ All base holders are used for centre through tool coolant.

★ Coupling bolt and wrench are supplied as standard.

★ ZMACX head is recommended to use with the MAJOR DREAM base holder for anti-vibration.

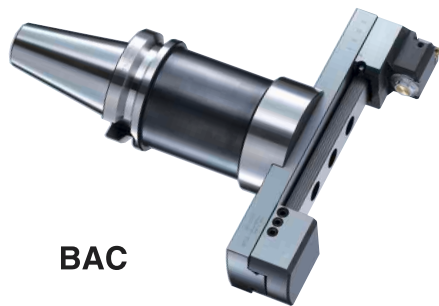
★ When L length is required longer than standard, please specify the boring depth M and Q No.



Q No.

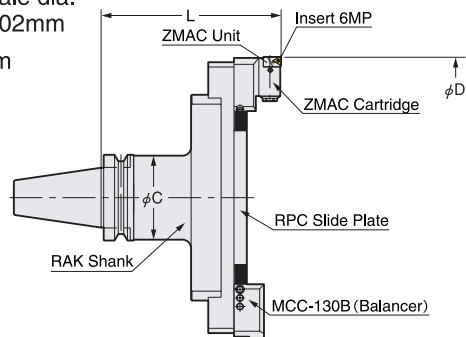
2LOCK BALANCE-CUT BAC BORING ARBOR for LARGE DIA.

NIKKEN



BAC

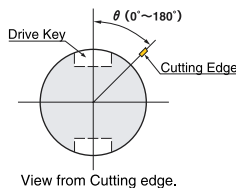
- Min. dial read out: main scale dia. 0.02mm, sub scale dia. 0.002mm
- Boring Dia: ϕ 130~595mm



Boring Dia: ϕ 130~595mm for Finishing.

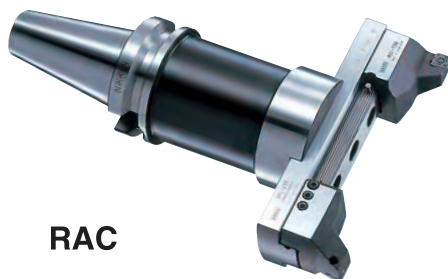
TAPER	Code.No	D MIN.~MAX.	L	C	RAK Shank Code No.	PPC Plante No	Cartridge (Balancer)	Weight (kg)
No.40	NBT40 -BAC130-205	130~195	205	61	NBT40-RAK-130	RPC-130	MCCZ-130 (MCC-130B) Insert Tip 6MP	6.8
	(NIT40) -BAC180-205	180~245				-180		7.8
No.50	NBT50 -BAC130-185, 235, 285	130~195	185, 235, 285	90	NBT50-RAK-110, 160, 210	RPC-130		13.0, 14.5, 17.5
	(NIT50) -BAC180-185, 235, 285	180~245				-180		13.5, 15.0, 18.0
	-BAC230-185, 235, 285	230~295				-230		14.0, 15.5, 18.5
	-BAC280-185, 235, 285	280~345				-280		14.5, 16.0, 19.0
	-BAC330-210*	330~395	210 (220*)	98	NBT50-RAK330-125 NIT50-RAK330-135*	RPC-330		16.2
	-BAC380-210*	380~445				-380		16.5
	-BAC430-210*	430~495				-430		17.5
	-BAC480-210*	480~545				-480		18.5
	-BAC530-210*	530~595				-530		19.5

- ★ "C" grade (Coated) Inserts are supplied as standard. ★ Please refer P.95 for cutting condition.
- ★ Unit "M5HZ-55" is provided as standard, please refer P.72 for Shank (RAK) and Plate (RPC).
- ★ Shank, Plate and Cartridge are delivered in separate packages.
- ★ When ordering, please let us know machine maker and model no. to avoid the interference with tool magazine of ATC.
- ★ The location of cutting edge is same as drive key in standard.
- The different location is available, please specify θ in Code No. e.g. NBT50-BAC180-235 (90°)
- ★ The boring arbors marked * with NIT50, L (gauge length) is 220. e.g. NIT50-BAC330-220



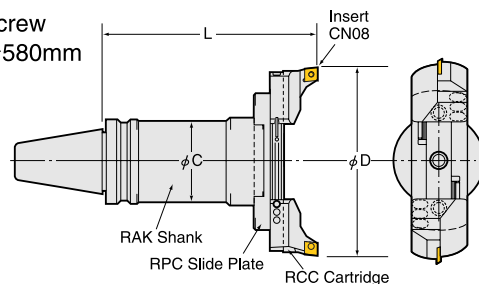
2LOCK BALANCE-CUT BAC BORING ARBOR for LARGE DIA.

NIKKEN



RAC

- With slight adjust screw
- Boring Dia: ϕ 130~580mm



Boring Dia: ϕ 130~580mm for Roughing.

TAPER	Code.No	D MIN.~MAX.	L	C	RAK Shank Code No.	PPC Plante No	Cartridge No. for Large dia.	Weight (kg)
No.40	NBT40 -RAC130-205	130~180	205	61	NBT40-RAK-130	RPC-130	For Heavy Duty Boring of Iron and Cast Iron RCC-130 x2 Insert Tip CN08	6.8
	(NIT40) -RAC180-205	180~230				-180		7.8
No.50	NBT50 -RAC130-185, 235, 285	130~180	185, 235, 285	90	NBT50-RAK-110, 160, 210	RPC-130		11.3, 12.8, 15.8
	(NIT50) -RAC180-185, 235, 285	180~230				-180		11.8, 13.3, 16.3
	-RAC230-185, 235, 285	230~280				-230		12.3, 13.8, 16.8
	-RAC280-185, 235, 285	280~330				-280		12.8, 14.3, 17.3
	-RAC330-210*	330~380	210 (220*)	98	NBT50-RAK330-125 NIT50-RAK330-135*	RPC-330		15.5
	-RAC380-210*	380~430				-380		16.5
	-RAC430-210*	430~480				-430		17.5
	-RAC480-210*	480~530				-480		18.5
	-RAC530-210*	530~580				-530		19.5

- ★ The Code No. on above table are the boring arbors with RCC-130 cartridge (Insert tip: CN08) the Heavy Duty Boring of Iron and Cast Iron. Please refer P.95 for cutting condition.
- ★ Boring arbor with cartridges & insert for Steel, Stainless Steel and Cast Iron (E), for Aluminum (A) and for Through Hole & Multi Sheets (K) are available.
- Please refer P.72 for cartridges. e.g. NBT50-RAC130-185E
- ★ Shank, Plate and Cartridge are delivered in separate packages. ★ When ordering, please let us know machine maker and model no. to avoid the interference with tool magazine of ATC.
- ★ The location of cutting edge is same as drive key in standard. The different location is available, please specify θ in Code No. e.g. NBT50-RAC180-235 (90°)
- ★ The boring arbors marked * with NIT50, L (gauge length) is 220. e.g. NIT50-RAC330-220

2Lock