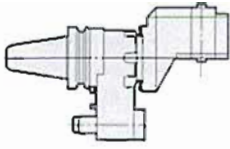


ANGULAR HEAD SYSTEM (Free Positioning in 360°)

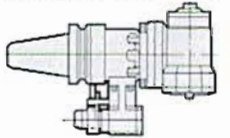


Quick type Angular Head P.101

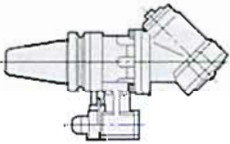
BT/IT-AFT Off-Set type



BT/IT-AHT 90° type



BT/IT-AHT 45° type



AHK-C



AHK-SK



AHK-PC



AHK-Z



AHK-SCA



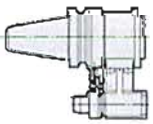
P.102

Various machining such as end milling, drilling, face milling, tapping etc. can be conveniently done by just changing adapter. Very suitable for production of many kinds of small quantity.

BT50-AFT35-90 Cutting Data Material of Work: S55C Carbon Steel				
Adaptor	Tool	Cutting Width×Depth	min ⁻¹	Feed (mm/min)
SK10	HSS 2 Flutes End Mill	10×5.0	800	80
PC60	φ60 Face Mill	45×3.0	60	300
SCA	φ100×4 Side Cutter	4.0×6.0	70	70
C20	φ18.5 Drill	18.5×40	400	80

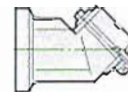
Modular type Angular Head P.103

BT/IT-AHM Modular type Main Body

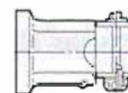


Head can be changed according to the application. Small Dia Head, 45° or 90° Head, Long Head etc. are available in standard series. For Heavy Cutting, Direct Mount Flange type is recommended.

AHM-SK 45° type



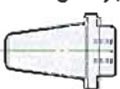
AHM-SK 90° type



Direct Mount Flange type Angular Head P.105

NT-F

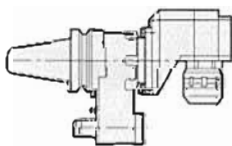
Direct Mount Flange type Shank



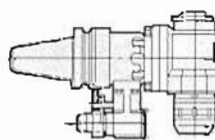
Solid Type Angular Head P.104

Most popular Slim Chuck SK10, 16, 25 and Milling Chuck C20, 32 are combined as solid. High Precision and High Rigidity are ensured.

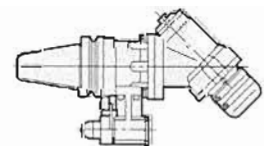
AFK-AFC Off-Set type



AHM-AHC 90° type



AHK-AHC 30°, 45°, 60° types



- Free Radius Positioning in 360°
- Taper Connection System is applied to Stopper Block. (Different from the one of another FA tooling)
- Oil Hole type is available. Please contact with us.
- Special Degree Angular Head is available on demand.
- Spindle Speeder type Angular Head (X5 times, MAX. 18,000min⁻¹) is available.

BT40-AHPX10-215, BT50-AHPX10-206
IT40-AHPX10-215, IT50-AHPX10-206

Spindle Speeder type Angular Head
MAX.18,000min⁻¹

NEW

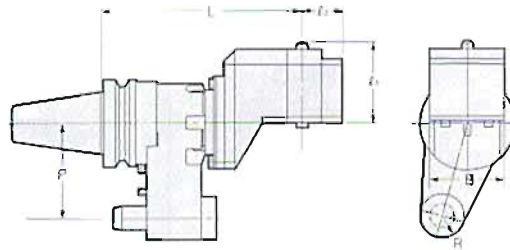
Angular Head with Oil Hole System



QUICK TYPE ANGULAR HEAD (Free Positioning in 360°)



Quick type Off-Set Angular Head



Explanation of the Code No.

BT40 - AF T 30 - 200

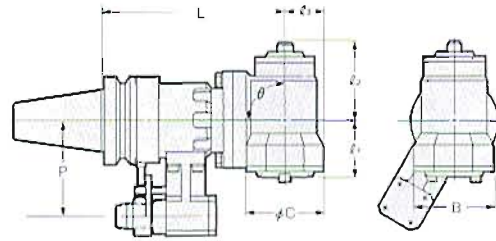
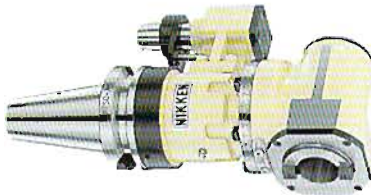
- Length from Gauge Line
- Taper No. of Adapter
- Quick type
- Off-Set type Angular Head
- Shank

MAX2,000min⁻¹

TAPER	Code No.	L	P	l ₁	l ₂	B	R	Adapter	Weight (kg)
No.40	BT40-AFT30-200	200	65	85	35	70	17.5	AHK30	7.5
No.50	BT50-AFT35-230	230	110	85	45	84	25	AHK35	16.0

★ Taper Connection System is applied to Stopper Block. (Different from the another FA Tooling) ★ All types are available with Oil Hole System.
 ★ Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension. P.108
 ★ IT40-AFT30-200 and IT50-AFT35-230 are also available. ★ When M/C spindle rotates CW, the cutter rotates CW.

Quick type 90° Angular Head



Explanation of the Code No.

BT40 - AH T 30 - 160 - 90

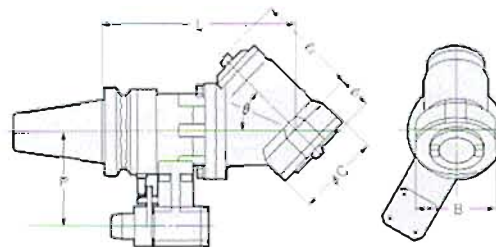
- Angle
- Length from Gauge Line
- Taper No. of Adapter
- Quick type
- Symbol of Angular Head
- Shank

MAX2,000min⁻¹

TAPER	Code No. L - θ	L	P	l ₁	l ₂	l ₃	C	B	θ	Adapter	Weight(kg)
No.40	BT40-AHT30-160-90	160	65	58	61	37	86	80	90	AHK30	6.5
	(IT40) -250* -90	250									10.5
No.50	BT50-AHT35-210-90	210	110	65	88	45	100	90	90	AHK35	17.0
	(IT50) -300* -90	300									22.0

★ Taper Connection System is applied to Stopper Block. (Different from the another FA tooling) ★ All types are available with Oil Hole System.
 ★ Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension. P.108
 ★ Models with * mark : Detailed discussion is needed. ★ When M/C spindle rotates CCW, the cutter rotates CW.

Quick type 30°, 45°, 60° Angular Head



Explanation of the Code No.

BT40 - AH T 30 - 170 - 45

- Angle
- Length from Gauge Line
- Taper No. of Adapter
- Quick type
- Symbol of Angular Head
- Shank

MAX2,000min⁻¹

TAPER	Code No. L - θ	L	P	l ₁	l ₂	C	B	θ	Adapter	Weight(kg)
No.40	BT40-AHT30-205-30	205	65	1.5	122	86	80	30	AHK30	6.5
	(IT40) -170-45	170		35	88			45		6.5
	-160-60	160		35	88			60		6.5
	-250* -30	250		1.5	122			30		10.5
	-45			35	88			45		10.5
	-60			35	88			60		10.5
No.50	BT50-AHT35-258-30	258	110	0	140	100	90	30	AHK35	17.0
	(IT50) -225-45	225		26	110			45		17.0
	-210-60	210		40	105			60		17.0
	-300* -30	300		0	140			30		22.0
	-45			26	110			45		22.0
	-60			40	105			60		22.0

★ Taper Connection System is applied to Stopper Block. (Different from the another FA tooling) P.108 ★ All types are available with Oil Hole System.
 ★ Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension. P.108
 ★ Models with * mark : Detailed discussion is needed. ★ When M/C spindle rotates CCW, the cutter rotates CW.

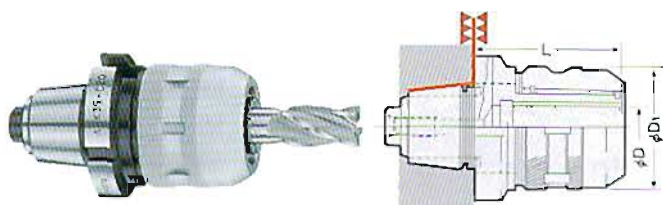
ADAPTER FOR QUICK TYPE ANGULAR HEAD



Quick type Angular Head
P.101



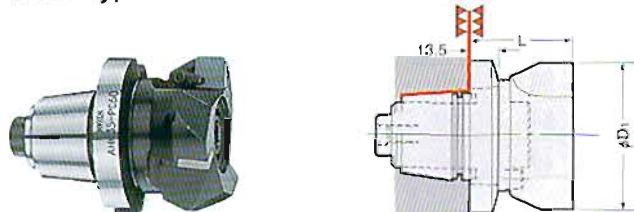
Quick type Milling Chuck (Double Face Contact)



Code No.	D	L	D ₁	Weight(kg)	KM Collet
AHK30-C16	60	44	44	1.0	KM16
AHK35-C16,C20	60, 65	44, 52	44, 52	1.1, 1.2	KM16, KM20

★ For KM COLLET, please refer P.30.

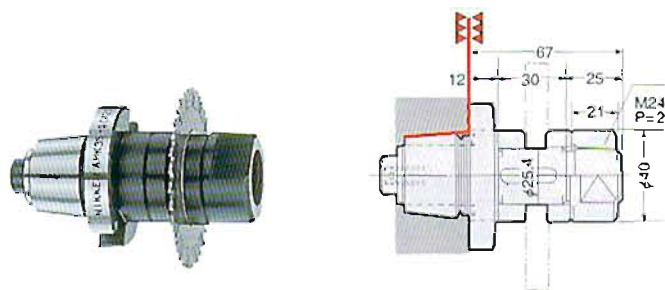
Quick type NIKKEN PRO-CUT (Double Face Contact)



Code No.	PC.No.	L	D ₁	Weight (kg)
AHK30-PC50		45	50	0.7
AHK35-PC60,PC80		45, 57	60, 80	0.9, 1.3

★ Inserts are standard accessory. Code No. of Insert: PC-422 (SPMM 120300)
★ Minimum order quantity of Insert: 10pcs

Quick type Side Cutter Arbor (Double Face Contact)



Code No.	L	D	D ₁	Weight (kg)
AHK35-SCA25.4	12	25.4	40	1.1

★ The key and set of distance collars are standard accessory.

Quick type Slim Chuck



Code No.	SK.No.	D	L	D ₁	Weight(kg)	SK Collet
AHK30-SK10		1.75~10	35	27.5	0.4	SK10
-SK16		2.75~16	50	40	0.6	SK16
AHK35-SK10		1.75~10	35	27.5	0.5	SK10
-SK16		2.75~16	50	40	0.7	SK16

★ SK Collet is not included, please refer P.38

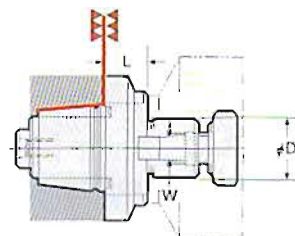
Quick type Tapper Chuck



Code No.	Z.No.	L	Weight(kg)	Tap Collet
AHK30-Z8, Z12		85, 100	0.6, 0.9	ZK 8, ZKG12
AHK35-Z8, Z12, Z16		75, 85, 100	0.7, 1.0, 1.5	ZK 8, ZKG12, ZKG16

★ Tapping Capability Z8:M2~8 Z12:M2~12 Z16:M3~20
★ Tap Collet is not included, please refer P.51 to P.52.

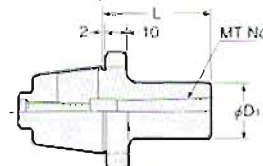
Quick type Face Mill Arbor (Double Face Contact)



Code No.	L	D ₁	W	Weight(kg)
AHK35-FMA25.4	18.5	25.4	9.5	0.7
-FMA31.75		31.75	12.7	0.8

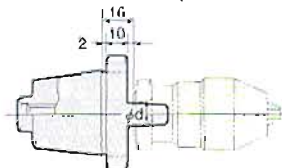
★ The Keys and a Bolt are standard accessory.
★ NIKKEN PRO-END MILL can be used P.89

Quick type Morse Taper Sleeve



Code No.	MT.No.	L	D ₁	Weight(kg)
AHK30-MT1, MT2		50, 65	25, 32	0.4, 0.5
AHK35-MT1, MT2, MT3		50, 60, 85	25, 32, 40	0.5, 0.6, 0.9

Quick type Drill Chuck Adapter



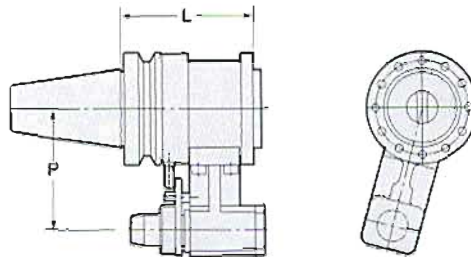
Code No.	J.No.	L	J.No.	Weight(kg)
AHK30-J6		16	J6	0.4
AHK35-J6				0.5

★ This adapter is supplied without drill chuck.

MODULAR TYPE ANGULAR HEAD

NIKKEN

Modular type Angular Head AHM

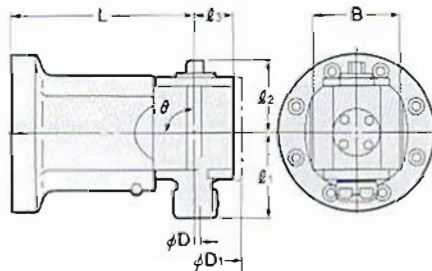


MAX6,000min⁻¹

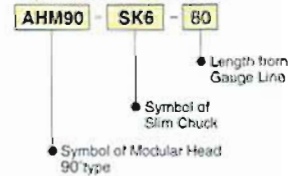
TAPER	Code No. -L	L	P	Weight(kg)	Suitable Modular Head
No.40	BT40(IT40)-AHM-100	100	65	4.5	
No.50	BT50(IT50)-AHM-120	120	110	11.5	

- ★ Taper Connection System is applied to Stopper Block. (Different from the another FA Tooling)
- ★ All types are available with Oil Hole System.
- ★ Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension. P.108

90° type Modular Head AHM90



Explanation of the Code No.

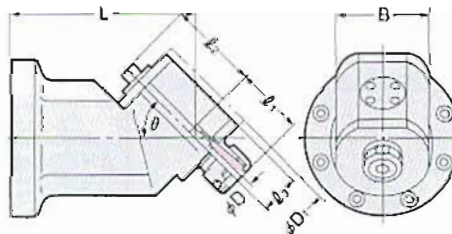


SK6 : MAX6,000min⁻¹ SK10,16 : MAX4,000min⁻¹

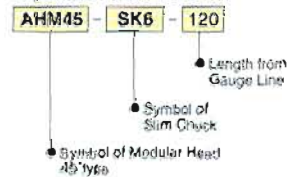
Code No. -L	D	l ₁	l ₂	l ₃	D ₁	B	θ	Weight(kg)	SK Collet
AHM90-SK 6-80, 120, 150*	0.7~6	42	35	22	50	48	90	3.0, 4.0, 4.5	SK 6
-SK10-80, 120, 150*	1.75~10	63	57	32	64	60		3.5, 4.5, 5.0	SK 10
-SK16-80, 120, 150*	2.75~16	66	58	35	74	70		4.2, 5.2, 5.7	SK 16

- ★ *Mark is for light machining.
- ★ For SK Collet, please refer P.38
- ★ When M/C spindle rotates CCW, the cutter rotates CW.

30°, 45°, 60° type Modular Head AHM45



Explanation of the Code No.



SK6 : MAX6,000min⁻¹ SK10,16 : MAX4,000min⁻¹

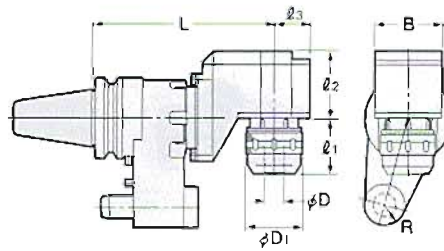
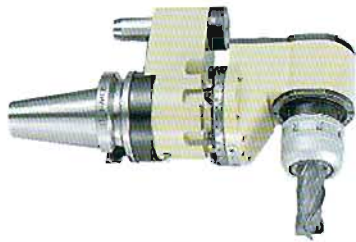
Code No. -L	D	l ₁	l ₂	l ₃	D ₁	B	θ	Weight(kg)	SK Collet
AHM45-SK 6-120, 150*	0.7~6	27	67	22	50	52	45	3.0, 4.0, 4.5	SK 6
-SK10-120, 150*	1.75~10	39	80	30	64	60		3.5, 4.5, 5.0	SK 10
-SK16-120, 150*	2.75~16	38	90	35	74	70		4.2, 5.2, 5.7	SK 16

- ★ *Mark is for light machining.
- ★ For SK Collet, please refer P.38
- ★ Angle 30°, 60° are also available as an option.
- ★ When M/C spindle rotates CCW, the cutter rotates CW.

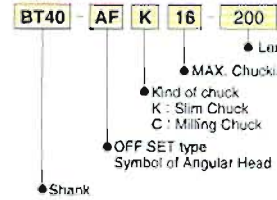
Solid type Angular Head



Solid OFF SET type Angular head



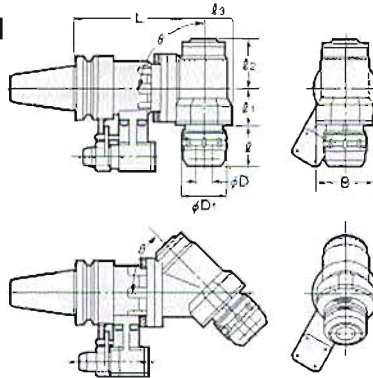
Explanation of the Code No.



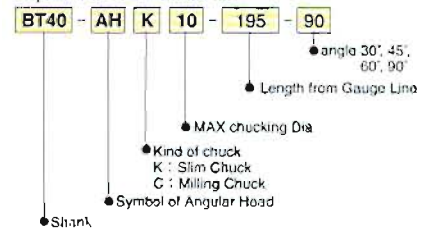
TAPER	Code No. -L	D	D ₁	l ₁	l ₂	l ₃	B	R	min ⁻¹	Weight (kg)	Applicable Collet
No.40	BT40-AFK16-200 (IT40)	2.75~16	40	50	85	35	70	17.5	2,000	8.5	SK 16
	-AFC20-200	2~20	52	56						8.7	KM 20
No.50	BT50-AFC20-230 (IT50)	2~20	52	58	85	45	84	25	2,000	17.0	KM 20
	-AFC32-230	3~32	69	65						17.2	KM 32

★Taper Connection System is applied to Stopper Block. (Different from the another FA Tooling) ★All types are available with Oil Hole System.
 ★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension. P.108
 ★For (SK16), please refer P.38. For (KM20) and (KM32), please refer P.30.
 ★Please advise name of M/C builder and model No. etc. ★When M/C spindle rotates CW, the cutter rotates CW.

Solid - 90°, 45° type Angular head



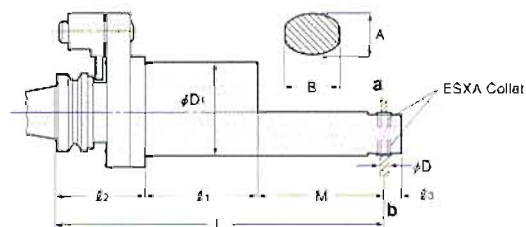
Explanation of the Code No.



TAPER	Code No. -L -θ	D	D ₁	l	l ₁	l ₂	l ₃	B	min ⁻¹	Weight (kg)	Applicable Collet
No.30	BT30-AHK10-120-90	1.75~10	27.5	20	49	50	27.5	55	2,000	3.0	SK 10
No.40	BT40-AHK10-180,220*-90 (IT40)	1.75~10	27.5	18	45	57	32	60	4,000	8.0, 9.0	SK 10
	-AHK16-180,220*-90 -AHC20-160,250*-90	2.75~16	40	25	41	58	35	70		8.7, 9.7	SK 16
No.50	BT50-AHK10-200,240*-90 (IT50)	1.75~10	27.5	18	45	57	32	60	4,000	15.0, 16.0	SK 10
	-AHK16-200,240*-90	2.75~16	40	25	41	58	35	70		15.7, 16.7	SK 16
	-AHK25-210,300*-90 -AHC32-210,300*-90	16~25.4	55	57	60	82	45	90	2,000	17.2, 22.2	SK 25
		3~32	69							17.5, 22.5	KM32

★Taper Connection System is applied to Stopper Block. (Different from the another FA Tooling) ★All types are available with Oil Hole System.
 ★Stopper block is available as an option. When ordering, please inform your M/C maker and Model as well as your M/C spindle flange dimension. P.108
 ★For (SK10) (SK16) (SK25), please refer P.38. For (KM25) and (KM32), please refer P.30.
 ★Angle 30°, 45°, 60° are also available as an option. ★Mark is for light cutting
 ★When M/C spindle rotates CCW, the cutter rotates CW.
 ★Please contact with us for the dimension of 30°, 45°, 60° type.

Angular head for deep hole



MAX 3,500 min⁻¹

TAPER	Code No. -L	D	D ₁	A	B	M	l ₁	l ₂	l ₃	Weight (kg)	Applicable Collet
No.40	BT40-AHPL6-270	3~6	80	36	45	103	92	75	15	6.0	ESXA6
No.50	BT50-AHPL8-288	3~8	90	43	50	125	61	102	20	16.0	ESXA8

★ESXA Collet is supplied as an option.
 ★Different shape is possible, please contact with us for more detail.
 ★When M/C spindle rotates cw, the cutter at a rotates CW and the cutter at b rotates CCW.
 ★IT40-AHPL6-270 and IT50-AHPL8-288 are also available.