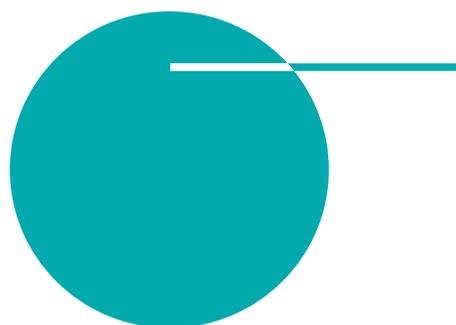


Tooling for machining centers

# MC TOOLING SYSTEM

ALPS TOOL BT TOOLING SYSTEM



● BT50, BT40, BT30  
25T, S20T, 15T

## Milling Chuck



P2-3

Milling Chuck (TR type)

## Collet



P4

Straight Collet

## Collet Holder



P5-7

Collet Holder (EXH type)

## Collet Holder



P8

Collet Holder (ECH type)

## SS.Collet Holder



P9

SS.Collet Holder

## AR Collet



P10-11

AR Collet (Standard type)

## AR Coolant Collet



P12

AR Coolant Collet (OH type)

## AR Coolant Collet



P13

AR Coolant Collet (C type)

## AR Tap Collet



P14

AR Tap Collet (GB type)

## AR Tap Collet



P15

AR Tap Collet (GH type)

## Milling Arbor



P16-17

Arbor for Face Milling Cutter (A/B/C)

## Side Cut Arbor



P18

Arbor for Side Milling Cutter (SCA type)

## Side Lock Holder



P19

Side Lock Holder (A type/S type)

## Morse Taper Holder



P20

Morse Taper Holder (A type)

## MT.Drill Socket



P20

MT.Drill Socket

## Jacobs Taper Holder



P21

Jacobs Taper Holder

## Collet Holder



P22

Small Collet Holder for MC and DC (15T type)

## Collet Holder



P22

Small Collet Holder for MC and DC (S20T type)

## Collet Holder



P23

Small Collet Holder for MC and DC (25T type)

## Pull Bolt



P24

Pull Studs

## Thermo Grip Chuck



Another Catalog

Thermo Grip Chuck

High quality chuck with good balance of high speed, high accuracy, high rigidity and high gripping force

## Milling Chuck (TR type)

Heavy Cutting

Coolant Thru

7MPa Available

### Clamp mark

- Tightening completion sign is easy to understand and ensures secure clamping.



A patent mechanism which is no uneasiness at high speed, not to mention high rigidity and high accuracy(PAT). It is possible to use the Inner and Outer Coolant by the special slots of a chucking hole.

### Coolant Thru

To change of a coolant system, an option is unnecessary.



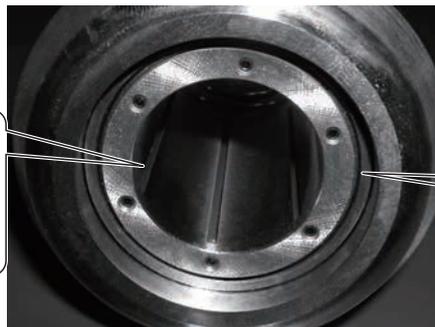
Internal coolant



Side through coolant

### Special slits realize high rigidity and high grasp power.

- Sufficient tightening force with thick case.
- The main body deforms elastically to achieve stable runout accuracy.



### High rigidity structure

- The thick structure of the body achieves high rigidity.

### It can be used for processing which needs high accuracy.

- Excellent accuracy is achieved even with milling chucks.  
TIR 15 $\mu$ m (4  $\times$  D)

### Can also be used for heavy duty cutting.

- Suitable for machining heavy cutting materials and high machining conditions.

### Suitable for high-speed rotation.



High quality chuck with good balance for high speed, high accuracy, high rigidity and high gripping force

## Milling Chuck (TR type)

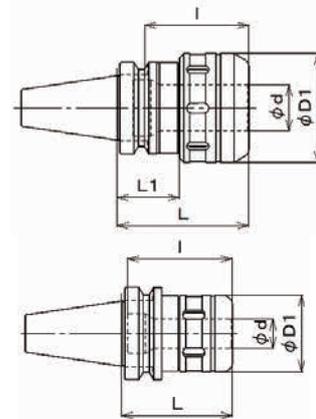
Heavy Cutting

Coolant Thru

7MPa Available



Form explanation  
**BT50 - TRX 16 - 105**  
 Shank type      Holder type      Diameter      Dimension



CODE	Chucking Size	L	L1	D1	I	Collet Code	Spanner	Adjust bolt with coolant				
BT50 - TRX16 -105	16	105	-	45	68	-	FK-7	-				
-135		135										
-TRX20 -105	20	105		52	70	ASS20-d	FK-8	ACH20-07				
-135		135										
- TRX25 -105	25	105		63	94	ASS25-d	FK-9	ACH25-07				
-135		135										
-150		165										
- TRX32 -105	32	105		-	75	110	ASS32-d	FK-10	ACH32-07			
-135		135										
-165		165										
- TRX42 -105	42	105			92		-			ASS32-d	FK-9	-
-135		135										
-165		165										
BT40 - TRX16 - 75	16	75		45	68	-	FK-7	-				
-105		105										
- TRX20 - 75	20	75		52	70	ASS20-d	FK-8	ACH20-07				
-105		105										
-135		135										
- TRX25 - 85	25	85	63	90	ASS25-d	FK-9	ACH25-d					
-105		105										
-135		135										
- TRX32 - 90	32	90	42	75	80	ASS32-d	FK-10	ACH32-d				
-105		105	57									
-135		135	87									
BT30 - TRX16 - 70	16	70	-	45	68	-	FK-7	-				
- TRX20 - 75 ※	20	75	23	52	70	ASS20-d	FK-8	ACH20-07				
- 80		80	28		75							
- TRX25 - 85 ※	25	85	25	63	74	ASS25-d	FK-9	ACH25-07				
- 90		90	30		79							

NOTES:

- Collet holder are used with straight collets in unit form.  
When ordering, please specify straight collets.
- Please order collet and nut wrench separately.
- When using with straight collet, clamping power will decrease.
- Please order Adjust bolt separately.
- Type of Coolant bolt and wrench.  
TRX16 ~ 25 → M2.0 × 3/LRE0.9, TRX32 ~ 42 → M2.5 × 3/LRE1.3
- In the table ※ some machines can not be used because of interference.  
Please check the dimensions of L1 · D1 in the item of tool restriction of machine instruction manual.

## Straight Collet

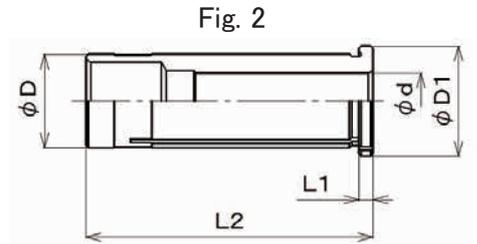
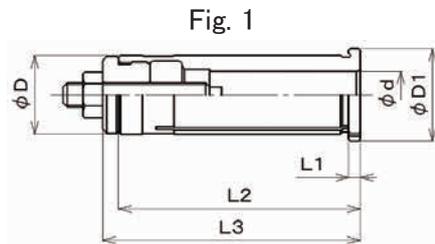
An adjustment bolt is inside.  
Can be used combining with Milling Chuck TRX.



Form explanation

ASS20 - 10

Grasp diameter  
Collet diameter



CODE	Fig.	Metric	D	L3	L2	L1	D1
ASS20 - d	1 (Adjustment bolt)	6, 8, 10, 12, 16	20	65	61	3	23.5
ASS25 - d		6, 8, 10, 12, 16, 20	25	67	63		28.5
ASS32 - d		6, 8, 10, 12, 16, 20, 25	32	75	70		37.0
ASS42 - d		6, 8, 10, 12, 16, 20, 25, 32	42	83	78		47.0
AS 16 - d	2	6, 8, 10, 12	16	-	48	3	20.0
AS 20 - d		6, 8, 10, 12, 16	20		61		23.5
AS 25 - d		6, 8, 10, 12, 16, 20	25		63		28.5
AS 32 - d		6, 8, 10, 12, 16, 20, 25	32		70		37.0
AS 42 - d		6, 8, 10, 12, 16, 20, 25, 32	42		78		47.0

NOTES : 1) When you install a ASS □□ -d1 collet to milling chuck TRX, internal coolant can not be used.

Collet holder with slim shape, high precision, high accuracy balance and excellent versatility

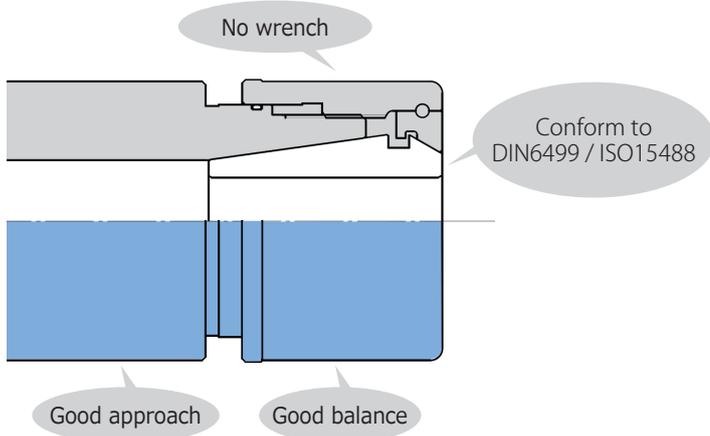
## ● Collet Holder (EXH type)

16° Collet

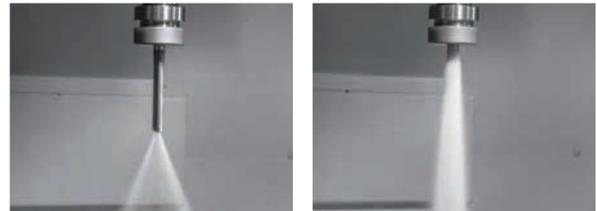
Coolant Thru

7MPa Available

**Slim, High accuracy balance, Excellent versatility.**



**Support various coolant system.**



Internal coolant      Side through coolant

Simply replacing the collet, easy to support Internal coolant and side through coolant.

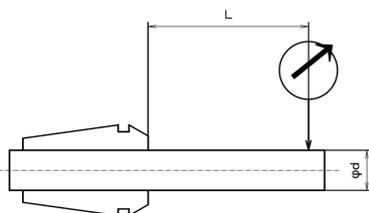
**By simply replacing the collet, it supports various functions such as coolant through, tapping, etc.**



Immediate replacement collet support for various in.

-  AR Collet Standard type
-  AR Coolant Thru Collet OH type (Internal Coolant)
-  AR Coolant Thru Collet C type (Side through Coolant)
-  AR Tap Collet GB type
-  AR Coolant Thru Tap Collet GH type (Internal Coolant)

### Run-out at 4 × D



Nominal diameter D	L	Rounout		
		Class AAA	Class AA	Class A
1 ~ 1.5	4 × D	3 μ	5 μ	8 μ
2 ~ 5.5				
6 ~ 10				
11 ~ 20				

AR Collet conforms to DIN6499 / ISO15488 There is an item a standard type. a coolant type. and a coolant tap type.

### Compatible with irregularly shaped tools.



Support in exchange for a large diameter cutter nut also.

The nut(NA-F) can be replaced, for large diameter tools EXH holder, the tool can be Used in safe umbrella.

Collet holder with slim shape, high precision, high accuracy balance and excellent versatility

## Collet Holder (EXH type)

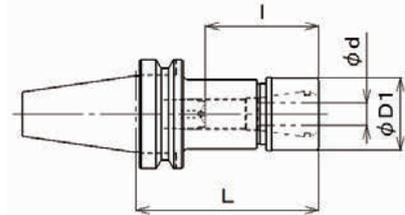
16° Collet

Coolant Thru

7MPa Available



Form explanation  
**BT50 - EXH 10 - 120**  
 Shank type      Holder type      Diameter      Dimension



CODE	Grip Diameter	L	I (Adjustment)	D1 Nut diameter	Collet CODE	Wrench	Adjust bolt	
			Max. ~ Min.				without coolant hole	with coolant hole
BT50 - EXH 7 - 90	0.5 ~ 7	90	20 ~ 45	23	AR11-d	XSP23	ECH 7-05	ECH 70H-05
-120		120						
-165		165						
- EXH10 - 90	0.5 ~ 10	90	30 ~ 50	30	AR16-d	XSP30	ECH10-05	ECH100H-05
-120		120						
-165		165						
- EXH13 - 90	0.5 ~ 13	90	35 ~ 55	35	AR20-d	XSP35	ECH13-05	ECH130H-05
-120		120						
-165		165						
- EXH16 - 90	0.5 ~ 16	90	40 ~ 55	42	AR25-d	XSP42	ECH16-05	ECH160H-05
-120		120						
-165		165						
- EXH20 - 90	2 ~ 20	90	45 ~ 60	50	AR32-d	XSP50	ECH20-05	ECH200H-05
-120		120						
-165		165						
BT40 - EXH 7 - 75	0.5 ~ 7	75	20 ~ 45	23	AR11-d	XSP23	ECH 7-05	ECH 70H-05
-105		105						
-135		135						
- EXH10 - 75	0.5 ~ 10	75	30 ~ 50	30	AR16-d	XSP30	ECH10-05	ECH100H-05
-105		105						
-135		135						
- EXH13 - 75	0.5 ~ 13	75	35 ~ 55	35	AR20-d	XSP35	ECH13-05	ECH130H-05
-105		105						
-135		135						
- EXH16 - 75	0.5 ~ 16	75	40 ~ 55	42	AR25-d	XSP42	ECH16-05	ECH160H-05
-105		105						
-135		135						
- EXH20 - 75	2 ~ 20	75	45 ~ 60	50	AR32-d	XSP50	ECH20-05	ECH200H-05
-105		105						
-135		135						

NOTES:

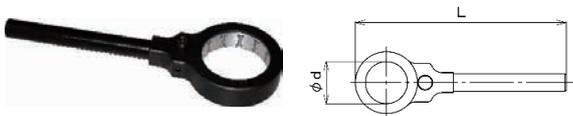
- 1) Collet holder are used with AR collets.  
When ordering please specify AR collets.
- 2) Please order collet and nut wrench separately.
- 3) Please order Adjust bolt separately.

CODE	Grip Diameter	L	I (Adjustment) Max. ~ Min.	D1 Nut diameter	Collet CODE	Wrench	Adjust bolt	
							without coolant hole	with coolant hole
BT30 - EXH 7 - 60	0.5 ~ 7	60	20 ~ 45	23	AR11-d	XSP23	ECH 7-05	ECH 70H-05
-105		105						
- EXH10 - 60	0.5 ~ 10	60	30 ~ 50	30	AR16-d	XSP30	ECH10-05	ECH100H-05
-120		120						
- EXH13 - 60	0.5 ~ 13	60	30 ~ 55	35	AR20-d	XSP35	ECH13-05	ECH130H-05
-120		105						
- EXH16 - 60	0.5 ~ 16	60	40 ~ 55	42	AR25-d	XSP42	ECH16-05	ECH160H-05
-105		105						

NOTES: 1) Collet holder are used with AR collets.  
 When ordering please specify AR collets.  
 2) Please order collet and nut wrench separately.  
 3) Please order Adjust bolt separately.

## Wrench • Nut

### XSP type

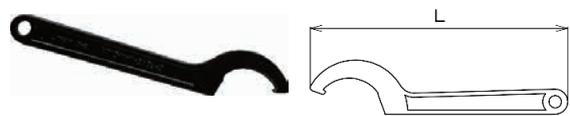


Form explanation

XSP 23  
 |  
 Diameter  
 Wrench type

CODE	Bore	L	Fit
XSP23	23	120	EXH 7
XSP30	30	140	EXH10
XSP35	35	154	EXH13
XSP42	42	173	EXH16
XSP50	50	180	EXH20

### FK type



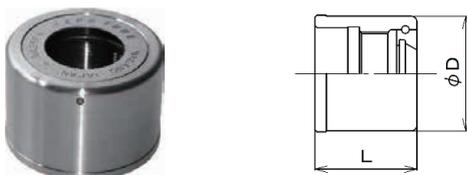
Used for nuts of NA □□ F

Form explanation

FK - 3  
 |  
 Number  
 Wrench type

CODE	L	Fit
FK- 3	136	NA11F
FK- 4	136	NA16F
FK- 5	160	NA20F
FK- 6	173	NA25F
FK- 7	196	NA32F
FK- 8	208	TRX20
FK- 9	232	TRX25
FK-10	247	TRX32
FK0085	271	TRX42

### Nut type FX



Form explanation

NA 11 FX  
 |  
 Size Type  
 Nut

CODE	Bore	L	Fit
NA11FX	23	20.5	EXH 7
NA16FX	30	26.5	EXH10
NA20FX	35	28.5	EXH13
NA25FX	42	30	EXH16
NA32FX	50	31	EXH20

### Nut type F



Form explanation

NA 11 F  
 |  
 Size Type  
 Nut

CODE	Bore	L	Fit
NA11F	23	11	EXH 7
NA16F	30	15	EXH10
NA20F	35	17	EXH13
NA25F	42	18	EXH16
NA32F	50	19	EXH20

A wide variety of variations support processing

## Collet Holder (ECH type)

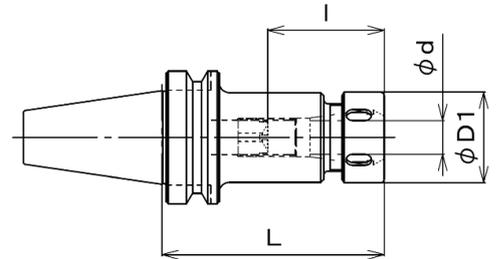
16° Collet

Coolant Thru

20MPa Available



Form explanation  
**BT50 - ECH 10 - 120**  
 Shank type      Holder type      Diameter      Dimension



When using at high speeds, please replace with a high speed nut (NA-R/SR).

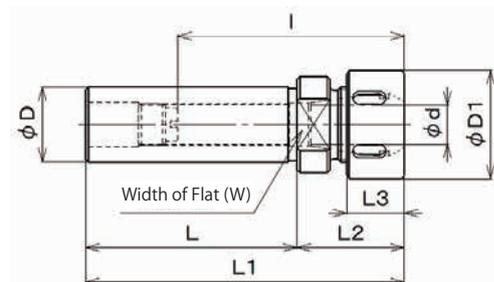
CODE	Grip Diameter d	L	Max. ~ Min. Adjustment	Nut diameter D1	Collet CODE	Wrench	Adjust bolt	
							without colant hole	with coolant hole
BT50 - ECH 7 - 90	0.5 ~ 7	90	45 ~ 20	23	AR11-d	FK-3	ECH 7-05	ECH 70H-05
-135		135						
- ECH10 - 90	0.5 ~ 10	90	50 ~ 30	32	AR16-d	FK-4	ECH10-05	ECH100H-05
-120		120						
-150		150						
- ECH13 - 90	0.5 ~ 13	90	55 ~ 35	36	AR20-d	FK-5	ECH13-05	ECH130H-05
-120		120						
- ECH16 - 90	0.5 ~ 16	90	55 ~ 40	43	AR25-d	FK-6	ECH16-05	ECH160H-05
-120		120						
-150		150						
- ECH20 - 90	2 ~ 20	90	60 ~ 45	51	AR32-d	FK-8	ECH20-05	ECH200H-05
-120		120						
- ECH26 - 90	3 ~ 26	90	80 ~ 55	63	AR40-d	FK-9	ECH26-05	ECH260H-05
BT40 - ECH 7 - 75	0.5 ~ 7	75	45 ~ 20	23	AR11-d	FK-3	ECH 7-05	ECH 70H-05
-105		105						
- ECH10 - 75	0.5 ~ 10	75	50 ~ 30	32	AR16-d	FK-4	ECH10-05	ECH100H-05
-105		105						
-135		135						
- ECH13 - 75	0.5 ~ 13	75	55 ~ 35	36	AR20-d	FK-5	ECH13-05	ECH130H-05
-105		105						
- ECH16 - 75	0.5 ~ 16	75	55 ~ 40	43	AR25-d	FK-6	ECH16-05	ECH160H-05
-105		105						
-135		135						
- ECH20 - 75	2 ~ 20	75	60 ~ 45	51	AR32-d	FK-8	ECH20-05	ECH200H-05
-105		105						
- ECH26 - 75	3 ~ 26	75	75 ~ 50	63	AR40-d	FK-9	ECH26-05	ECH260H-05
BT30 - ECH 7 - 60	0.5 ~ 7	60	45 ~ 20	23	AR11-d	FK-3	ECH 7-05	ECH 70H-05
-105		105						
- ECH10 - 60	0.5 ~ 10	60	50 ~ 30	32	AR16-d	FK-4	ECH10-05	ECH100H-05
-120		120						
- ECH13 - 60	0.5 ~ 13	60	55 ~ 35	36	AR20-d	FK-5	ECH13-05	ECH130H-05
-120		120						
- ECH16 - 60	0.5 ~ 16	60	55 ~ 40	43	AR25-d	FK-6	ECH16-5	ECH160H-05
-105		105						
- ECH20 - 75	2.5 ~ 20	6	60 ~ 45	51	AR32-d	FK-8	ECH20-05	ECH200H-05
-105		105						

NOTES: 1) Collet holder are used with AR collets.  
 When ordering please specify AR collets.  
 2) Please order collet and nut wrench separately.  
 3) Please order Adjust bolt separately.

## ● SS.Collet Holder



Form explanation  
**SS25 - ECH 10 - 70**  
 Shank type      Holder type      Diameter      Dimension



CODE	d	D	L	L1	L2	I	Nut diameter		W	Collet	Wrench
							D1	L3			
SS 8 - ECH 5S - 35	0.3 ~ 5	8	35	49	14	36	14.5	10.8	6	AR 8 - d	SP-13
SS12 - ECH 5S - 80		12	80	96	16				10		
SS16 - ECH 7 - 40	0.5 ~ 7	16	40	56	16	40	23	11.5	14	AR11- d	FK-3
- 70		70	94	24	55	19					
SS20 - ECH 7 - 45		20	45	61	16	45			17		
SS25 - ECH10 - 70	0.5 ~ 10	25	70	105	35	70	32	17	27	AR16 - d	FK-4
-150			150	185	35	53					
- ECH13 - 70	0.5 ~ 13	70	106	36	75	36	19	36	AR20 - d	FK-5	
- ECH16 - 70	0.5 ~ 16		110	40	80	43	20	36	AR25 - d	FK-4	
SS32 - ECH10 - 80	0.5 ~ 10	32	80	119	39	70	32	17	32	AR16 - d	FK-5
- ECH13 - 80	0.5 ~ 13			116	36	75	36	19		36	AR20 - d
- ECH16 - 80	0.5 ~ 16			120	40	80	43	20	36	AR25 - d	
- ECH20 - 80	2.5 ~ 20			40	128	48	100	51	23	46	AR32 - d
SS40 - ECH20 - 110		110	158								

NOTES: 1) Collet holder are used with straight collets in unit form.  
 When ordering please specify straight collets.  
 2) Please order collet and nut wrench separately.



A wide variety of variations support processing

## AR Collet

DIN6499

ISO15488

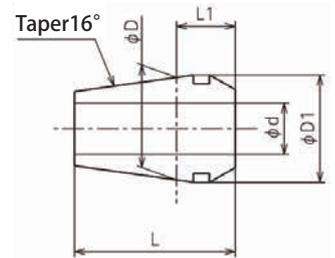
16° Collet



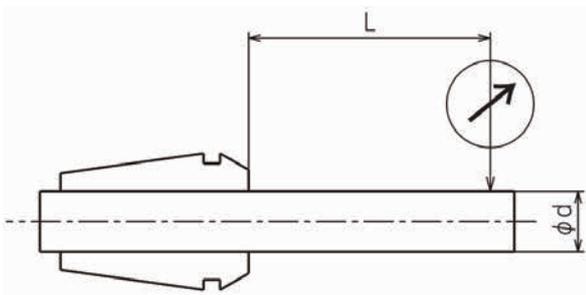
AR Collet is applicable to processing for Drill, and End mill and Reamer.

AR Collet is 16-degree taper collet excellent in flexibility.

AR Collet can be choosed 8 micrometers and 5 micrometers and 3 micrometers T.I.R. accuracy.



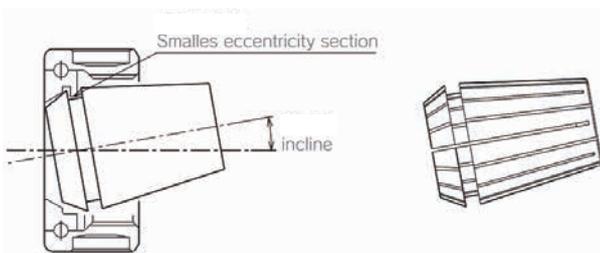
## CONCENTRICITY OF TEST BAR RUNOUT (TIR)



Size	d	L	Accuracy by grade ( μ m)		
			A	AA	AAA
AR 8	0.5 - 5	4 x d	8	5	-
AR11	1 - 7	4 x d	8	5	3
AR16	1 - 10	4 x d	8	5	3
AR20	1 - 13 (14)	4 x d	8	5	3
AR25	1 - 16	4 x d	8	5	3
AR32	2.5 - 20	4 x d	8	5	3
AR40	4 - 26	4 x d	8	5	-
AR50	6 - 10	25	8	5	-
	12 - 26	40			
	28 - 34	60	18	10	

○ Collets of diameter over φ 26 are of defferent accuracy stadard from above.

## REMOVAL AND MOUNTING OF COLLET



**It is easy to pull the collet out because Pull Ring is integrated with Thrust Ring in Nut.**

○ Collet can be removed from Nut by inclining collet when Groove of Collet is hooked on the smallest eccentricity section of Thrust Ring of Nut.

Note : 1) After Collet is seated into Nut, please mount Nut into Collet Holder.

2) Please put cutting tool shank into Collet with full depth.

## RECOMMENDED TORQUE OF NUT CLAMPING

Dimension	Size	Torque	Holder size
AR 8	φ 0.5 - < φ 3.5	7	ECH 5
	φ 3.5 - φ 5.0	10	
AR11	φ 1.0 - < φ 3.5	15	ECH 7
	φ 3.5 - φ 7.0	20	
AR16	φ 1.0 - < φ 3.5	30	ECH10
	φ 3.5 - φ 10.0	40	
AR20	φ 1.0 - < φ 3.5	40	ECH13
	φ 3.5 - φ 14.0	60	
AR25	φ 1.0 - < φ 3.5	40	ECH16
	φ 3.5 - φ 16.0	60	
AR32	φ 3.0 - φ 20.0	70	ECH20
AR40	φ 4.0 - φ 26.0	80	ECH26
AR50	φ 6.0 - φ 34.0	140	ECH34

**AR Collet Holder Recommended torque of nut clamping.**

□ Caution Excessive torque will damage a holder, nut, or collet.

A wide variety of variations support processing

DIN6499

ISO15488

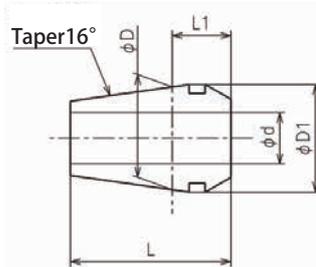
16° Collet

## AR Collet Standard type



Form explanation

AR 16 - 10 AA  
 Name Size I.D. Grade



AR Collet is usable for applications for Drill, and End mill and Reamer. AR Collet is 16-degree taper collet.

AR Collets are classified as 8 micrometers, 5 micrometers and 3 micrometers T.I.R.

AR 8	
L1=4.6, φ D=8, φ D1=8.5, L=13.5	
CODE	O.D. range
AR8-0.5	0.5 - 0.3
AR8-1	1.0 - 0.5
AR8-1.5	1.5 - 1.0
AR8-2	2.0 - 1.5
AR8-2.5	2.5 - 2.0
AR8-3	3.0 - 2.5
AR8-3.5	3.5 - 3.0
AR8-4	4.0 - 3.5
AR8-4.5	4.5 - 4.0
AR8-5	5.0 - 4.5

AR16	
L1=10, φ D=16, φ D1=17, L=27	
CODE	O.D. range
AR16-1	1.0 - 0.5
AR16-1.5	1.5 - 1.0
AR16-2	2.0 - 1.5
AR16-2.5	2.5 - 2.0
AR16-3	3.0 - 2.5
AR16-3.175	3.175
AR16-3.5	3.5 - 3.0
AR16-4	4.0 - 3.5
AR16-4.5	4.5 - 4.0
AR16-5	5.0 - 4.5
AR16-6	6.0 - 5.0
AR16-7	7.0 - 6.0
AR16-8	8.0 - 7.0
AR16-9	9.0 - 8.0
AR16-10	10.0 - 9.0

AR25	
L1=11.5, φ D=25, φ D1=26, L=35	
CODE	O.D. range
AR25-1	1.0 - 0.5
AR25-1.5	1.5 - 1.0
AR25-2	2.0 - 1.5
AR25-2.5	2.5 - 2.0
AR25-3	3.0 - 2.5
AR25-3.5	3.5 - 3.0
AR25-4	4.0 - 3.5
AR25-4.5	4.5 - 4.0
AR25-5	5.0 - 4.5
AR25-6	6.0 - 5.0
AR25-7	7.0 - 6.0
AR25-8	8.0 - 7.0
AR25-9	9.0 - 8.0
AR25-10	10.0 - 9.0
AR25-11	11.0 - 10.0
AR25-12	12.0 - 11.0
AR25-13	13.0 - 12.0
AR25-14	14.0 - 13.0
AR25-15	15.0 - 14.0
AR25-16	16.0 - 15.0

AR40	
L1=14.5, φ D=40, φ D1=41, L=46	
CODE	O.D. range
AR40-4	4.0 - 3.5
AR40-4.5	4.5 - 4.0
AR40-5	5.0 - 4.5
AR40-6	6.0 - 5.0
AR40-7	7.0 - 6.0
AR40-8	8.0 - 7.0
AR40-9	9.0 - 8.0
AR40-10	10.0 - 9.0
AR40-11	11.0 - 10.0
AR40-12	12.0 - 11.0
AR40-13	13.0 - 12.0
AR40-14	14.0 - 13.0
AR40-15	15.0 - 14.0
AR40-16	16.0 - 15.0
AR40-17	17.0 - 16.0
AR40-18	18.0 - 17.0
AR40-19	19.0 - 18.0
AR40-20	20.0 - 19.0
AR40-21	21.0 - 20.0
AR40-22	22.0 - 21.0
AR40-23	23.0 - 22.0
AR40-24	24.0 - 23.0
AR40-25	25.0 - 24.0
AR40-26	26.0 - 25.0

AR11	
L1=6.5, φ D=11, φ D1=11.5, L=18	
CODE	O.D. range
AR11-1	1.0 - 0.5
AR11-1.5	1.5 - 1.0
AR11-2	2.0 - 1.5
AR11-2.5	2.5 - 2.0
AR11-3	3.0 - 2.5
AR11-3.175	3.175
AR11-3.5	3.5 - 3.0
AR11-4	4.0 - 3.5
AR11-4.5	4.5 - 4.0
AR11-5	5.0 - 4.5
AR11-5.5	5.5 - 5.0
AR11-6	6.0 - 5.5
AR11-6.5	6.5 - 6.0
AR11-7	7.0 - 6.5

AR20	
L1=11, φ D=20, φ D1=21, L=31	
CODE	O.D. range
AR20-1	1.0 - 0.5
AR20-1.5	1.5 - 1.0
AR20-2	2.0 - 1.5
AR20-2.5	2.5 - 2.0
AR20-3	3.0 - 2.5
AR20-3.175	3.175
AR20-3.5	3.5 - 3.0
AR20-4	4.0 - 3.5
AR20-4.5	4.5 - 4.0
AR20-5	5.0 - 4.5
AR20-6	6.0 - 5.0
AR20-7	7.0 - 6.0
AR20-8	8.0 - 7.0
AR20-9	9.0 - 8.0
AR20-10	10.0 - 9.0
AR20-11	11.0 - 10.0
AR20-12	12.0 - 11.0
AR20-13	13.0 - 12.0
AR20-14 *	14.0 - 13.0

AR32	
L1=12.5, φ D=32, φ D1=33, L=40	
CODE	O.D. range
AR32-2.5	2.5 - 2.0
AR32-3	3.0 - 2.5
AR32-3.5	3.5 - 3.0
AR32-4	4.0 - 3.5
AR32-4.5	4.5 - 4.0
AR32-5	5.0 - 4.5
AR32-6	6.0 - 5.0
AR32-7	7.0 - 6.0
AR32-8	8.0 - 7.0
AR32-9	9.0 - 8.0
AR32-10	10.0 - 9.0
AR32-11	11.0 - 10.0
AR32-12	12.0 - 11.0
AR32-13	13.0 - 12.0
AR32-14	14.0 - 13.0
AR32-15	15.0 - 14.0
AR32-16	16.0 - 15.0
AR32-17	17.0 - 16.0
AR32-18	18.0 - 17.0
AR32-19	19.0 - 18.0
AR32-20	20.0 - 19.0

NOTES:

(1) Odd size tool shank can be properly held with Collet with enough grasp range from nominal size.

Example : In case of holding 6.7 mm dia. Drill, use nominal size 7 Collet.

(2) When ordering Collet, specify class of TIR accuracy at end of Code number. Class "AAA" id order made.

\*You can't insert deep inside with AR20-14 because I.D. of collet holders is smaller than 14mm.

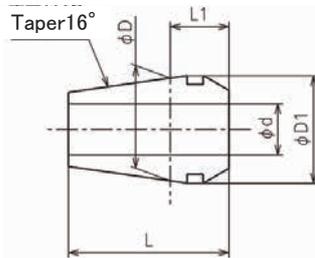
Compatible with center-through high-pressure coolant

16° Collet

Coolant Thru

20MPa Available

## AR Coolant Collet OH type



AR Coolant Collet (PAT.) is a liquid sealing collet applying special slitting. and a new type of collet which can seal coolant oil completely at even high pressure of 20MPa.

AR11 OH	
L1=6.5, φ D=11, φ D1=11.5, L=18	
CODE	O.D. range
AR11OH-2	2.0 - 1.9
AR11OH-2.5	2.5 - 2.4
AR11OH-3	3.0 - 2.9
AR11OH-3.5	3.5 - 3.4
AR11OH-4	4.0 - 3.9
AR11OH-4.5	4.5 - 4.4
AR11OH-5	5.0 - 4.9
AR11OH-5.5	5.5 - 5.4
AR11OH-6	6.0 - 5.9
AR11OH-6.5	6.5 - 6.4
AR11OH-7	7.0 - 6.9

AR16 OH	
L1=10, φ D=16, φ D1=17, L=27	
CODE	O.D. range
AR16OH-2	2.0 - 1.9
AR16OH-2.5	2.5 - 2.4
AR16OH-3	3.0 - 2.9
AR16OH-3.5	3.5 - 3.4
AR16OH-4	4.0 - 3.9
AR16OH-4.5	4.5 - 4.4
AR16OH-5	5.0 - 4.9
AR16OH-5.5	5.5 - 5.4
AR16OH-6	6.0 - 5.5
AR16OH-6.5	6.5 - 6.0
AR16OH-7	7.0 - 6.5
AR16OH-7.5	7.5 - 7.0
AR16OH-8	8.0 - 7.5
AR16OH-8.5	8.5 - 8.0
AR16OH-9	9.0 - 8.5
AR16OH-9.5	9.5 - 9.0
AR16OH-10	10.0 - 9.5

AR20 OH	
L1=11, φ D=20, φ D1=21, L=31	
CODE	O.D. range
AR20OH-3	3.0 - 2.9
AR20OH-3.5	3.5 - 3.4
AR20OH-4	4.0 - 3.9
AR20OH-4.5	4.5 - 4.4
AR20OH-5	5.0 - 4.9
AR20OH-5.5	5.5 - 5.4
AR20OH-6	6.0 - 5.5
AR20OH-6.5	6.5 - 6.0
AR20OH-7	7.0 - 6.5
AR20OH-7.5	7.5 - 7.0
AR20OH-8	8.0 - 7.5
AR20OH-8.5	8.5 - 8.0
AR20OH-9	9.0 - 8.5
AR20OH-9.5	9.5 - 9.0
AR20OH-10	10.0 - 9.5
AR20OH-10.5	10.5 - 10.0
AR20OH-11	11.0 - 10.5
AR20OH-11.5	11.5 - 11.0
AR20OH-12	12.0 - 11.5
AR20OH-12.5	12.5 - 12.0
AR20OH-13	13.0 - 12.5

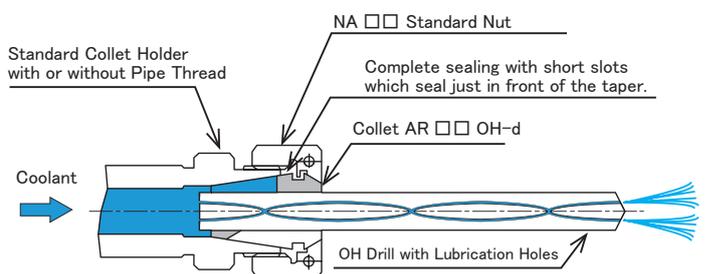
AR25 OH	
L1=11.5, φ D=25, φ D1=26, L=35	
CODE	O.D. range
AR25OH-3	3.0 - 2.9
AR25OH-3.5	3.5 - 3.4
AR25OH-4	4.0 - 3.9
AR25OH-4.5	4.5 - 4.4
AR25OH-5	5.0 - 4.9
AR25OH-5.5	5.5 - 5.4
AR25OH-6	6.0 - 5.5
AR25OH-6.5	6.5 - 6.0
AR25OH-7	7.0 - 6.5
AR25OH-7.5	7.5 - 7.0
AR25OH-8	8.0 - 7.5
AR25OH-8.5	8.5 - 8.0
AR25OH-9	9.0 - 8.5
AR25OH-9.5	9.5 - 9.0
AR25OH-10	10.0 - 9.5
AR25OH-10.5	10.5 - 10.0
AR25OH-11	11.0 - 10.5
AR25OH-11.5	11.5 - 11.0
AR25OH-12	12.0 - 11.5
AR25OH-12.5	12.5 - 12.0
AR25OH-13	13.0 - 12.5
AR25OH-13.5	13.5 - 13.0
AR25OH-14	14.0 - 13.5
AR25OH-14.5	14.5 - 14.0
AR25OH-15	15.0 - 14.5
AR25OH-15.5	15.5 - 15.0
AR25OH-16	16.0 - 15.5

AR32 OH	
L1=12.5, φ D=32, φ D1=33, L=40	
CODE	O.D. range
AR32OH-3	3.0 - 2.9
AR32OH-3.5	3.5 - 3.4
AR32OH-4	4.0 - 3.9
AR32OH-4.5	4.5 - 4.4
AR32OH-5	5.0 - 4.9
AR32OH-5.5	5.5 - 5.4
AR32OH-6	6.0 - 5.9
AR32OH-6.5	6.5 - 6.4
AR32OH-7	7.0 - 6.9
AR32OH-7.5	7.5 - 7.4
AR32OH-8	8.0 - 7.5
AR32OH-8.5	8.5 - 8.0
AR32OH-9	9.0 - 8.5
AR32OH-9.5	9.5 - 9.0
AR32OH-10	10.0 - 9.5
AR32OH-10.5	10.5 - 10.0
AR32OH-11	11.0 - 10.5
AR32OH-11.5	11.5 - 11.0
AR32OH-12	12.0 - 11.5
AR32OH-12.5	12.5 - 12.0
AR32OH-13	13.0 - 12.5
AR32OH-13.5	13.5 - 13.0
AR32OH-14	14.0 - 13.5
AR32OH-14.5	14.5 - 14.0
AR32OH-15	15.0 - 14.5
AR32OH-15.5	15.5 - 15.0
AR32OH-16	16.0 - 15.5
AR32OH-16.5	16.5 - 16.0
AR32OH-17	17.0 - 16.5
AR32OH-17.5	17.5 - 17.0
AR32OH-18	18.0 - 17.5
AR32OH-18.5	18.5 - 18.0
AR32OH-19	19.0 - 18.5
AR32OH-19.5	19.5 - 19.0
AR32OH-20	20.0 - 19.5

AR40 OH	
L1=14.5, φ D=40, φ D1=41, L=46	
CODE	O.D. range
AR40OH-10	10.0 - 9.5
AR40OH-10.5	10.5 - 10.0
AR40OH-11	11.0 - 10.5
AR40OH-11.5	11.5 - 11.0
AR40OH-12	12.0 - 11.5
AR40OH-12.5	12.5 - 12.0
AR40OH-13	13.0 - 12.5
AR40OH-13.5	13.5 - 13.0
AR40OH-14	14.0 - 13.5
AR40OH-14.5	14.5 - 14.0
AR40OH-15	15.0 - 14.5
AR40OH-15.5	15.5 - 15.0
AR40OH-16	16.0 - 15.5
AR40OH-16.5	16.5 - 16.0
AR40OH-17	17.0 - 16.5
AR40OH-17.5	17.5 - 17.0
AR40OH-18	18.0 - 17.5
AR40OH-18.5	18.5 - 18.0
AR40OH-19	19.0 - 18.5
AR40OH-19.5	19.5 - 19.0
AR40OH-20	20.0 - 19.5
AR40OH-20.5	20.5 - 20.0
AR40OH-21	21.0 - 20.5
AR40OH-21.5	21.5 - 21.0
AR40OH-22	22.0 - 21.5
AR40OH-22.5	22.5 - 22.0
AR40OH-23	23.0 - 22.5
AR40OH-23.5	23.5 - 23.0
AR40OH-24	24.0 - 23.5
AR40OH-24.5	24.5 - 24.0
AR40OH-25	25.0 - 24.5
AR40OH-25.5	25.5 - 25.0
AR40OH-26	26.0 - 25.5

- NOTES:
- (1) Sizes not mentioned above are order made.
  - (2) When in use, insert a drill to the end from the front part of the collet.
  - (3) Do not use smaller sized cutting tools than inner diameter of collet or coolant will leak out of a collet.
  - (4) AR/OH collet does not work if using flat-face shank cutting tool.

### Structure of AR /OH type coolant collet



Side-through high-pressure coolant compatible

16° Collet

Coolant Thru

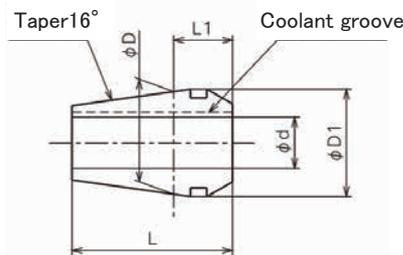
20MPa Available

## AR Coolant Collet C type

Made to order

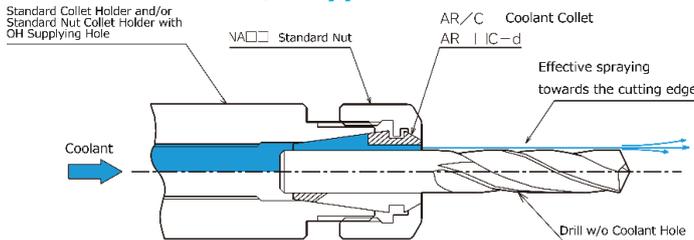


Form explanation  
**AR 16 C - 10 AA**  
 Name Size Type I.D. Grade



AR/C coolant collet (PAT) is a liquid sealing chuck applying special slitting. AR/C was added to the coolant groove to the inner diameter of the collet. This coolant groove has been made possible refueling effective to the tip of the tool.

### Structure of AR /C type coolant collet



CODE	φ d		φ D	L	Supported Holders
	Range	Shrink range			
AR11C-d	3 — 7	0.1	11	18	EXH 7/ECH 7
AR16C-d	3 — 5.9				
AR20C-d	6 — 10	0.5	16	27	EXH10/ECH10
	5 — 5.9				
AR25C-d	6 — 13	0.1	20	31	EXH13/ECH13
	6 — 16				
AR32C-d	8 — 20	0.5	25	35	EXH16/ECH16

### Features of AR/C type coolant collet

- ◆ Correspond for high-pressure coolant sealing can be done by high-pressure of 20MPa except for the coolant groove.
- ◆ Coolant is sprayed toward the cutting edge, making it easy to reduce chip clogging.
- ◆ Effective for deep drilling of small diameter hole.
- ◆ For water-soluble or oil coolant available.
- ◆ AR / C is also valid for semi-dry (mist) processing.

#### NOTES:

- (1) AR / C is compatible with water-soluble coolant.  
AR / C will also manufacture products corresponding to the oil based coolant.
- (2) When ordering, specify the type of oil and accuracy class.  
Order Example : AR16 C -6 . . . Water-soluble coolant for φ 6, grade A  
AR16CY-6AA . . . Oil-based coolant, for φ 6, grade AA
- (3) Drill should be inserted deeper the depth of the collet.
- (4) When gripping a collet of a size other than the diameter, coolant may seep out or a small amount of coolant may leak.
- (5) The sealing of the collet does not work when a straight shank with flat edge is used.
- (6) The inside diameter shape varies depending on φ d.

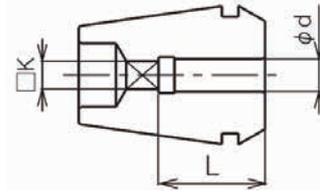
16° Collet

Tap

## ● AR Tap Collet GB type



Form explanation  
**AR** **16** **GB** **-** **M4**  
 Name Size Type Tap size



TAP COLLET with Square Hole for Synchronized Tapping.

Size			CODE				
Metric thread	Unified screw thread	Pipe thread	AR16GB	AR20GB	AR25GB	AR32GB	AR40GB
M4	No.8U		AR16GB-M4	AR20GB-M4	AR25GB-M4	AR32GB-M4	
M5	No.10/12U		-M5	-M5	-M5	-M5	
M6	1/4U		-M6	-M6	-M6	-M6	
	5/16U		-5/16U	-5/16U	-5/16U	-5/16U	
M8			-M8	-M8	-M8	-M8	
M10			-M10	-M10	-M10	-M10	AR40GB-M10
M11			-7/16U	-7/16U	-7/16U	-7/16U	-7/16U
		P1/8	-P1/8	-P1/8	-P1/8	-P1/8	-P1/8
M12				-M12	-M12	-M12	-M12
	1/2U			-1/2U	-1/2U	-1/2U	-1/2U
M14	9/16U				-M14	-M14	-M14
		P1/4			-P1/4	-P1/4	-P1/4
	5/8U				-5/8U	-5/8U	-5/8U
M16					-M16	-M16	-M16
		P3/8			-P3/8	-P3/8	-P3/8
M18	3/4U					-M18	-M18
M20						-M20	-M20
M22	7/8U						-M22
		P1/2					-P1/2
M24							-M24
M27	1U						-M27

NOTES: 1) The above chart based on JIS Standard.  
 Please ask for Tap Shank of ASNI,DIN,or ISO Standard is required.

2) Each suitable collet is required for each tap size.

For Synchro-tap processing · Coolant collet

16° Collet

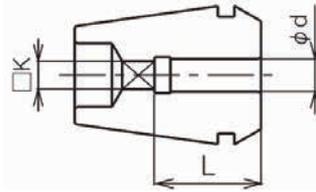
Coolant Tap

20MPa Available

## AR Coolant Tap Collet GH type



Form explanation  
**AR** **16** **GH** - **M6**  
 Name Size Type Tap size



AR/GH tap collet chuck is for tap with a oil hole  
 Higher sealing ability than AR/GB tap collet  
 chuck makes tool life longer. Can be used for  
 deep-hole tapping.

Size			CODE				
Metric thread	Unified screw thread	Pipe thread	AR16GH	AR20GH	AR25GH	AR32GH	AR40GH
M6	1/4U		AR16GH-M6	AR20GH-M6	AR25GH-M6	AR32GH-M6	
	5/16U		-5/16U	-5/16U	-5/16U	-5/16U	
M8			-M8	-M8	-M8	-M8	
M10			-M10	-M10	-M10	-M10	AR40GH-M10
M11			-7/16U	-7/16U	-7/16U	-7/16U	-7/16U
		P1/8	-P1/8	-P1/8	-P1/8	-P1/8	-P1/8
M12				-M12	-M12	-M12	-M12
	1/2U			-1/2U	-1/2U	-1/2U	-1/2U
M14	9/16U				-M14	-M14	-M14
		P1/4			-P1/4	-P1/4	-P1/4
	5/8U				-5/8U	-5/8U	-5/8U
M16					-M16	-M16	-M16
		P3/8			-P3/8	-P3/8	-P3/8
M18	3/4U					-M18	-M18
M20						-M20	-M20
M22	7/8U						-M22
		P1/2					-P1/2
M24							-M24
M27	1U						-M27

NOTES: 1) The above chart based on JIS Standard.  
 Please ask for Tap Shank of ASNI,DIN,or ISO Standard is required.  
 2) Each suitable collet is required for each tap size.

JIS B 4133 Face milling compatible

## Arbors for Face Milling Cutters Type A



Face Milling Cutter Arbor corresponding to JIS B4133.

Form explanation

**BT50 FMA 25.4 - 150**

Shank type      Holder type      Diameter      Dimension

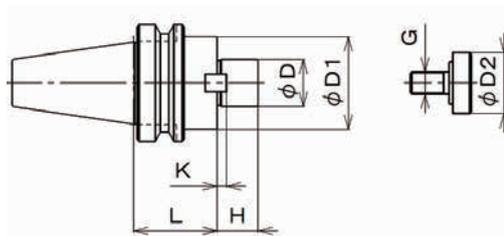


Fig. 1

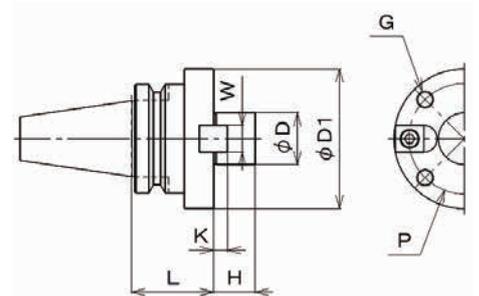


Fig. 2

Inch

CODE	Fig.	D	L	D1	H	W	K	G	D2	P	Cuuter DIA (JIS B4113)	
BT50 - FMA25.4 - 45	1	25.4	45	50	22	9.5	5	M12	33	-	76 , (3")	
- 90			90									
- 150			150									
- FMA31.75 - 45		31.75	45	60	30	12.7	7	M16	40		-	102 , (4")
- 75			75									
- 105			105									
- FMA38.1 - 45		38.1	45	80	34	15.9	9	M20	50		-	127 , (5")
- 75			75									
- FMA50.8 - 45		50.8	45	100	36	19.05	10	M24	65		-	152 , 178 , (6") , (7")
- 75	75											
- FMA47.625 - 75	2	47.625	75	128.57	38	25.4	12.5	M16	-	101.6	203 , (8")	
BT40 - FMA25.4 - 45	1	25.4	45	50	22	9.5	5	M12	33	-	76 , (3")	
- 90			90									
- FMA31.75 - 45		31.75	45	60	30	12.7	7	M16	44		-	102 , (4")
- 75			75									
- FMA38.1 - 60		38.1	60	80	34	15.9	9	M20	50		-	127 , (5")
BT30 - FMA25.4 - 45	25.4	45	50	22	9.5	5	M12	33	-	-	76 , (3")	
- 60		60										

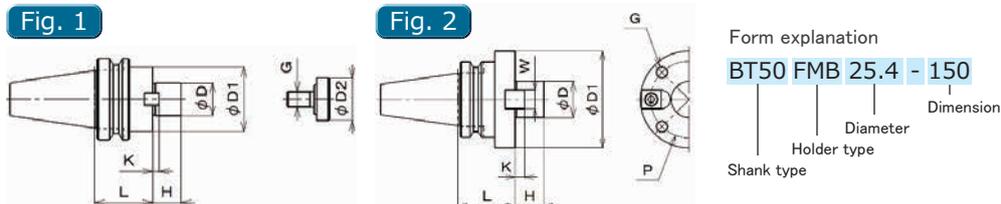
NOTES: 1) Cutters are supposed to be JIS B4113 type face milling cutters.

2) Driving key and clamp bolts are standard accessories.

Compatible with SANDVIK T-MAX face mills and shoulder face mills

## Arbors for Face Milling Cutters Type B

Face Milling Cutter Arbor corresponding to T-MAX Face mill and Shoulder mill for SANDVIK.



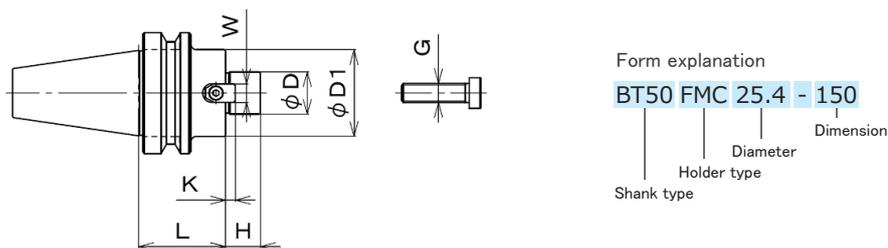
Inch

CODE	Fig.	D	L	D1	H	W	K	G	D2	P	Cutter DIA (Sandvik Coromant)
BT50 - FMB25.4 - 45	1	25.4	45	80	26	9.5	5	M12	33	-	80
- 90			90								
- 105			105								
- FMB38.1 - 45			38.1								
- 75	75	85		26	15.9	9	M20	50	100 , 125		
- 105	105										
- FMB38.1F - 75	75									110	66.7 × M12
- 105	105										
BT40 - FMB25.1 - 45	1	25.4	45	62	26	9.5	5	M12	33	-	80
- 60			60								
- 90			90								
- FMB38.1 - 60			38.1								
- 75	75										

Compatible with SANDVIK T-MAX face mills and shoulder face mills

## Arbors for Face Milling Cutters Type C

Face Milling Cutter Arbor corresponding to T-MAX Face mill and Shoulder mill for SANDVIK.



Inch

CODE	D	L	D1	H	W	K	G	Cutter DIA (JIS B4113)
BT50 - FMC25.4 - 45	25.4	45	70	20	9.5	6	M12	80
- 90		90						
- 150		150						
- FMC38.1 - 45	38.1	45	85	22	15.9	7	M16	100
- 75		70						
- 105		105						
BT40 - FMC25.4 - 60	25.4	60	62	20	9.5	6	M12	80
- 90		90						
- FMC38.1 - 45	38.1	60	85	22	15.9	7	M16	100

NOTES: 1) Cutters are supposed to be the COROMANT T-MAX shoulder face mill of SANDVIK.

2) Driving key and clamp bolts are standard accessories.

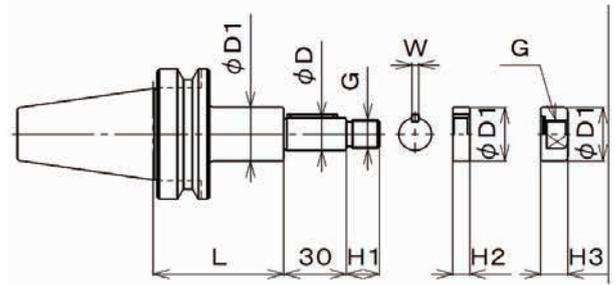
A wide variety of variations support processing

## Arbors for Side Milling Cutters



Form explanation  
**BT50 SCA 12.7 - 105**  
 Shank type      Holder type      Diameter      Dimension

H2
3, 5, 7
8, 10, 12



Inch

CODE	D	L	D1	G	H1	W	H3	Cutter DIA	
								JIS B4206	JIS B4219
BT50 - SCA12.7 - 75	12.7	75	20	M12 × 1.25	15	-	12	-	50
-105		105							
- SCA15.875 - 90	15.875	90	26	M14 × 1.5	16	3.18	13	50	60
-120		120							
- SCA22.225 - 90	22.225	90	34	M20 × 1.5	21	-	18	(60), 63, (75)	75
-135		135							
- SCA25.4 - 90	25.4	90	40	M24 × 2	25	6.35	21	80, (100)	100, 125
-135		135							
- SCA31.75 - 90	31.75	90	46	M30 × 2	30	7.92	26	100, 125, (150)	150, 175, 200
-135		135							
- SCA38.1 - 90	38.1	90	55	M36 × 2	36	9.52	31	160, (175), 200	-
-135		135							
BT40 - SCA12.7 - 75	12.7	75	20	M12 × 1.25	15	-	12	-	50
-105		105							
- SCA15.875 - 75	15.875	75	26	M14 × 1.5	16	3.18	13	50	60
-105		105							
- SCA22.225 - 75	22.225	75	34	M20 × 1.5	21	-	18	(60), 63, (75)	75
-120		120							
- SCA25.4 - 75	25.4	75	40	M24 × 2	25	6.35	21	80, (100)	100, 125
-120		120							
- SCA31.75 - 90	31.75	90	46	M30 × 2	30	7.92	26	100, 125, (150)	150, 175, 200
BT30 - SCA12.7 - 40	12.7	40	20	M12 × 1.25	15	-	12	-	50
- SCA15.875 - 40	15.875	40	26	M14 × 1.5	16	3.18	13	50	60
- SCA22.225 - 40	22.225	40	34	M20 × 1.5	21	-	18	(60), 63, (75)	75

NOTES: 1) Cutters are supposed to be JIS B4206 side milling cutters.  
 JIS B4107 side milling cutters with cemented carbide tips.  
 JIS B4219 metal slitting saws, JIS B4109 metal slitting saws with cemented tips.

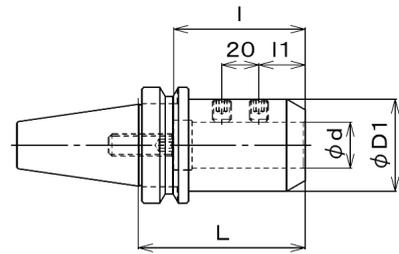
2) Normal accessories are nuts and collars  
 (H3 :3,5,7,8,10,12mm)

Support processing with reliable performance

## Side Lock Holder A Type



Form explanation  
**BT50 SLA 20 - 105**  
 Shank type | Holder type | Diameter | Dimension



General-purpose type

CODE	d	L	D1	I		I1
				Min.	Max.	
BT50 - SLA20 - 105	20	105	50	55	70	25
- SLA25 - 105	25			65	80	30
- SLA32 - 105	32			90	110	
- SLA42 - 105	42					
BT40 - SLA20 - 90	20	90	50	55	70	25
- SLA25 - 90	25			65	80	30
- SLA32 - 90	32					
BT30 - SLA20 - 75	20	75	44	55	70	25
- SLA25 - 75	25					

For End-Mill with flat face.

## Side Lock Holder S Type

Side lock holders for the exclusive use ISO-3338 type end mills, which have the flat face on a shank.

Made to order

Form explanation  
**BT50 SLS 10 - 75**  
 Shank type | Holder type | Diameter | Dimension

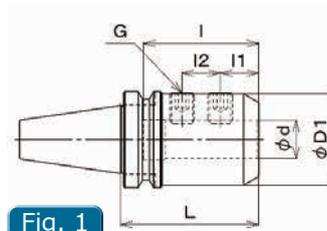


Fig. 1

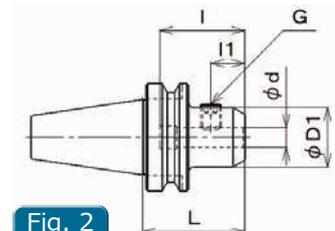


Fig. 2

Dedicated to end mills

CODE	Fig.	d	L	D1	I	I1	I2	G
BT50 - SLS 6 - 75	1	6	75	25	35	15	15	1-M6
- SLS 8 - 75		8		28	40			1-M8
- SLS10 - 75		10		30	45	16	16	1-M10
- SLS12 - 75		12		35	50	20	20	1-M12
- SLS16 - 75		16		42	60	23	23	1-M14
- SLS20 - 105		20		50	75	25		1-M16
- SLS25 - 105	2	25	105	60	81	30	25	2-M16
- SLS32 - 105		32		70				
- SLS40 - 120		40						
- SLS42 - 120	42	80	110		30		1-M16	
BT40 - SLS 6 - 60	1	6	60	25	35	15	-	1-M6
- SLS 8 - 60		8		28	40			1-M8
- SLS10 - 60		10		30	45	16		1-M10
- SLS12 - 60		12		35	50	20		1-M12
- SLS16 - 60		16		42	60	23		1-M14
- SLS20 - 90		20		50	75	25		20
- SLS25 - 90	25	60						
- SLS32 - 90	1	32	90	62	81	25	25	1-M16

NOTES: 1) Side Lock Holder can't use through coolant.

For Morse taper drills

## Morse Taper Holder A Type

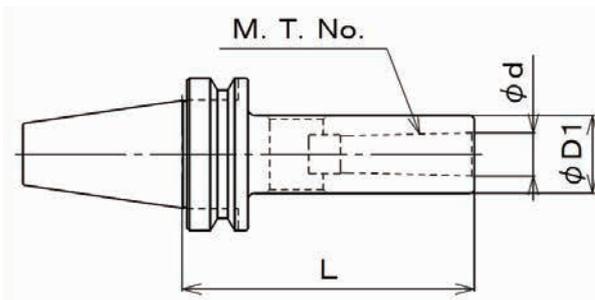
Morse Taper Holder is used together with Morse Taper Drill.



Form explanation

**BT50 - MTA 1 - 45**

Shank type | Holder type | Taper type | Dimension



CODE	M.T.NO.	L	d	D1
BT50 - MTA1 - 45	1	45	12.065	25
-120		120		
-180		180		
- MTA2 - 45	2	45	17.78	32
-135		135		
-180		180		
- MTA3 - 45	3	45	23.825	40
-150		150		
-180		180		
- MAT4 - 75	4	75	31.267	50
-180		180		
- MAT5 -105	5	105	44.339	65
-210		210		
BT40 - MAT1 - 45	1	45	12.065	25
-120		120		
- MTA2 - 60	2	60	17.78	32
-120		120		
- MTA3 - 75	3	75	23.825	40
-135		135		
- MTA4 - 95	4	95	31.267	50
-165		165		
BT30 - MTA1 - 50	1	50	12.065	25
- MTA2 - 65	2	60	17.78	30

For converting morse taper size

## MT. Drill Sockets

Made to order

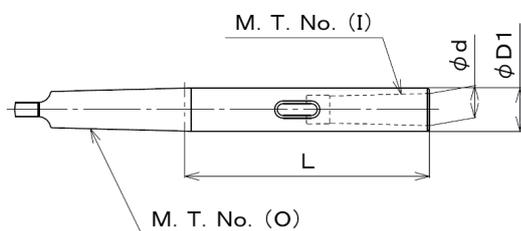


The Morse taper drill can be used when the taper size is different from the Holder's.

Form explanation

**MT DS11 - 135**

Shank type | Holder type | Dimension



CODE	M.T.NO.		d	L	D1
	(O)	(I)			
MT - DS11 - 135	1	1	12.065	135	20
- DS21 - 135	2	2	17.78		24
- DS22 - 135					
- DS32 - 135	3	3	23.825	150	32
- DS33 - 150					
- DS43 - 150	4	4	31.267		40
- DS44 - 150					
- DS54 - 150	5	5	44.399	180	50
- DS55 - 180					

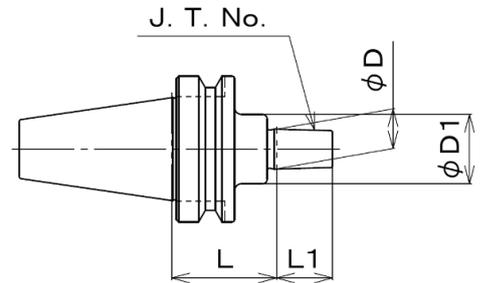
## Easy drill chucking

## ● Jacobs Taper Holder

Jacobs Taper Holder is used together with Drill Chuck. And it grasps a straight drill.



Form explanation  
**BT50 JTA 25 - 105**  
 Shank type | Holder type | Diameter | Dimension



CODE	J.T.No	L	D	D1	L1	Drill Chuck CODE
BT50 - JTA 2 - 45	2	45	14.119	30	20	100 - J2
-105		105				
- JTA 6 - 45	6	45	17.17		24	130 - J6
-105		105				160 - J6
BT40 - JTA 2 - 45	2	45	14.119		20	100 - J2
-105		105				
- JTA 6 - 45	6	45	17.17		24	130 - J6
-105		105				160 - J6
BT30 - JTA 2 - 30	2	30	14.119		20	100 - J2
- JTA 6 - 30	6		17.17		24	130 - J6
						160 - J6

NOTES: 1) Drill chuck are not supplied.

## ● Drill Chuck



It is a drill chuck made by ALBRECHT.  
 Drill Chuck is used attaching to Jacobs Taper Holder.  
 Please choose drill chuck code from a list and order for it.

CODE	J.T.No.	Grasp range	Outer diameter dimension
100 - J2	2JT	0 ~ 100	43
130 - J6	6JT	0 ~ 130	50
160 - J6		0 ~ 160	56

Collet holder for small MC and DC

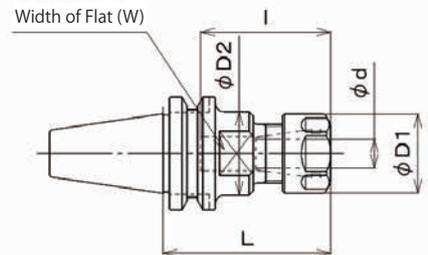
## 15T-Collet Holder

16° Collet

Form explanation  
**15T - ECH 10 S - 120**  
 Shank type    Holder type    Diameter    Nut type    Dimension



It is applicable to processing using Drill, Reamer, and End mill and Tap.  
 It is the collet holder used by small MC-DC.  
 Collet Holder can use 16-degree taper collet.



CODE	d	L	I	D2	W	D1	Collet CODE	Nut Wrench	Adjust bolt without coolant
			Max.						
15T - ECH 7S - 40	0.5 ~ 7	40	31	20	17	19	AR11	AP-17A	ECH 7-05
- 48		48							
- 55		55							
- 75		75							
- 90		90							
- ECH10S - 55	0.5 ~ 10	55	45	25	22	28	AR16	SP-25	ECH10-05

Collet holder for small MC and DC

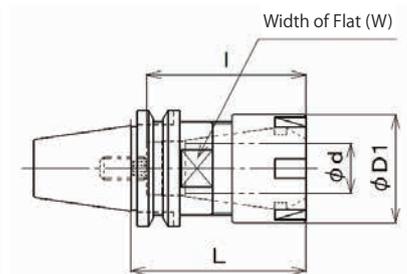
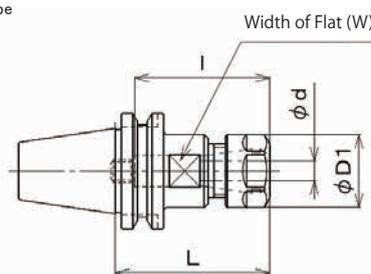
## S20T-Collet Holder

16° Collet

Form explanation  
**S20T - ECH 7 S - 40**  
 Shank type    Holder type    Diameter    Nut type    Dimension



It is applicable to processing using Drill, Reamer, and End mill and Tap.  
 It is the collet holder used by small MC-DC.  
 Collet Holder can use 16-degree taper collet.



When using at high speeds, please replace with a high speed nut (NA-R/SR).

CODE	d	L	I	W	D1	Collet CODE	Nut Wrench	Adjust bolt without coolant
			Max.					
S20T - ECH 7S - 40	0.5 ~ 7	40	35	17	19	AR11	SP-17A	ECH 7-05
- 50		50						
- ECH10S - 45	0.5 ~ 10	45	19	19	28	AR16	SP-25	ECH10-05
- 60		60						
- ECH13S - 45	0.5 ~ 13	45	22	22	34	AR20	SP-30	ECH13-05
- 60		60						
- ECH13M - 15		45						

NOTES: 1) Collet holders are combined with collets and Pull Studs in unit form.  
 2) Please order collet and nut wrench separately.  
 3) Please order Adjust bolt separately.

Collet holder for small MC and DC

## 25T-Collet Holder

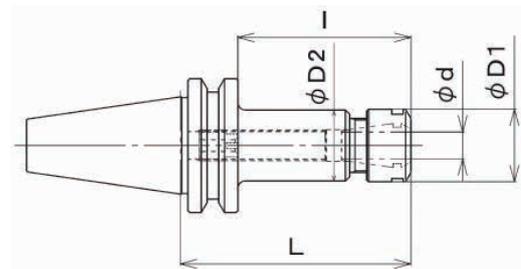
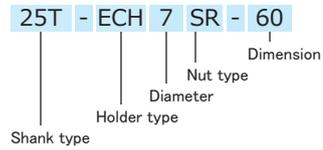
16° Collet

It is applicable to processing using Drill, Reamer, and End mill and Tap.

It is the collet holder used by small MC-DC. Collet Holder can use 16-degree taper collet.



Form explanation



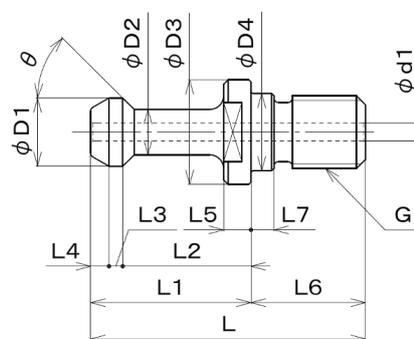
When using at high speeds, please replace with a high speed nut (NA-R/SR).

CODE	d	L	I	D2	W	D1	Collet CODE	Nut Wrench	Adjust bolt without coolant
			Max.						
25T - ECH 5M - 45	0.5 ~ 5	45	-	12	-	12	AR 8	AE-8M	-
- ECH 7SR - 60	0.5 ~ 7	60	35	19		19	AR11	SP-17A	ECH 7-05
- 70		70	55	22		28	AR16	SP-25	ECH10-05
- ECH10SR - 60	0.5 ~ 10	60		25		34	AR20	SP-30	ECH13-05
- 70		70		-		23	19	AR11	SP-17A
- ECH13SR - 60	0.5 ~ 13	60							
25T - ECT 7S - 60	0.5 ~ 7	60							
- 70		70							

- NOTES: 1) Collet holders are combined with collets and Pull Studs in unit form.  
 2) Please order collet and nut wrench separately.  
 3) ECT type is use for synchronization processing.  
 4) Please order Adjust bolt separately.

## Pull Studs

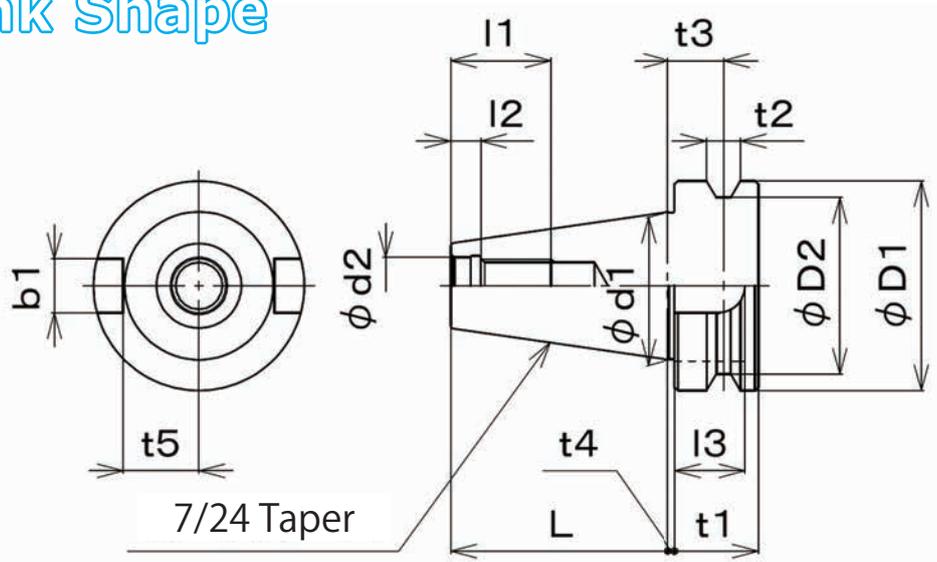
Holder is certainly drawn into Machine spindle. It is excellent in durability.



CODE	L	L6	L1	D3	L5	D4	L7	G	L2	D2	D1	d1	L3	L4	Q														
P50T - 1	85	40	45	38	10	25	8	M24	35	17	23	-	5	5	45°														
- 1 OH												6																	
- 2												-																	
- 2 OH												6																	
- 3												-																	
- 3 OH												6																	
P50T - JIS	74		34		7				25	21	28	-			75°														
- JIS OH												10																	
P40T - 1	60	25	35	23	6	17	5	M16	28	10	15	-	3	4	45°														
- 1 OH												4																	
- 2												-																	
- 2 OH												4																	
- 3												-																	
- 3 OH												4																	
P40T - JIS	54	25	29	23	7				23	14	19	-		3	75°														
- JIS OH												7																	
P30T - 1	43	20	23	16.5	5	12.5	4	M12	18	7	11	-	2.5	2.5	45°														
- 1 OH												2.5																	
- 2												-																	
- 2 OH												2.5																	
P30T - JIS												19.6				23.4							18.4	8	12	-	3	2	75°
- S																										4			
S20R - 1	34.5	14	20.5	14	4	8.5		M8	16	7	9.5	-	2.1	2.4	90°														
- 2												-																	
- R												-																	
15R - 1	26	11	15	10	3	6.5	3	M6	11.7	5.2	7.4	-	1.4	1.9	75°														
- 2												-																	
- B												-																	
	28	11	17						13.5	4	7		1.5	2	45°														

NOTES: 1) We can make a variety of pull studs to suit your machine.  
When ordering, please specify pull studs code or the machine model and type.

## Shank Shape



CODE	D1	D2	t1	t2	t3	t4	d1	d2	L	l1	l2	g	l3	b1	t5
15T	27	21	11	5	5.5	1.5	19.05	6.6	27	15	5	M6	9.5	8.1	9.8
S20T	30	24					22.225	8.5	25	18	6.5	M8			11.4
25T	35	28	13	6	8.5	2	25.4		40	48.4	24	7	M12	17	16.1
BT30	46	38	20	8	11.6		31.75	12.5							
BT40	63	53	25	10	16.6	3	44.45	17	101.8	45	13	M24	31	25.7	22.6
BT50	100	85	35	15	23.2		69.85	25							25.7

## Pull Studs Spec Sheet

CODE	SUB CODE 2	Body Marking	Specification
P50T - 1	P50T - I	P50T - 1	MAS 403 P50T 1 shape
- 1 OH	- I - S	- 1 $\phi$ 6	MAS 403 P50T 1 shape with hole
- 2	- II	- 2	MAS 403 P50T 2 shape
- 2 OH	- II - S	- 2 ( $\phi$ 6)	MAS 403 P50T 2 shape with hole
- 3	- III	- 3	Manufacturer's standard (MAS 403 P50T angle 90 degrees)
- 3 OH	- III - S	- 3 $\phi$ 6	Manufacturer's standard (With holes as above)
- JIS	J50P	- JIS NH	JIS B 6339-3 Appendix JA(Reference) JJ shape
- JIS	- S	- JIS ( $\phi$ 10)	JIS B 6339-3 Appendix JA(Reference) JJ shape with hole
P40T - 1	P40T - I	P40T - 1	MAS 403 P40T 1 shape
- 1 OH	- I - S	- 1 ( $\phi$ 4)	MAS 403 P40T 1 shape with hole
- 2	- II	- 2	MAS 403 P40T 2 shape
- 2 OH	- II - S	- 2 $\phi$ 4	MAS 403 P40T 2 shape with hole
- 3	- III	- 3	Manufacturer's standard (MAS 403 P40T angle 90 degrees)
- 3 OH	- III - S	- 3 ( $\phi$ 4)	Manufacturer's standard (With holes as above)
- JIS	J40P	- JIS NH	JIS B 6339-3 Appendix JA(Reference) JJ shape
- JIS OH	J40P - S	- JIS $\phi$ 7	JIS B 6339-3 Appendix JA(Reference) JJ shape with hole
P30T - 1	P30T - I	P30T - 1	MAS 403 P30T 1 shape
- 1 OH	- I - S	- 1 $\phi$ 2.5	MAS 403 P30T 1 shape with hole
- 2	- II	- 2	MAS 403 P30T 1 shape
- 2 OH	- II - S	- 2 $\phi$ 2.5	MAS 403 P30T 1 shape with hole
- JIS	J30P	- JIS	JIS B 6339-3 Appendix JA(Reference) JJ shape
- JIS OH	- S	- JIS ( $\phi$ 4)	JIS B 6339-3 Appendix JA(Reference) JJ shape with hole
S20R - 1	S20R - I	S20R - 1	JIS 4003 S20R 1 shape
- 2	- II	- 2	JIS 4003 S20R 2 shape
- R	- R	- R	Manufacturer's standard (ROKU-ROKU SMART TECHNOLOGY CO.,LTD.)
15R - 1	15R - 1	15R - 1	JIS 4002 15R 1 shape
- 2	- 2	- 2	JIS 4002 15R 2 shape
- B	- B	- B	Manufacturer's standard (BROTHER INDUSTRIES, LTD.)





For more information about this catalog, please request a separate dedicated catalog.

# C-max

## ALPSTOOL

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