



Features



Video 1



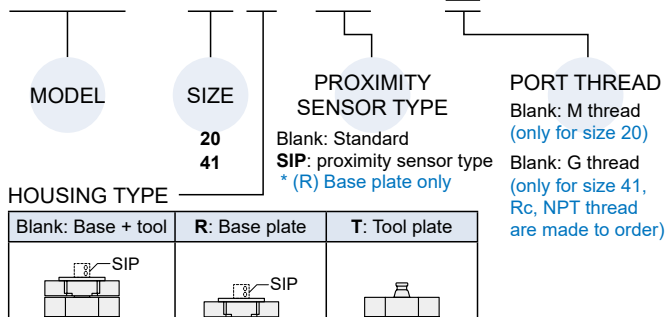
Video 2



Total handling weight Size 20 : 25 kg Size 41 : 50 kg

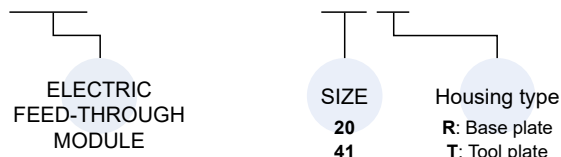
Order example of automatic tool changer

MCTC — 20 R — SIP — □



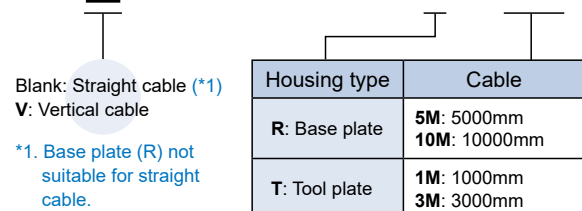
Electric feed-through module

K19 — MCTC — 20 R



Cable * Size 20 and 41 use the same cable.

KBL□ — MCTC — 20 R — 5M



Features

- One robot base plate can accommodate multiple tool plates (such as grippers, pneumatic tools, or vacuum pads), offering excellent production flexibility, reducing tool changeover time, and lowering labor costs.
- High rigidity locating pins with special treatment for good service life.
- Tapered locating stud for high locating accuracy with repeatability of ± 0.015 mm.
- Ejection mechanism for releasing base plate (R) and tool plate (T).
- Self-locking mechanism for preventing plates from ejecting when pneumatic source was accidentally removed.
- Accurate connection change with electric module to avoid manual operation mistakes.
- ISO flange for easy-mounting on most of the robot arms.

Specification

Model		MCTC	
Size		20	41
Recommended handling weight (*1)	Tool (*2)	(kg)	3.5
	Workpiece	(kg)	21.5
Locking force (*3)	(N)	2300	4500
Repeat accuracy	(mm)	± 0.015	
Max. permissible XY-axis offset	(mm)	± 1	± 2
Max. permissible angular offset	(°)	± 2	
Operating pressure	(MPa)	0.45~0.7	
Ambient temperature	(°C)	+5 ~ +60	
Proximity sensor		RJY 	
Weight	Base plate (R)	(kg)	0.47
	Tool plate (T)	(kg)	0.37

*1. Tool and workpiece please refer to Applications.

*2. With tool plate (T).

*3. Under locking condition (operating pressure 0.45 MPa).

*4. Spring, tapered locating stud, and locating pin are consumables. Please consider to replace when performing below expectations.

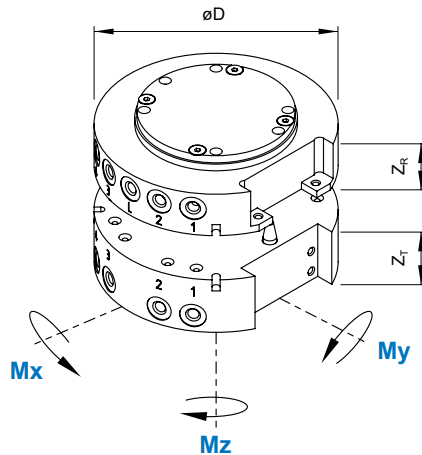
Electric feed-through module

Model	K19-MCTC-*			
Housing type	Base plate (R)		Tool plate (T)	
Size	20	41	20	41
Min. ambient temp. (°C)	5			
Max. ambient temp. (°C)	60			
Number of pin contacts	19			
Nominal current (A)	3/pin			
Nominal voltage (V DC)	50			
Electrical connection	Bayonet lock connector (male)		Bayonet lock socket (female)	
Weight (g)	85	118	91	119

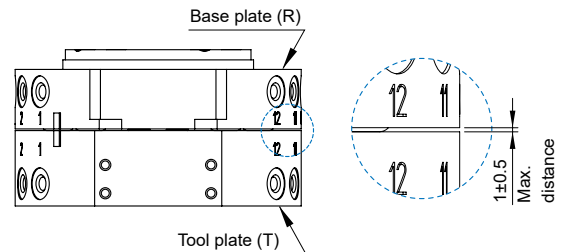
ISO adapter

Model	A50	A80
Size	20	41
Weight	Standard (g)	193
	SIP (g)	124

Max. allowable moment



Max. distance when locking

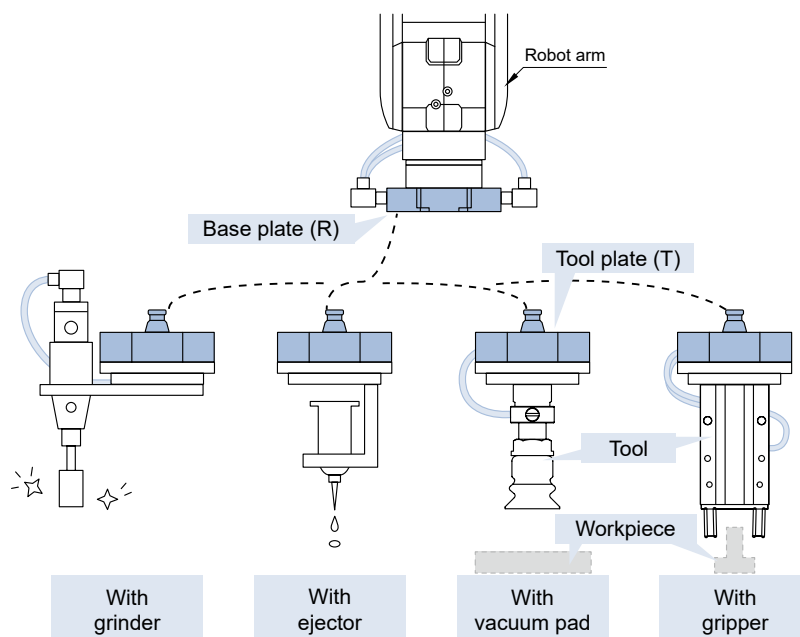


Size	ϕD	Z_R	Z_T	Mx max. (Nm)	My max. (Nm)	Mz max. (Nm)
20	90	18.7	23.7	161	161	209
41	130	32.3	27	447	447	616

* Only for locking state.

Applications

1. MCTC can be used on any type of robot arm.
2. The main feature is the quick tool exchange with good repeat accuracy.
3. MCTC can be used for various applications within max. 50 kg (Size 41) total load as shown below.

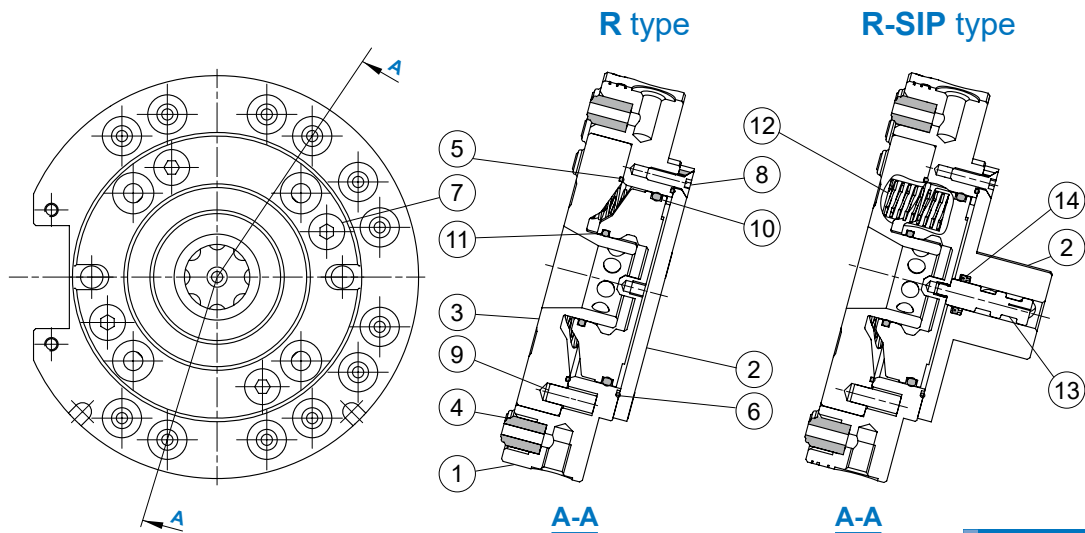


MCTC Inside structure & Parts list

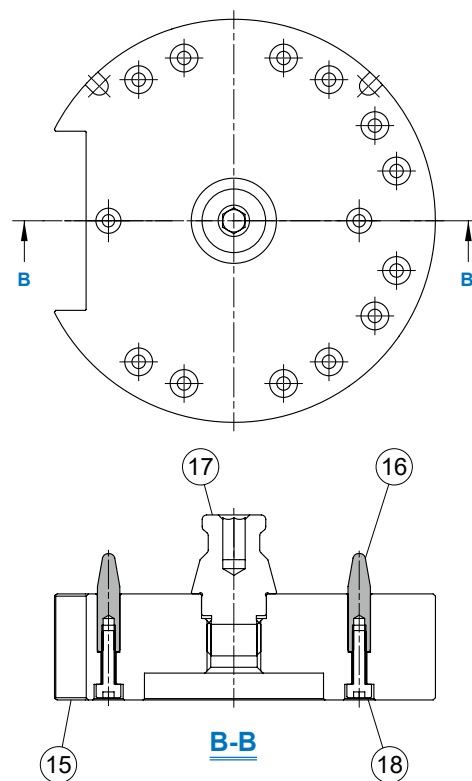
AUTOMATIC TOOL CHANGER



Base plate



Tool plate



Material – Base plate (R)

No.	Part name	Material	Q'y / Size		Repair kits (inclusion)
			20	41	
1	Body	Aluminum alloy	1		
2	Cover	Aluminum alloy	1		
3	Locator	Composite material	1		
4	Sealing column	NBR	12	10	●
5	O-ring	NBR	1		●
6	O-ring	NBR	1		●
7	Bolt	Stainless steel	4		
8	Bolt	Stainless steel	4		
9	Pin	Carbon steel	1		
10	O-ring	NBR	1		●
11	O-ring	NBR	1		●
12	Spring	Spring steel	6		●
13	Detection shaft	Stainless steel	1*		
14	Packing	NBR	1*		●

* Only for base plate – proximity sensor type (R-SIP).

Material – Tool plate (T)

No.	Part name	Material	Q'y	Repair kits (inclusion)
15	Body	Aluminum alloy	1	
16	Locating pin	Alloy steel	2	●
17	Tapered locating stud	Stainless steel	1	●
18	Bolt	Stainless steel	2	●

Order example of repair kits

Size	Base plate (R)	Base plate (R) – proximity sensor type (R-SIP)	Tool plate (T)
20	PS-MCTC-20R	PS-MCTC-20R-SIP	PS-MCTC-20T
41	PS-MCTC-41R	PS-MCTC-41R-SIP	PS-MCTC-41T

Base plate (R)

Thread (×2)

For inductive proximity sensor.

Ejection Mechanism

Eject the plates with piston force smoothly without interference.

Tool plate (T)

Tapered locating stud

Tapered locating stud for high locating accuracy.

Locating pin (×2)

Tempered locating pin for good non-rotating accuracy.

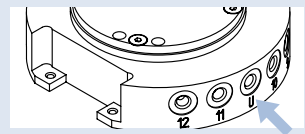
Locking mechanism

High accurate curved plate fitting for smooth combining and releasing.

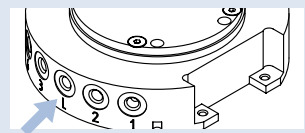
Self-locking mechanism

Prevent the plates from releasing with high tension springs when the pneumatic source is accidentally removed.

Unlock (U)



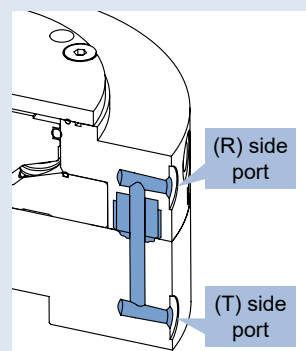
Lock (L)



Air inlet

Without interfering contours due to the integration into the housing. Also suitable for vacuum.

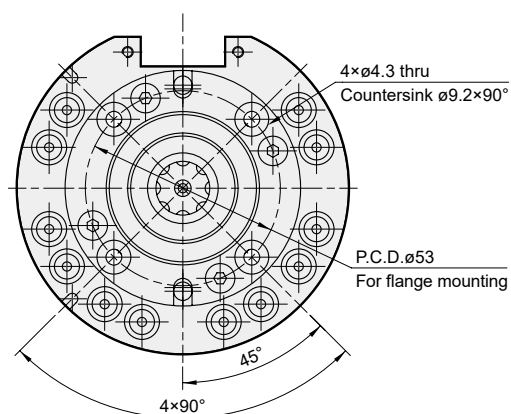
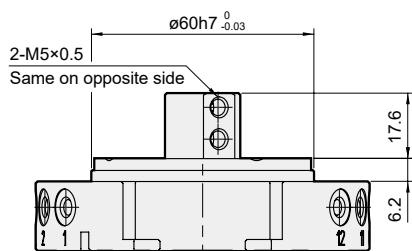
* Ports with identification number for piping.



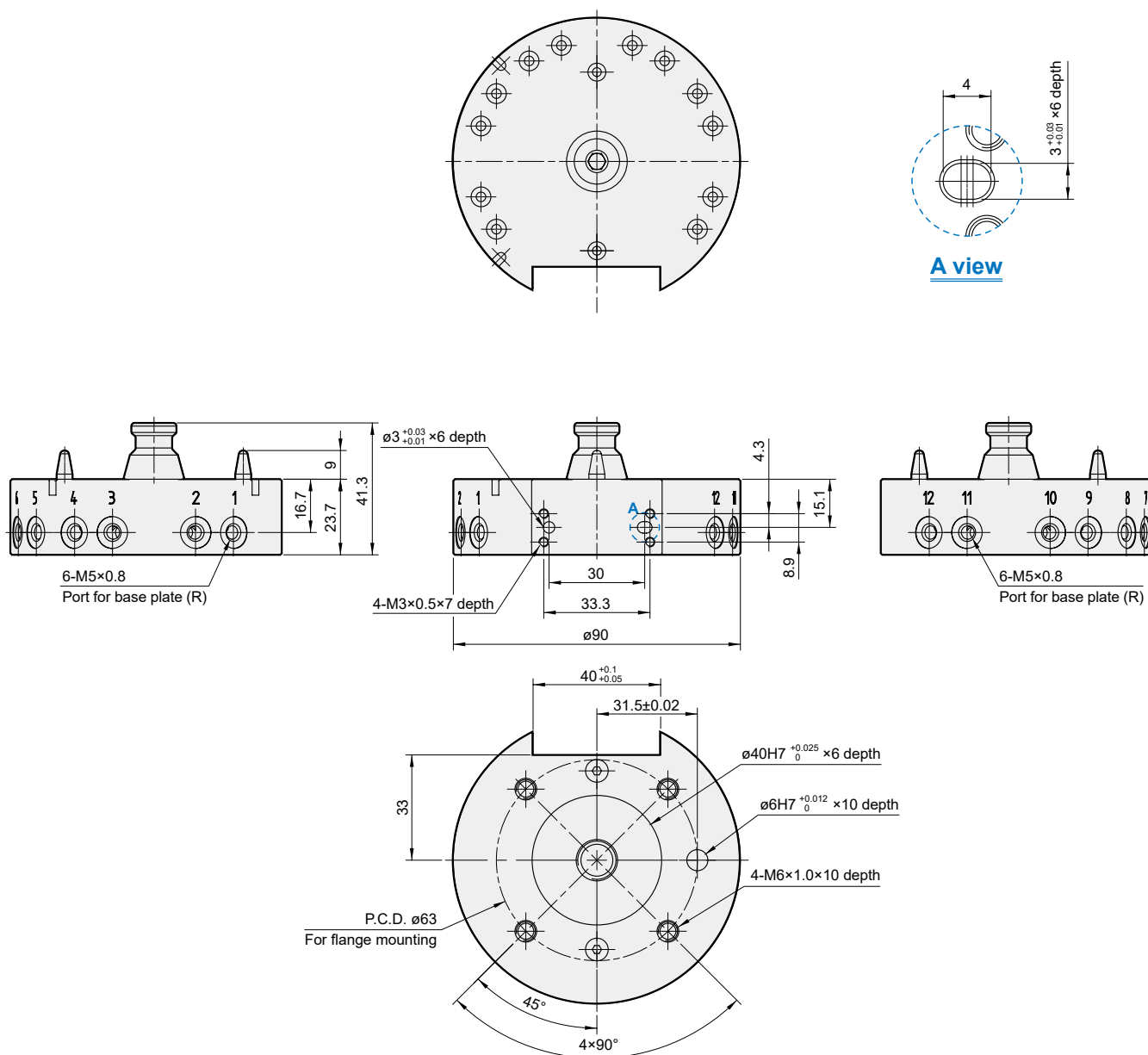
Base plate



for proximity sensor

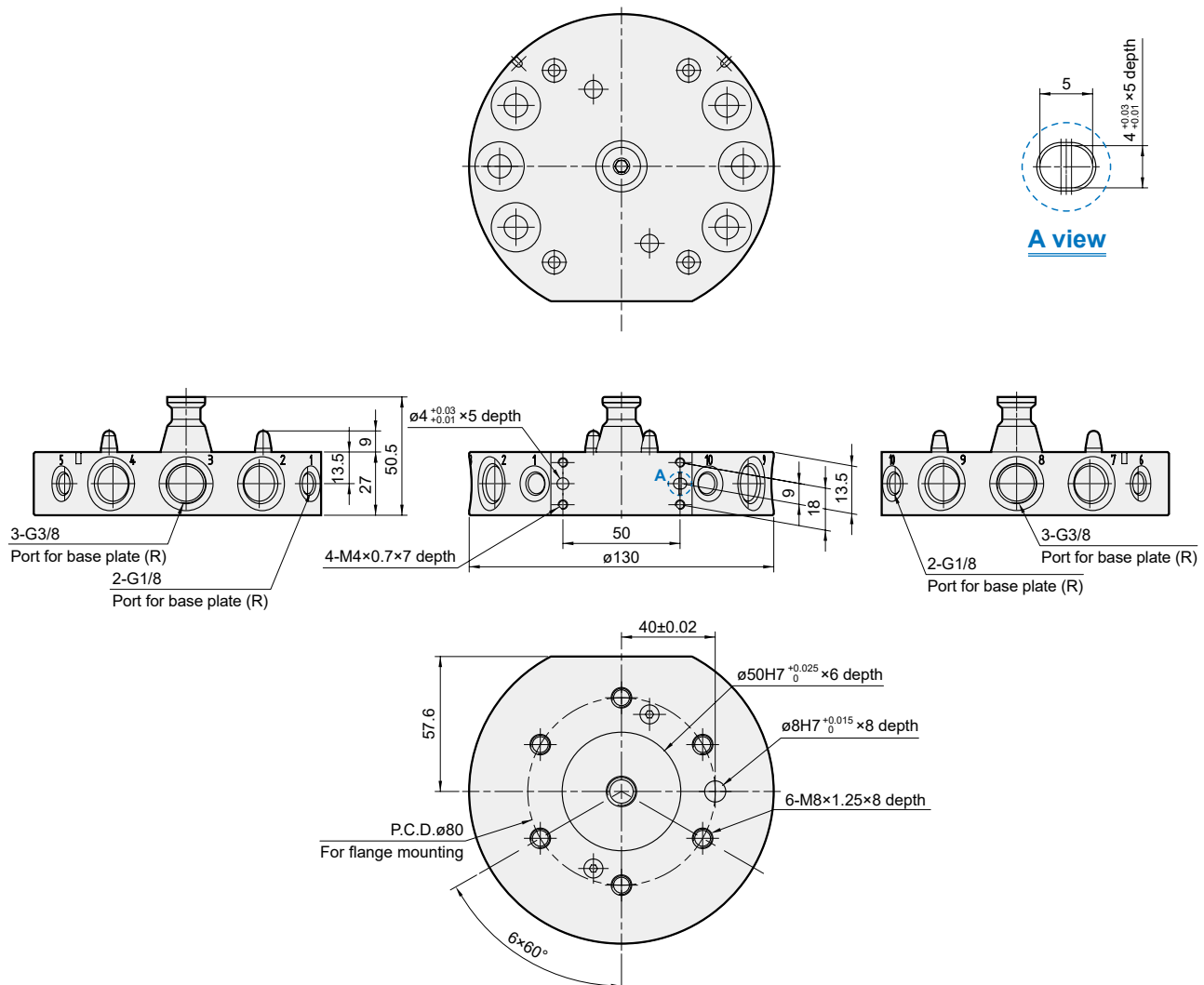


T Tool plate





T Tool plate

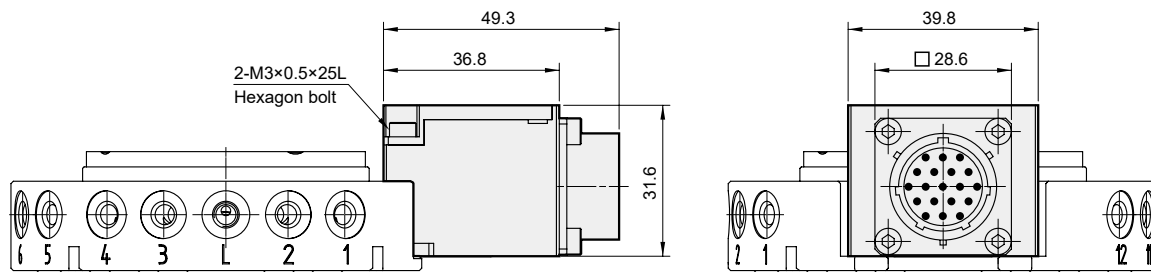


MCTC Dimensions – Electric feed - through module

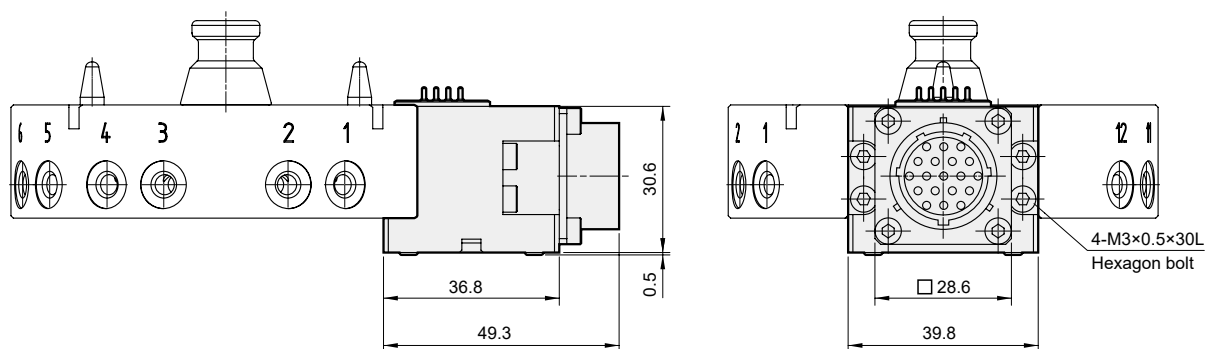
AUTOMATIC TOOL CHANGER



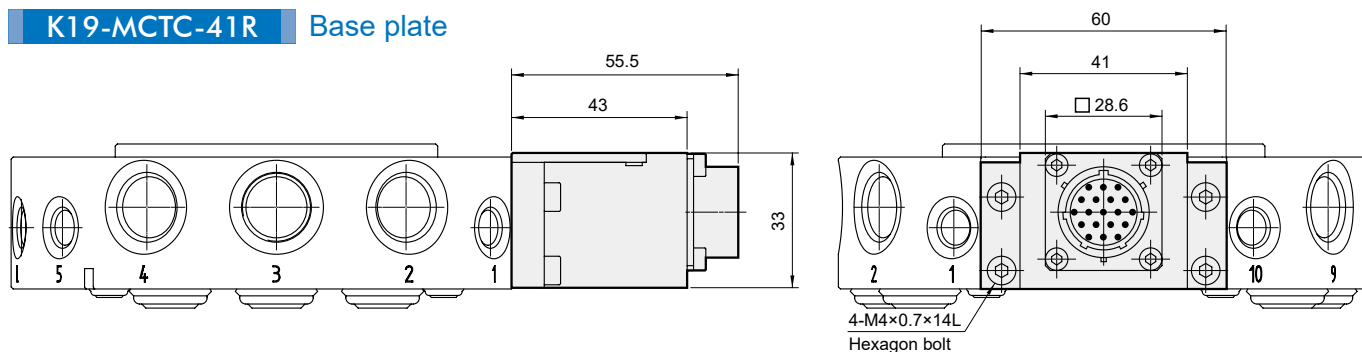
K19-MCTC-20R Base plate



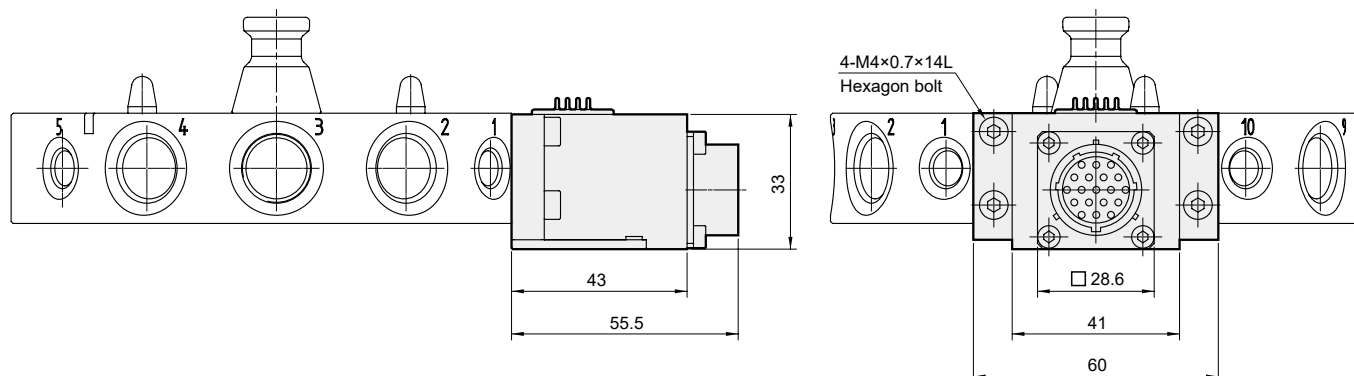
K19-MCTC-20T Tool plate



K19-MCTC-41R Base plate



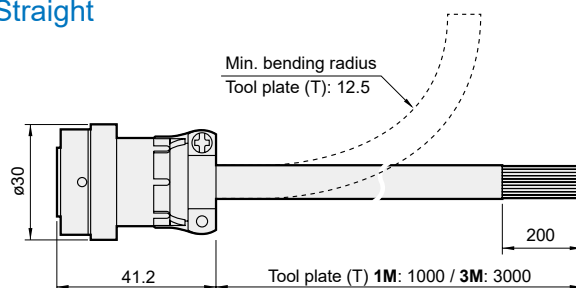
K19-MCTC-41T Tool plate



KBL-MCTC-20T

Straight

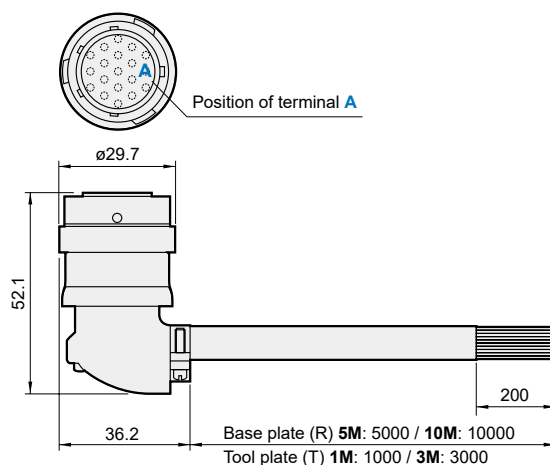
Size 20 and 41 use the same cable



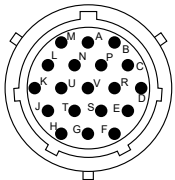
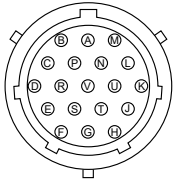
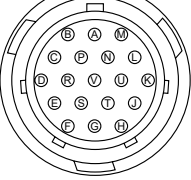
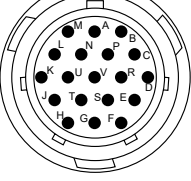
KBLV-MCTC-20R/T

Vertical

Size 20 and 41 use the same cable



19 Pin layout

Electric	Way	Color	Cable
Base plate (R) Bayonet lock connector (Male)  Tool plate (T) Bayonet lock socket (Female) 	A	White	A
	B	Brown	B
	C	Green	C
	D	Yellow	D
	E	Gray	E
	F	Pink	F
	G	Blue	G
	H	Red	H
	J	Black	J
	K	Violet	K
	L	Gray/Pink	L
	M	Red/Blue	M
	N	White/Green	N
	P	Brown/Green	P
	R	White/Yellow	R
	S	Yellow/Brown	S
	T	White/Gray	T
	U	Gray/Brown	U
	V	White/Pink	V
Base plate (R) (Female)  Tool plate (T) (Male) 	A	White	A
	B	Brown	B
	C	Green	C
	D	Yellow	D
	E	Gray	E
	F	Pink	F
	G	Blue	G
	H	Red	H
	J	Black	J
	K	Violet	K
	L	Gray/Pink	L
	M	Red/Blue	M
	N	White/Green	N
	P	Brown/Green	P
	R	White/Yellow	R
	S	Yellow/Brown	S
	T	White/Gray	T
	U	Gray/Brown	U
	V	White/Pink	V

Accessory kits of ISO adapter board

* for base plate (R)

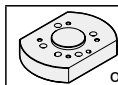
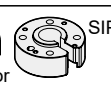
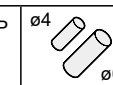
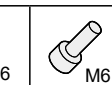
AK – MCTC – 20R – SIP – A50

PROXIMITY
SENSOR TYPE

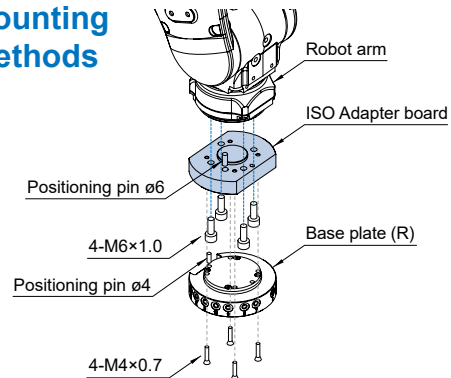
ADAPTER
BOARD P.C.D

Blank: Standard type

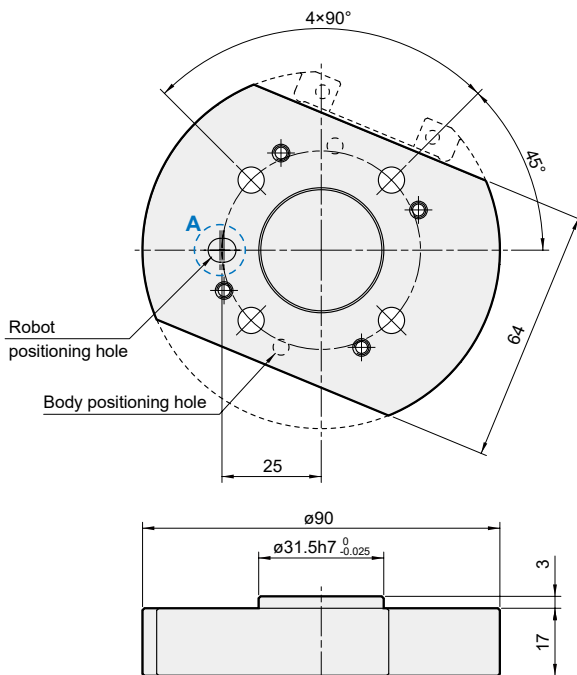
SIP: Proximity sensor type

			
ISO Adapter board	Pin (each 1)	Bolt (×4)	Bolt (×4)

Mounting methods

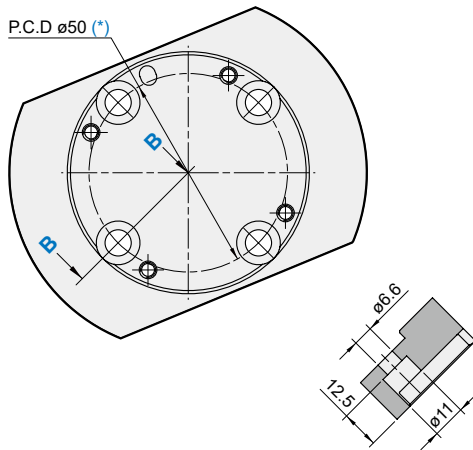
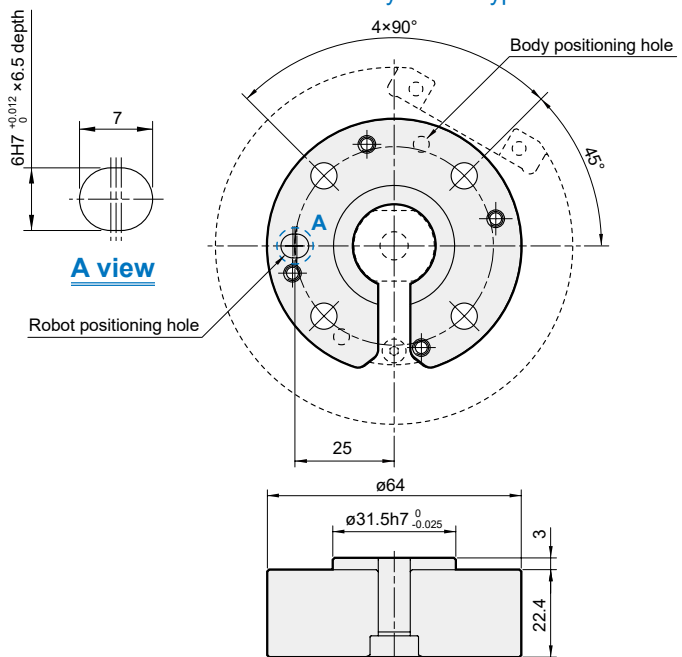


A50

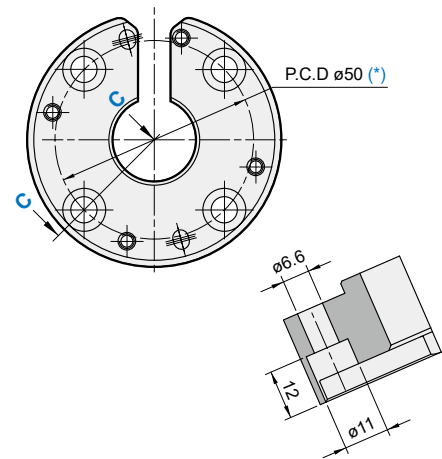


SIP-A50

Proximity sensor type



B-B



C-C

* Robot connection: ISO 9409-1-50-4-M6

Accessory kits of ISO adapter board

* for base plate (R)

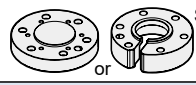
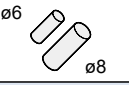
AK – MCTC – 41R – SIP – A80

PROXIMITY
SENSOR TYPE

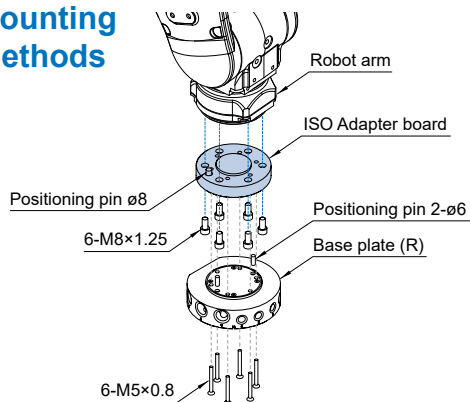
ADAPTER
BOARD P.C.D

Blank: Standard type

SIP: Proximity sensor type

			
ISO Adapter board	Pin (ø6x2, ø8x1)	Bolt (x6)	Bolt (x6)

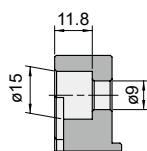
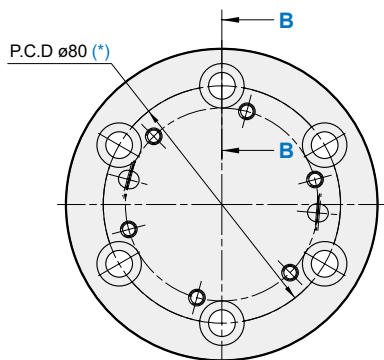
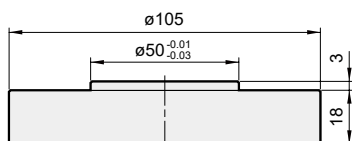
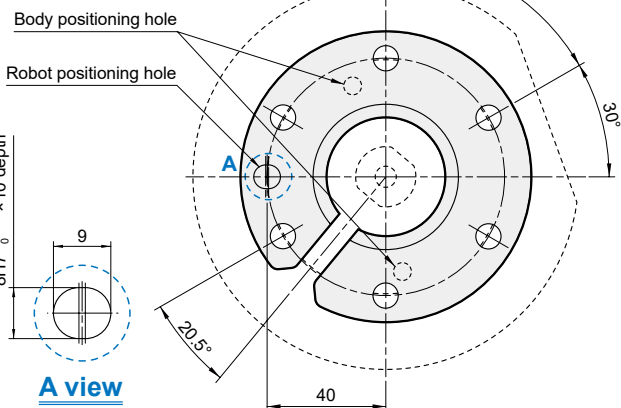
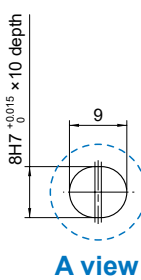
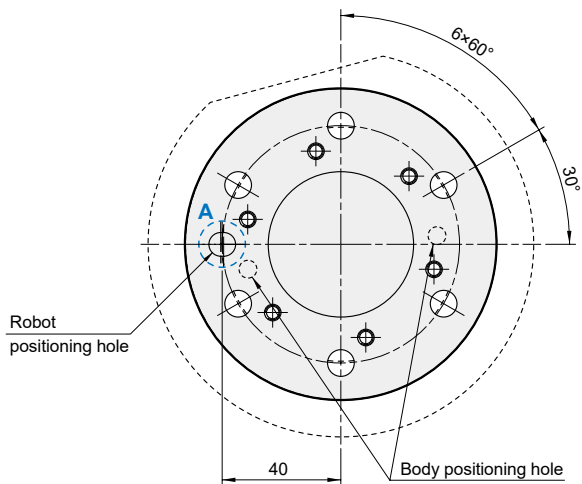
Mounting methods



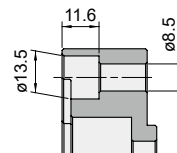
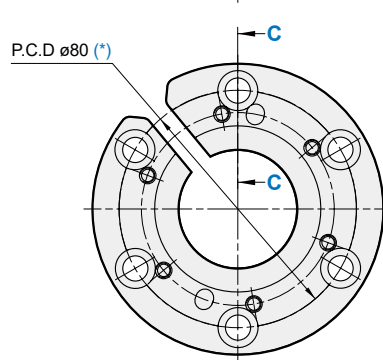
A80

SIP-A80

Proximity sensor type



B-B



C-C

* Robot connection: ISO 9409-1-80-6-M8