Key Features

■Automatic tool change in multiple grippers and tools

Vast reduction in changeover time as well as automation for numerous types of application and workpieces

■Anti-drop mechanism for standard models

Grippers and other tools can be retained even at a sudden air loss, and which prevents peripheral devices from being damaged

■Various options

Various options such as electrode (15-pin for electric signals, signal cable, and D-sub connector), tool stands (for 1 or 2-piece), and check valves.

KHC-5

How To Order

■Robot Side

Standard ------- **KHC-1R**

Size Parts Option

Option ------- **KHC - 5 R - D1** ---- D1 Electrode mounted on KHC-5 Robot Side

Size	
Symbol	
1	
5	
10	
20	

Parts	
Symbol	Name
R	Robot Side Only

Option	
Symbol	Name
D1	Electrode (15-pin)
D2	Electrode + Signal Cable (1m)
D3 *	Electrode + D-Sub Connector (Socket)
B *	Check Valve
Z	Special Type (Custom)

*Except KHC-1R

For option detail ▶36P

■Tool Side

Standard ------- **KHC-1H**

Size Parts Option

Option ------- **KHC - 5 H - D** ---- KHC-5H & its Electrode

Size	
Symbol	
1	
5	
10	
20	

Parts	
Symbol	Name
H	Tool Side Only

Option	
Symbol	Name
D	Tool-side Electrode (15-pin)
D3 *	Electrode + D-Sub Connector (Socket)
Z	Special Type (Custom)

*Except KHC-1H

For option detail ▶36P

■Option only

Size Parts Option

KHC - 5 RS - D_1 ---- Robot Side Electrode (15-Pin) of KHC-5 only

Size	
Symbol	
1	
5	
10	
20	

Parts	
Symbol	Name
RS	Robot Side Only
HS	Tool Side Only
S	Other Options Only

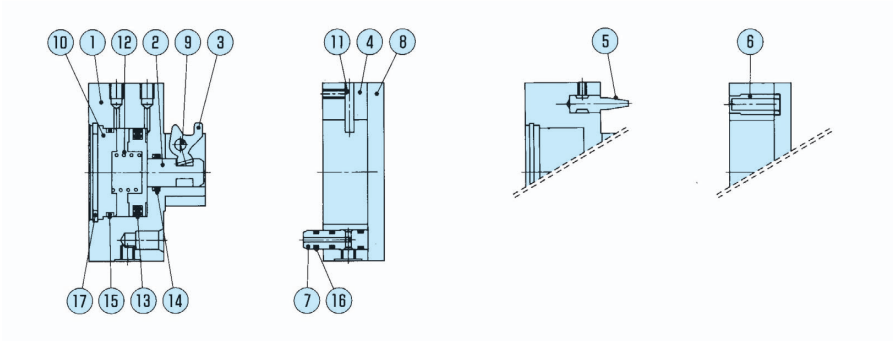
Option			
Symbol	Name	Symbol	Name
D	Tool-Side Electrode (15-pin)	T_1	Tool Stand with 1 Holder
D_1	Electrode (15-pin)	T_2	Toole Stand with 2 Holders
D_2	Electrode + Signal Cable (1m)	Z	Special Type (Custom)
D_3	Electrode + D-Sub Connector (Socket)		

For option detail ▶ 36P

Specification

Model	KHC-1 For Layout Drawing ▶410P	KHC-5 For Layout Drawing ▶411P	KHC-10 For Layout Drawing ▶412P	KHC-20 For Layout Drawing ▶413P
Payload Limit (kg)	1	5	10	20
O.D. (mm)	dia.45	dia.64	dia.78	dia.88
Total length when coupled (mm)	36	43	49	56
Working Pressure	Pneumatic: 0.3 to 0.7MPa			
Ambient Temperature (℃)	5 to 60			
Repeatability (mm)	±0.01			
Coupling Axial Force (N)	78	245	676	1087
Moment when coupled (N·m)	3.1	11.8	34.3	76.6
Torque when coupled (N·m)	8.6	12.8	16	18.9
Weight (kg)	0.187	0.35	0.65	0.90
Air Port	6 Air Ports			
Electric Interface (Option)	D_1:Electrode (15-pin) D_2:Electrode + Signal Cable (1m) D_3:Electrode + D-Sub Connector (Socket) *Up to electric current of 2A			

Internal Structure / Parts & Seals



■Parts List

No.	Name	Material	No.	Name	Material	No.	Name	Material
1	Body	Aluminum	7	Air Pin	Stainless Steel	13	Piston Seal	
2	Piston	Stainless Steel	8	Tool Plate	Aluminum	14	Rod Seal	
3	Arm	Carbon Steel	9	Fulcrum Shaft	Carbon Steel	15	Cylinder Seal	
4	Tool Adapter	Aluminum	10	Cylinder Cover	Aluminum	16	Air Pin Seal	
5	Locating Pin	Stainless Steel	11	Operating Shaft	High-Carbon Chromium Bearing Steel	17	Snap Ring	
6	Locating Hole	Stainless Steel	12	Spring	Stainless Steel			

■Seals List

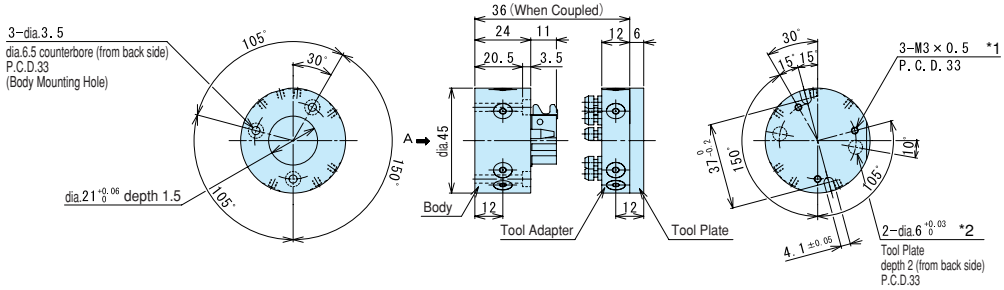
No.	KHC-1	KHC-5	KHC-10	KHC-20
13	PSD-20	PSD-32	PSD-50	PSD-63
14	MYA-8	MYA-10	MYA-14	MYA-16
15	dia.8×dia.1	S-29	S-48	S-60
16	S-3, S-4	S-4, S-5	S-4, S-5	S-4, S-5

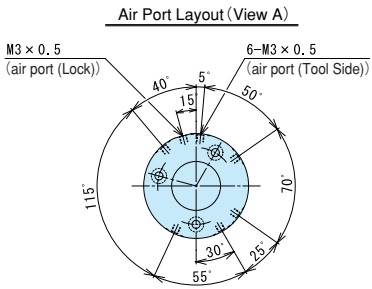
Layout Drawing

For CAD data, please go to ▶518P

■KHC-1

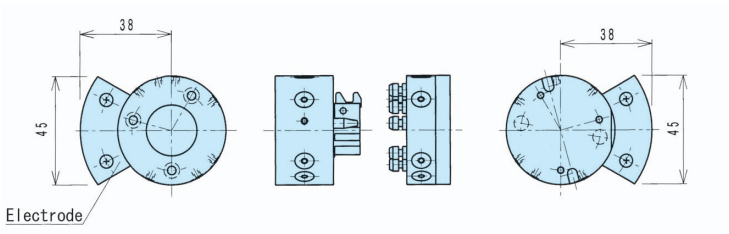
KHC-1 Standard





*1 This hole can not be used as it is a hole to connect tool adapter with plate
*2 This hole can not be used as it is a hole to locate tool plate
*3 When using a different plate, please drill *1 & *2 holes on the plate

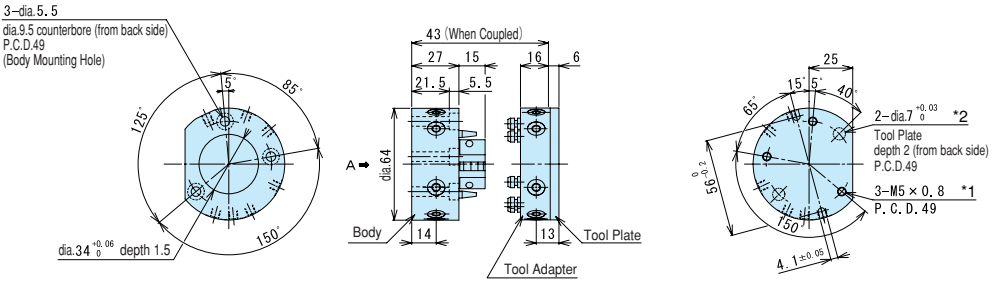
KHC-1R-D1 • 1H-D



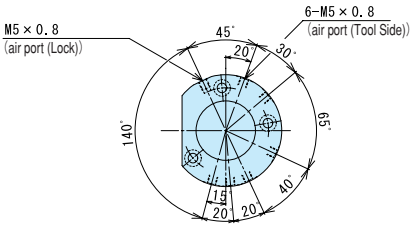
Layout Drawing

■KHC-5

KHC-5 Standard

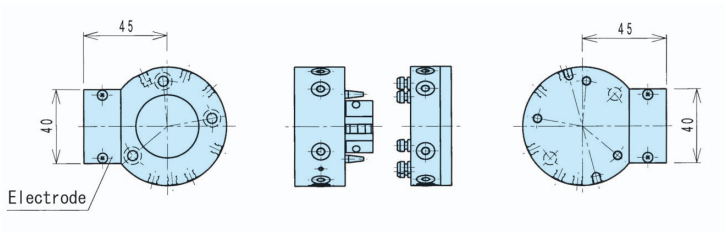


Air Port Layout (View A)

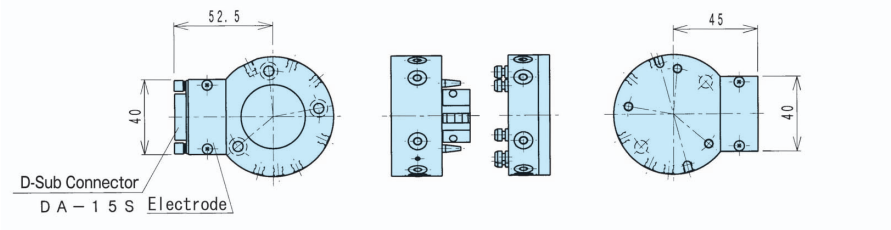


*1 This hole can not be used as it is a hole to connect tool adapter with plate
*2 This hole can not be used as it is a hole to locate tool plate
*3 When using a different plate, please drill *1 & *2 holes on the plate

KHC-5R-D1(D2) • 5H-D



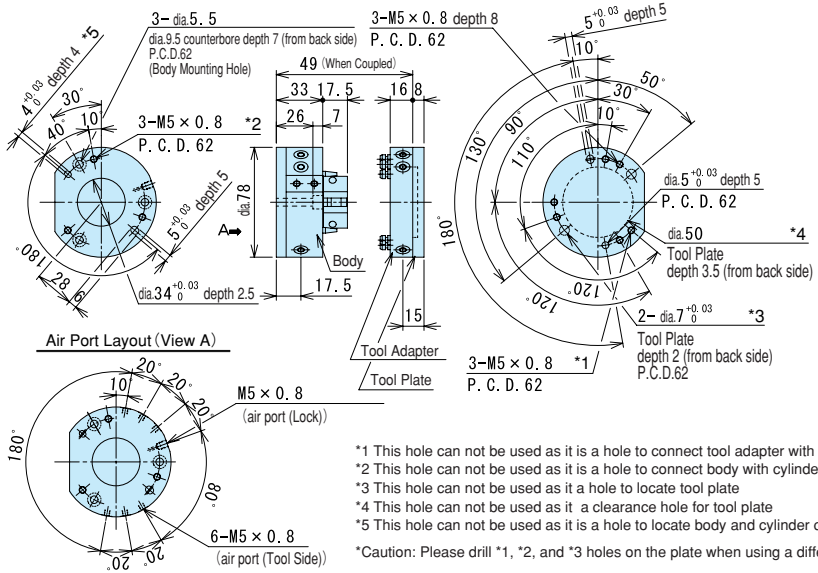
KHC-5R-D3 • 5H-D



For CAD data, please go to ▶518P

■KHC-10

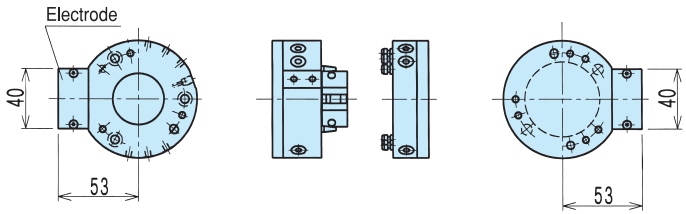
KHC-10 Standard



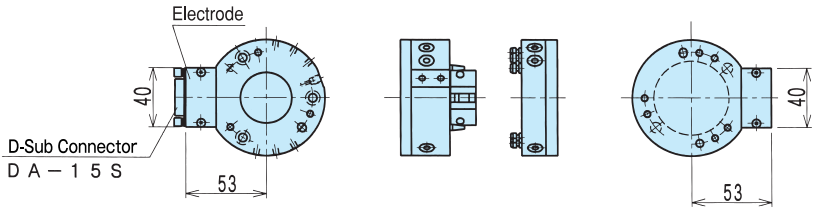
*1 This hole can not be used as it is a hole to connect tool adapter with plate
*2 This hole can not be used as it is a hole to connect body with cylinder cover
*3 This hole can not be used as it a hole to locate tool plate
*4 This hole can not be used as it a clearance hole for tool plate
*5 This hole can not be used as it is a hole to locate body and cylinder cover.

*Caution: Please drill *1, *2, and *3 holes on the plate when using a different plate.

KHC-10R-D1(D2) • 10H-D



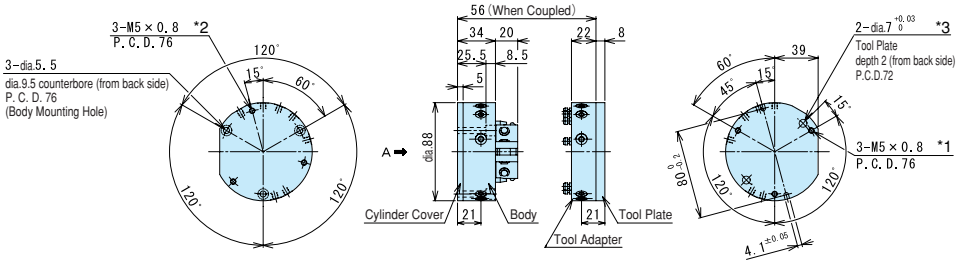
KHC-10R-D3 • 10H-D



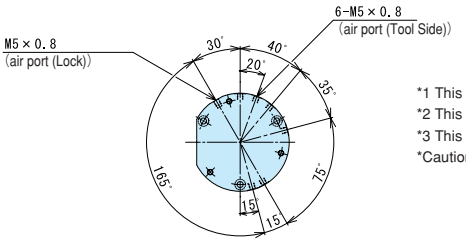
Layout Drawing

■KHC-20

KHC-20 Standard

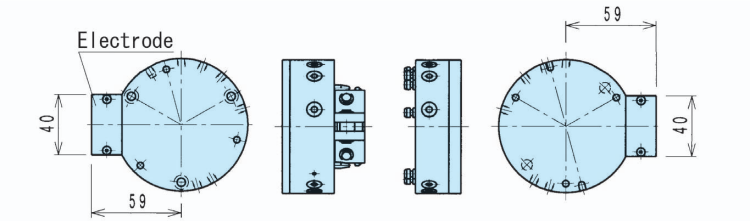


Air Port Layout (View A)

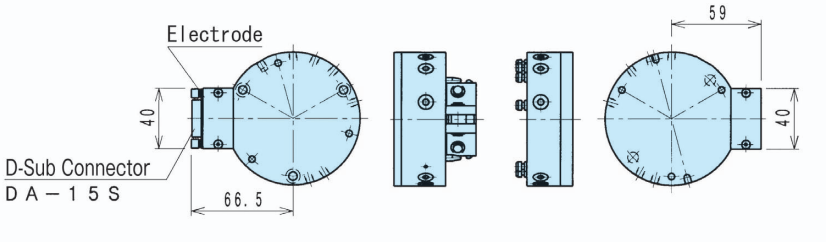


*1 This hole can not be used as it is a hole to connect tool adapter with plate
*2 This hole can not be used as it is a hole to connect body with cylinder cover
*3 This hole can not be used as it a hole to locate tool plate
*Caution: Please drill *1, and *3 holes on the plate when using a different plate.

KHC-20R-D1(D2) • 20H-D



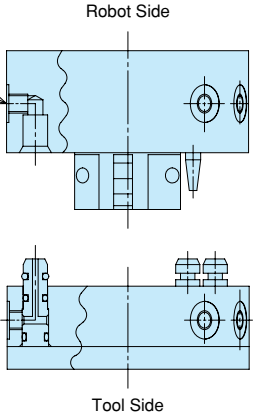
KHC-20R-D3 • 20H-D



For CAD data, please go to ▶518P

Precautions for Use

Please use a valve that is capable of "3-position all port block" since the tool side air port is open



Please make the space between robot and tool as 1mm. When air is supplied, the arm will draw in the tool side, resulting in compensating 1mm space.

Tool side ejection area will hit if the clearance is less than 1mm