Hydraulic Oil/Air/Coolant

Rotary Joint

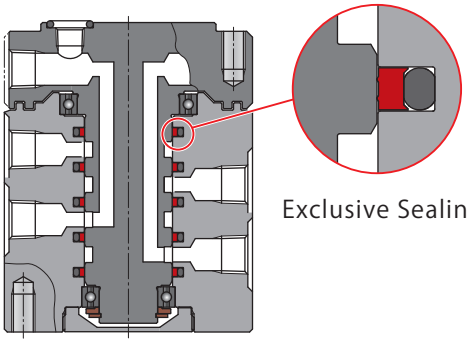
Model JRA/JRB/JRC/JRD

Long Operational Life • Compact • Low Torque

A center through port is available for high volume coolant.

Durable

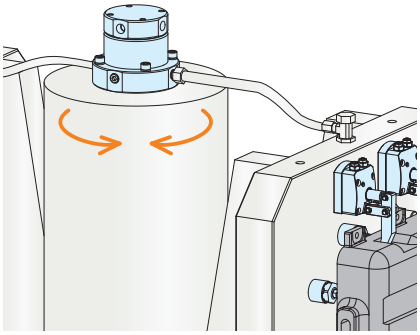
Highly-durable sealing + highly-rigid body to satisfy the specification values even after using for a long time.



Exclusive Sealing

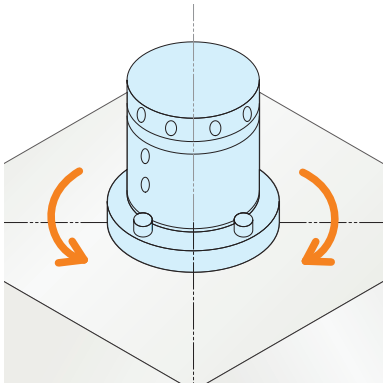
Compact

The compact design allows for minimal installation space.



Smooth

Low torque and smooth rotation reduces loads to the surrounding application. Ensures low torque even under high pressure.



• For Hydraulic Oil, Air and High Volume Coolant※1

Introducing the Kosmek exclusive low-friction sealing, it enables low-torque and smooth rotation.
Each part of the Rotary Joint has high rigidity, and the highly-durable sealing and the high-capacity design allows for a longer operational life.

You can choose the number of ports from 2, 4, 6, 8, 12, 16 along with the center through port※1.

※1. JRB is the only model with the center through port designed for a large amount of coolant.
(When using the center through port, install a swivel joint, etc.)

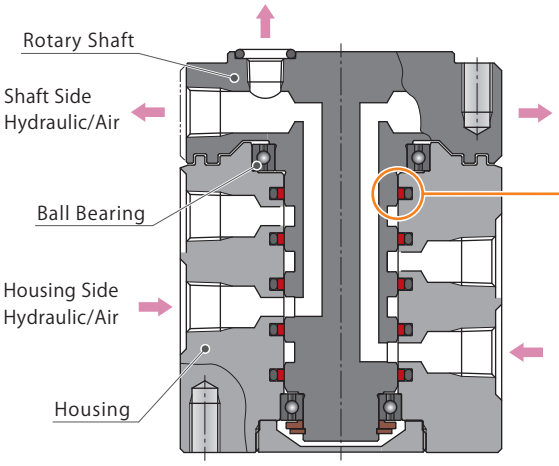
Cross Section

4 Models Available

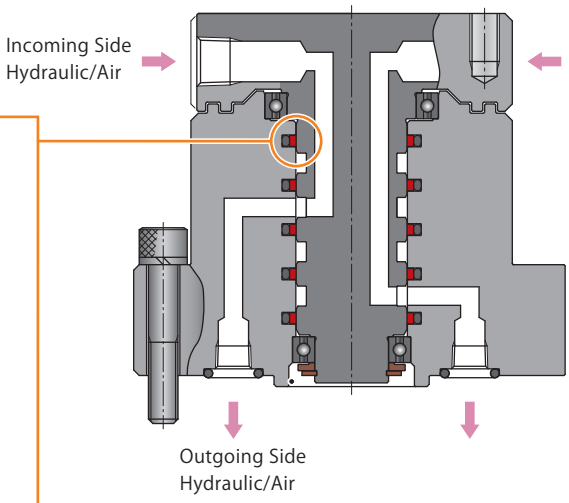
Select the best model based on your requirements.

NEW

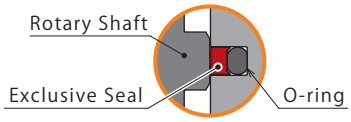
Model JRA



Model JRC

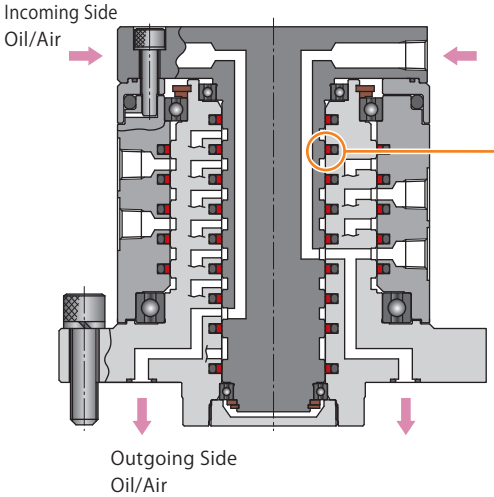


Sealing Part Detail



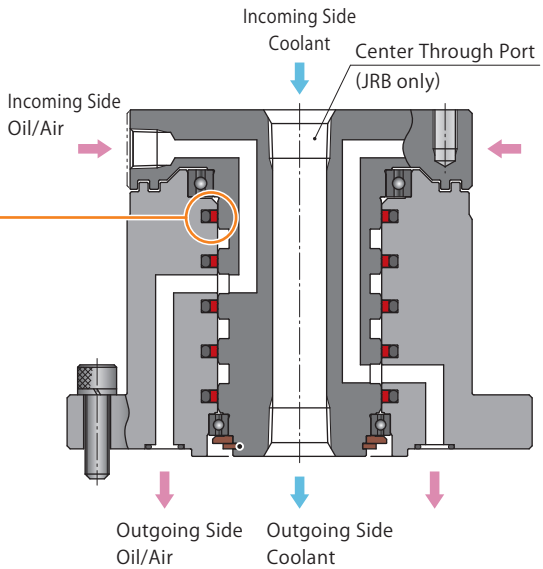
Model JRD

The dual structure allows for taller and more compact body.

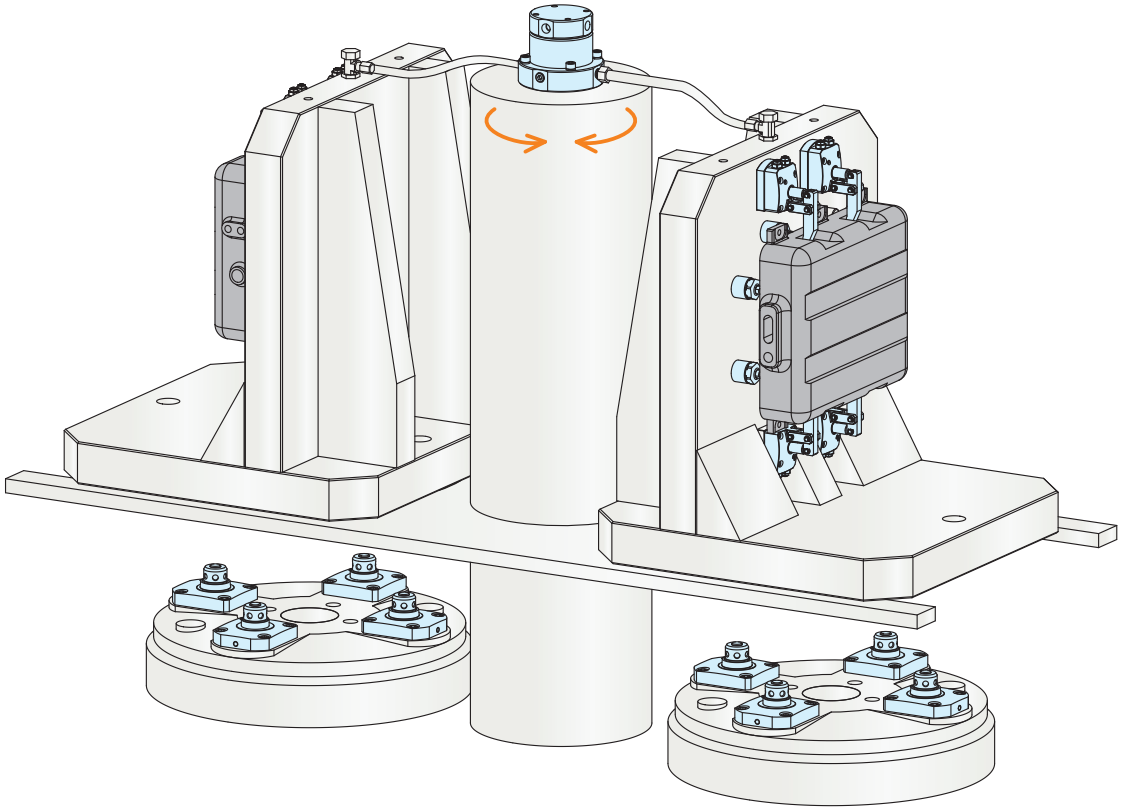


Model JRB

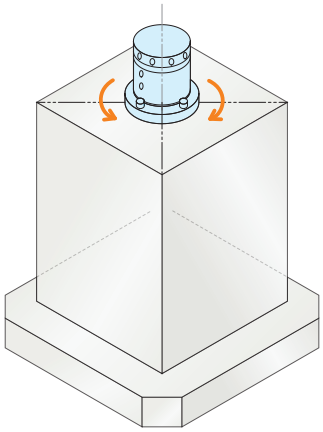
The center through port allows for high volume coolant.



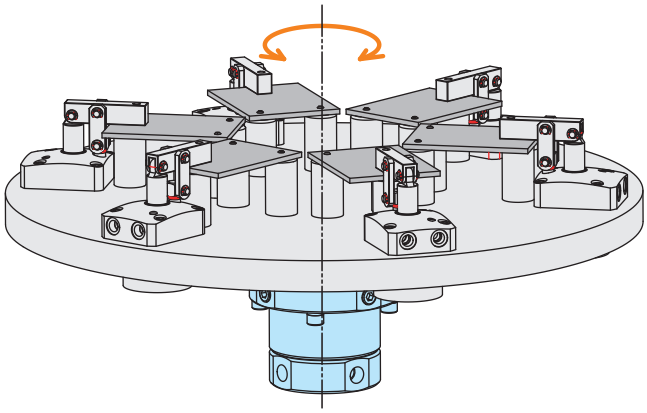
Application Examples



Turntable



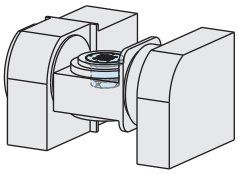
Angle Plate Fixture



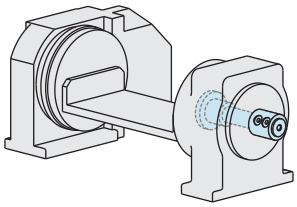
Fixture

Exclusive Cases

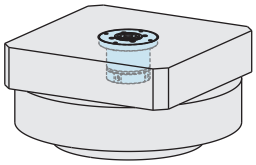
※ Some of exclusive cases. Please contact us for custom-made Rotary Joint.



NC Rotary Table



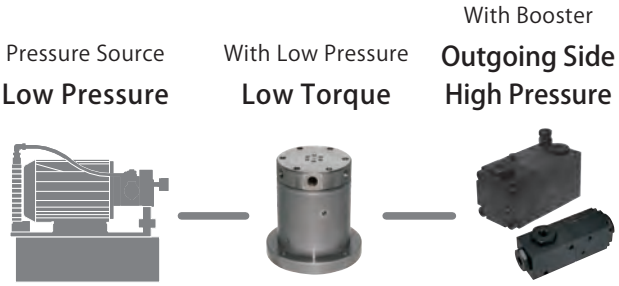
Tail Stock



B-axis of Machine Table

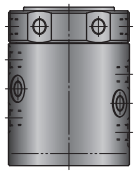
Higher outgoing side pressure with low torque

Using a booster (model AU/BU) after rotary joint allows low rotating torque and the use of high pressure for actuators.

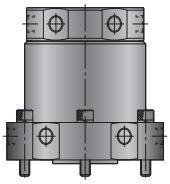


Rotary Joint Models

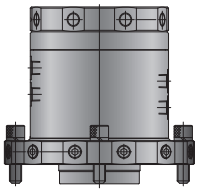
NEW



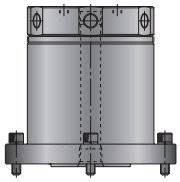
Model JRA → P.1177



Model JRC → P.1178



Model JRD → P.1179



Model JRB → P.1180

Center Through Port	No Center Through Port			One Center Through Port
The Number of Ports	2/4/6/8		12/16	2/4/6/8 + Center Through Port
Features	Low Rotary Torque・Compact		Dual Structure・Compact	Large Flow Rate
Flange	No Flange	With Flange		
Usable Fluid	General Hydraulic Oil：25MPa or less			
	Air：1MPa or less			
				Coolant：1MPa or less (Available only for Center Through Port)

Model No. Indication : No Center Through Port Model

JRA 02 0 0 - S - A
1 2 3 4 5

1 The Number of Ports

02 : 2 ports
04 : 4 ports
06 : 6 ports
08 : 8 ports

2 Center Through Port

0 : None

3 Design No.

0 : Revision Number

4 Housing Side Piping Method

S : Piping Option (Rc Thread)
B : Piping Option (G Thread)※1

5 Shaft Side Piping Method

A : Both Gasket and Piping Option (With R Thread Plug)
D : Both Gasket and Piping Option (With G Thread Plug)※1

Notes :
1. Contact us for other piping methods.
※1. Contact us when a G screw is required for the housing side port or the shaft side port.

Specifications

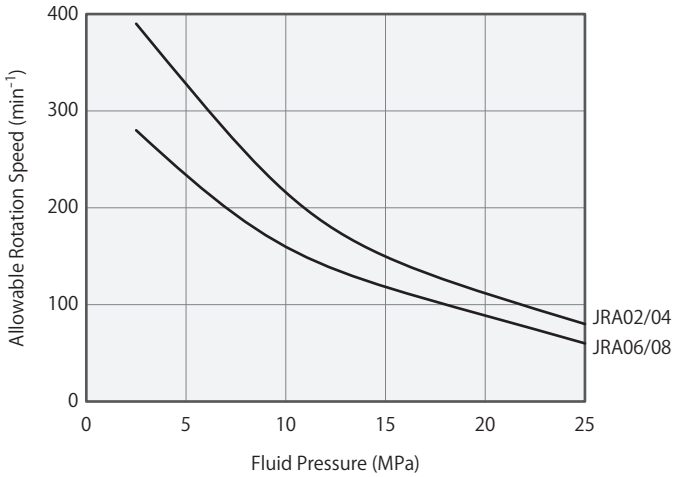
Model No.		JRA0200-□-□	JRA0400-□-□	JRA0600-□-□	JRA0800-□-□
Operating Pressure MPa	Oil	0 ~ 25.0			
	Air	0 ~ 1.0			
Port	The Number of Ports	2	4	6	8
	Min. Passage Area mm2	19.6			
Center Through Port		None			
Usable Fluid		General Hydraulic Oil or Air			
Operating Temperature ℃		−10 ~ 70			
Weight kg		2.4	4.5	7.8	9.3

Notes : 1. If there is oil slick leak from hydraulic circuit to air circuit, install a drain circuit between the two circuits.
2. Please avoid continuous operation as it will cause overheating and damage to the internal packing.

Performance Curve : Allowable Rotation Speed Graph

	Allowable Rotation Speed (min^{-1})			
Model No.	JRA0200	JRA0400	JRA0600	JRA0800
Fluid Pressure (MPa)	-□-□	-□-□	-□-□	-□-□
25	80		60	
14	160		125	
7	280		200	
2.5	390		280	

Notes :
1. This graph shows the relationship between Allowable Rotation Speed (min^{-1}) and Fluid Pressure (MPa).
2. Do not exceed the temperature written in the specification even with lower rotation speed.



Model No. Indication : No Center Through Port Model

JRC 02 0 0 - S - A
1 2 3 4 5

1 The Number of Ports

02 : 2 ports
04 : 4 ports
06 : 6 ports
08 : 8 ports

2 Center Through Port

0 : None

3 Design No.

0 : Revision Number

4 Incoming Side Piping Method

S : Piping Option (Rc Thread)
B : Piping Option (G Thread)※2

5 Outgoing Side Piping Method

A : Both Gasket and Piping Option (With R Thread Plug)
D : Both Gasket and Piping Option (With G Thread Plug)※2

Note :
1. Contact us for other piping methods.
※2. Contact us when a G screw is required for the incoming side port or the outgoing side port.

Specifications

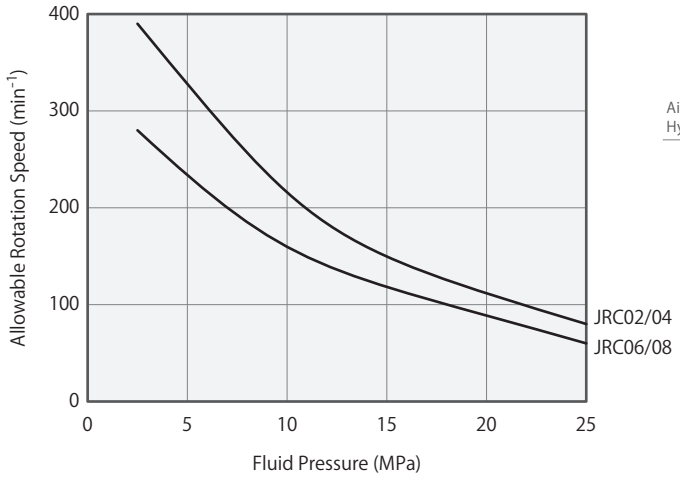
Model No.		JRC0200-□-□	JRC0400-□-□	JRC0600-□-□	JRC0800-□-□
Operating Pressure MPa	Oil	0 ~ 25.0			
	Air	0 ~ 1.0			
Port	The Number of Ports	2	4	6	8
	Min. Passage Area mm2	19.6			
Center Through Port		None			
Usable Fluid		General Hydraulic Oil or Air			
Operating Temperature ℃		−10 ~ 70			
Weight kg		4.5	5.5	8.0	9.5

Notes : 1. If there is oil slick leak from hydraulic circuit to air circuit, install a drain circuit between the two circuits.
2. Please avoid continuous operation as it will cause overheating and damage to the internal packing.

Performance Curve : Allowable Rotation Speed Graph

	Allowable Rotation Speed (min^{-1})			
Model No.	JRC0200	JRC0400	JRC0600	JRC0800
Fluid Pressure (MPa)	-□-□	-□-□	-□-□	-□-□
25	80		60	
14	160		125	
7	280		200	
2.5	390		280	

Notes :
1. This graph shows the relationship between Allowable Rotation Speed (min^{-1}) and Fluid Pressure (MPa).
2. Do not exceed the temperature written in the specification even with lower rotation speed.



Model No. Indication : No Center Through Port Model

JRD 12 0 0 - S - G
1 2 3 4 5

1 The Number of Ports

12 : 12 ports
16 : 16 ports

2 Center Through Port

0 : None

3 Design No.

0 : Revision Number

4 Incoming Side Piping Method

S : Piping Option (Rc Thread)
B : Piping Option (G Thread)※1

5 Outgoing Side Piping Method

G : Gasket Option

Notes :
1. Contact us for other piping methods.
※1. Contact us when a G screw is required for the incoming side port or the outgoing side port.

Specifications

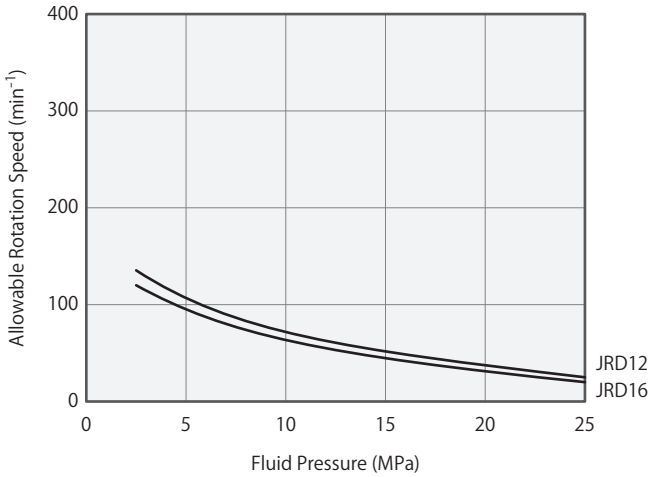
Model No.		JRD1200-□-G	JRD1600-□-G
Operating Pressure MPa	Oil	0 ~ 25.0	
	Air	0 ~ 1.0	
Port	The Number of Ports	12	16
	Min. Passage Area mm2	9.1	
Center Through Port		None	
Usable Fluid		General Hydraulic Oil or Air	
Operating Temperature ℃		−10 ~ 70	
Weight kg		20	25

Notes : 1. If there is oil slick leak from hydraulic circuit to air circuit, install a drain circuit between the two circuits.
2. Please avoid continuous operation as it will cause overheating and damage to the internal packing.

Performance Curve : Allowable Rotation Speed Graph

	Allowable Rotation Speed (min^{-1})	
Model No.	JRD1200 -□-G	JRD1600 -□-G
Fluid Pressure (MPa)		
25	25	20
14	55	48
7	90	80
2.5	135	120

Notes :
1. This graph shows the relationship between Allowable Rotation Speed (min^{-1}) and Fluid Pressure (MPa).
2. Do not exceed the temperature written in the specification even with lower rotation speed.



Model No. Indication : One Center Through Port Model

JRB 02 1 0 - S - G - S
(1) (2) (3) (4) (5) (6)

1 The Number of Ports

02 : 2 ports **06** : 6 ports
04 : 4 ports **08** : 8 ports

2 Center Through Port

1 : One Center Through Port

3 Design No.

0 : Revision Number

4 Incoming Side Piping Method

S : Piping Option (Rc Thread)
B : Piping Option (G Thread)※2

5 Outgoing Side Piping Method

G : Gasket Option

6 Center Through Port Piping Method

S : Piping Option (Rc Thread)
B : Piping Option (G Thread)※3

Notes :
1. Contact us for other piping methods.
※2. Contact us when a G screw is required for the incoming side port.
※3. Only available with conversion connector. Contact us for further information.

Specifications

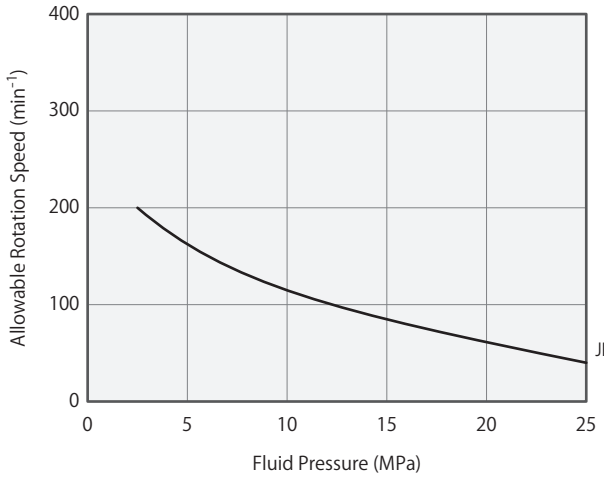
Model No.		JRB0210-□-G-□	JRB0410-□-G-□	JRB0610-□-G-□	JRB0810-□-G-□
Operating Pressure MPa	Oil	0 ~ 25.0			
	Air・Coolant	0 ~ 1.0			
Port	The Number of Ports	2	4	6	8
	Min. Passage Area mm2	28.3			
	Usable Fluid	General Hydraulic Oil or Air			
Center Through Port	The Number of Ports	1			
	Min. Passage Area mm2	254			
	Usable Fluid	Coolant (General Hydraulic Oil or Air)			
Operating Temperature ℃		−10 ~ 70			
Weight kg		7.5	10.0	12.5	15.0

Notes : 1. If there is oil slick leak from hydraulic circuit to air circuit, install a drain circuit between the two circuits.
2. Please avoid continuous operation as it will cause overheating and damage to the internal packing.

Performance Curve : Allowable Rotation Speed Graph

	Allowable Rotation Speed (min^{-1})			
Model No.	JRB0210	JRB0410	JRB0610	JRB0810
Fluid Pressure (MPa)	-□-G-□	-□-G-□	-□-G-□	-□-G-□
25	40			
14	90			
7	140			
2.5	200			

Notes :
1. This graph shows the relationship between Allowable Rotation Speed (min^{-1}) and Fluid Pressure (MPa).
2. Do not exceed the temperature written in the specification even with lower rotation speed.



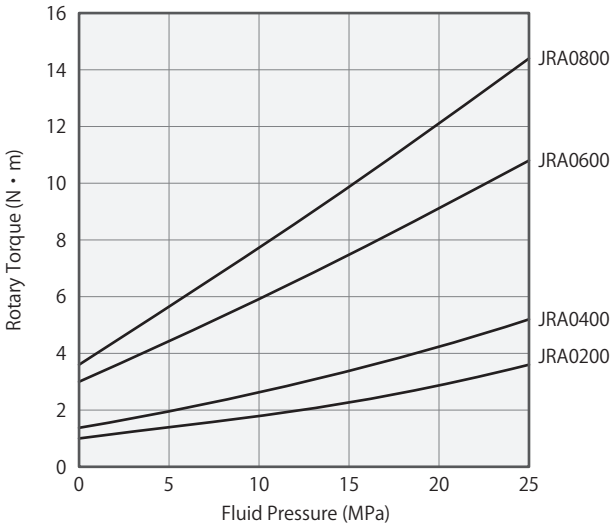
Performance Curve (Rotary Torque : Reference Value)

JRA : No Center Through Port Model

	Rotary Torque (N·m)			
Model No.	**JRA0200**	**JRA0400**	**JRA0600**	**JRA0800**
Fluid Pressure (MPa)	-□-□	-□-□	-□-□	-□-□
25	3.6	5.2	10.8	14.4
20	2.9	4.2	9.1	12.1
15	2.3	3.4	7.5	9.8
10	1.8	2.6	5.9	7.7
7	1.6	2.2	5.0	6.4
0	1.0	1.4	3.0	3.6

Notes :

1. This graph shows the relationship between Rotary Torque (N•m) and Fluid Pressure (MPa).
2. The starting torque might be more than double of rotating torque shown in the graph and may change depending on the conditions of down time, etc.
3. The rotary torque is a reference value.

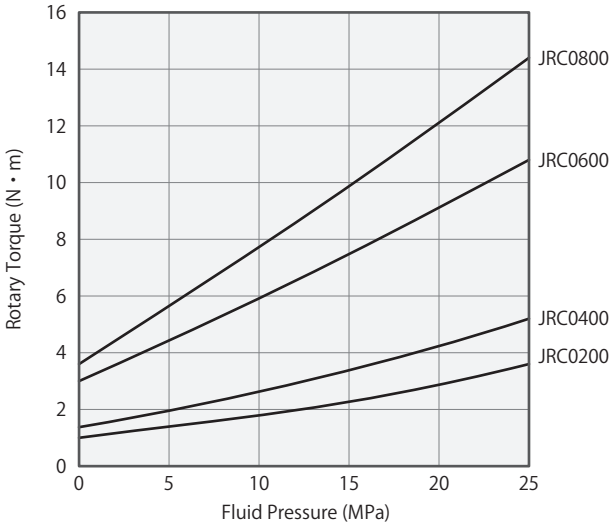


JRC : No Center Through Port Model

	Rotary Torque (N·m)			
Model No.	**JRC0200**	**JRC0400**	**JRC0600**	**JRC0800**
Fluid Pressure (MPa)	-□-□	-□-□	-□-□	-□-□
25	3.6	5.2	10.8	14.4
20	2.9	4.2	9.1	12.1
15	2.3	3.4	7.5	9.8
10	1.8	2.6	5.9	7.7
7	1.6	2.2	5.0	6.4
0	1.0	1.4	3.0	3.6

Notes :

1. This graph shows the relationship between Rotary Torque (N•m) and Fluid Pressure (MPa).
2. The starting torque might be more than double of rotating torque shown in the graph and may change depending on the conditions of down time, etc.
3. The rotary torque is a reference value.

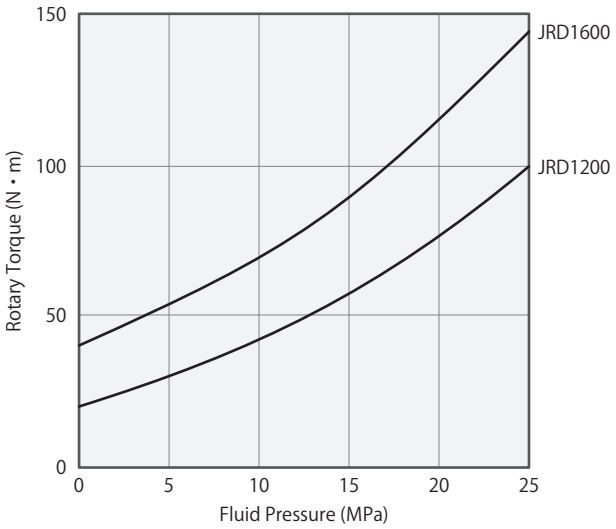


JRD : No Center Through Port Model

	Rotary Torque (N·m)	
Model No.	**JRD1200**	**JRD1600**
Fluid Pressure (MPa)	-□-G	-□-G
25	100.0	145.0
20	75.0	114.0
15	56.0	89.0
10	42.5	70.0
7	35.0	59.0
0	20.0	40.0

Notes :

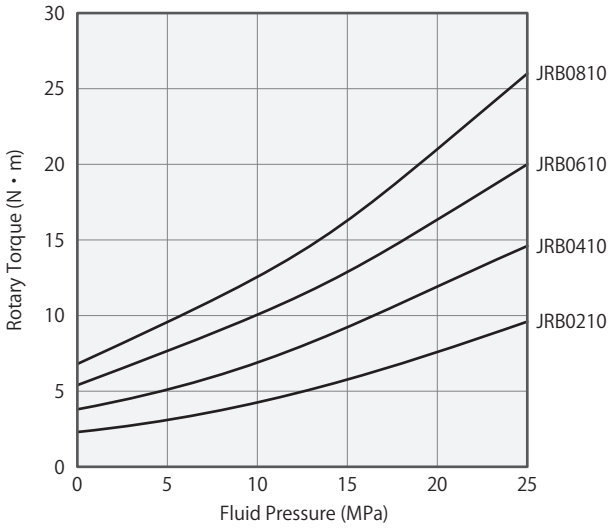
1. This graph shows the relationship between Rotary Torque (N•m) and Fluid Pressure (MPa).
2. The starting torque might be more than double of rotating torque shown in the graph and may change depending on the conditions of down time, etc.
3. The rotary torque is a reference value.



Performance Curve (Rotary Torque : Reference Value)

JRB : One Center Through Port Model

	Rotary Torque (N·m)			
Model No.	**JRB0210**	**JRB0410**	**JRB0610**	**JRB0810**
Fluid Pressure (MPa)	**-□-G-□**	**-□-G-□**	**-□-G-□**	**-□-G-□**
25	9.6	14.6	20.0	26.0
20	7.6	12.0	16.2	21.0
15	5.7	9.3	13.0	16.5
10	4.2	6.8	10.0	12.7
7	3.5	5.7	8.5	10.5
0	2.3	3.8	5.3	6.8



Notes :

1. This graph shows the relationship between Rotary Torque (N·m) and Fluid Pressure (MPa).
2. The starting torque might be more than double of rotating torque shown in the graph and may change depending on the conditions of down time, etc.
3. The rotary torque is a reference value.

High-Power Series
Pneumatic Series
Hydraulic Series
Valve / Coupler Hydraulic Unit
Manual Operation Accessories
Cautions / Others

Air Sequence Valve
BWD
Hydraulic Non-Leak Coupler
BGA/BGB
BGC/BGD
BGP/BGS
BBP/BBS
BNP/BNS
BJP/BJS
BFP/BFS
Auto Coupler
JTA/JTB
JTC/JTD
JVA/JVB
JVC/JVD
JVE/JVF
JNA/JNB
JNC/JND
JLP/JLS
Rotary Joint
JR
Hydraulic Valve
BK
BEQ
BT
BLS/BLG
BLB
JSS/JS
JKA/JKB
BMA/BMG
AU/AU-M
BU
BP/JPB
BX
BEP/BSP
BH
BC
Air Hydraulic Unit
CV
CK
CP/CPB
CPC/CQC
CB
CC
AB/AB-V
AC/AC-V

External Dimensions : JRA0200

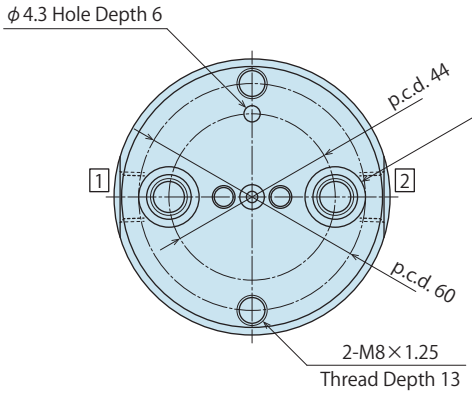
※ This drawing shows JRA0200-S-A.
(2 Circuit Ports)

Contact us when a G screw is required for the shaft side port or the housing side port.

Model No. Indication

JRA0200- S B - A D

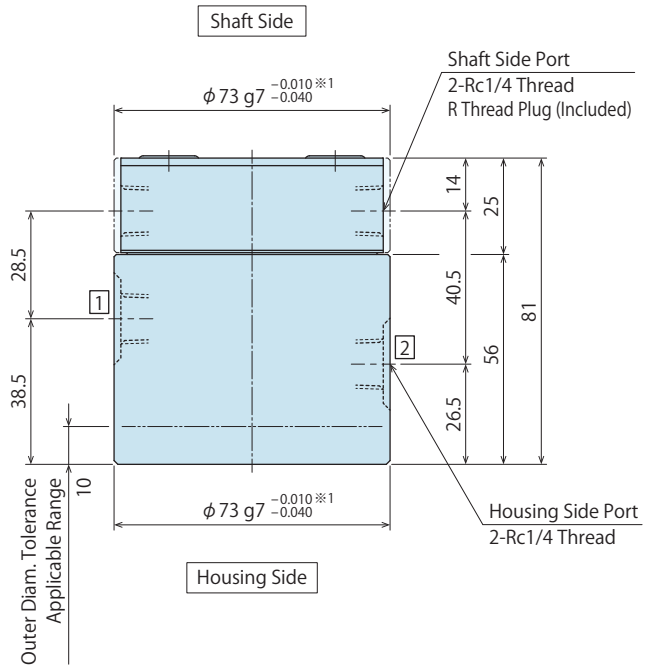
4 Housing Side Piping Method
5 Shaft Side Piping Method



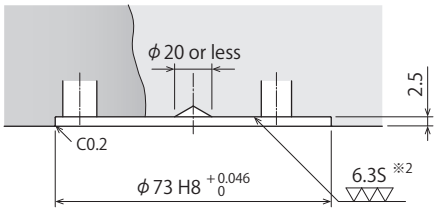
Shaft Side Port : In case of the Gasket Option
2-Gasket Port Rc1/8 Thread・180° Pitch R Thread Plug (Included)
O-ring : 1BP12 (Included)

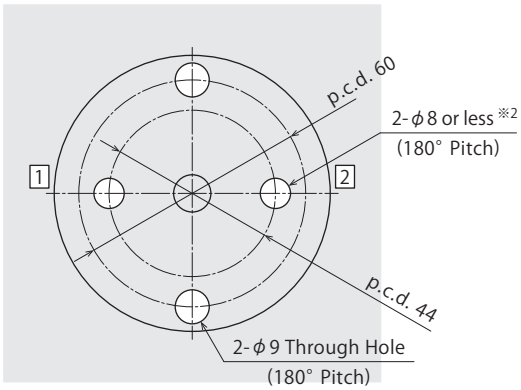
Notes :
1. When mounting the product, restrain only the rotation direction of either of the shaft side or the housing side.
2. Please use a hose for piping of the side which only the rotation direction is restrained.
3. If there is oil slick leak from hydraulic circuit to air circuit, install a drain circuit between the two circuits.
4. Please avoid continuous operation since it will cause overheating and damage to the internal packing.
5. The port number is marked on each port.
6. When using Rc1/4 for the shaft side port, please set the attached R1/8 thread plug.
When using the gasket option, please set the attched O-ring and R1/4 thread plug.

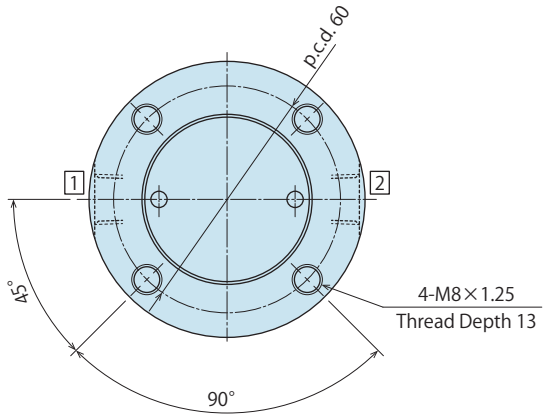
※1. In case of G thread piping option : External dimensions are different. (JRA0200 : 2 port model only)



Machining Dimensions of Mounting Area : Shaft Side







Notes :
※2. In case of the gasket option.
1. Refer to the external dimensions for the machining dimensions of the housing side mounting area.
2. The mounting surface (O-ring sealing surface) should be flat and its maximum height of the roughness profile should be 6.3S or less.

External Dimensions : JRA0400

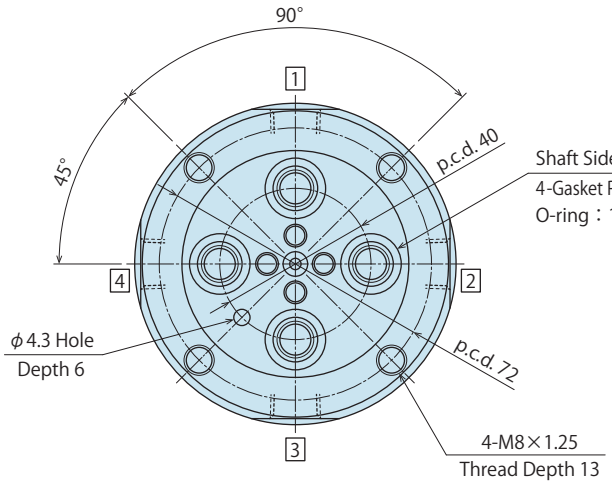
※ This drawing shows JRA0400-S-A.
(4 Circuit Ports)

Contact us when a G screw is required for the shaft side port or the housing side port.

Model No. Indication

JRA0400- S/B - A/D

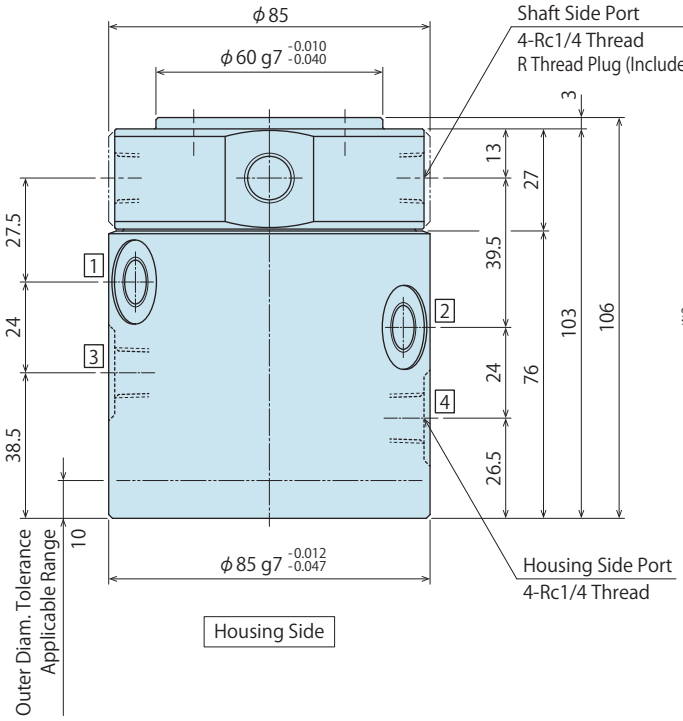
4 Housing Side Piping Method
5 Shaft Side Piping Method



Shaft Side Port : In case of the Gasket Option
4-Gasket Port Rc1/8 Thread • 90° Pitch R Thread Plug (Included)
O-ring : 1BP12 (Included)

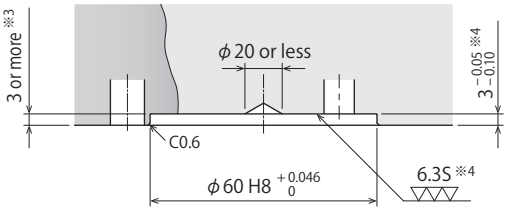
Notes :
1. When mounting the product, restrain only the rotation direction of either of the shaft side or the housing side.
2. Please use a hose for piping of the side which only the rotation direction is restrained.
3. If there is oil slick leak from hydraulic circuit to air circuit, install a drain circuit between the two circuits.
4. Please avoid continuous operation since it will cause overheating and damage to the internal packing.
5. The port number is marked on each port.
6. When using Rc1/4 for the shaft side port, please set the attached R1/8 thread plug.
   When using the gasket option, please set the attched O-ring and R1/4 thread plug.
7. When mounting the shaft side, gradually tighten the four bolts in diagonal pattern. (In case of the gasket option)

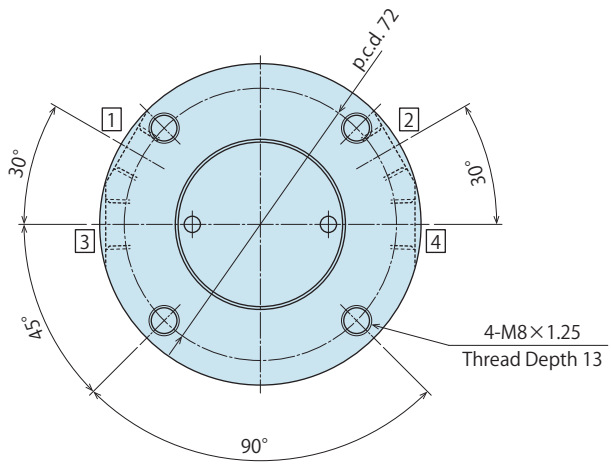
Shaft Side

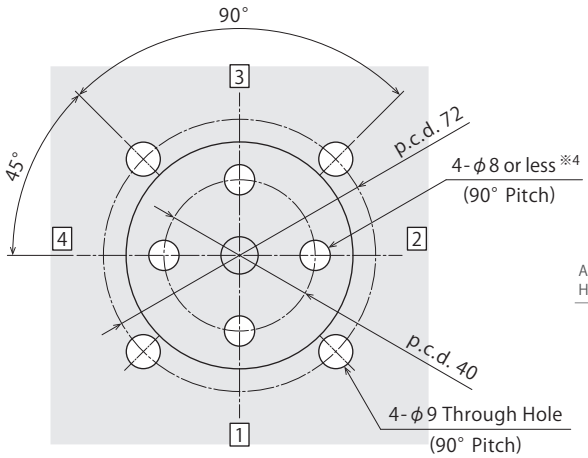


Housing Side

Machining Dimensions of Mounting Area : Shaft Side







Notes :
※3. In case of the piping option.
※4. In case of the gasket option.
1. Refer to the external dimensions for the machining dimensions of the housing side mounting area.
2. The mounting surface (O-ring sealing surface) should be flat and its maximum height of the roughness profile should be 6.3S or less.

External Dimensions : JRA0600

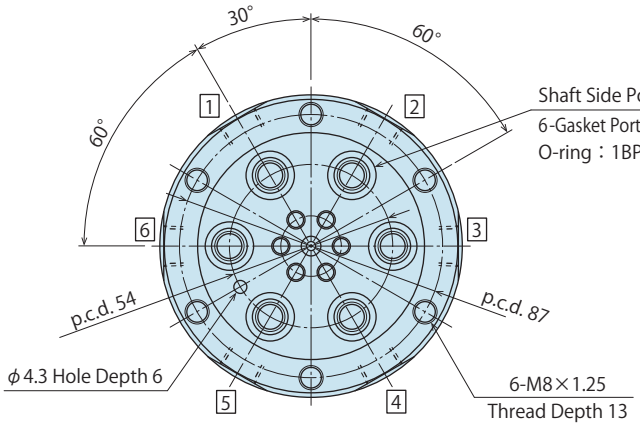
※ This drawing shows JRA0600-S-A.
(6 Circuit Ports)

Contact us when a G screw is required for the shaft side port or the housing side port.

Model No. Indication

JRA0600- S/B - A/D

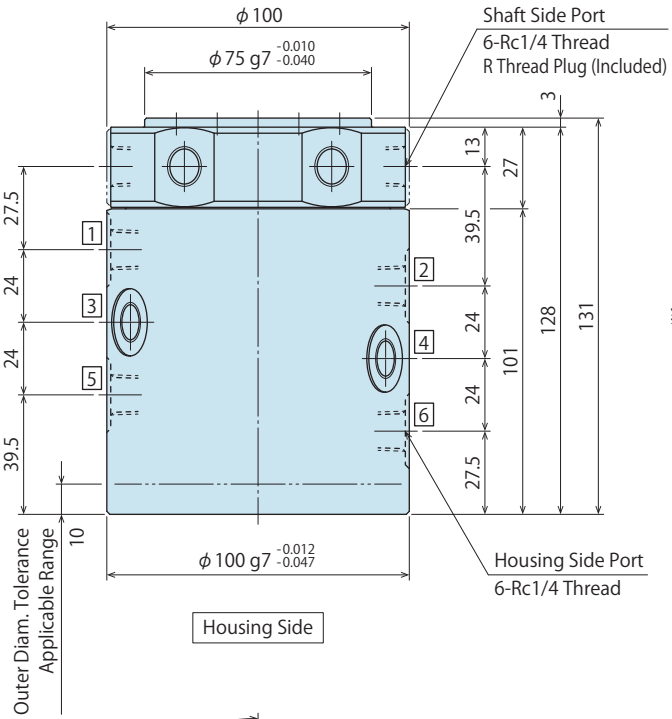
4 Housing Side Piping Method
5 Shaft Side Piping Method



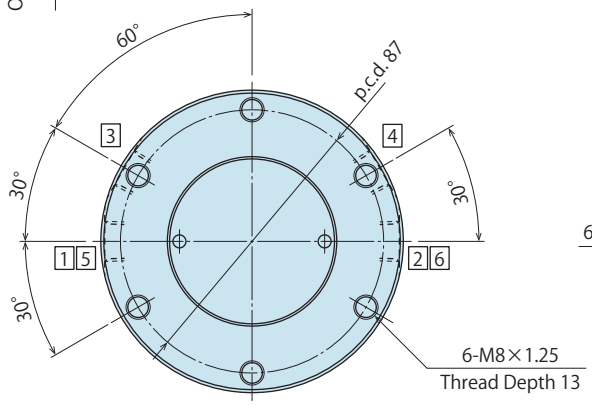
Shaft Side Port : In case of the Gasket Option
6-Gasket Port Rc1/8 Thread • 60° Pitch R Thread Plug (Included)
O-ring : 1BP12 (Included)

Notes :
1. When mounting the product, restrain only the rotation direction of either of the shaft side or the housing side.
2. Please use a hose for piping of the side which only the rotation direction is restrained.
3. If there is oil slick leak from hydraulic circuit to air circuit, install a drain circuit between the two circuits.
4. Please avoid continuous operation since it will cause overheating and damage to the internal packing.
5. The port number is marked on each port.
6. When using Rc1/4 for the shaft side port, please set the attached R1/8 thread plug.
   When using the gasket option, please set the attched O-ring and R1/4 thread plug.
7. When mounting the shaft side, gradually tighten the six bolts in diagonal pattern. (In case of the gasket option)

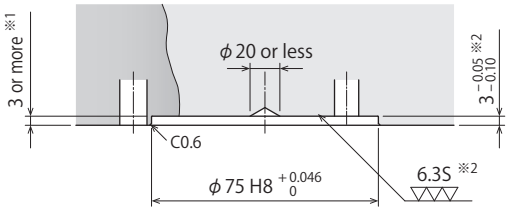
Shaft Side

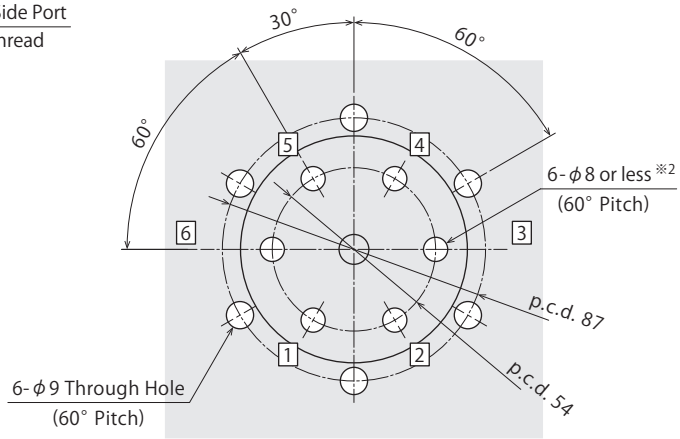


Housing Side



Machining Dimensions of Mounting Area : Shaft Side





Notes :
※1. In case of the piping option.
※2. In case of the gasket option.
1. Refer to the external dimensions for the machining dimensions of the housing side mounting area.
2. The mounting surface (O-ring sealing surface) should be flat and its maximum height of the roughness profile should be 6.3S or less.

External Dimensions : JRA0800

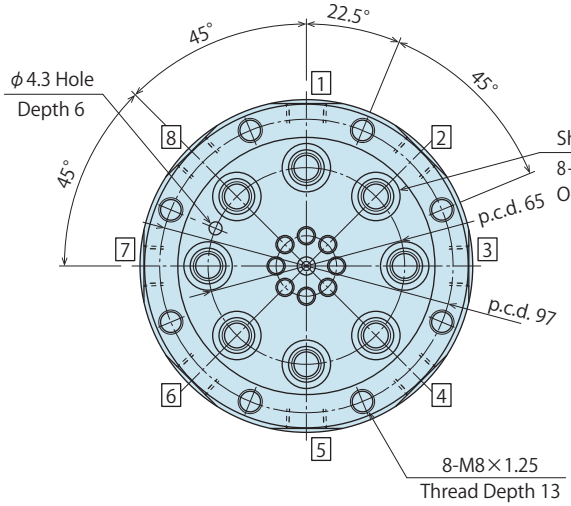
※ This drawing shows JRA0800-S-A.
(8 Circuit Ports)

Contact us when a G screw is required for the shaft side port or the housing side port.

Model No. Indication

JRA0800- S B - A D

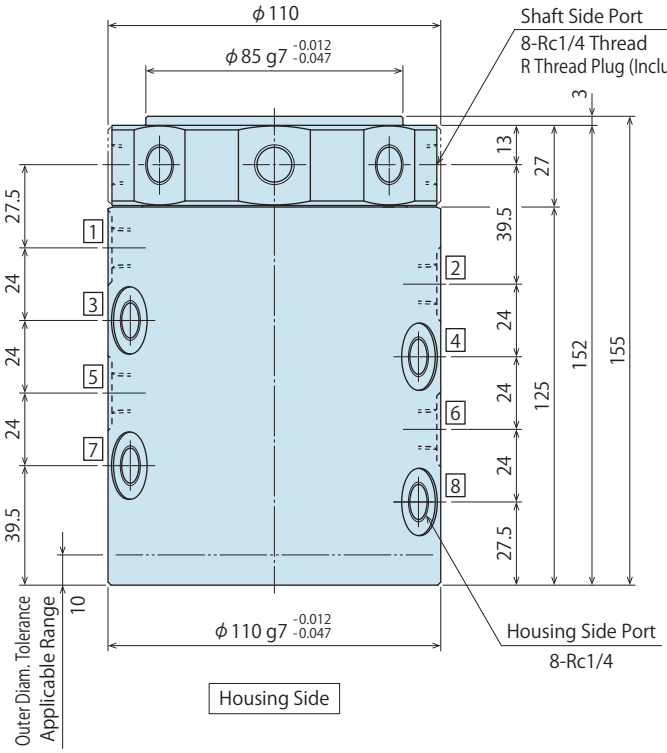
4 Housing Side Piping Method
5 Shaft Side Piping Method



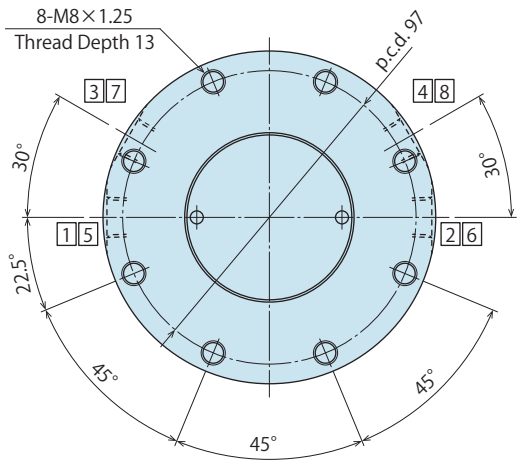
Shaft Side Port : In case of the Gasket Option
8-Gasket Port Rc1/8 Thread • 45° Pitch R Thread Plug (Included)
O-ring : 1BP12 (Included)

Notes :
1. When mounting the product, restrain only the rotation direction of either of the shaft side or the housing side.
2. Please use a hose for piping of the side which only the rotation direction is restrained.
3. If there is oil slick leak from hydraulic circuit to air circuit, install a drain circuit between the two circuits.
4. Please avoid continuous operation since it will cause overheating and damage to the internal packing.
5. The port number is marked on each port.
6. When using Rc1/4 for the shaft side port, please set the attached R1/8 thread plug.
   When using the gasket option, please set the attched O-ring and R1/4 thread plug.
7. When mounting the shaft side, gradually tighten the eight bolts in diagonal pattern. (In case of the gasket option)

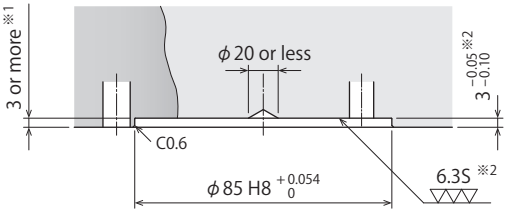
Shaft Side

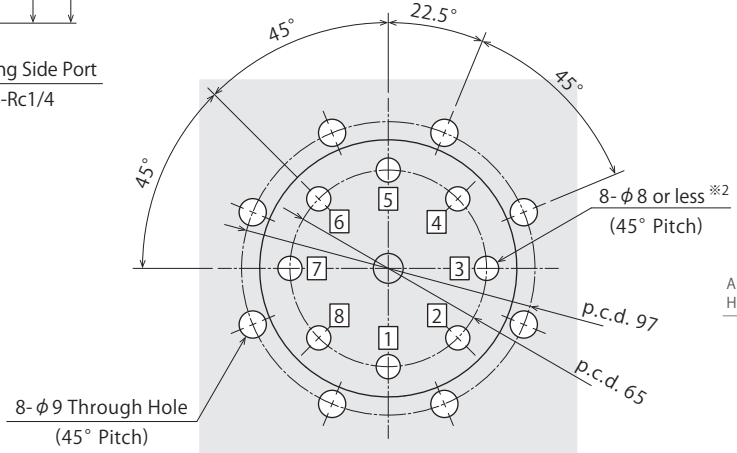


Housing Side



Machining Dimensions of Mounting Area : Shaft Side



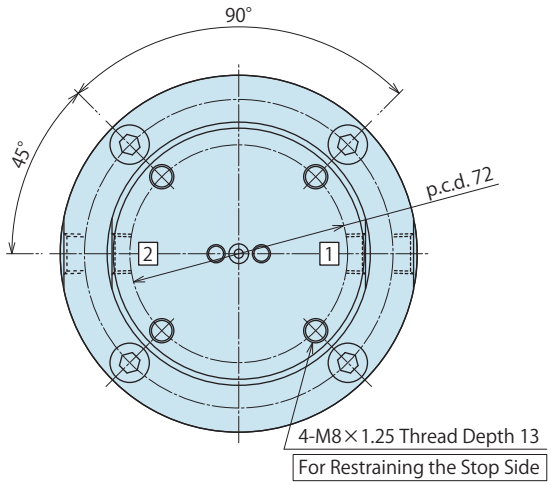


Notes :
※1. In case of the piping option.
※2. In case of the gasket option.
1. Refer to the external dimensions for the machining dimensions of the housing side mounting area.
2. The mounting surface (O-ring sealing surface) should be flat and its maximum height of the roughness profile should be 6.3S or less.

External Dimensions : JRC0200

※ This drawing shows JRC0200-S-A.
(2 Circuit Ports)

Contact us when a G screw is required for the incoming side port or the outgoing side port.

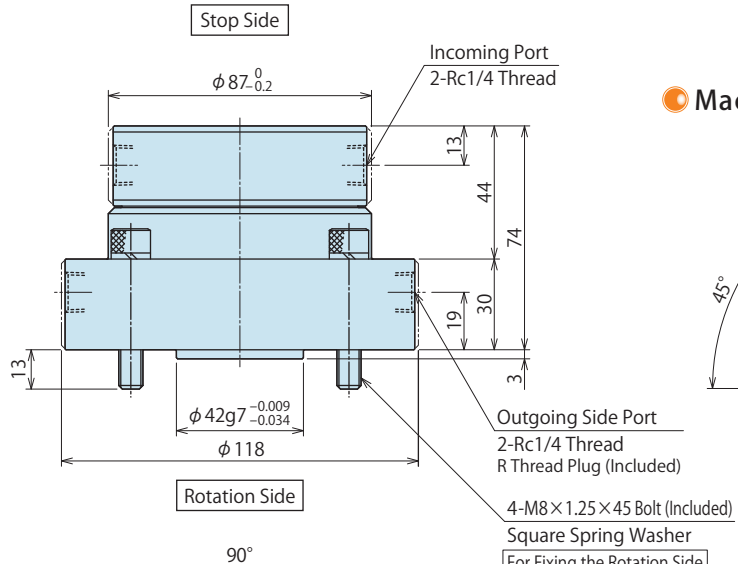


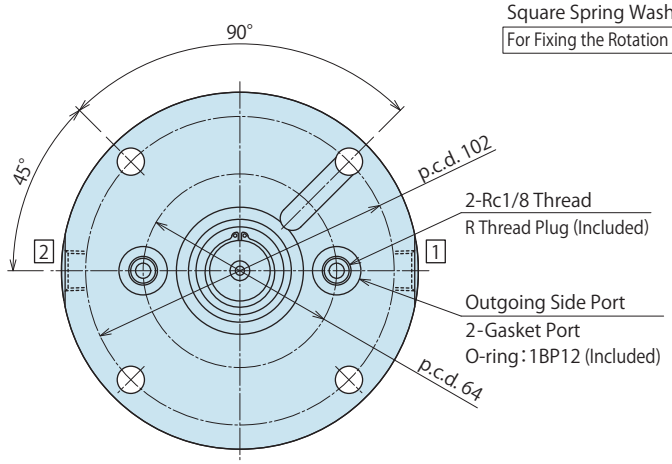
Model No. Indication

JRC0200- S/B - A/D

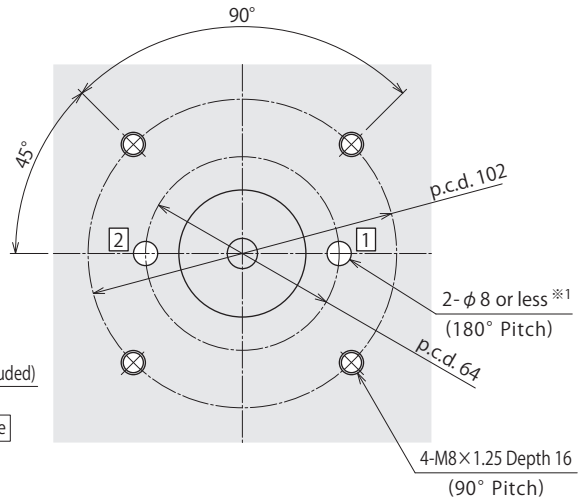
4 Incoming Side Piping Method
5 Outgoing Side Piping Method

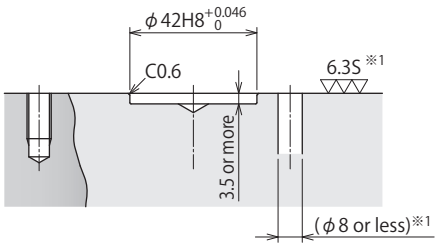
Notes :
1. The flange part of the rotation side must be fixed with the bolts, and restrain only the rotation direction of the stop side.
2. Please use a hose for piping of the stop side.
3. If there is oil slick leak from hydraulic circuit to air circuit, install a drain circuit between the two circuits.
4. Please avoid continuous operation since it will cause overheating and damage to the internal packing.
5. The port number is marked on each port.
6. When using Rc1/4 for the outgoing side port, please set the attached R1/8 thread plug.
When using the gasket option, please set the attched O-ring and R1/4 thread plug.





Machining Dimensions of Mounting Area



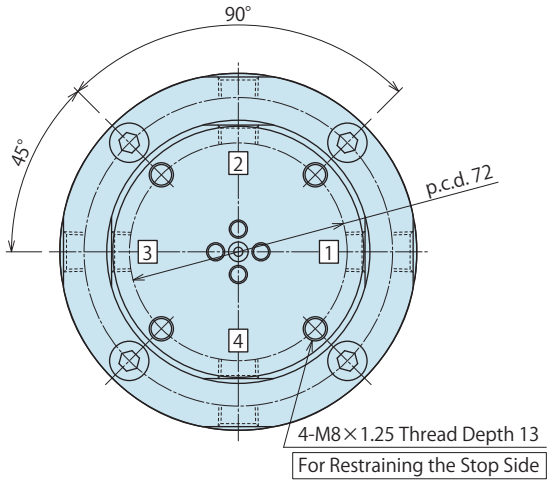


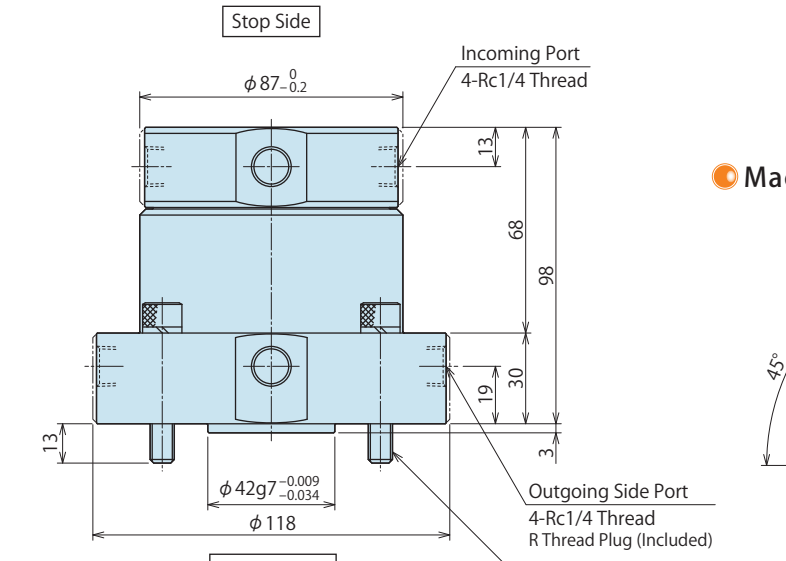
Notes :
※1. In case of the gasket option.
1. The mounting surface (O-ring sealing surface) should be flat and its maximum height of the roughness profile should be 6.3S or less.

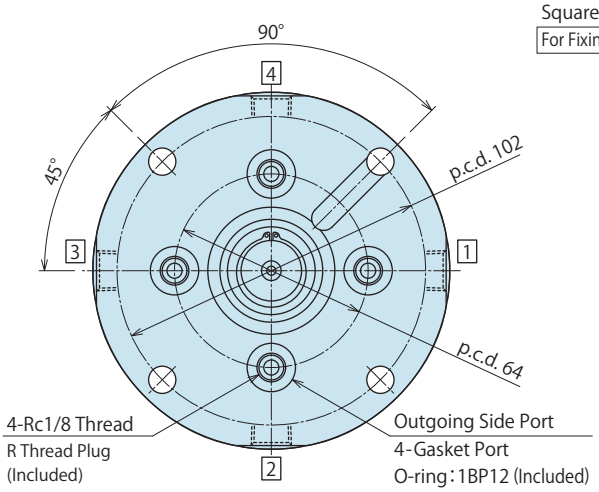
External Dimensions : JRC0400

※ This drawing shows JRC0400-S-A.
(4 Circuit Ports)

Contact us when a G screw is required for the incoming side port or the outgoing side port.







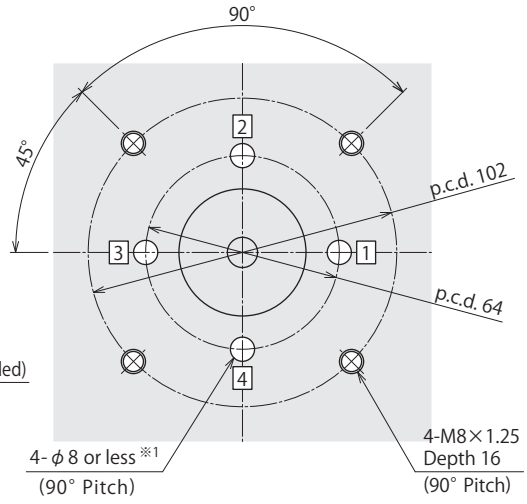
Model No. Indication

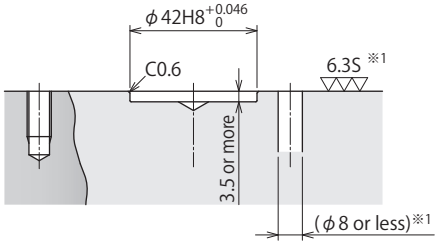
JRC0400- S/B - A/D

4 Incoming Side Piping Method
5 Outgoing Side Piping Method

Notes :
1. The flange part of the rotation side must be fixed with the bolts, and restrain only the rotation direction of the stop side.
2. Please use a hose for piping of the stop side.
3. If there is oil slick leak from hydraulic circuit to air circuit, install a drain circuit between the two circuits.
4. Please avoid continuous operation since it will cause overheating and damage to the internal packing.
5. The port number is marked on each port.
6. When using Rc1/4 for the outgoing side port, please set the attached R1/8 thread plug.
When using the gasket option, please set the attched O-ring and R1/4 thread plug.

Machining Dimensions of Mounting Area





Notes :
※1. In case of the gasket option.
1. The mounting surface (O-ring sealing surface) should be flat and its maximum height of the roughness profile should be 6.3S or less.

External Dimensions : JRC0600

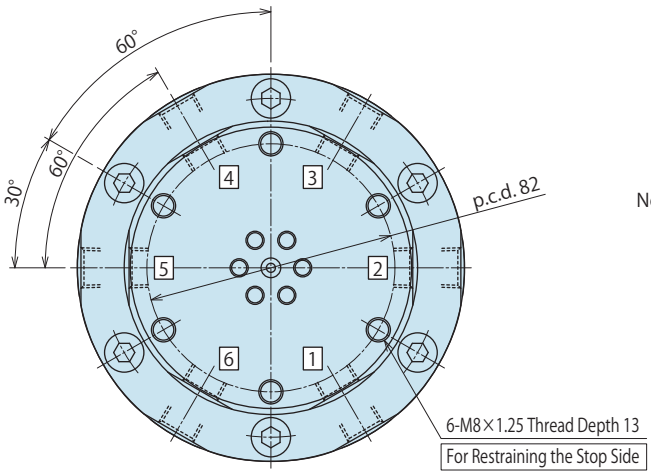
※ This drawing shows JRC0600-S-A.
(6 Circuit Ports)

Contact us when a G screw is required for the incoming side port or the outgoing side port.

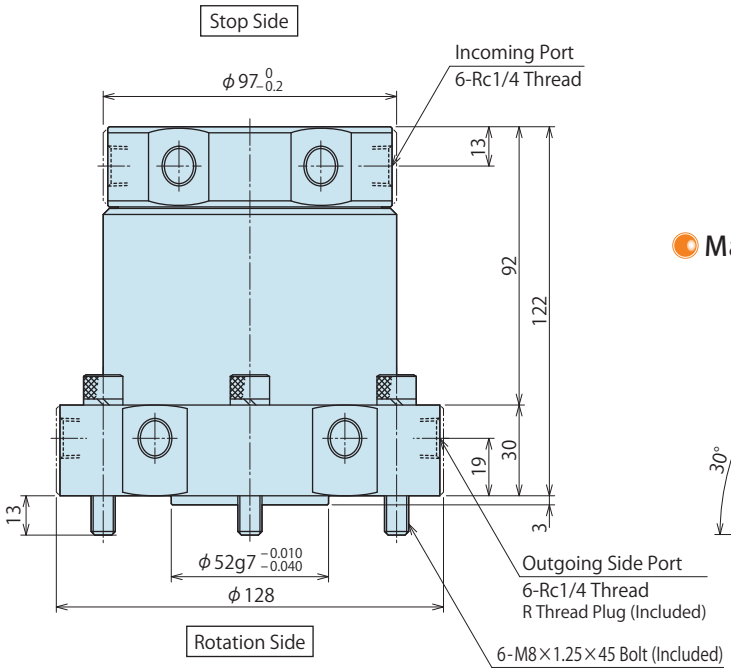
Model No. Indication

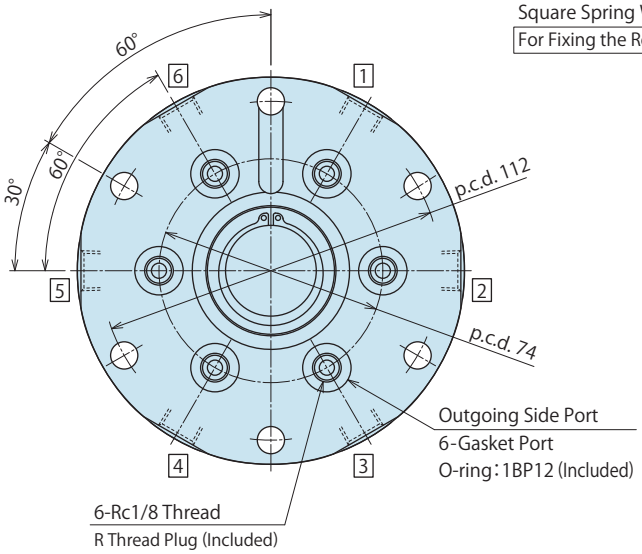
JRC0600- S B - A D

4 Incoming Side Piping Method
5 Outgoing Side Piping Method

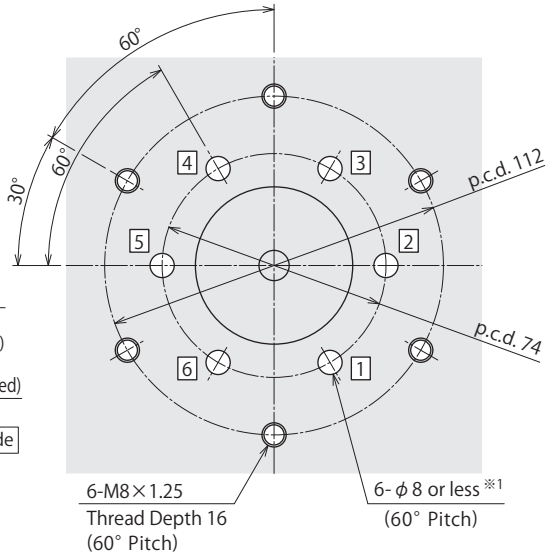


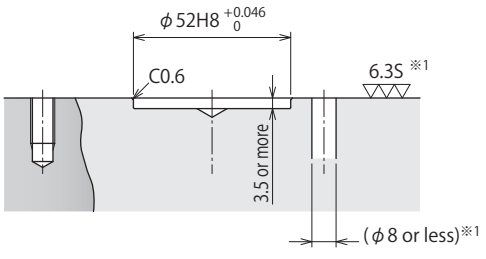
Notes :
1. The flange part of the rotation side must be fixed with the bolts, and restrain only the rotation direction of the stop side.
2. Please use a hose for piping of the stop side.
3. If there is oil slick leak from hydraulic circuit to air circuit, install a drain circuit between the two circuits.
4. Please avoid continuous operation since it will cause overheating and damage to the internal packing.
5. The port number is marked on each port.
6. When using Rc1/4 for the outgoing side port, please set the attached R1/8 thread plug.
   When using the gasket option, please set the attched O-ring and R1/4 thread plug.





Machining Dimensions of Mounting Area



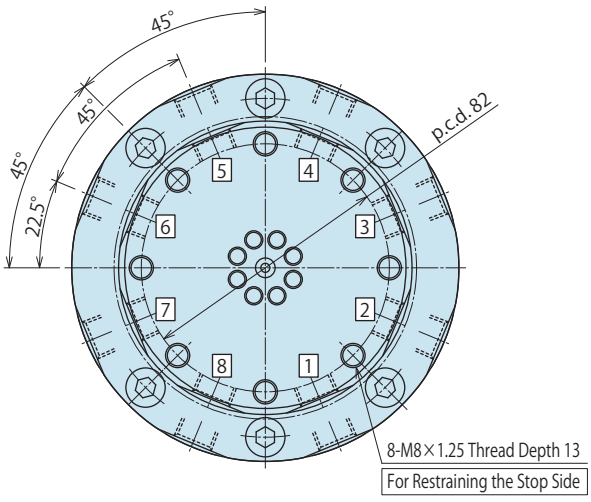


Notes :
※1. In case of the gasket option.
1. The mounting surface (O-ring sealing surface) should be flat and its maximum height of the roughness profile should be 6.3S or less.

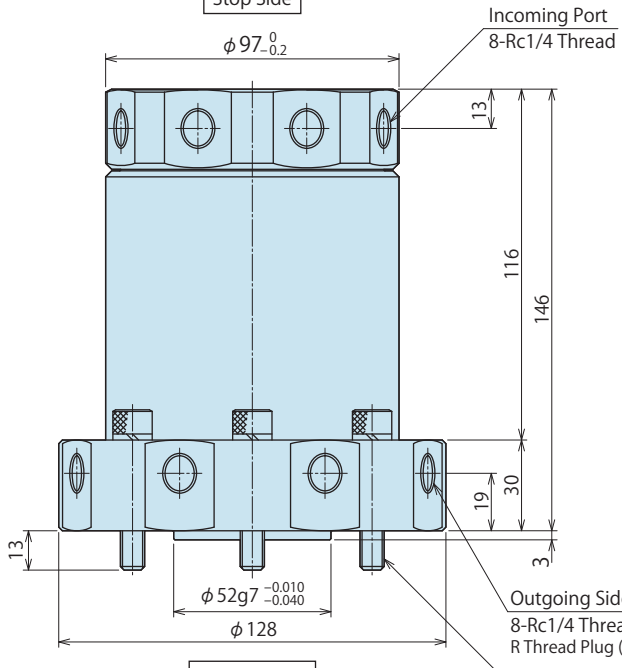
External Dimensions : JRC0800

※ This drawing shows JRC0800-S-A.
(8 Circuit Ports)

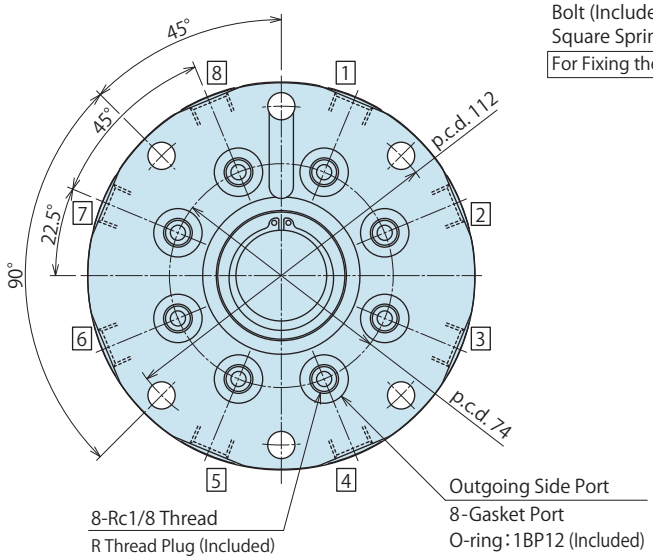
Contact us when a G screw is required for the incoming side port or the outgoing side port.



Stop Side



Rotation Side



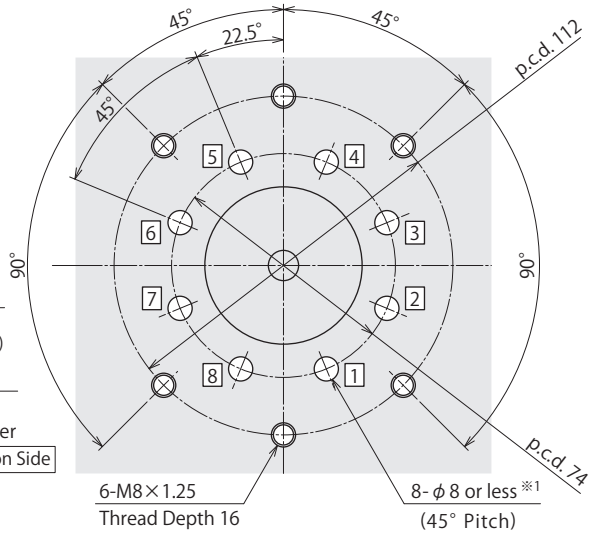
Model No. Indication

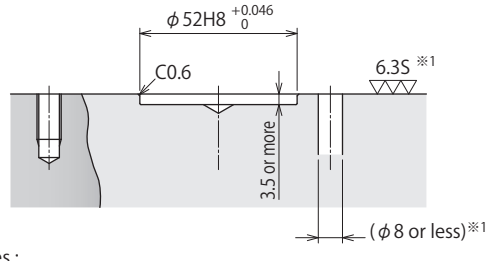
JRC0800- S/B - A/D

4 Incoming Side Piping Method
5 Outgoing Side Piping Method

Notes :
1. The flange part of the rotation side must be fixed with the bolts, and restrain only the rotation direction of the stop side.
2. Please use a hose for piping of the stop side.
3. If there is oil slick leak from hydraulic circuit to air circuit, install a drain circuit between the two circuits.
4. Please avoid continuous operation since it will cause overheating and damage to the internal packing.
5. The port number is marked on each port.
6. When using Rc1/4 for the outgoing side port, please set the attached R1/8 thread plug.
   When using the gasket option, please set the attched O-ring and R1/4 thread plug.

Machining Dimensions of Mounting Area



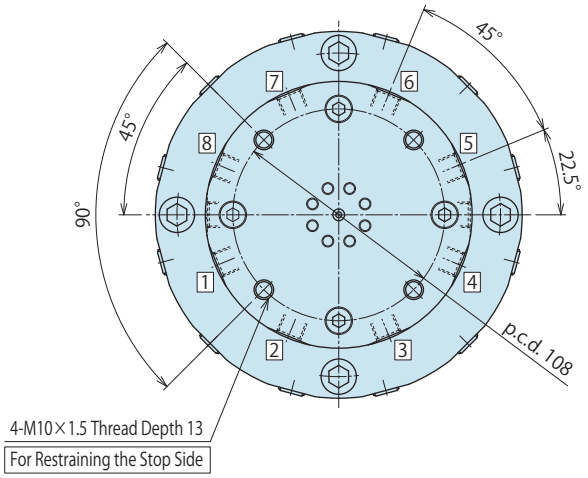


Notes :
※1. In case of the gasket option.
1. The mounting surface (O-ring sealing surface) should be flat and its maximum height of the roughness profile should be 6.3S or less.

External Dimensions : JRD1200

※ This drawing shows JRD1200-S-G.
(12 Circuit Ports)

Contact us when a G screw is required for the incoming side port.

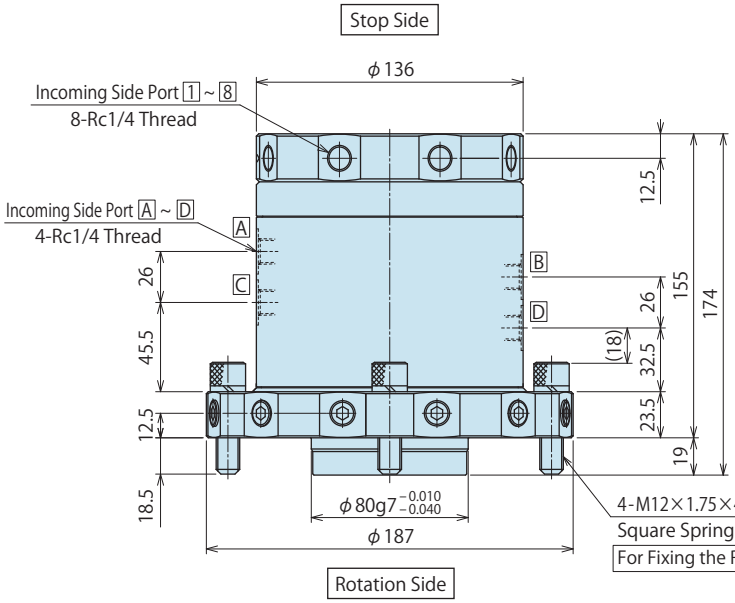


Model No. Indication

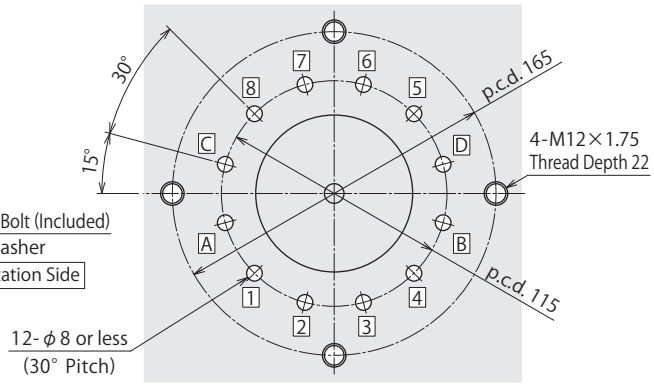
JRD1200- S/B -G

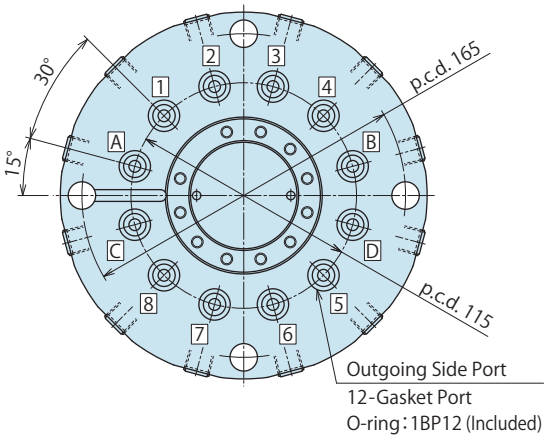
4 Incoming Side Piping Method
5 Outgoing Side Piping Method

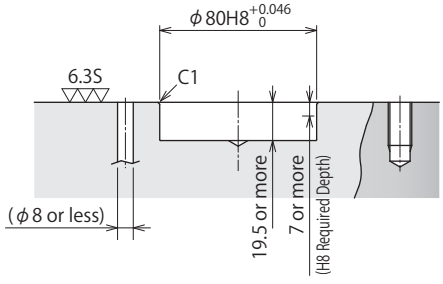
Notes :
1. The flange part of the rotation side must be fixed with the bolts, and restrain only the rotation direction of the stop side.
2. Please use a hose for piping of the stop side.
3. When using both oil and air, it is recommended to use 1 ~ 8 for oil, and A ~ D for air. (Due to the dual structure, the rotation sealing diameter of 1 ~ 8 is smaller than that of A ~ D .)
   - Rotating torque can be lowered since sliding resistance caused by hydraulic pressure (high pressure) is decreased.
   - No need to consider oil slick leak from hydraulic circuit to air circuit.
4. If it is not able to use the above recommended ports and there is oil slick leak to air circuit, install a drain circuit between the two circuits.
5. Please avoid continuous operation as it will cause overheating and damage to the internal packing.
6. The port number is marked on each port.



Machining Dimensions of Mounting Area





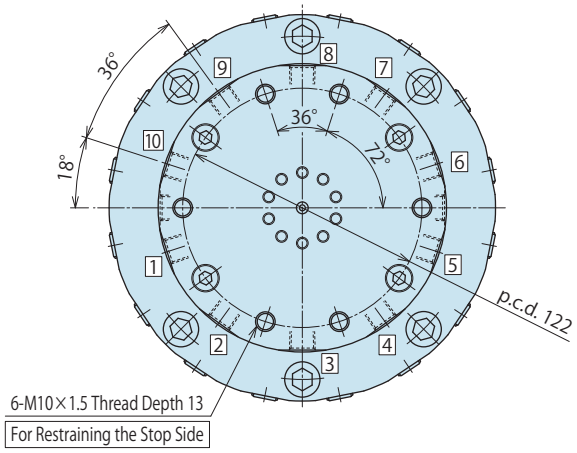


Note :
1. The mounting surface (O-ring sealing surface) should be flat and its maximum height of the roughness profile should be 6.3S or less.

External Dimensions : JRD1600

※ This drawing shows JRD1600-S-G.
(16 Circuit Ports)

Contact us when a G screw is required for the incoming side port.

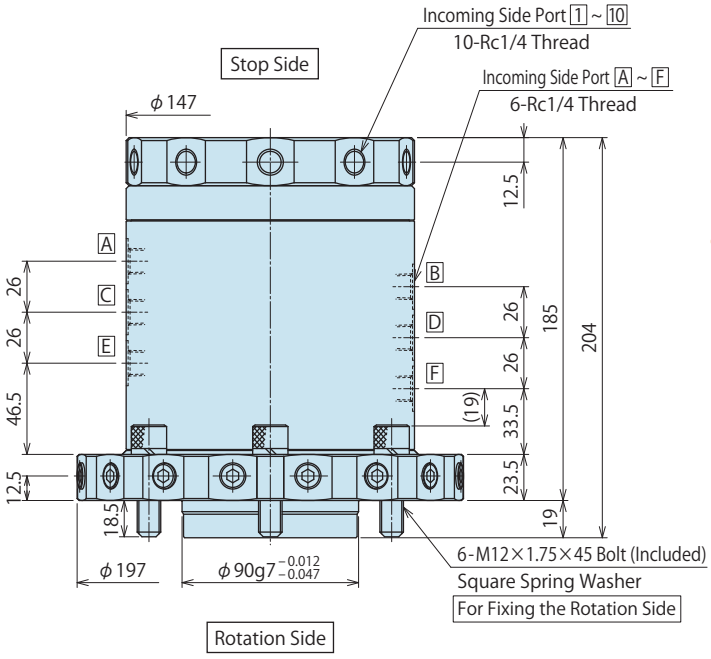


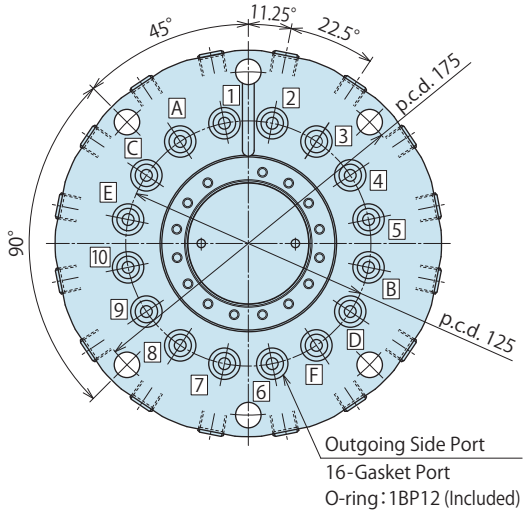
Model No. Indication

JRD1600- S B -G

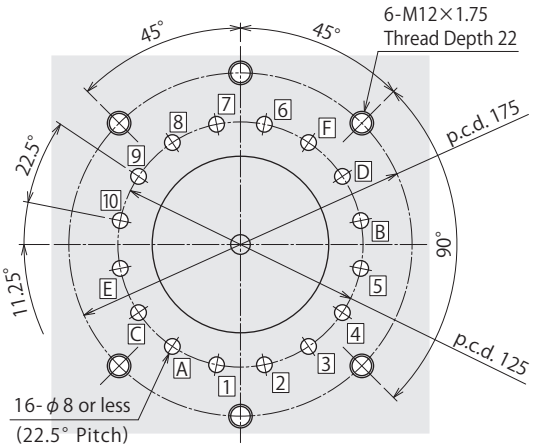
4 Incoming Side Piping Method
5 Outgoing Side Piping Method

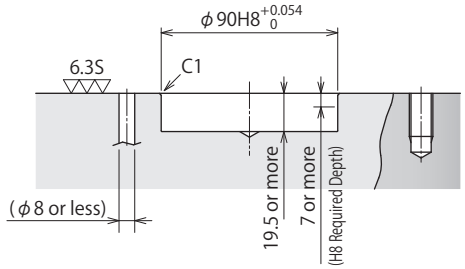
Notes :
1. The flange part of the rotation side must be fixed with the bolts, and restrain only the rotation direction of the stop side.
2. Please use a hose for piping of the stop side.
3. When using both oil and air, it is recommended to use 1 ~ 10 for oil, and A ~ F for air. (Due to the dual structure, the rotation seal diameter of 1 ~ 10 is smaller than that of A ~ F .)
   - Rotating torque can be lowered since sliding resistance caused by hydraulic pressure (high pressure) is decreased.
   - No need to consider oil slick leak from hydraulic circuit to air circuit.
4. If it is not able to use the above recommended ports and there is oil slick leak to air circuit, install a drain circuit between the two circuits.
5. Please avoid continuous operation as it will cause overheating and damage to the internal packing.
6. The port number is marked on each port.





Machining Dimensions of Mounting Area





Note :
1. The mounting surface (O-ring sealing surface) should be flat and its maximum height of the roughness profile should be 6.3S or less.

External Dimensions : JRB0210

※This drawing shows JRB0210-S-G-S.
(2 Circuit Ports + 1 Center Through Port)

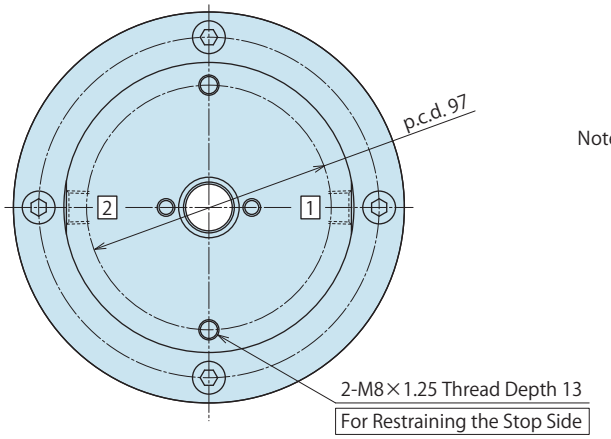
Contact us when a G screw is required for the incoming side port or the center through port. (The center through port is only available with a conversion connector.)

Model No. Indication

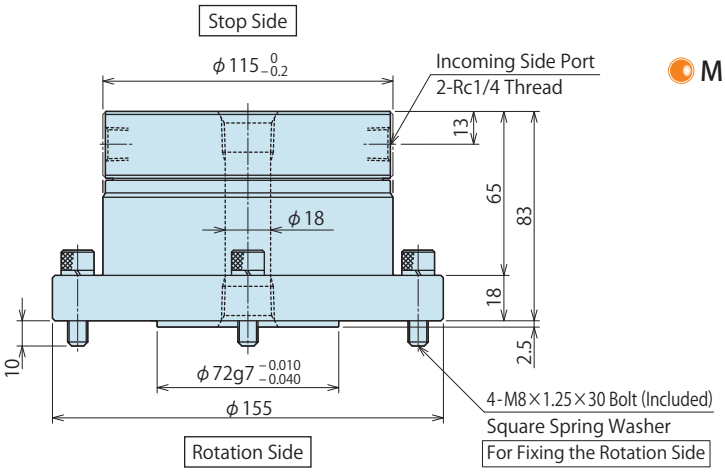
JRB0210- S/B -G- S/B

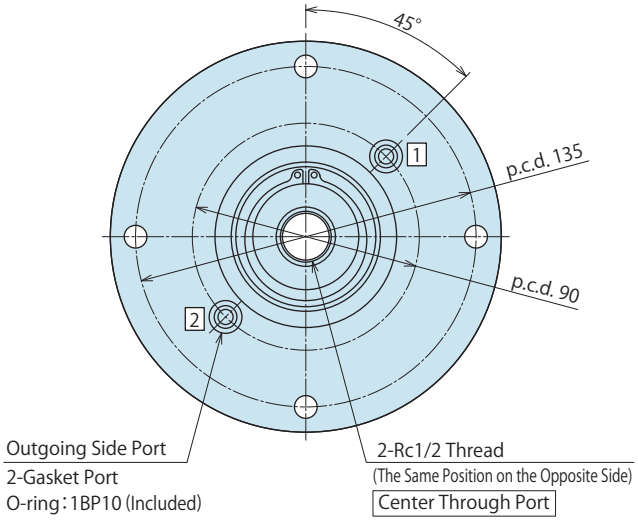
4 Incoming Side Piping Method

6 Center Through Port Piping Method

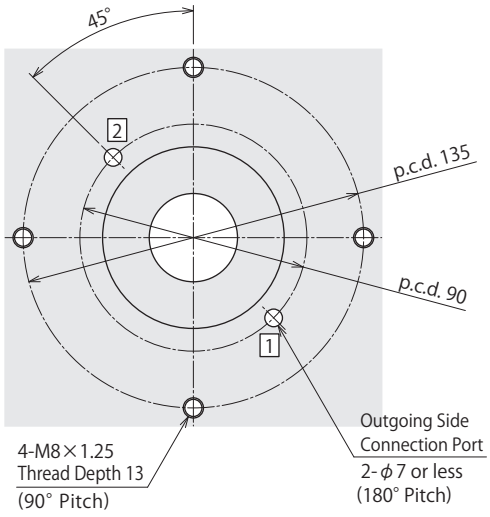


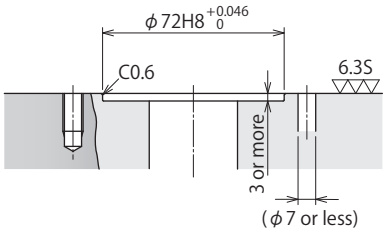
Notes :
1. The flange part of the rotation side must be fixed with the bolts, and restrain only the rotation direction of the stop side.
2. Please use a hose for piping of the stop side.
3. If there is oil slick leak from hydraulic circuit to air circuit, install a drain circuit between the two circuits.
4. Please avoid continuous operation as it will cause overheating and damage to the internal packing.
5. It requires another rotary joint when using the center coolant port.
6. The port number is marked on each port.





Machining Dimensions of Mounting Area



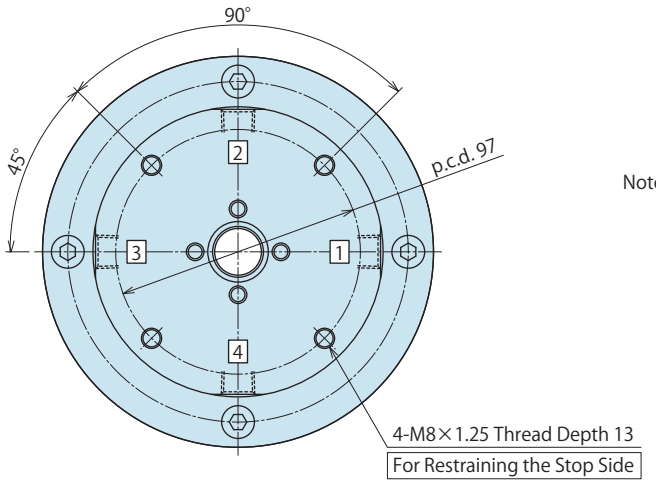


Note :
1. The mounting surface (O-ring sealing surface) should be flat and its maximum height of the roughness profile should be 6.3S or less.

External Dimensions : JRB0410

※This drawing shows JRB0410-S-G-S.
(4 Circuit Ports + 1 Center Through Port)

Contact us when a G screw is required for the incoming side port or the center through port. (The center through port is only available with a conversion connector.)

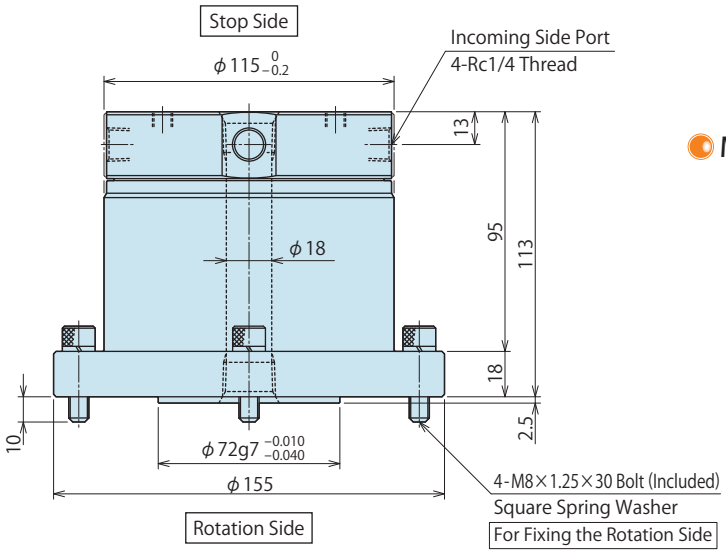


Model No. Indication

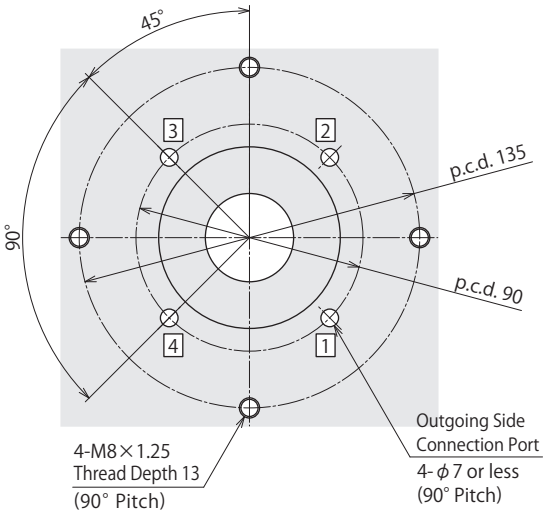
JRB0410-[S/B]-G-[S/B]

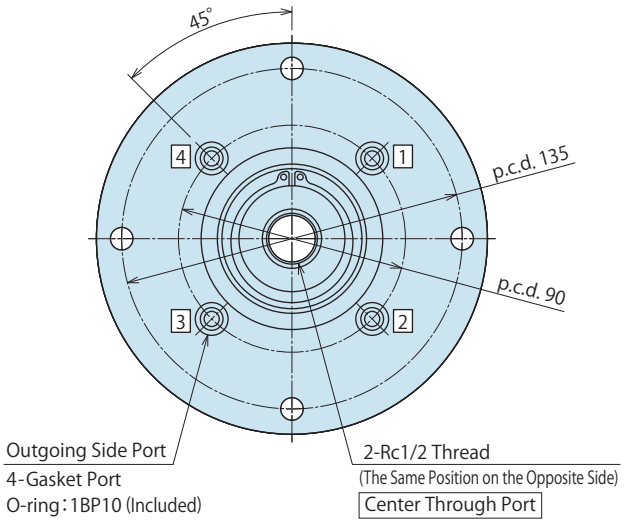
4 Incoming Side Piping Method
6 Center Through Port Piping Method

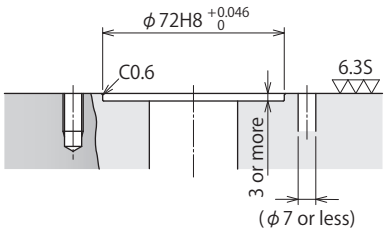
Notes :
1. The flange part of the rotation side must be fixed with the bolts, and restrain only the rotation direction of the stop side.
2. Please use a hose for piping of the stop side.
3. If there is oil slick leak from hydraulic circuit to air circuit, install a drain circuit between the two circuits.
4. Please avoid continuous operation as it will cause overheating and damage to the internal packing.
5. It requires another rotary joint when using the center coolant port.
6. The port number is marked on each port.



Machining Dimensions of Mounting Area





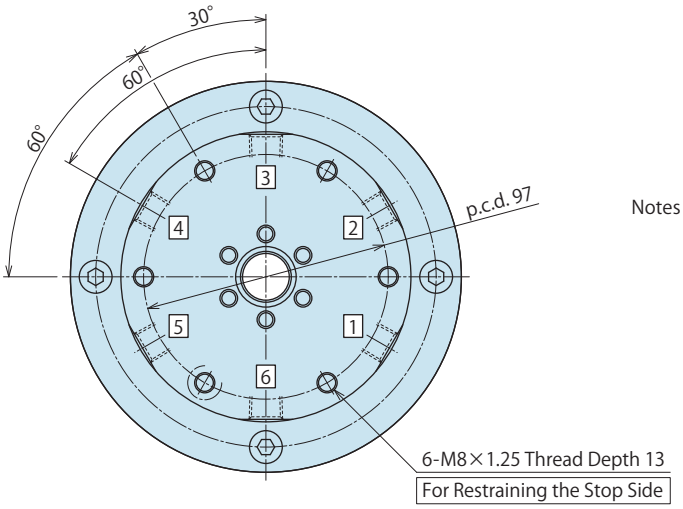


Note :
1. The mounting surface (O-ring sealing surface) should be flat and its maximum height of the roughness profile should be 6.3S or less.

External Dimensions : JRB0610

※This drawing shows JRB0610-S-G-S.
(6 Circuit Ports + 1 Center Through Port)

Contact us when a G screw is required for the incoming side port or the center through port. (The center through port is only available with a conversion connector.)



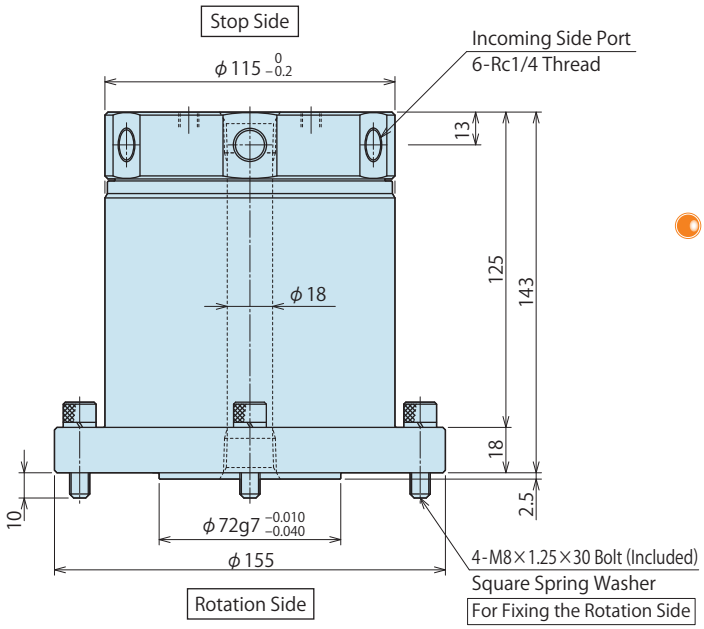
Model No. Indication

JRB0610-[S/B]-G-[S/B]

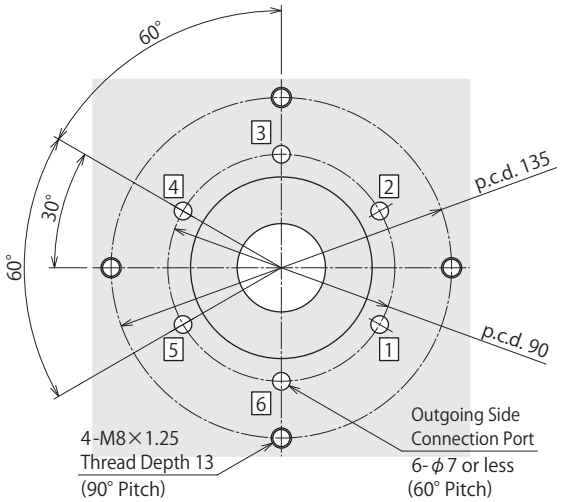
4 Incoming Side Piping Method

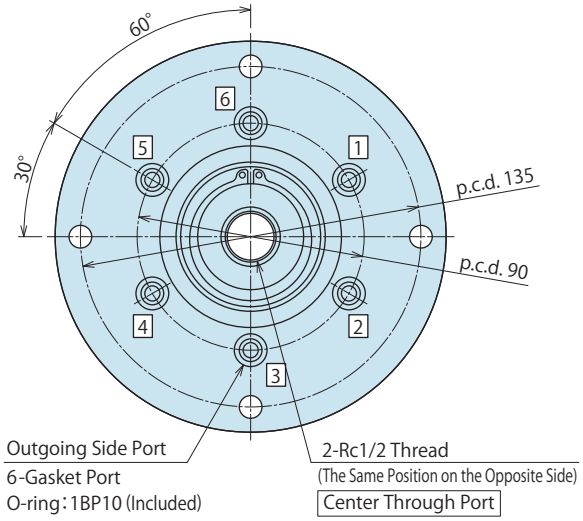
6 Center Through Port Piping Method

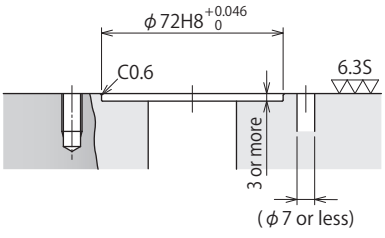
Notes :
1. The flange part of the rotation side must be fixed with the bolts, and restrain only the rotation direction of the stop side.
2. Please use a hose for piping of the stop side.
3. If there is oil slick leak from hydraulic circuit to air circuit, install a drain circuit between the two circuits.
4. Please avoid continuous operation as it will cause overheating and damage to the internal packing.
5. It requires another rotary joint when using the center coolant port.
6. The port number is marked on each port.



Machining Dimensions of Mounting Area





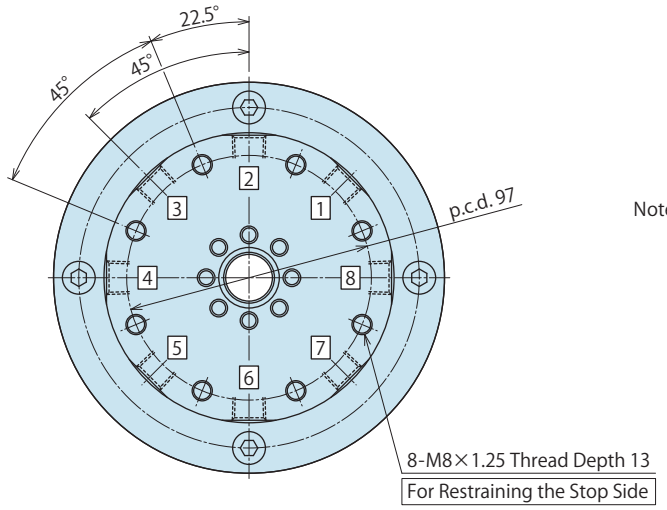


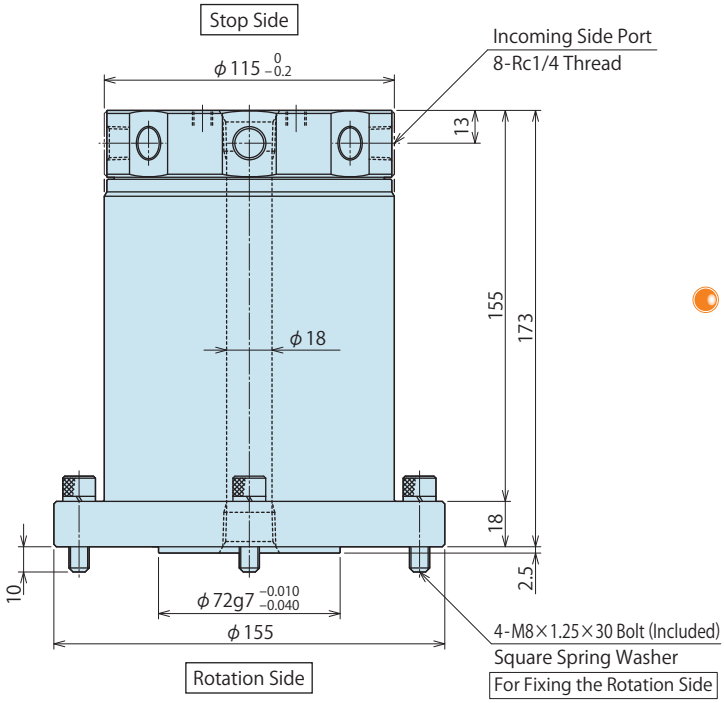
Note :
1. The mounting surface (O-ring sealing surface) should be flat and its maximum height of the roughness profile should be 6.3S or less.

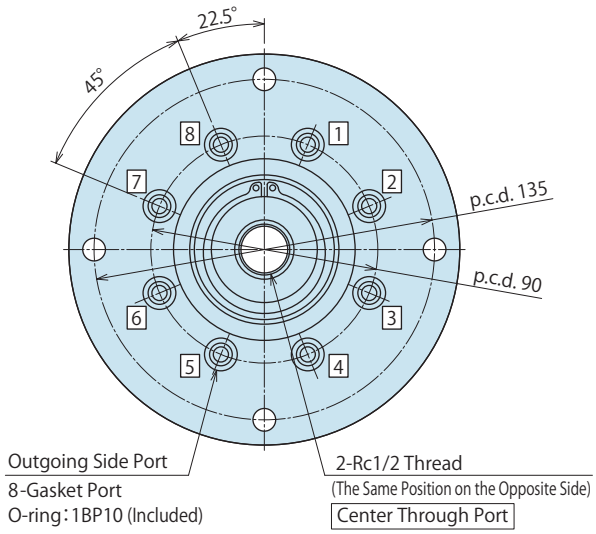
External Dimensions : JRB0810

※This drawing shows JRB0810-S-G-S.
(8 Circuit Ports + 1 Center Through Port)

Contact us when a G screw is required for the incoming side port or the center through port. (The center through port is only available with a conversion connector.)







Model No. Indication

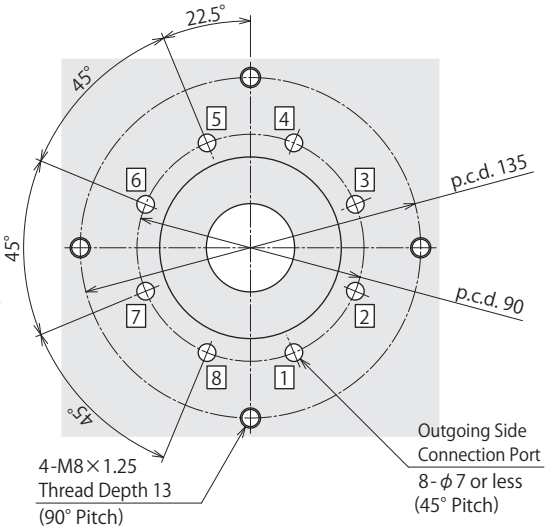
JRB0810- S B -G- S B

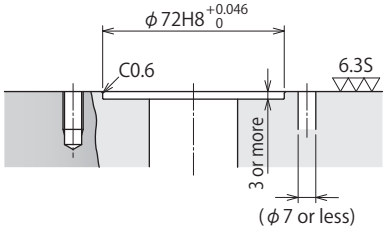
4 Incoming Side Piping Method

6 Center Through Port Piping Method

Notes :
1. The flange part of the rotation side must be fixed with the bolts, and restrain only the rotation direction of the stop side.
2. Please use a hose for piping of the stop side.
3. If there is oil slick leak from hydraulic circuit to air circuit, install a drain circuit between the two circuits.
4. Please avoid continuous operation as it will cause overheating and damage to the internal packing.
5. It requires another rotary joint when using the center coolant port.
6. The port number is marked on each port.

Machining Dimensions of Mounting Area





Note :
1. The mounting surface (O-ring sealing surface) should be flat and its maximum height of the roughness profile should be 6.3S or less.

Cautions

Notes for Design

1) Check Specifications
- Please use each product according to the specifications.

2) Hold only the rotating direction of the stop side.
- For the stop side, hold only the rotating direction to avoid offset load. For the rotation side, fix it with the attached bolts.

3) Use a hose for piping of the stop side.
- Steel piping increases a load during rotation and leads to malfunction.

4) Please avoid continuous operation.
- It will cause overheating of the internal packing. (Do not exceed the temperature written in the specification even with lower rotation speed.

5) Be careful with oil slick leak when air circuit and hydraulic circuit are set close to each other.
- If there is oil slick leak from hydraulic circuit to air circuit, install a drain circuit between the two circuits. At this time, make sure not to block the drain circuit port with a plug, etc. (Depending on the model, there will be no oil slick leak to a specific circuit.)

6) Rotating torque varies depending on the condition of fluid pressurization.
- The rotating torque shown in the performance curve is for reference.

7) The starting torque can be more than double of the rotating torque.
- It varies depending on the down time.

8) For JRA Series
Select either the piping option or the gasket option for the shaft side port.
- When using Rc1/4 (G1/4) piping option for the shaft side port, please set the attached R1/8 thread plug. When using the gasket option, please set the attched O-ring and R1/4 (G1/4A) thread plug.

9) For JRB Series
The center through port is not designed as a rotary structure.
- When using the center through port, install a swivel joint, etc.

10) For JRC Series
Select either the piping option or the gasket option for the outgoing side port.
- When using Rc1/4 (G1/4) piping option for the shaft side port, please set the attached R1/8 thread plug. When using the gasket option, please set the attched O-ring and R1/4 (G1/4A) thread plug.

Installation Notes

1) Check the Usable Fluid
- Please refer to the Hydraulic Fluid List and use the appropriate hydraulic oil (Refer to P.1355).
- Please supply filtered clean dry air.

2) Procedure before Piping
- The pipeline, piping connector and fixture circuits should be cleaned by thorough flushing. Otherwise, the flow characteristics may decrease due to clogging, or the packing can be damaged.
- Dust and cutting chips in the circuit can lead to fluid leakage and malfunction.
- This product is not equipped with a protective function to prevent contaminants going into a hydraulic system and pipes.
- In order to prevent contaminants from going into the product during the piping work, it should be carefully cleaned before working.

3) Applying Sealing Tape
- Wrap with tape 1 to 2 times following the screw direction.
- Pieces of the sealing tape can lead to fluid leakage and malfunction.
- In order to prevent contaminants from going into the product during the piping work, it should be carefully cleaned before working.

4) Installation of the Product
- Make sure not to damage the O-ring when installing the product.
- **JRB/JRC/JRD**：Use all the attached bolts with hex holes (Strength Grade 12.9) and tighten the body with torque in the following table.
JRA：For installation of the shaft or the housing, use the hexagonal socket bolts as multiple mounting bolt holes (Strength Grade 12.9) and tighten them with torque in the following table.

Model No.	Mounting Bolt Size	Tightening Torque (N·m)
JRA	M8×1.25	25
JRB	M8×1.25	25
JRC	M8×1.25	25
JRD	M12×1.5	80

5) Oil Leakage when Installing and Starting to Use the Product
- Durability testing of each port is performed with hydraulic pressure 1.5 times the maximum operating pressure. The oil is released after the test, but there can be slight oil leakage when installing and starting to use the product.

Hydraulic Fluid List

ISO Viscosity Grade ISO-VG-32

Maker	Anti-Wear Hydraulic Oil	Multi-Purpose Hydraulic Oil
Showa Shell Sekiyu	Tellus S2 M 32	Morlina S2 B 32
Idemitsu Kosan	Daphne Hydraulic Fluid 32	Daphne Super Multi Oil 32
JX Nippon Oil & Energy	Super Hyrando 32	Super Mulpus DX 32
Cosmo Oil	Cosmo Hydro AW32	Cosmo New Mighty Super 32
ExxonMobil	Mobil DTE 24	Mobil DTE 24 Light
Matsumura Oil	Hydol AW-32	
Castrol	Hyspin AWS 32	

Note : As it may be difficult to purchase the products as shown in the table from overseas, please contact the respective manufacturer.

※ Please refer to P.1355 for common cautions. • Installation Notes • Hydraulic Fluid List • Notes on Hydraulic Cylinder Speed Control Circuit • Notes on Handling • Maintenance/Inspection • Warranty

Cautions

Installation Notes (For Hydraulic Series)

1) Check the Usable Fluid

- Please use the appropriate fluid by referring to the Hydraulic Fluid List.

2) Procedure before Piping

- The pipeline, piping connector and fixture circuits should be cleaned by thorough flushing.
- The dust and cutting chips in the circuit may lead to fluid leakage and malfunction.
- There is no filter provided with Kosmek's product except for a part of valves which prevents foreign materials and contaminants from getting into the circuit.

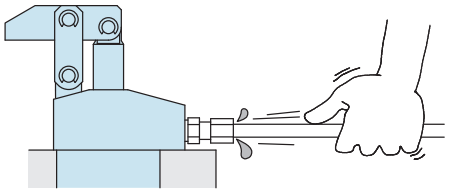
3) Applying Sealing Tape

- Wrap with tape 1 to 2 times following the screw direction.
- Pieces of the sealing tape can lead to oil leakage and malfunction.
- Please implement piping construction in a clear environment to prevent anything getting in products.

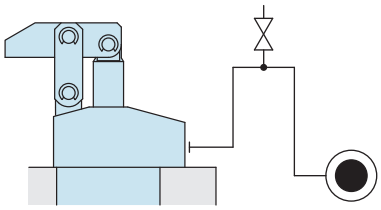
4) Air Bleeding of the Hydraulic Circuit

- If the hydraulic circuit has excessive air, the action time may become very long. If air enters the circuit after connecting the hydraulic port or under the condition of no air in the oil tank, please perform the following steps.

① Reduce hydraulic pressure to less than 2MPa.
② Loosen the cap nut of pipe fitting closest to the clamp by one full turn.
③ Shake the pipeline to loosen the outlet of pipe fitting.
Hydraulic fluid mixed with air comes out.



④ Tighten the cap nut after bleeding.
⑤ It is more effective to release air at the highest point inside the circuit or at the end of the circuit.
(Set an air bleeding valve at the highest point inside the circuit.)



5) Checking Looseness and Retightening

- At the beginning of the machine installation, the bolt and nut may be tightened lightly. Check the looseness and re-tighten as required.

Hydraulic Fluid List

ISO Viscosity Grade ISO-VG-32

Maker	Anti-Wear Hydraulic Oil	Multi-Purpose Hydraulic Oil
Showa Shell Sekiyu	Tellus S2 M 32	Morlina S2 B 32
Idemitsu Kosan	Daphne Hydraulic Fluid 32	Daphne Super Multi Oil 32
JX Nippon Oil & Energy	Super Hyrando 32	Super Mulpus DX 32
Cosmo Oil	Cosmo Hydro AW32	Cosmo New Mighty Super 32
ExxonMobil	Mobil DTE 24	Mobil DTE 24 Light
Matsumura Oil	Hydol AW-32	
Castrol	Hyspin AWS 32	

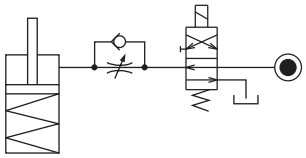
Note : Please contact manufacturers when customers require products in the list above.

Notes on Hydraulic Cylinder Speed Control Unit

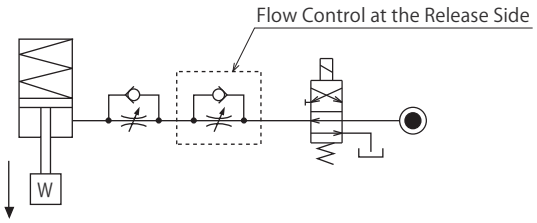
Please pay attention to the cautions below. Design the hydraulic circuit for controlling the action speed of hydraulic cylinder. Improper circuit design may lead to malfunctions and damages. Please review the circuit design in advance.

Flow Control Circuit for Single Acting Cylinder

For spring return single acting cylinders, restricting flow during release can extremely slow down or disrupt release action. The preferred method is to control the flow during the lock action using a valve that has free-flow in the release direction. It is also preferred to provide a flow control valve at each actuator.



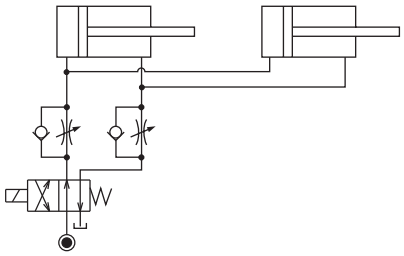
Accelerated clamping speed by excessive hydraulic flow to the cylinder may sustain damage. In this case add flow control to regulate flow. (Please add flow control to release flow if the lever weight is put on at the time of release action when using swing clamps.)



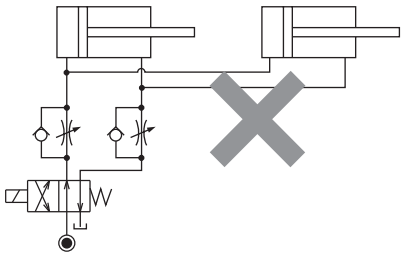
Flow Control Circuit for Double Acting Cylinder

Flow control circuit for double acting cylinder should have meter-out circuits for both the lock and release sides. Meter-in control can have adverse effect by presence of air in the system.
However, in the case of controlling LKE, TMA, TLA, both lock side and release side should be meter-in circuit.
Refer to P.75 for speed adjustment of LKE.
For TMA and TLA, if meter-out circuit is used, abnormal high pressure is created, which causes oil leakage and damage.

【Meter-out Circuit】(Except LKE/TMA/TLA)

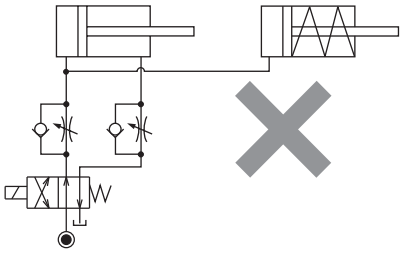


【Meter-in Circuit】(LKE/TMA/TLA must be controlled with meter-in.)



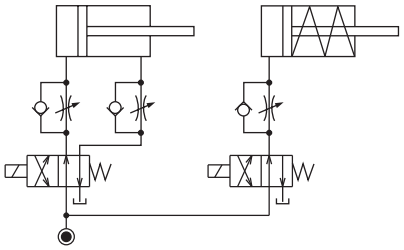
In the case of meter-out circuit, the hydraulic circuit should be designed with the following points.

① Single acting components should not be used in the same flow control circuit as the double acting components.
The release action of the single acting cylinders may become erratic or very slow.

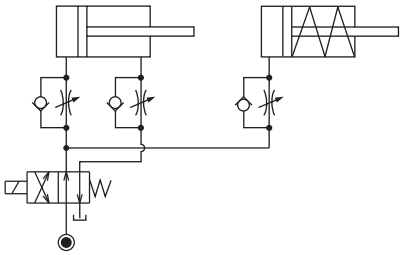


Refer to the following circuit when both the single acting cylinder and double acting cylinder are used together.

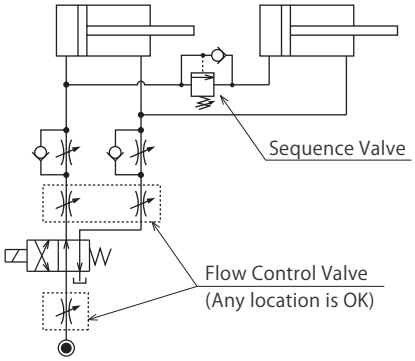
○ Separate the control circuit.



○ Reduce the influence of double acting cylinder control unit.
However, due to the back pressure in tank line, single action cylinder is activated after double action cylinder works.



② In the case of meter-out circuit, the inner circuit pressure may increase during the cylinder action because of the fluid supply. The increase of the inner circuit pressure can be prevented by reducing the supplied fluid beforehand via the flow control valve. Especially when using sequence valve or pressure switches for clamping detection. If the back pressure is more than the set pressure then the system will not work as it is designed to.



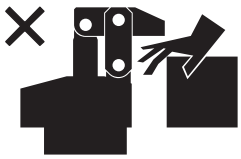
Cautions

Notes on Handling

1) It should be operated by qualified personnel.
- The hydraulic machine and air compressor should be operated and maintained by qualified personnel.

2) Do not operate or remove the product unless the safety protocols are ensured.
① The machine and equipment can only be inspected or prepared when it is confirmed that the safety devices are in place.
② Before the product is removed, make sure that the above-mentioned safety devices are in place. Shut off the pressure and power source, and make sure no pressure exists in the air and hydraulic circuits.
③ After stopping the product, do not remove until the temperature drops.
④ Make sure there is no abnormality in the bolts and respective parts before restarting the machine or equipment.

3) Do not touch a clamp (cylinder) while it is working.
Otherwise, your hands may be injured due to clinching.

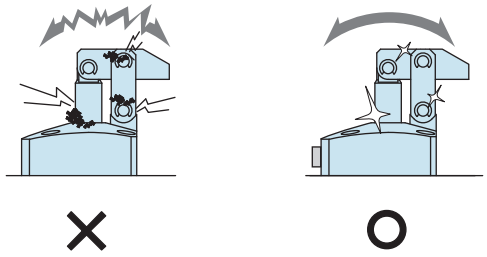


4) Do not disassemble or modify.
- If the equipment is taken apart or modified, the warranty will be voided even within the warranty period.

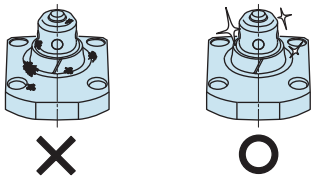
Maintenance and Inspection

1) Removal of the Machine and Shut-off of Pressure Source
- Before the machine is removed, make sure that safety devices and preventive devices are in place. Shut off the pressure and power source, and make sure no pressure exists in the air and hydraulic circuits.
- Make sure there is no abnormality in the bolts and respective parts before restarting.

2) Regularly clean the area around the piston rod and plunger.
- If it is used when the surface is contaminated with dirt, it may lead to packing seal damage, malfunctioning and fluid leakage.



3) Please clean out the reference surfaces on a regular basis (taper reference surface and seating surface) of the locating products. (VS/VT/VFL/VFM/VFJ/VFK/WVS/VWM/VWK/VX/VXE/VXF)
- The locating products, except VX/VXE/VXF model, can remove contaminants with cleaning functions. However, hardened cutting chips, adhesive coolant and others may not be removed. Make sure there are no contaminants before installing a workpiece/pallet.
- Continuous use with contaminant on components will lead to locating accuracy failure, malfunction and fluid leakage.



4) If disconnecting by couplers, air bleeding should be carried out on a regular basis to avoid air mixed in the circuit.

5) Regularly tighten nut, bolt, pin, cylinder, pipe line and others to ensure proper use.

6) Make sure the hydraulic fluid has not deteriorated.

7) Make sure there is a smooth action without an irregular noise.
- Especially when it is restarted after left unused for a long period, make sure it can be operated correctly.

8) The products should be stored in the cool and dark place without direct sunshine or moisture.

9) Please contact us for overhaul and repair.

Warranty

1) Warranty Period

- The product warranty period is 18 months from shipment from our factory or 12 months from initial use, whichever is earlier.

2) Warranty Scope

- If the product is damaged or malfunctions during the warranty period due to faulty design, materials or workmanship, we will replace or repair the defective part at our expense.
  Defects or failures caused by the following are not covered.

① If the stipulated maintenance and inspection are not carried out.
② If the product is used while it is not suitable for use based on the operator's judgment, resulting in defect.
③ If it is used or operated in an inappropriate way by the operator. (Including damage caused by the misconduct of the third party.)
④ If the defect is caused by reasons other than our responsibility.
⑤ If repair or modifications are carried out by anyone other than Kosmek, or without our approval and confirmation, it will void warranty.
⑥ Other caused by natural disasters or calamities not attributable to our company.
⑦ Parts or replacement expenses due to parts consumption and deterioration.
(Such as rubber, plastic, seal material and some electric components.)

Damages excluding from direct result of a product defect shall be excluded from the warranty.

Sales Offices

Sales Offices across the World

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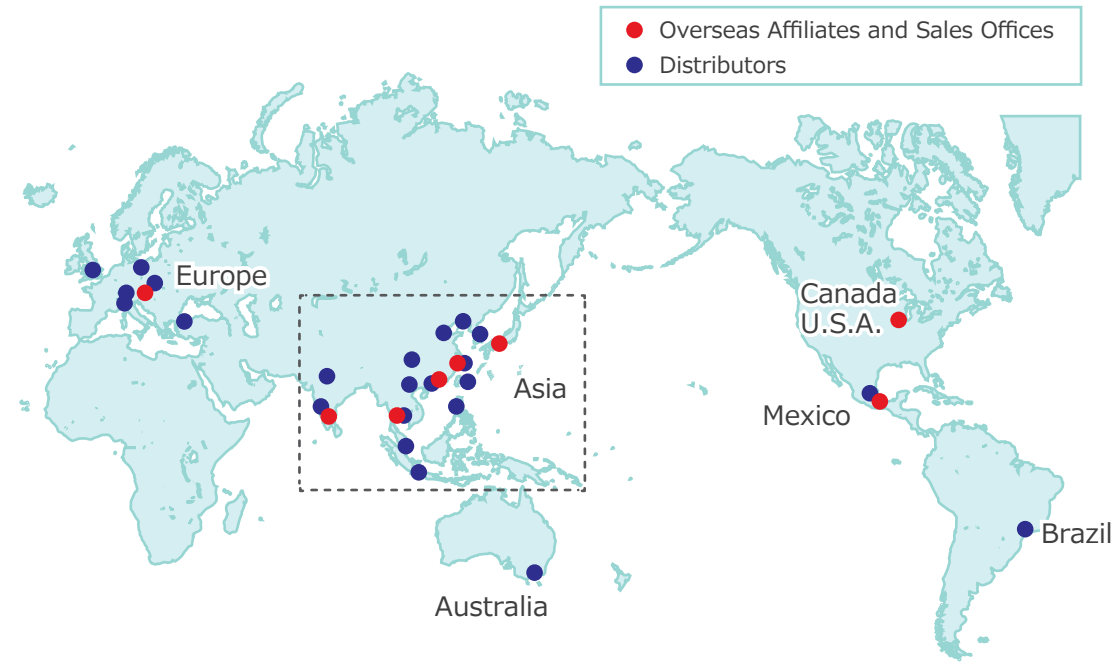
Global Network



Asia Detailed Map

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