

## Rotary joint

# Hydraulic Oil/Air/Coolant Rotary Joint

Model JR



## Long Operational Life • Compact • Low Torque

A center through port is available for high volume coolant.

### • Applicable for Hydraulic • Pneumatic • High Volume Coolant<sup>※1</sup>

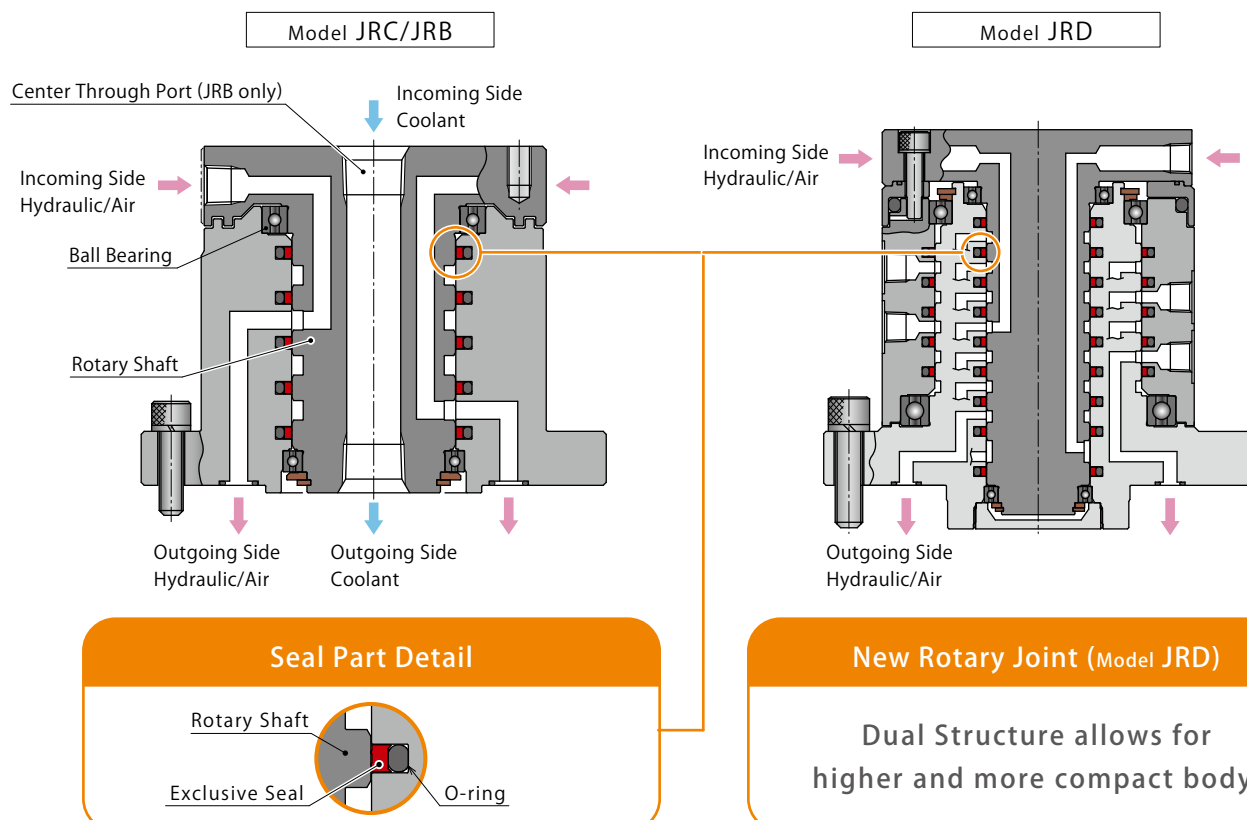
It adopts the original developed low friction seal and low torque enables smooth rotation. Each part of this rotary joint is highly durable and each seal provided by KOSMEK has low torque, highly durable and high capacity design that allows for a longer life of the component.

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

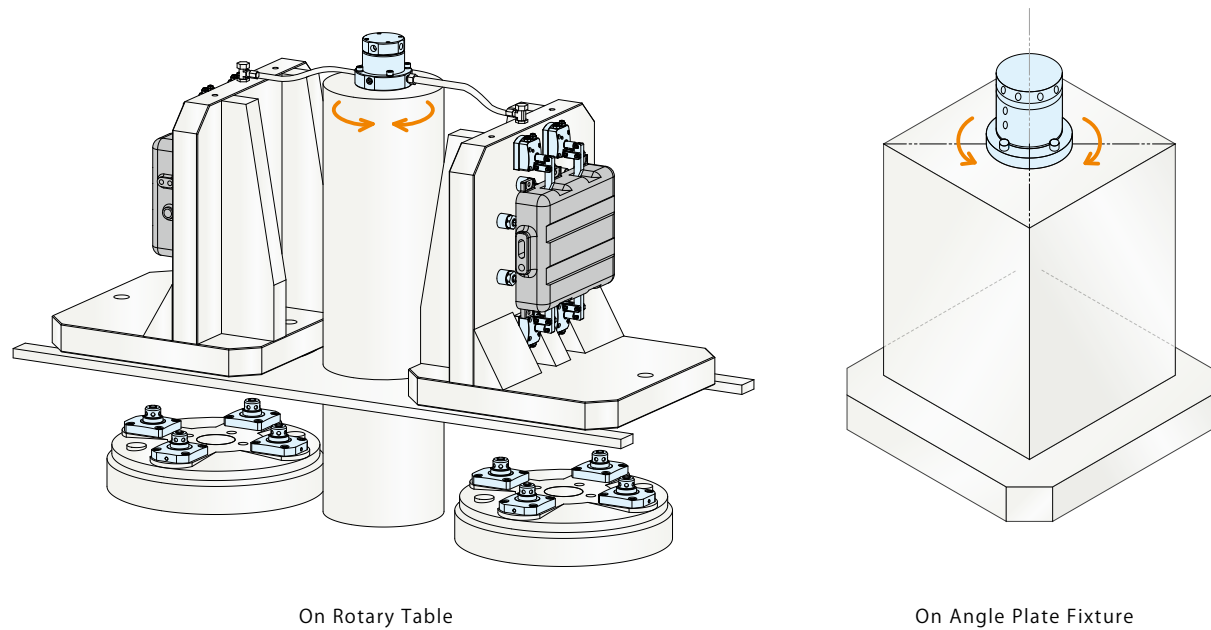
※1. JRB is the only model with the center through port designed for a large amount of coolant.

(When using the center through port, install a swivel joint, etc.)

### • Cross Section

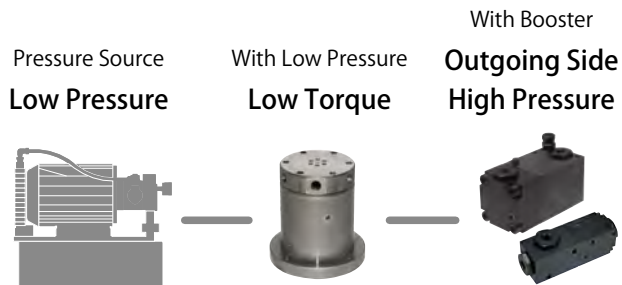


## Application Examples

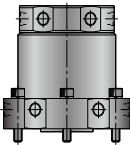
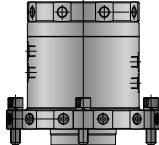
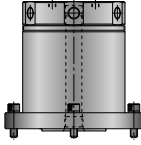


- **Make the outgoing side pressure higher with low torque.**

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



## Variation

	 Model <b>JRC</b> → P.1073	<div>NEW</div>  Model <b>JRD</b> → P.1074	 Model <b>JRB</b> → P.1075
Classification	No Center Through Port		One Center Through Port
The Number of the Ports	2/4/6/8 Port	12/16 Port	2/4/6/8 Port+Center Through Port
Feature	Low Rotary Torque・Compact	Dual Structure・Compact	Large Flow Rate
Usable Fluid	General Hydraulic Oil : 25MPa or less		
	Air : 1MPa or less		
			Coolant : 1MPa or less (Available only for Center Through Port)

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
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

## 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      **06** : 6 ports  
**04** : 4 ports      **08** : 8 ports

### 2 Center Through Port

**0** : No Center Through Port

### 3 Design No.

**0** : Revision Number

### 4 Incoming Side Piping Method

**B** : Piping Option (G Thread)  
**S** : Piping Option (Rc Thread)

### 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)

Note :

1. Please contact us for other piping methods.

## Specifications

Model No.		JRC0200-□-□	JRC0400-□-□	JRC0600-□-□	JRC0800-□-□
Operating Pressure	Oil	0 ~ 25.0			
	MPa Air	0 ~ 1.0			
Port	Number	2	4	6	8
	Min. Passage Area mm <sup>2</sup>	19.6			
Center Through Port		None			
Usable Fluid		General Hydraulic Oil or Air			
Operating Temperature		℃ -10 ~ 70			
Mass	kg	4.5	5.5	8.0	9.5

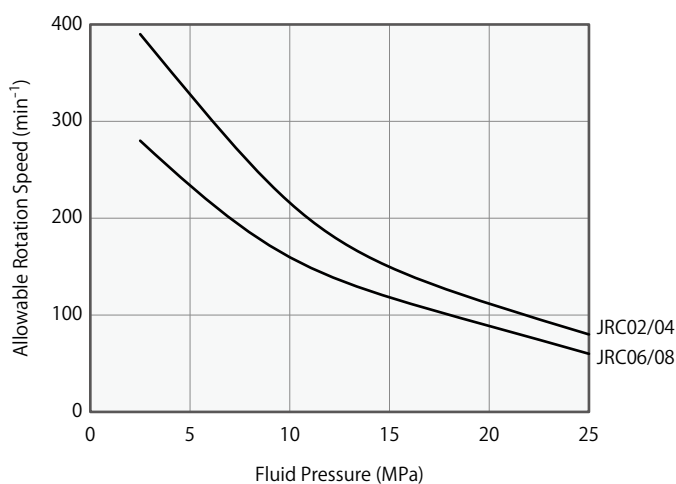
- Notes : 1. If there is oil slick leak from hydraulic circuit to air circuit, install a drain circuit between the two circuits.  
 2. Please avoid continuous operation as it will cause overheating and damage to the internal packing.

## Performance Curve (Allowable Rotation Speed Graph)

Model No. Indication	Allowable Rotation Speed (min <sup>-1</sup> )			
	JRC0200 -□-□	JRC0400 -□-□	JRC0600 -□-□	JRC0800 -□-□
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<sup>-1</sup>) and Fluid Pressure (MPa).
2. Do not exceed the temperature written in 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** : 1 2 ports  
**16** : 1 6 ports

### 2 Center Through Port

**0** : No Center Through Port

### 3 Design No.

**0** : Revision Number

### 4 Incoming Side Piping Method

**B** : Piping Option (G Thread)  
**S** : Piping Option (Rc Thread)

### 5 Outgoing Side Piping Method

**G** : Gasket Option

Note :

- Please contact us for other piping methods.

## Specifications

Model No.		JRD1200-□-G	JRD1600-□-G
Operating Pressure MPa	Oil	0 ~ 25.0	
	Air	0 ~ 1.0	
Port	Number	12	16
	Min. Passage Area mm <sup>2</sup>	9.1	
Center Through Port		None	
Usable Fluid		General Hydraulic Oil or Air	
Operating Temperature °C		-10 ~ 70	
Mass	kg	20	25

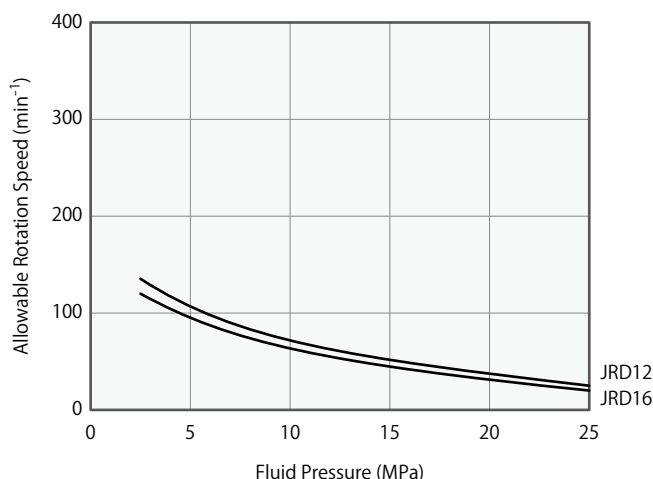
- Notes :
- If there is oil slick leak from hydraulic circuit to air circuit, install a drain circuit between the two circuits.
  - Please avoid continuous operation as it will cause overheating and damage to the internal packing.

## Performance Curve (Allowable Rotation Speed Graph)

Model No. Indication	Allowable Rotation Speed (min <sup>-1</sup> )	
	JRD1200 -□-G	JRD1600 -□-G
Fluid Pressure(MPa)		
25	25	20
14	55	48
7	90	80
2.5	135	120

Notes :

- This graph shows the relationship between Allowable Rotation Speed (min<sup>-1</sup>) and Fluid Pressure (MPa).
- Do not exceed the temperature written in specification even with lower rotation speed.



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
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

## 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

**B** : Piping Option (G Thread)  
**S** : Piping Option (Rc Thread)

### 5 Outgoing Side Piping Method

**G** : Gasket Option

### 6 Piping Method of Center Through Port

**B** : Piping Option (G Thread)<sup>※ 1</sup>  
**S** : Piping Option (Rc Thread)

Notes :

- ※1. Only available with conversion connector.  
Please contact us for further information.
- 1. Please contact us for other piping methods.

## Specifications

Model No.		JRB0210-□-G-□	JRB0410-□-G-□	JRB0610-□-G-□	JRB0810-□-G-□
Operating Pressure	Oil	0 ~ 25.0			
	MPa	Air/Coolant 0 ~ 1.0			
Port	Number	2	4	6	8
	Min. Passage Area mm <sup>2</sup>	28.3			
	Usable Fluid	General Hydraulic Oil or Air			
Center Through Port	Number	1			
	Min. Passage Area mm <sup>2</sup>	254			
	Usable Fluid	Coolant (General Hydraulic Oil or Air)			
Operating Temperature		°C -10 ~ 70			
Mass	kg	7.5	10.0	12.5	15.0

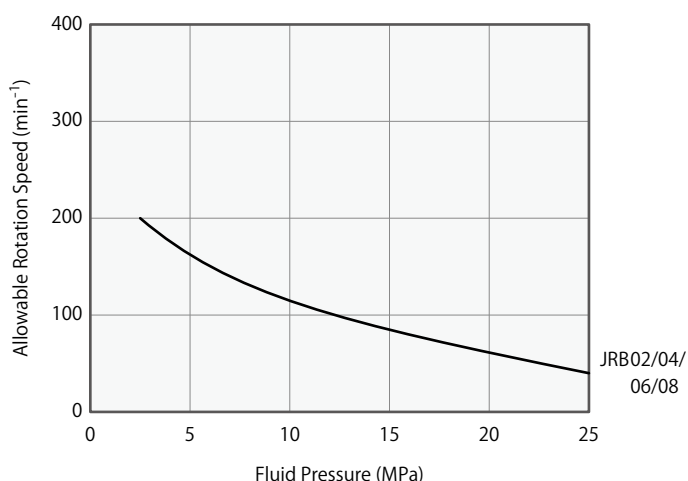
- Notes : 1. If there is oil slick leak from hydraulic circuit to air circuit, install a drain circuit between the two circuits.  
 2. Please avoid continuous operation as it will cause overheating and damage to the internal packing.

## Performance Curve (Allowable Rotation Speed Graph)

		Allowable Rotation Speed (min <sup>-1</sup> )			
Model No. Indication		JRB0210	JRB0410	JRB0610	JRB0810
Fluid Pressure(MPa)		-□-G-□	-□-G-□	-□-G-□	-□-G-□
25		40			
14		90			
7		140			
2.5		200			

Notes :

- This graph shows the relationship between Allowable Rotation Speed (min<sup>-1</sup>) and Fluid Pressure (MPa).
- Do not exceed the temperature written in specification even with lower rotation speed.



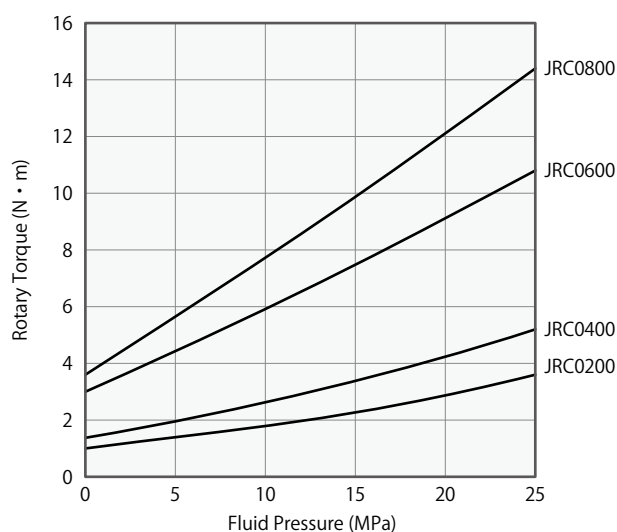
## Performance Curve (Rotary Torque : Reference Value)

### JRC : No Center Through Port Model

Model No. Indication	Rotary Torque (N·m)			
	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 graph and may change depending on the conditions of down time, etc.
3. The rotary torque is a reference value.

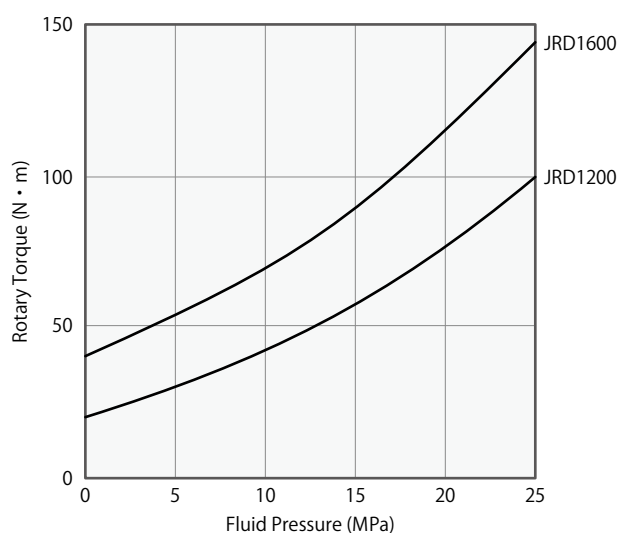


### JRD : No Center Through Port Model

Model No. Indication	Rotary Torque (N·m)	
	JRD1200	JRD1600
Fluid Pressure (MPa)	-□- <b>G</b>	-□- <b>G</b>
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 graph and may change depending on the conditions of down time, etc.
3. The rotary torque is a reference value.

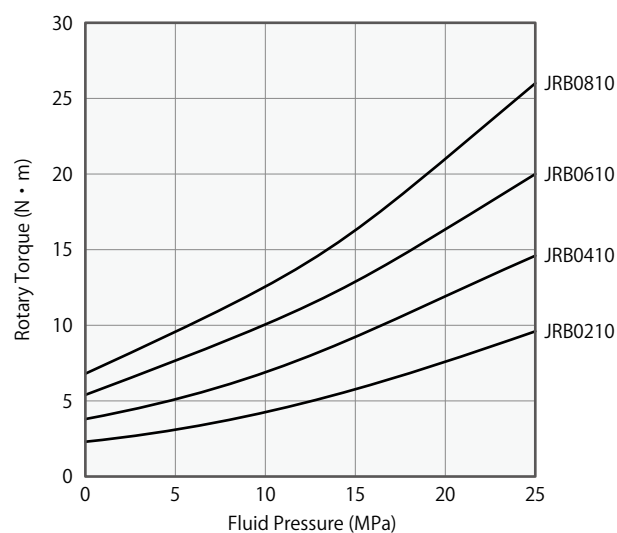


### JRB : One Center Through Port Model

Model No. Indication	Rotary Torque (N·m)			
	JRB0210	JRB0410	JRB0610	JRB0810
Fluid Pressure (MPa)	-□- <b>G</b> -□	-□- <b>G</b> -□	-□- <b>G</b> -□	-□- <b>G</b> -□
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 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 UnitManual 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

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

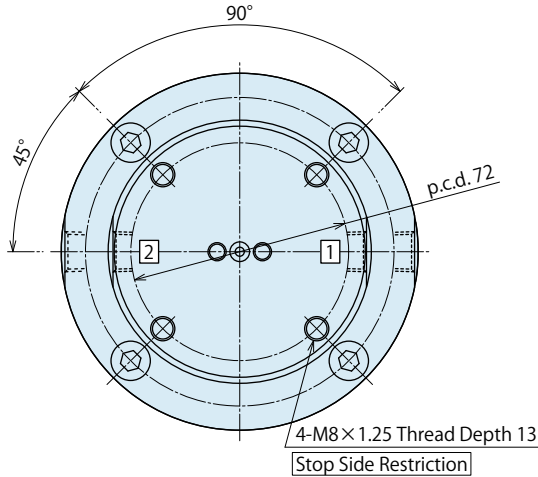
## External Dimensions : JRC0200

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

When G thread is necessary for incoming side or outgoing side ports,  
please contact us separately.

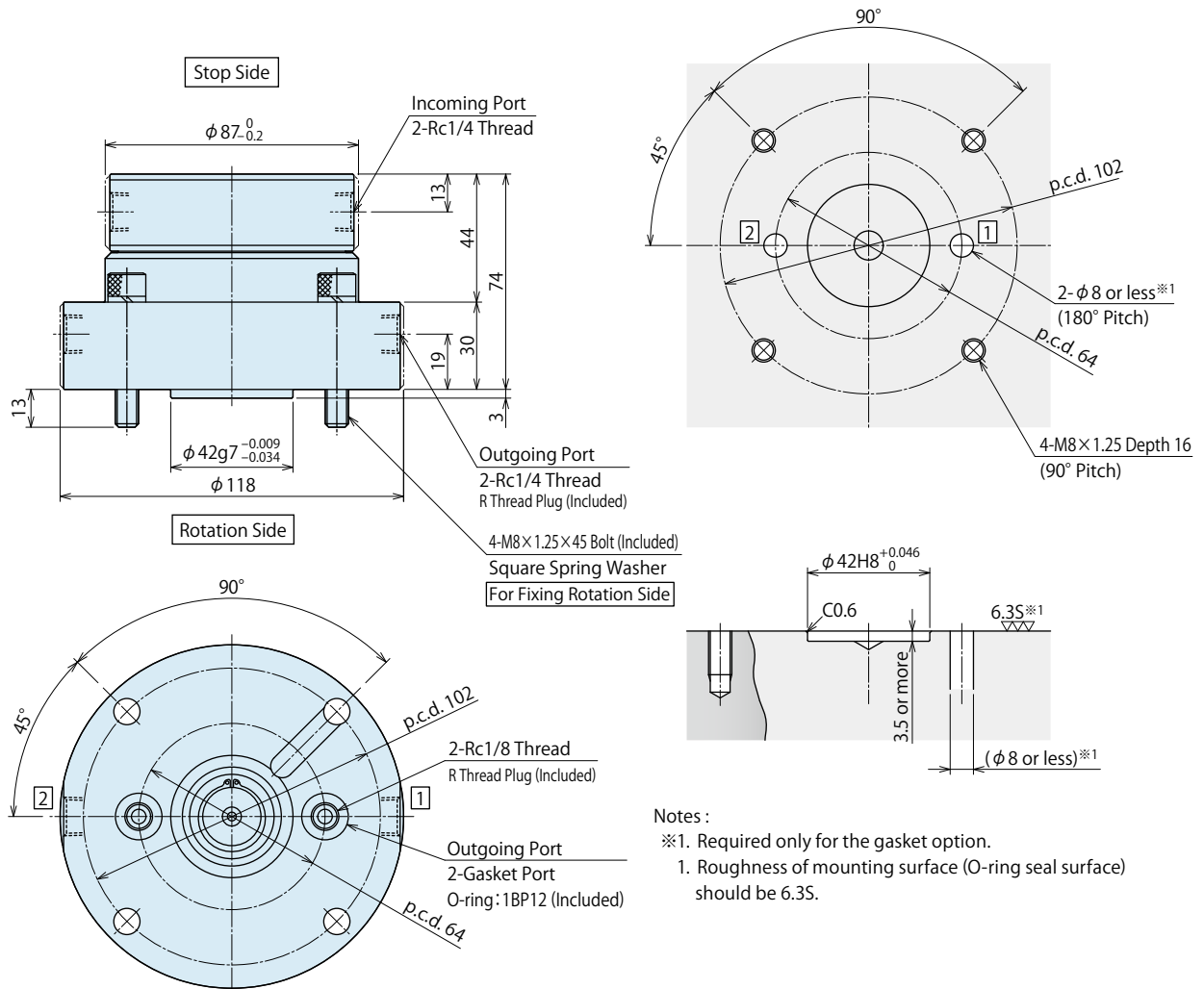
Model No. Indication

JRC0200- **B** - **A** **4** Incoming Side Piping Method  
**S** - **D** **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 hose for piping of 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. Each port exhibits a port number.
  6. When using Rc1/4 for a secondary side port, please install the attached R1/8 thread plug to the gasket port part.
- When using gasket option, please install O-ring and R1/4 plug.

## Machining Dimensions of Mounting Area



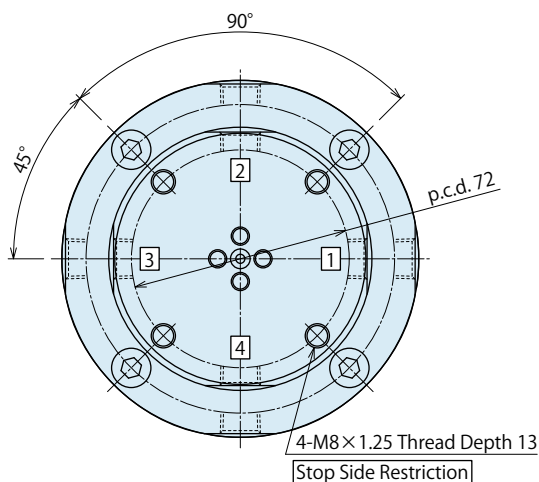
## External Dimensions : JRC0400

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

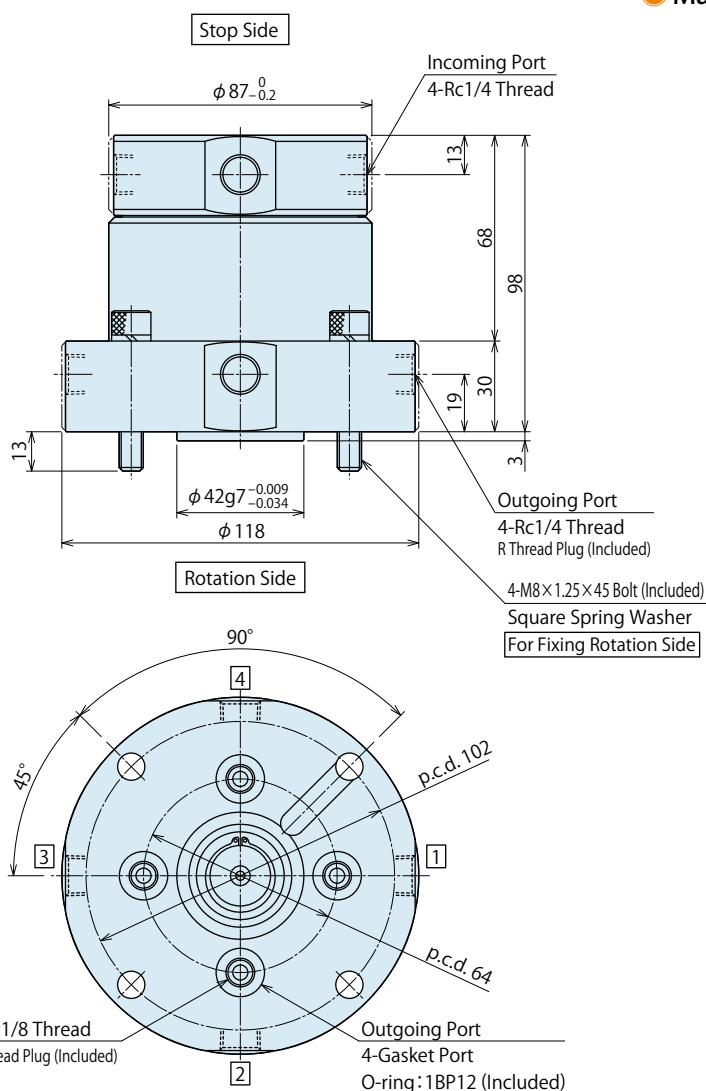
When G thread is necessary for incoming side or outgoing side ports,  
please contact us separately.

Model No. Indication

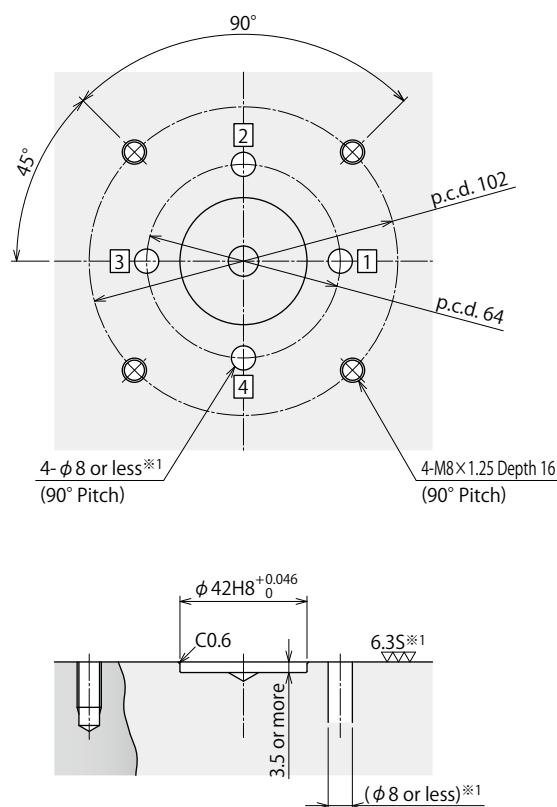
**JRC0400-** **B** - **A** **4** Incoming Side Piping Method  
**S** - **D** **5** Outgoing Side Piping Method



- 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 hose for piping of 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. Each port exhibits a port number.
  6. When using Rc1/4 for a secondary side port, please install the attached R1/8 thread plug to the gasket port part. When using gasket option, please install O-ring and R1/4 plug.



## Machining Dimensions of Mounting Area



Notes :

※1. Required only for the gasket option.

1. Roughness of mounting surface (O-ring seal surface) should be 6.3S.

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

JVA/JVB

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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 : JRC0600

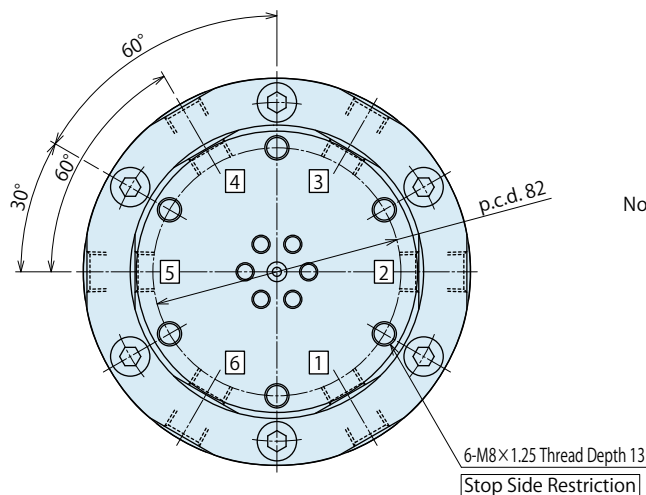
※This drawing indicates JRC0600-S-A.  
(6 Circuit Ports)

When G thread is necessary for incoming side or outgoing side ports, please contact us separately.

## Model No. Indication

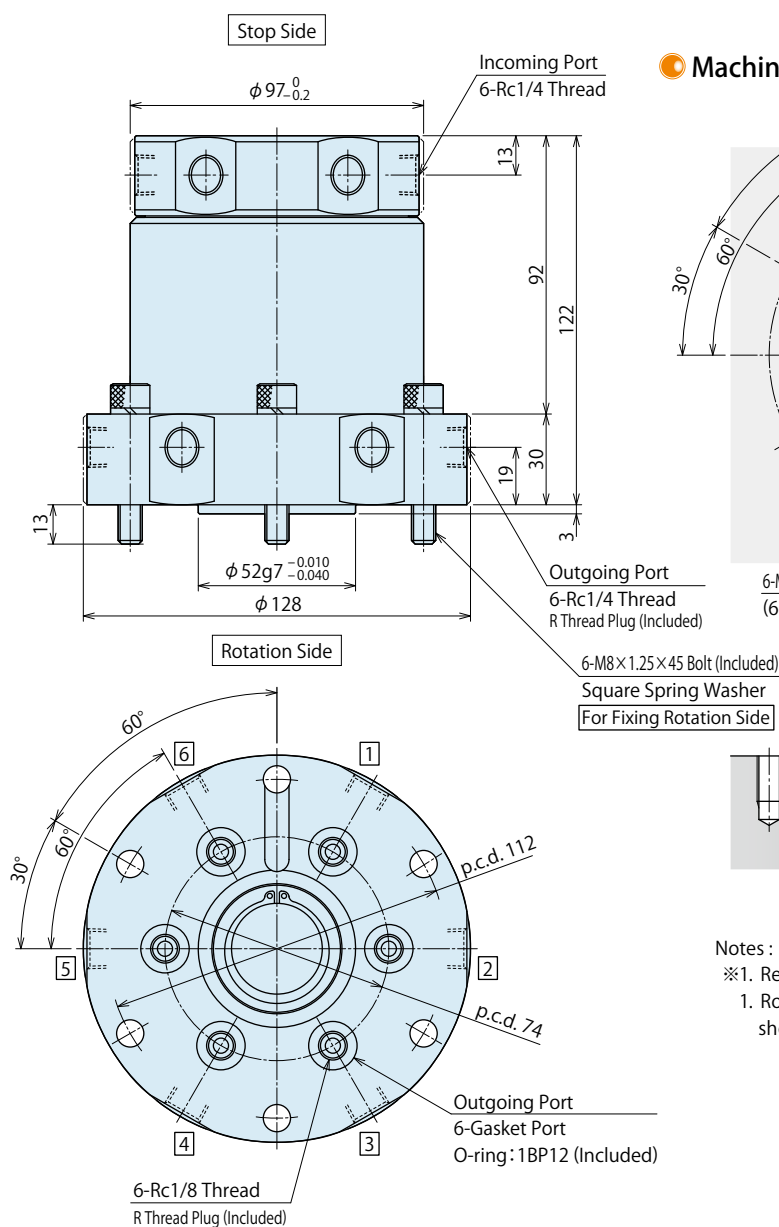
**JRC0600-** **B** **A**  
**S** **D**

**4** Incoming Side Piping Method  
**5** Outgoing Side Piping Method

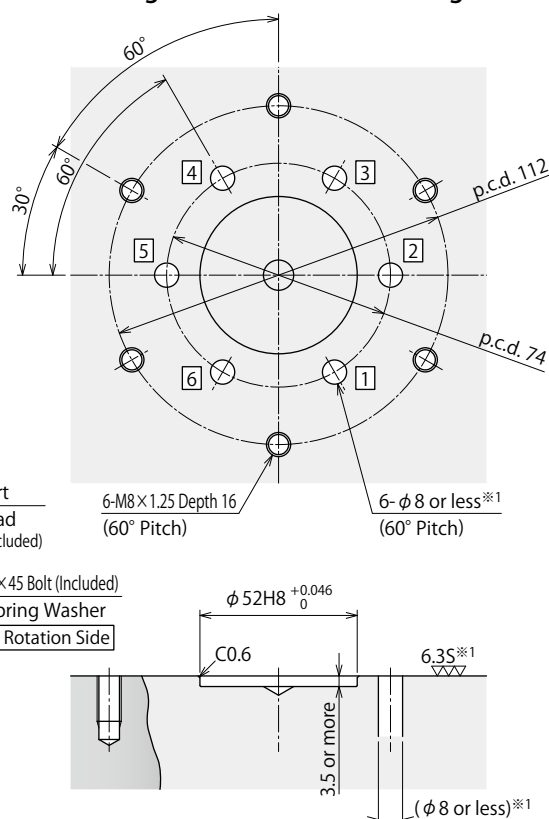


Notes :

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 hose for piping of 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. Each port exhibits a port number.
6. When using Rc1/4 for a secondary side port, please install the attached R1/8 thread plug to the gasket port part.  
When using gasket option, please install O-ring and R1/4 plug.



## ● Machining Dimensions of Mounting Area



Notes :

※1. Required only for the gasket option.

1. Roughness of mounting surface (O-ring seal surface) should be 6.3 $\mu$ .

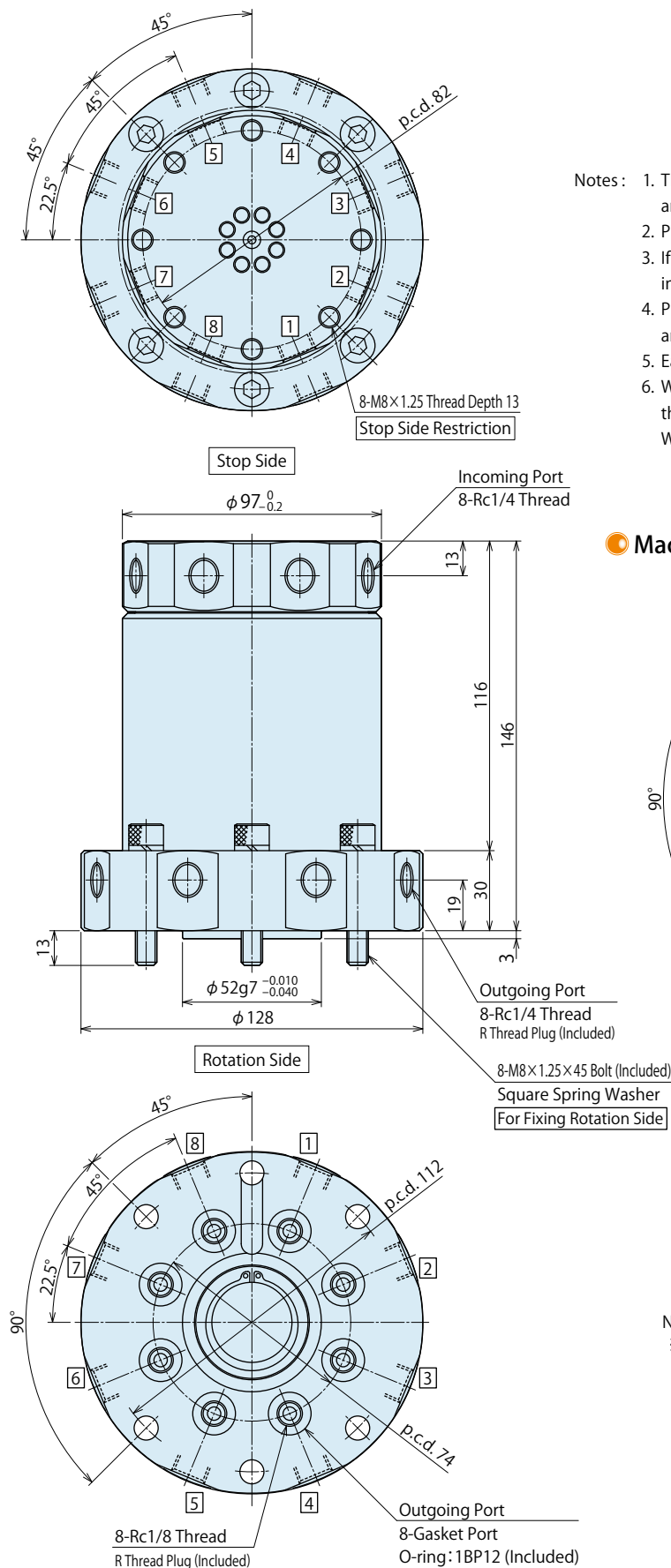
## External Dimensions : JRC0800

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

When G thread is necessary for incoming side or outgoing side ports,  
please contact us separately.

Model No. Indication

**JRC0800-** **B** - **A** **4** Incoming Side Piping Method  
**S** - **D** **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 hose for piping of 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. Each port exhibits a port number.
  6. When using Rc1/4 for a secondary side port, please install the attached R1/8 thread plug to the gasket port part.  
When using gasket option, please install O-ring and R1/4 plug.

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/BS

BFP/BFS

Auto Coupler

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

Notes :

※1. Required only for the gasket option.

1. Roughness of mounting surface (O-ring seal surface) should be 6.3S.

## External Dimensions : JRD1200

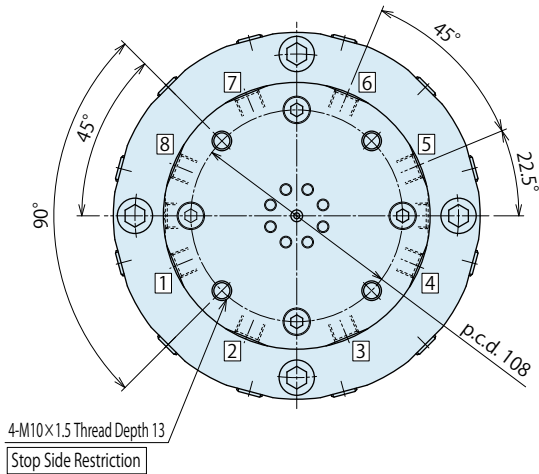
※ This drawing indicates JRD1200-S-G.  
(12 Circuit Ports)

When G thread is necessary for incoming side ports,  
please contact us separately.

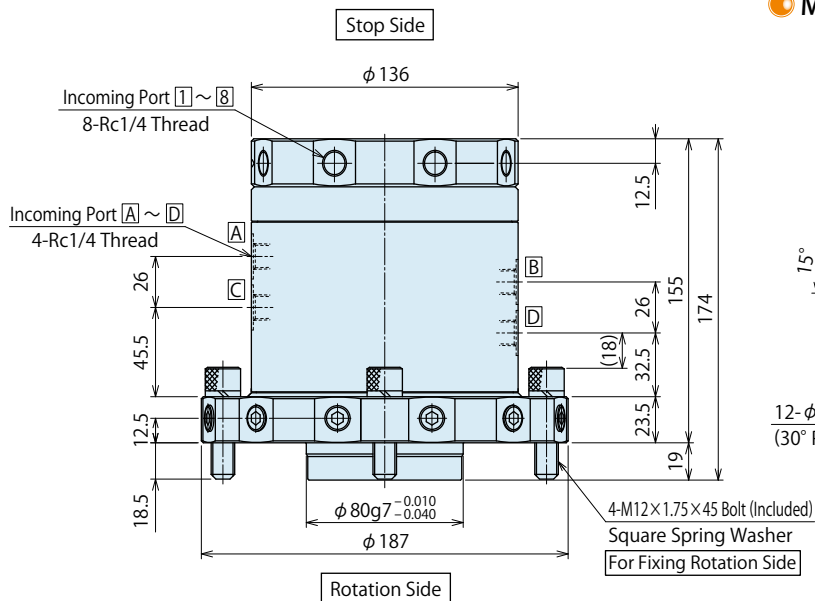
Model No. Indication

JRD1200-**B**-**G**  
**S**  
4 5

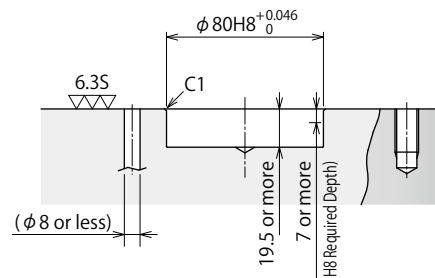
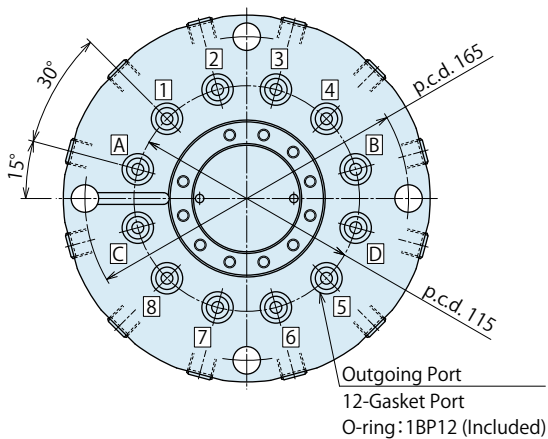
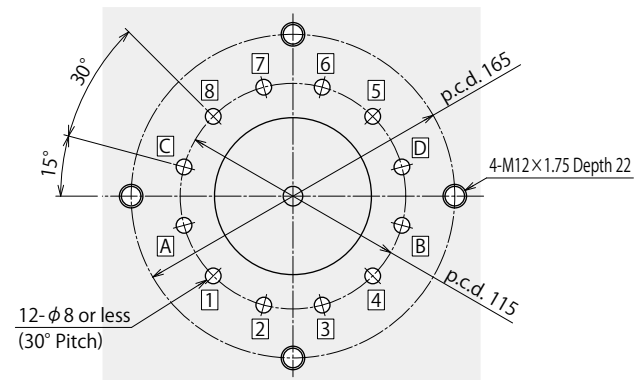
4 Incoming Side Piping Method  
5 Outgoing Side Piping Method



- 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 hose for piping of 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 seal 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. Each port exhibits a port number.



## Machining Dimensions of Mounting Area



Note :

1. Roughness of mounting surface (O-ring seal surface) should be 6.3S.



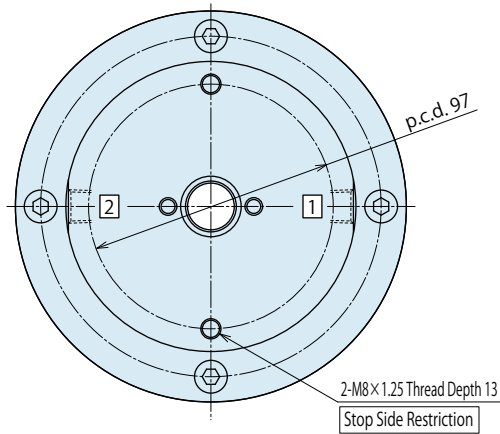
# External Dimensions : JRB0210

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

When G thread is necessary for incoming side ports or center through port, please contact us separately.  
(Center through port is only available with a conversion connector.)

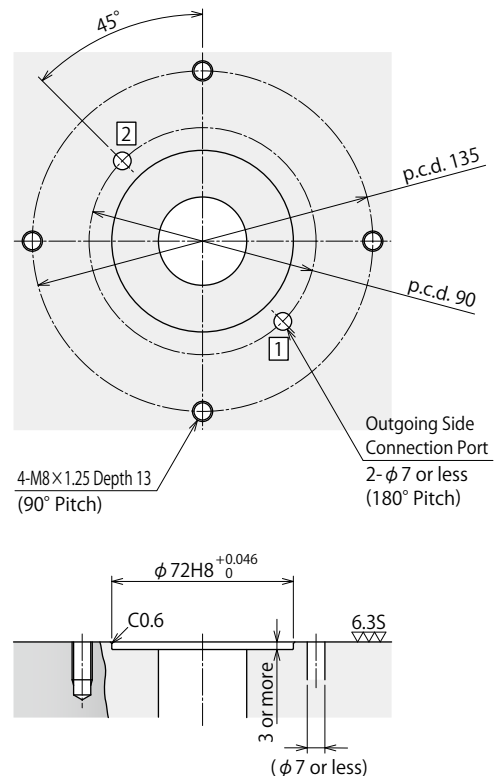
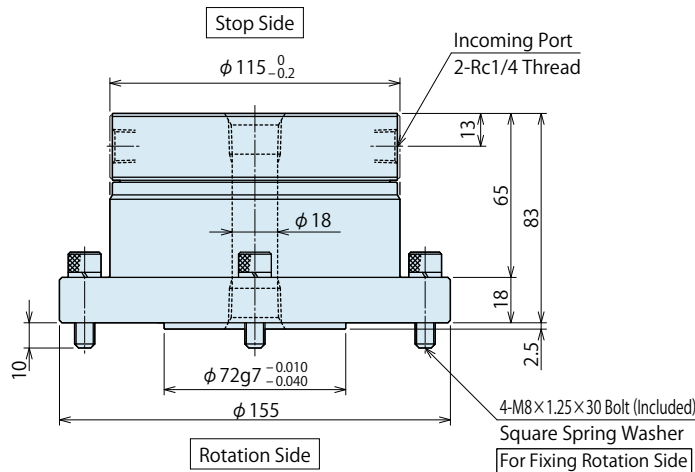
Model No. Indication

JRB0210-**B**-G-**B**  
**4** **6**  
**4** Incoming Side Piping Method  
**6** Center Through Port Piping Method



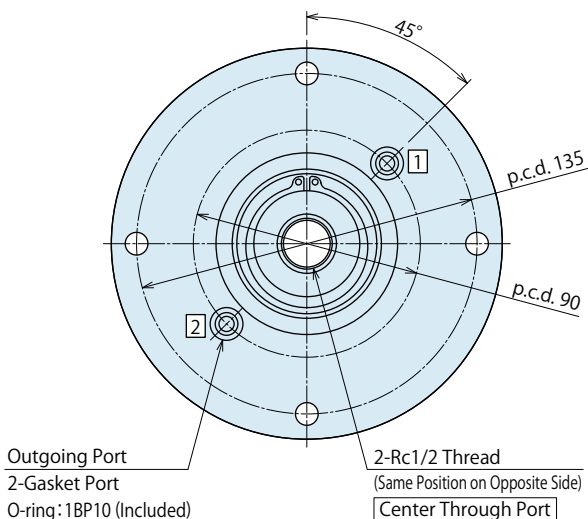
- Notes :
1. The flange part of the rotation side must be fixed with the bolts, and restrain only the rotation direction of the stop side.
  2. Please use hose for piping of stop side.
  3. If there is oil slick leak from hydraulic circuit to air circuit, install a drain circuit between the two circuits.
  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. Each port exhibits a port number.

## Machining Dimensions of Mounting Area



Note :

1. Roughness of mounting surface (O-ring seal surface) should be 6.3S.



## External Dimensions : JRB0410

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

When G thread is necessary for incoming side ports or center through port, please contact us separately.  
(Center through port is only available with a conversion connector.)

Model No. Indication

**JRB0410-** **B** **S** **-G-** **B** **S** **4** Incoming Side Piping Method  
**6** Center Through Port Piping Method

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

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

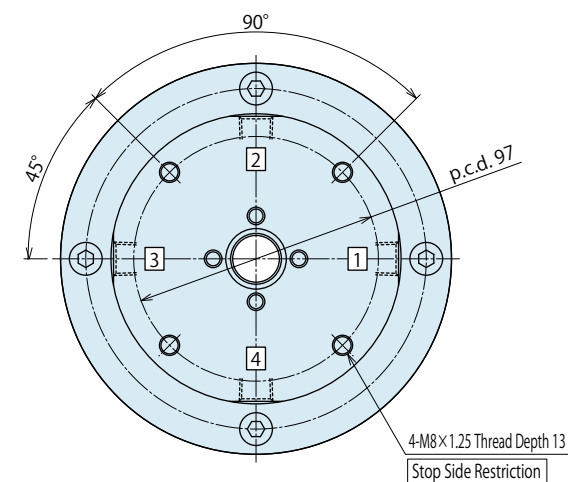
CPC/CQC

CB

CC

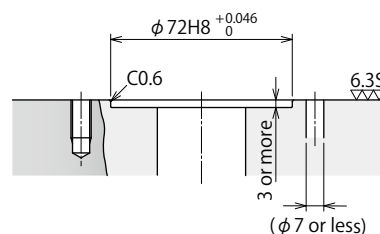
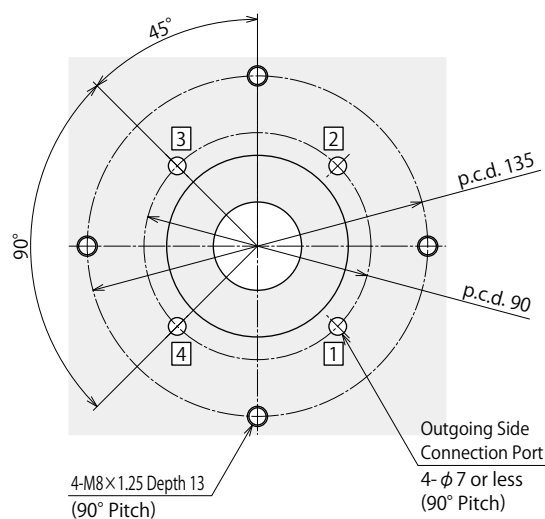
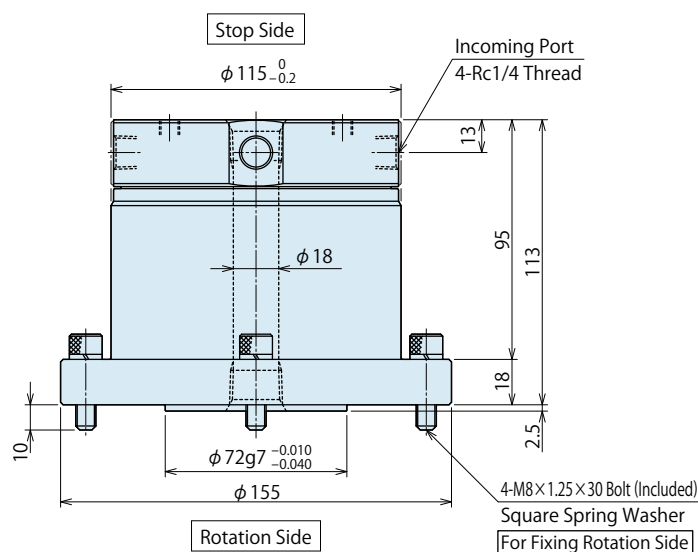
AB/AB-V

AC/AC-V



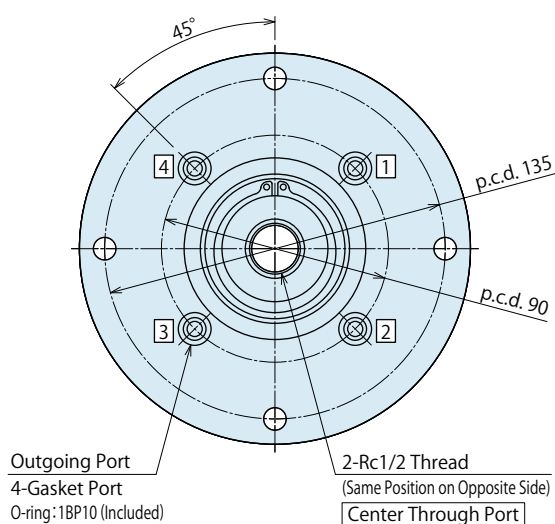
- Notes :
1. The flange part of the rotation side must be fixed with the bolts, and restrain only the rotation direction of the stop side.
  2. Please use hose for piping of stop side.
  3. If there is oil slick leak from hydraulic circuit to air circuit, install a drain circuit between the two circuits.
  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. Each port exhibits a port number.

## Machining Dimensions of Mounting Area



Note :

1. Roughness of mounting surface (O-ring seal surface) should be 6.35.



# External Dimensions : JRB0610

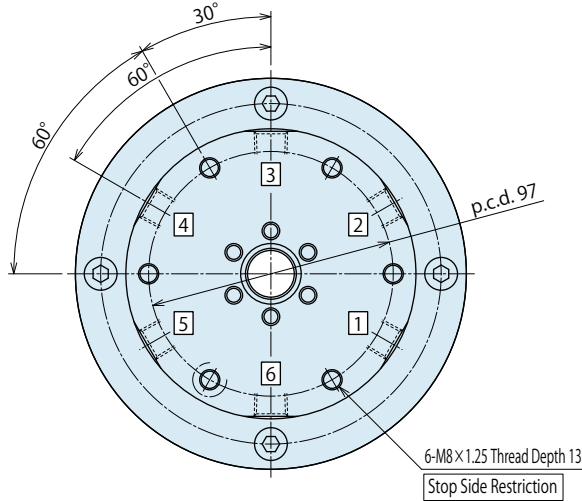
※ This drawing indicates JRB0610-S-G-S.  
(6 Circuit Ports + 1 Center Through Port)

When G thread is necessary for incoming side ports or center through port, please contact us separately.  
(Center through port is only available with a conversion connector.)

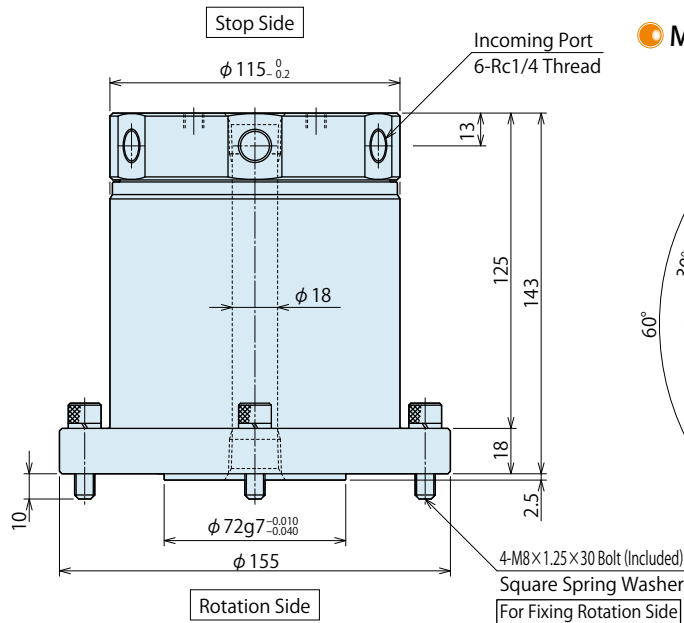
Model No. Indication

JRB0610-**B**-G-**B**  
**S** **S**  
**4** **6**

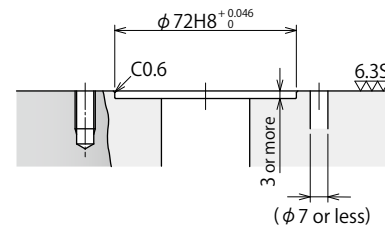
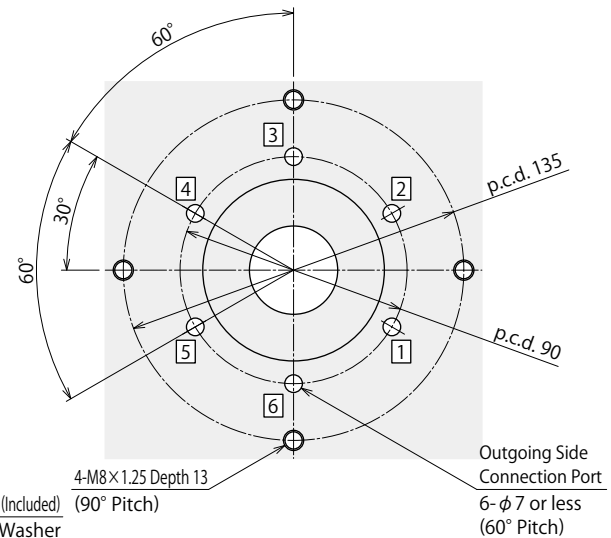
**4** Incoming Side Piping Method  
**6** Center Through Port Piping Method



- 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 hose for piping of 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. Each port exhibits a port number.

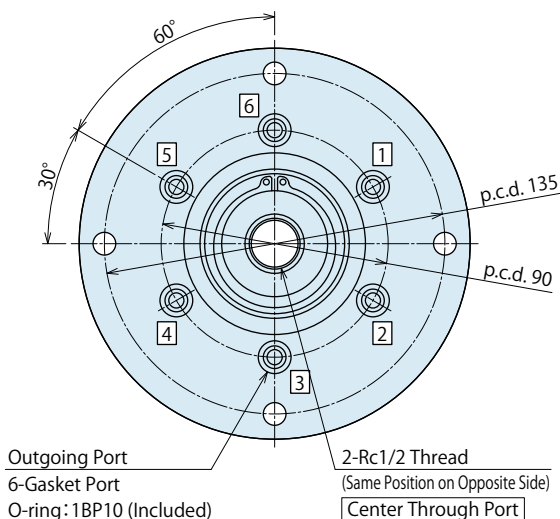


## Machining Dimensions of Mounting Area



Note:

1. Roughness of mounting surface (O-ring seal surface) should be 6.35.



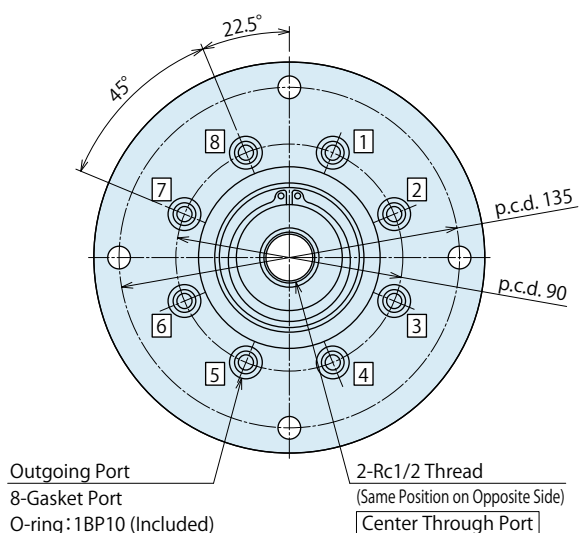
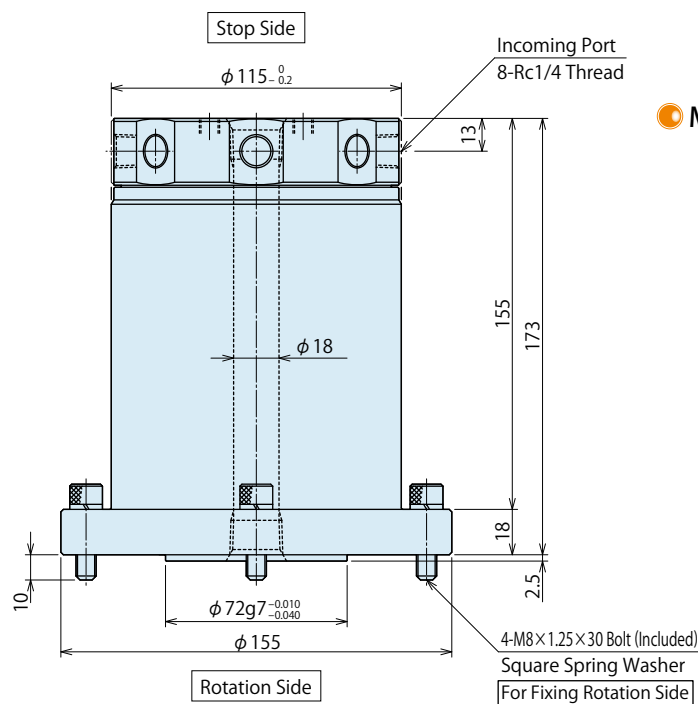
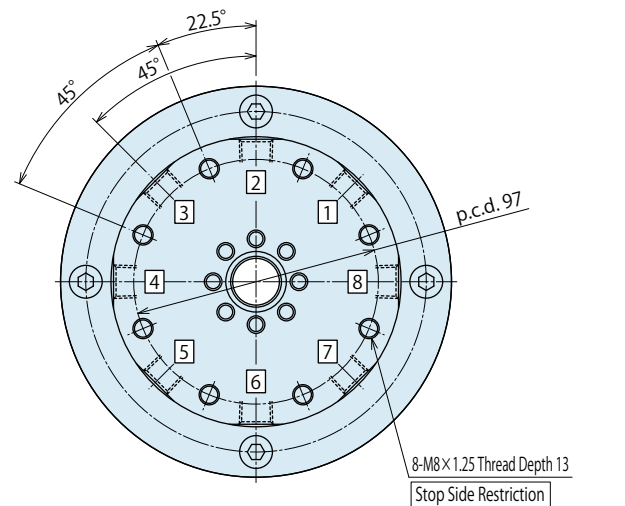
## External Dimensions : JRB0810

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

When G thread is necessary for incoming side ports or center through port, please contact us separately.  
(Center through port is only available with a conversion connector.)

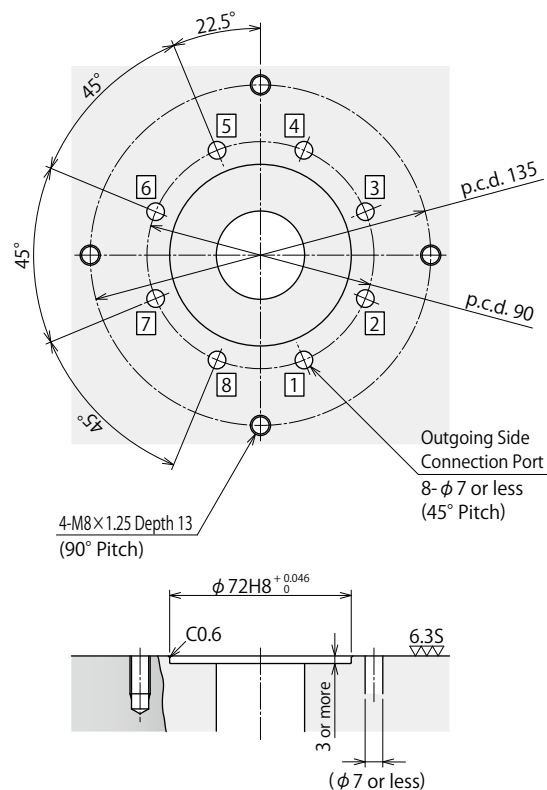
Model No. Indication

**JRB0810-** **B** **S** **-G-** **B** **S** **4** **6**  
 Incoming Side Piping Method  
 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 hose for piping of 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. Each port exhibits a port number.

## Machining Dimensions of Mounting Area



Note :

1. Roughness of mounting surface (O-ring seal surface) should be 6.35.

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/BS

BFP/BFS

Auto Coupler

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

## Cautions

### Notes for Design

- 1) Check Specifications
  - Please use each product according to the specifications.
- 2) Hold 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 the flange part with attached bolts.
- 3) Use a hose for piping of the stop side.
  - Steel piping increases a load during rotation which causes malfunction.
- 4) Please avoid continuous operation.
  - It will cause heat of internal packing.
- 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. (Depending on the model, there will be no oil slick leak to a specific circuit.)
- 6) Rotating torque varies depending on pressurization condition of the fluid.
  - The rotating torque shown in the performance curve is for reference.
- 7) The starting torque might be more than double of rotating torque.
  - It varies depending on the conditions of down time.
- 8) Center through port is not designed as a rotary structure.
  - When using the center through port, install a swivel joint, etc.

### Installation Notes

- 1) Check the Usable Fluid
  - Please use the appropriate fluid by referring to the Hydraulic Fluid List (P.1237).
  - Air should be clean and free of contaminants.
- 2) Treatment before Assembly
  - Perform flushing of piping and pipe fittings sufficiently to ensure a clean environment to avoid malfunctioning. Existence of chips or dusts may cause oil leakage or malfunction.
  - Dust and cutting chips in the circuit may lead to fluid leakage and malfunction.
  - This product is not equipped with protective function to prevent dust and cutting chips going into the hydraulic system and pipeline.
  - In order to prevent foreign substance going into the product during the piping work, it should be carefully cleaned before the work is started.
- 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.
  - In order to prevent a foreign substance from going into the product during the piping work, it should be carefully cleaned before working.
- 4) Mounting the Unit
  - Install carefully not to damage the O-ring installed in each body.
  - Use all attached bolts with hex holes (Strength Grade 12.9) and tighten the body with torque as shown in the table below.

Model No.	Mounting Bolt	Tightening Torque (N·m)
JRC	M8×1.25	25
JRD	M12×1.75	80
JRB	M8×1.25	25

※ Please refer to P.1237 for common cautions.

• Installation Notes    • Hydraulic Fluid List    • Notes on Hydraulic Cylinder Speed Control Circuit  
 • Notes on Handling    • Maintenance/Inspection    • Warranty

MEMO

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
JVA/JVB
JVC/JVD
JVE/JVF
JNA/JNB
JNC/JND
JLP/JLS

Rotary Joint
JR

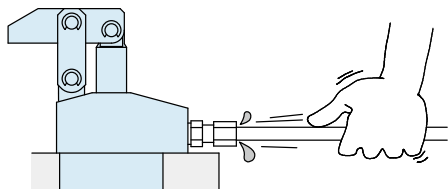
Hydraulic Valve
BK
BEQ
BT
BLS/BLG
BLB
JSS/JS
JKA/JKB
BMA/BMG
AU/AU-M
BU
BP/JPB
BX
BEP/BSP
BH
BC

Air Hydraulic Unit
CV
CK
CP/CPB
CPC/CQC
CB
CC
AB/AB-V
AC/AC-V

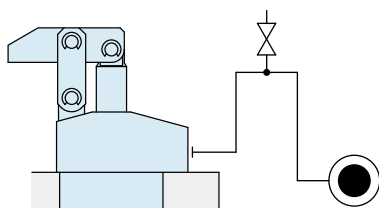
## Cautions

### 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.
  - In order to prevent a foreign substance from going into the product during the piping work, it should be carefully cleaned before working.
- 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 Wiggle 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 bleed 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 As it may be difficult to purchase the products as shown in the table from overseas, please contact the respective manufacturer.

## Cautions

Installation Notes  
(For Hydraulic Series)

Hydraulic Fluid List

Notes on Hydraulic Cylinder  
Speed Control Circuit

Notes on Handling

Maintenance/  
Inspection

Warranty

## Company Profile

Company Profile

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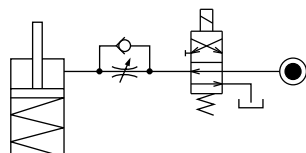
## Notes on Hydraulic Cylinder Speed Control Unit



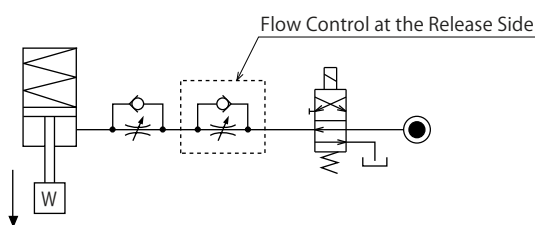
Please pay attention to the cautions below. Design the hydraulic circuit for controlling the action speed of hydraulic cylinder. Improper circuit design may lead to malfunctions and damages. Please review the circuit design in advance.

### 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

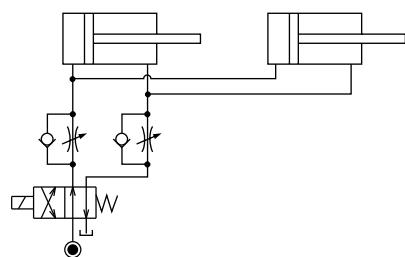
Flow control circuit for double acting cylinder should have meter-out circuits for both the lock and release sides. Meter-in control can have adverse effect by presence of air in the system.

However, in the case of controlling LKE, TMA, TLA, both lock side and release side should be meter-in circuit.

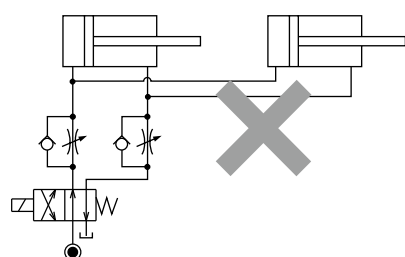
Refer to P.75 for speed adjustment of LKE.

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)

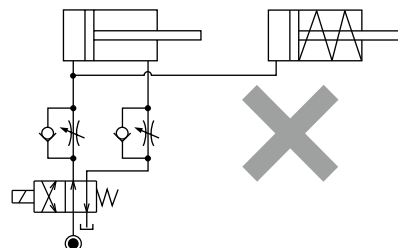


【Meter-in Circuit】 (LKE/TMA/TLA must be controlled with meter-in.)



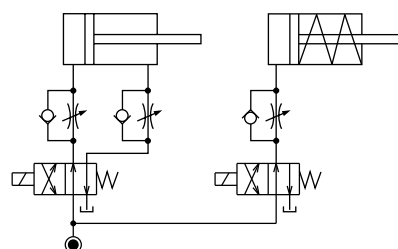
In the case of meter-out circuit, the hydraulic circuit should be designed with the following points.

- 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.

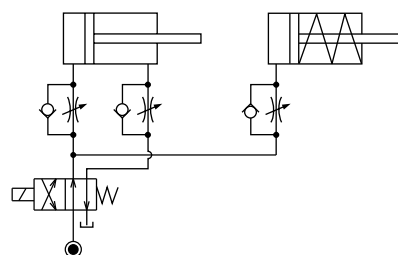


Refer to the following circuit when both the single acting cylinder and double acting cylinder are used together.

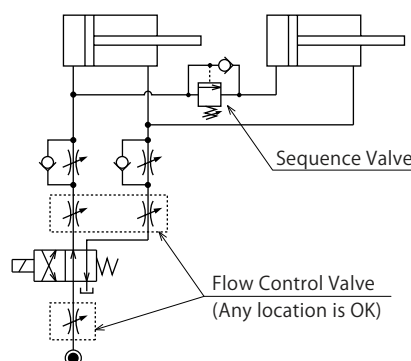
- Separate the control circuit.



- 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.



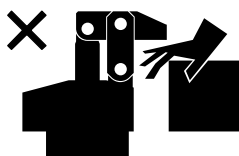
- ② In the case of meter-out circuit, the inner circuit pressure may increase during the cylinder action because of the fluid supply. The increase of the inner circuit pressure can be prevented by reducing the supplied fluid beforehand via the flow control valve. Especially when using sequence valve 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

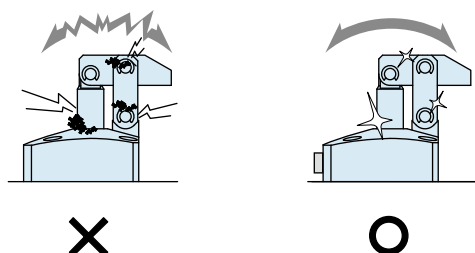
- 1) It should be handled by qualified personnel.
- The hydraulic machine and air compressor should be handled and maintained by qualified personnel.
- 2) Do not handle or remove the machine unless the safety protocols are ensured.
  - ① The machine and equipment can only be inspected or prepared when it is confirmed that the preventive devices are in place.
  - ② Before the machine is removed, make sure that the above-mentioned safety measures are in place. Shut off the air of hydraulic source and make sure no pressure exists in the hydraulic and air circuit.
  - ③ After stopping the machine, do not remove until the temperature cools down.
  - ④ Make sure there is no abnormality in the bolts and respective parts before restarting the machine or equipment.
- 3) Do not touch clamp (cylinder) while clamp (cylinder) is working. Otherwise, your hands may be injured due to clinching.



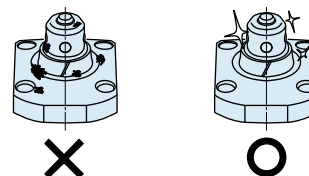
- 4) Do not disassemble or modify.
- If the equipment is taken apart or modified, the warranty will be voided even within the warranty period.

### ● Maintenance and Inspection

- 1) Removal of the Machine and Shut-off of Pressure Source
  - Before the machine is removed, make sure that the above-mentioned safety measures are in place. Shut off the air of hydraulic source and make sure no pressure exists in the hydraulic and air circuit.
  - 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, fluid leakage and air leaks.



- 3) Please clean out the reference surface regularly (taper reference surface and seating surface) of locating machine. (VS/VT/VFL/VFM/VFJ/VFK/WVS/VWM/VWK/VX/VXF)
  - Location products, except VX/VXF model, can remove contaminants with cleaning functions. When installing pallets make sure there is no thick sludge like substances on pallets.
  - Continuous use with dirt on components will lead to locating functions not work properly, leaking and malfunction.



- 4) If disconnecting by couplers on a regular basis, air bleeding should be carried out daily to avoid air mixed in the circuit.
- 5) Regularly tighten nuts, bolts, pins, cylinders and pipe line to ensure proper use.
- 6) Make sure the hydraulic fluid has not deteriorated.
- 7) Make sure there is smooth action and no abnormal 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.

**Cautions**[Installation Notes  
\(For Hydraulic Series\)](#)[Hydraulic Fluid List](#)[Notes on Hydraulic Cylinder  
Speed Control Circuit](#)[Notes on Handling](#)[Maintenance/  
Inspection](#)[Warranty](#)**Company Profile**[Company Profile](#)[Our Products](#)[History](#)**Index**[Search by  
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## ● 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 handled in 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

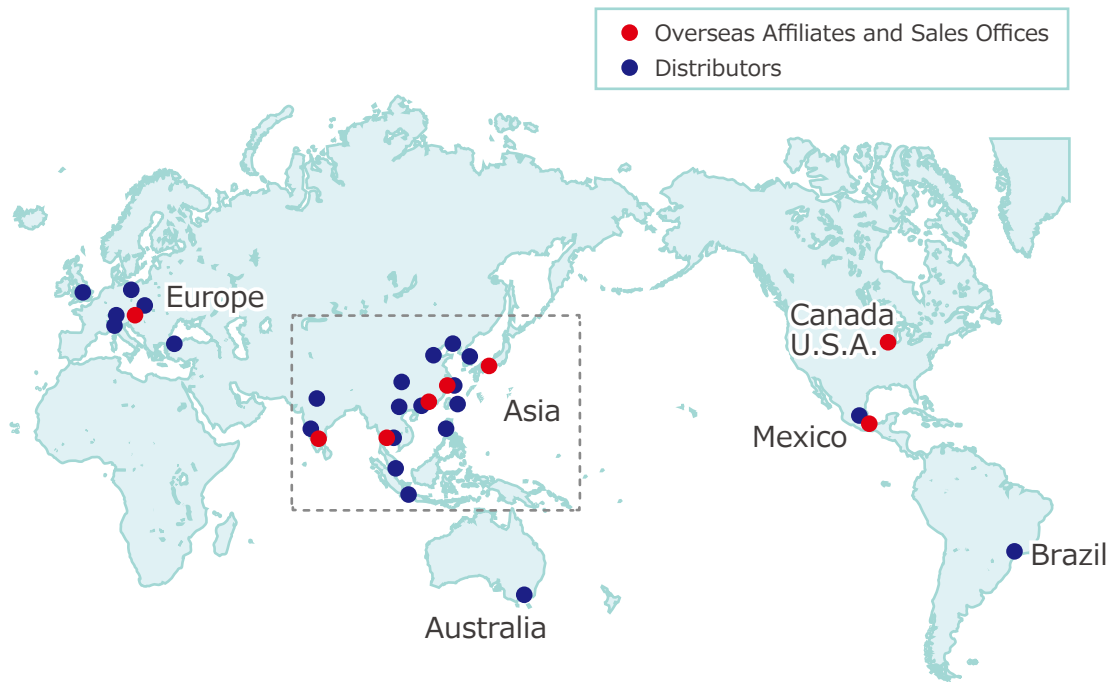
## Sales Offices across the World

Japan	<b>TEL. +81-78-991-5162</b>	<b>FAX. +81-78-991-8787</b>
Overseas Sales	KOSMEK LTD. 1-5, 2-chome, Murotani, Nishi-ku, Kobe-city, Hyogo, Japan 651-2241 〒651-2241 兵庫県神戸市西区室谷2丁目1番5号	
USA	<b>TEL. +1-630-620-7650</b>	<b>FAX. +1-630-620-9015</b>
KOSMEK (USA) LTD.	650 Springer Drive, Lombard, IL 60148 USA	
Mexico	<b>TEL. +52-442-161-2347</b>	
KOSMEK USA Mexico Office	Blvd Jurica la Campana 1040, B Colonia Punta Juriquilla Queretaro, QRO 76230 Mexico	
EUROPE	<b>TEL. +43-463-287587</b>	<b>FAX. +43-463-287587-20</b>
KOSMEK EUROPE GmbH	Schleppeplatz 2 9020 Klagenfurt am Wörthersee Austria	
China	<b>TEL. +86-21-54253000</b>	<b>FAX. +86-21-54253709</b>
KOSMEK (CHINA) LTD. 考世美(上海)贸易有限公司	Room601, RIVERSIDE PYRAMID No.55, Lane21, Pusan Rd, Pudong Shanghai 200125, China 中国上海市浦东新区浦三路21弄55号银亿滨江中心601室200125	
India	<b>TEL. +91-9880561695</b>	
KOSMEK LTD. - INDIA	F 203, Level-2, First Floor, Prestige Center Point, Cunningham Road, Bangalore -560052 India	
Thailand	<b>TEL. +66-2-300-5132</b>	<b>FAX. +66-2-300-5133</b>
Thailand Representative Office	67 Soi 58, RAMA 9 Rd., Suanluang, Suanluang, Bangkok 10250, Thailand	
Taiwan (Taiwan Exclusive Distributor)	<b>TEL. +886-2-82261860</b>	<b>FAX. +886-2-82261890</b>
Full Life Trading Co., Ltd. 盈生貿易有限公司	16F-4, No.2, Jian Ba Rd., Zhonghe District, New Taipei City Taiwan 23511 台湾新北市中和區建八路2號 16F-4 (遠東世紀廣場)	
Philippines (Philippines Exclusive Distributor)	<b>TEL. +63-2-310-7286</b>	<b>FAX. +63-2-310-7286</b>
G.E.T. Inc, Phil.	Victoria Wave Special Economic Zone Mt. Apo Building, Brgy. 186, North Caloocan City, Metro Manila, Philippines 1427	
Indonesia (Indonesia Exclusive Distributor)	<b>TEL. +62-21-5818632</b>	<b>FAX. +62-21-5814857</b>
P.T PANDU HYDRO PNEUMATICS	Ruko Green Garden Blok Z-II No.51 Rt.005 Rw.008 Kedoya Utara-Kebon Jeruk Jakarta Barat 11520 Indonesia	

## Sales Offices in Japan

Head Office Osaka Sales Office Overseas Sales	<b>TEL.078-991-5115</b>	<b>FAX.078-991-8787</b>
	〒651-2241	兵庫県神戸市西区室谷2丁目1番5号
Tokyo Sales Office	<b>TEL.048-652-8839</b>	<b>FAX.048-652-8828</b>
	〒331-0815	埼玉県さいたま市北区大成町4丁目81番地
Nagoya Sales Office	<b>TEL.0566-74-8778</b>	<b>FAX.0566-74-8808</b>
	〒446-0076	愛知県安城市美園町2丁目10番地1
Fukuoka Sales Office	<b>TEL.092-433-0424</b>	<b>FAX.092-433-0426</b>
	〒812-0006	福岡県福岡市博多区上牟田1丁目8-10-101

# Global Network



Asia Detailed Map



**KOSMEK**  
Harmony in Innovation

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