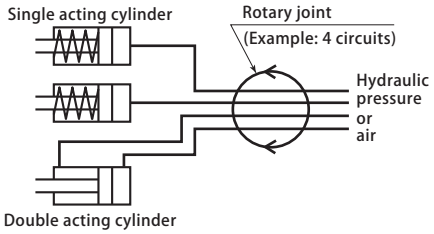
Rotary joint

model
WRA

Single rotary standard | 25MPa

Rotary joints are best suited for supplying hydraulic pressure and air to rotary table of machining center on which use of secured hydraulic hoses or fixed piping is difficult. Standard single rotary can be selected from among four types of two-circuit to eight-circuit types, with each circuit usable as independent circuit.

When a four-circuit type is selected, for example, four single acting cylinders or two double acting cylinders can be controlled individually.

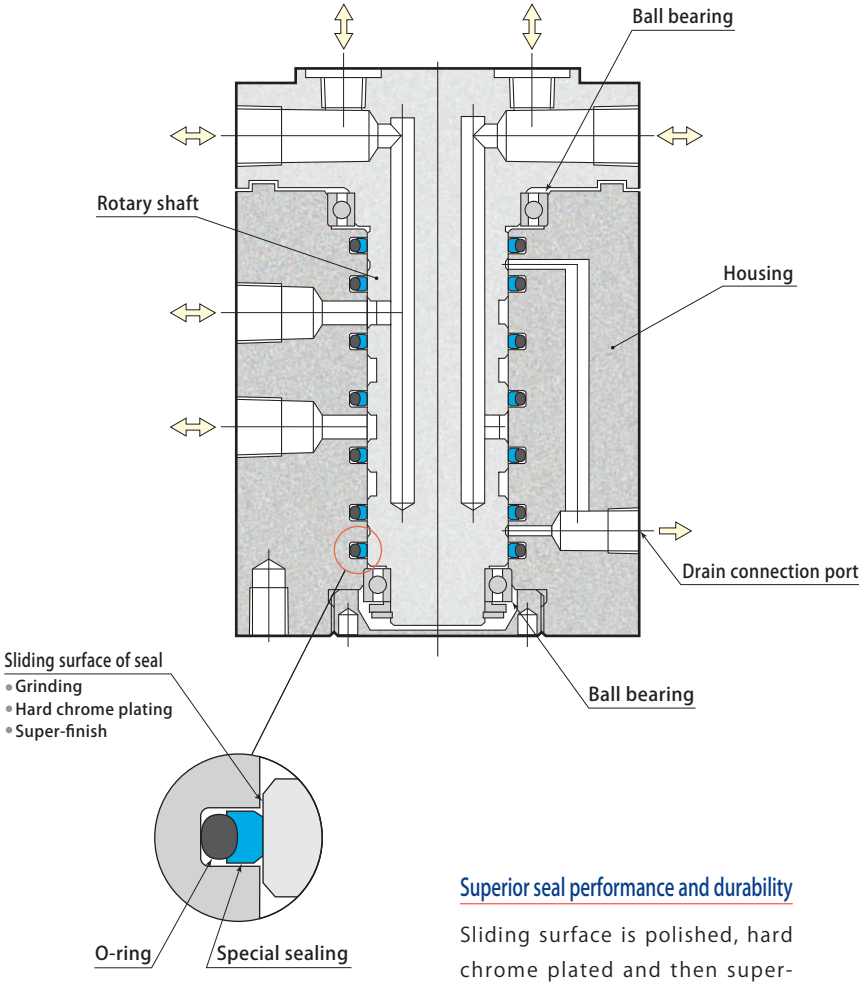


Low starting torque

Special seal with lower resistance has been adopted to minimize sliding friction to realize low starting torque.

Usable for both oil and air

Superior sealing capability of special seal can be utilized not only for hydraulic circuits but also for air circuits.

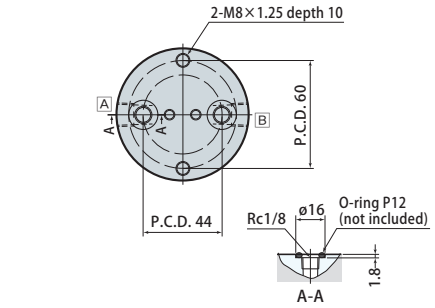


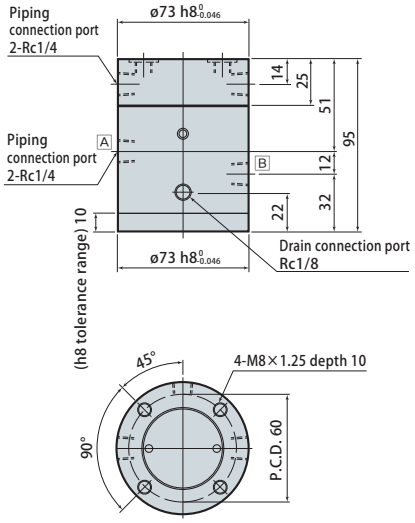
Superior seal performance and durability

Sliding surface is polished, hard chrome plated and then super-finished to offer superior seal performance and durability.

2 circuits

WRA2





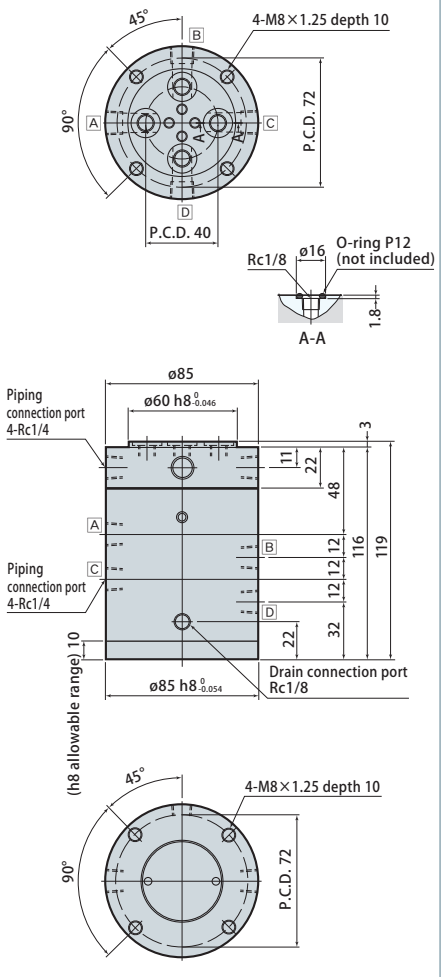
Each piping connection port is marked with code A or B.

Specifications

Model	WRA2	WRA4	WRA6	WRA8
Number of circuits	2 circuits	4 circuits	6 circuits	8 circuits
Fluid used	General mineral based hydraulic oil (ISO-VG32 equivalent) or air			
Max. working pressure (MPa)	25			
Allowable rotations	Varies depending on fluid pressure (refer to **page → 231** for details on allowable rotations.)			
Operating temperature (°C)	0 ~ 70			
Piping connection port dimensions	Rc1/4 (body upper surface is Rc1/8)			
Mass (kg)	3.0	5.0	8.9	12.9

4 circuits

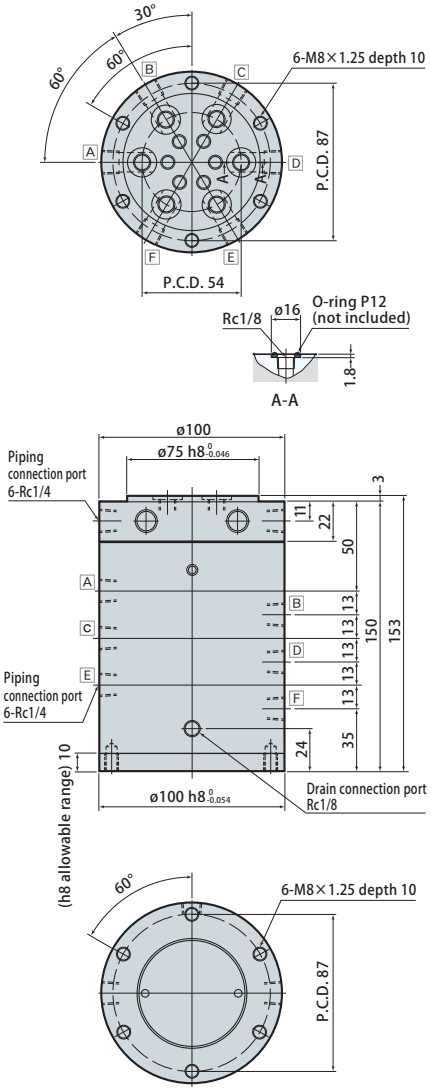
WRA4



Each piping connection port is marked with code A through D.

6 circuits

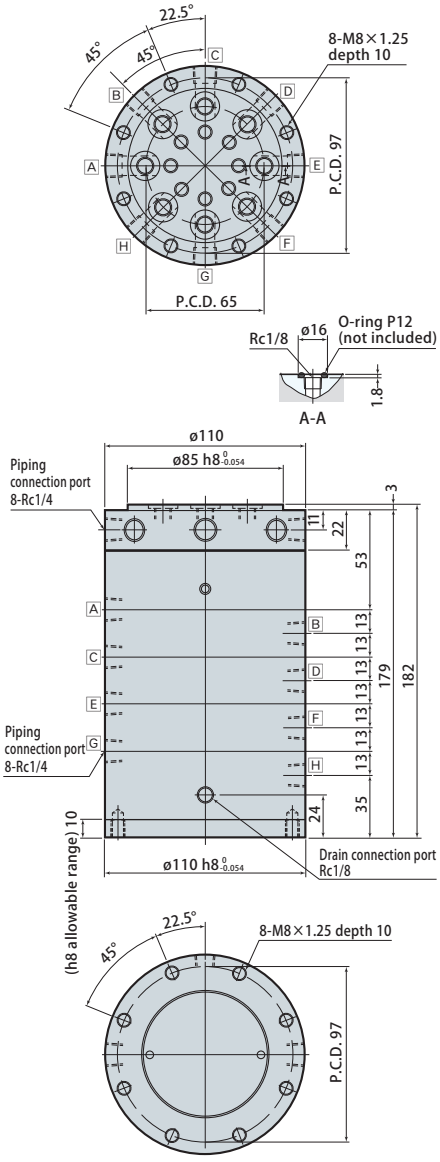
WRA6



Each piping connection port is marked with code A through F.

8 circuits

WRA8



Each piping connection port is marked with code A through H.

Mounting screws are not included.

Rotary joint

model
WRA

Single rotary flange | 25MPa

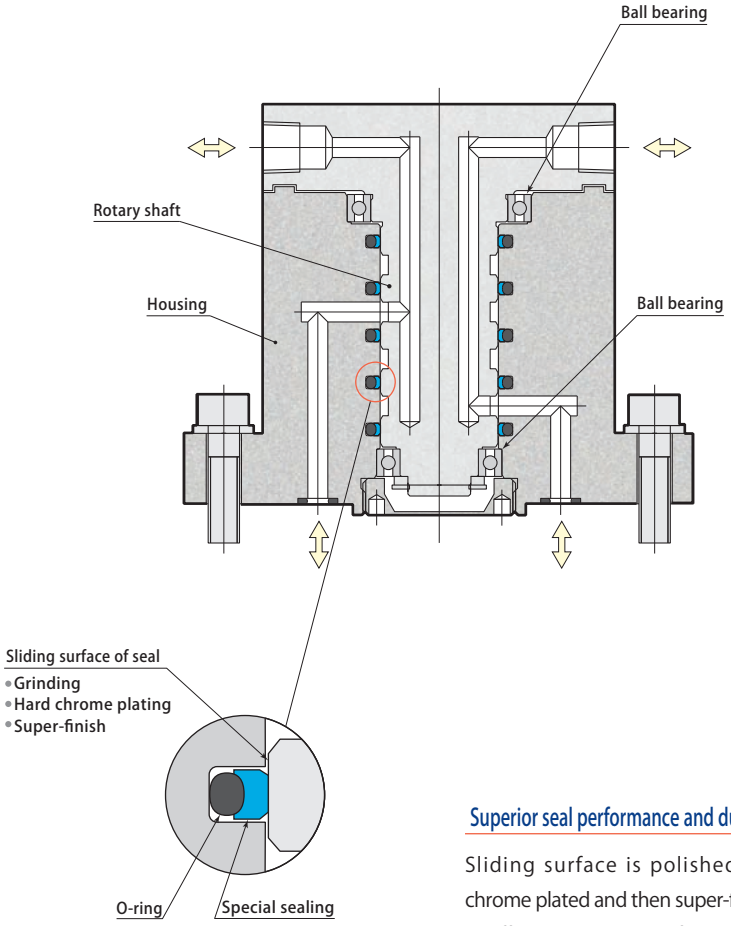
Single rotary with flange is a compact type rotary joint with mounting section of the body shaped in the form of flange to keep the overall height low. Four types are available with 2 to 8 circuits, and each circuit can be used independently.
Fluid should be supplied from flange side of the body with manifold piping.

Low starting torque

Special seal with lower resistance has been adopted to minimize sliding friction to realize low starting torque.

Usable for both oil and air

Superior sealing capability of special seal can be utilized not only for hydraulic circuits but also for air circuits.

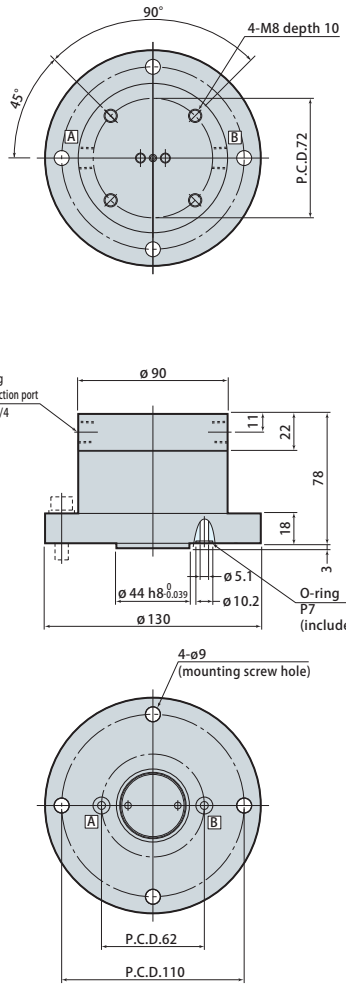


Superior seal performance and durability

Sliding surface is polished, hard chrome plated and then super-finished to offer superior seal performance and durability.

2 circuits

WRA2F



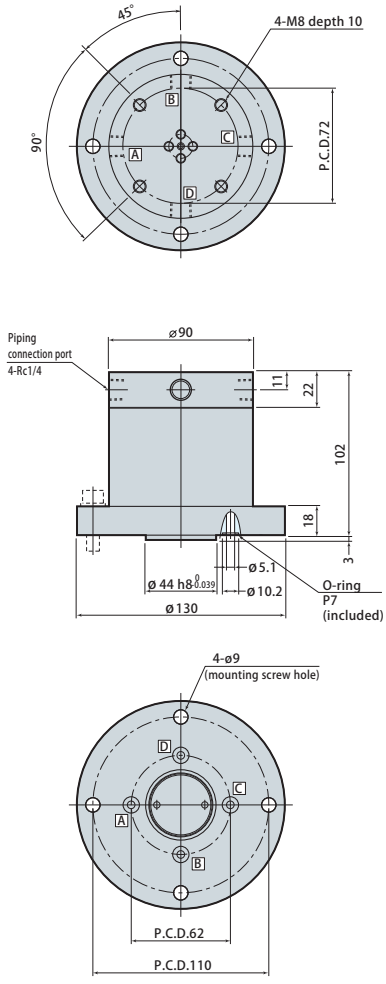
Each piping connection port is marked with code A or B.
Mounting surface finish must be no rougher than Rz6.3 (ISO4287:1997).

Specifications

Model	WRA2F	WRA4F	WRA6F	WRA8F
Number of circuits	2 circuits	4 circuits	6 circuits	8 circuits
Fluid used	General mineral based hydraulic oil (ISO-VG32 equivalent) or air			
Max. working pressure (MPa)	25			
Allowable rotations	Varies depending on fluid pressure (refer to **page → 231** for details on allowable rotations)			
Operating temperature (°C)	0 ~ 70			
Piping connection port dimensions	Rc1/4 (body lower surface is manifold piping)			
Mass (kg)	4.9	6.1	10.9	14.9

4 circuits

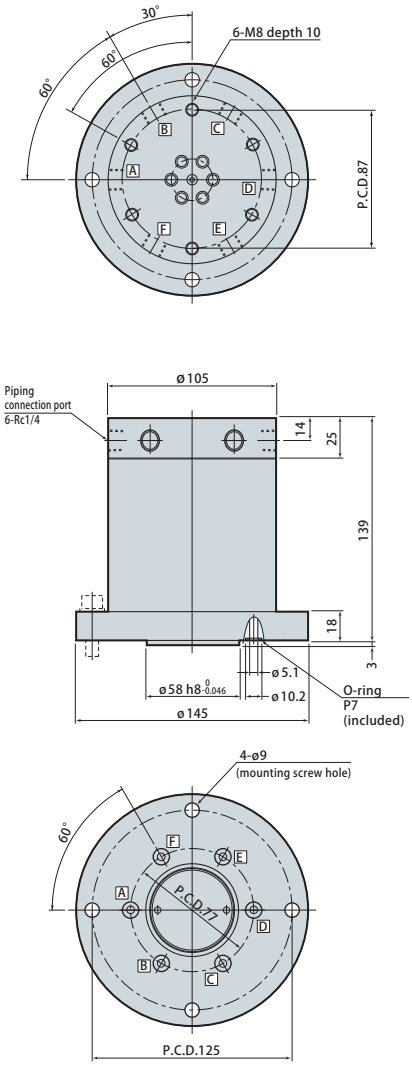
WRA4F



Each piping connection port is marked with code A through D.
Mounting surface finish must be no rougher than Rz6.3 (ISO4287:1997).

6 circuits

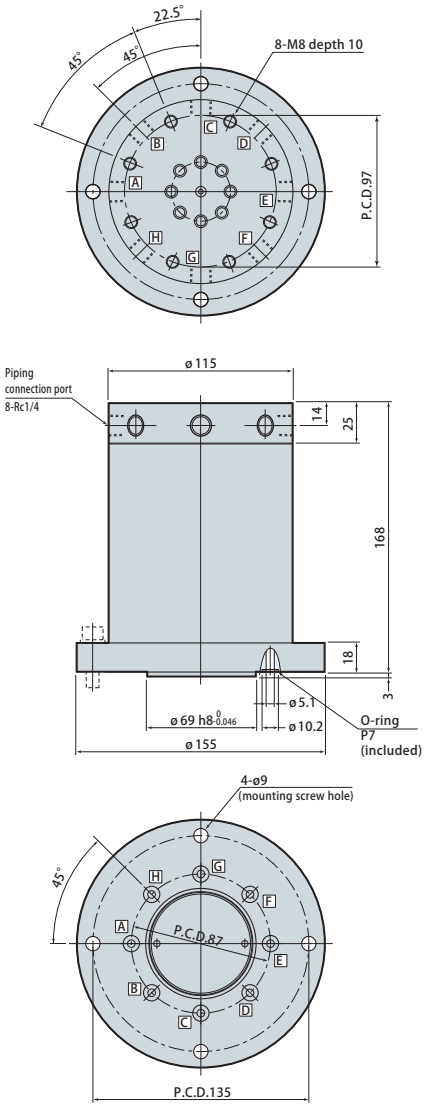
WRA6F



Each piping connection port is marked with code A through F.
Mounting surface finish must be no rougher than Rz6.3 (ISO4287:1997).

8 circuits

WRA8F



Each piping connection port is marked with code A through H.
Mounting surface finish must be no rougher than Rz6.3 (ISO4287:1997).

Mounting screws are not included.

Rotary joint

model
WRA

Double rotary flange | 25MPa

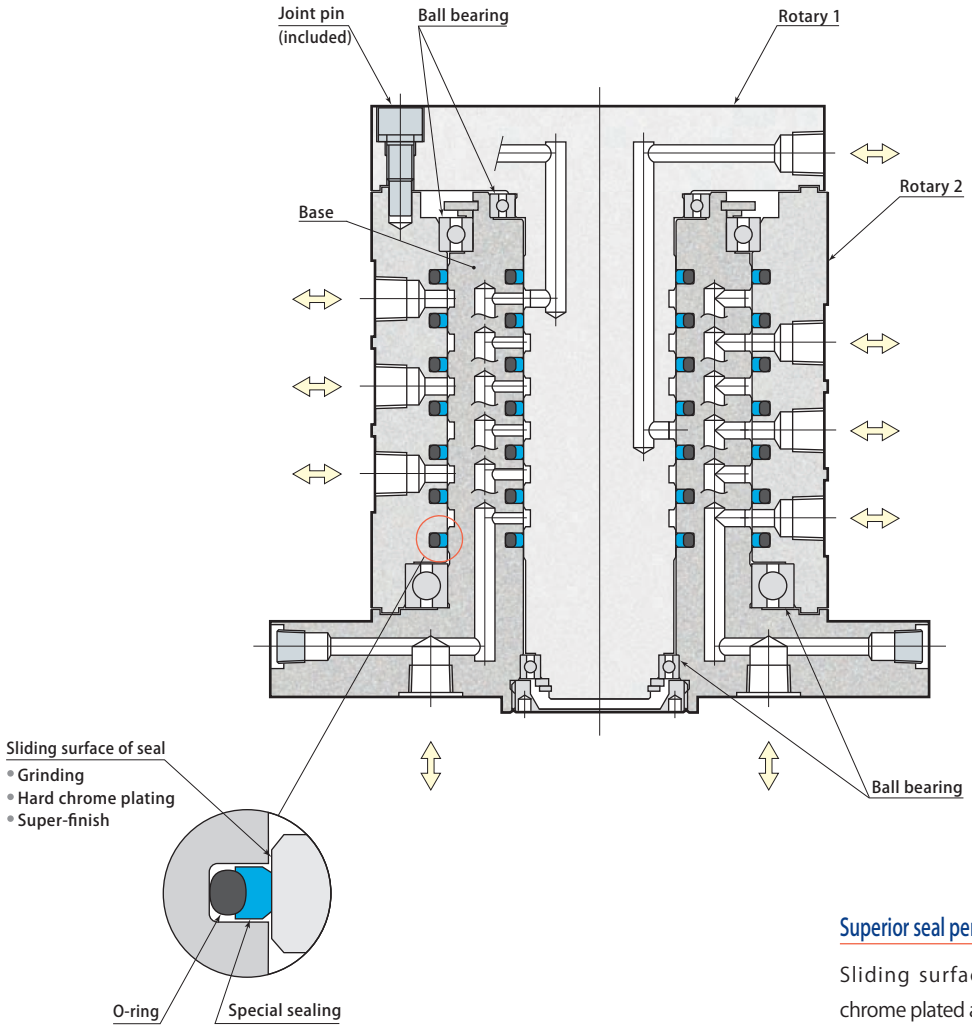
Double rotary type combines two rotaries on same axis to keep the overall height lower still. Two types are available with 12 or 16 circuits, and each circuit can be used independently. Rotary 1 and Rotary 2 rotate independently but they can be synchronized by using a joint pin (included).

Low starting torque

Special seal with lower resistance has been adopted to minimize sliding friction to realize low starting torque.

Usable for both oil and air

Superior sealing capability of special seal can be utilized not only for hydraulic circuits but also for air circuits.



Superior seal performance and durability

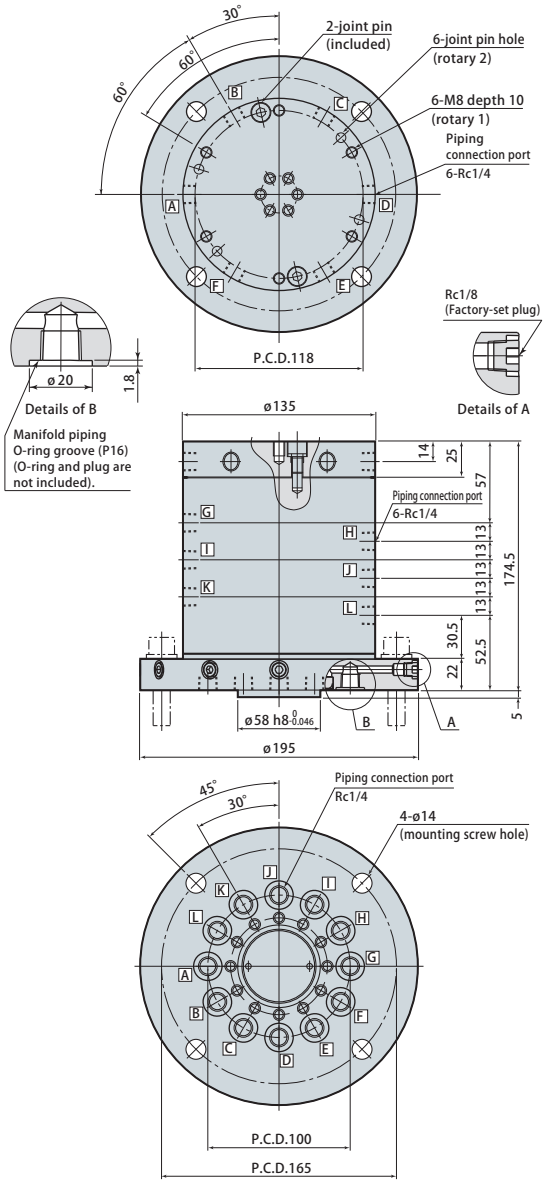
Sliding surface is polished, hard chrome plated and then super-finished to offer superior seal performance and durability.

Specifications

Model	WRA66	WRA88
Number of circuits	12 circuits	16 circuits
Fluid used	General mineral based hydraulic oil (ISO-VG32 equivalent) or air	
Max. working pressure (MPa)	25	
Allowable rotations	Varies depending on fluid pressure (refer to **page → 231** for details on allowable rotations)	
Operating temperature (°C)	0 ~ 70	
Piping connection port dimensions	Rc1/4	
Mass (kg)	22	30

12 circuits

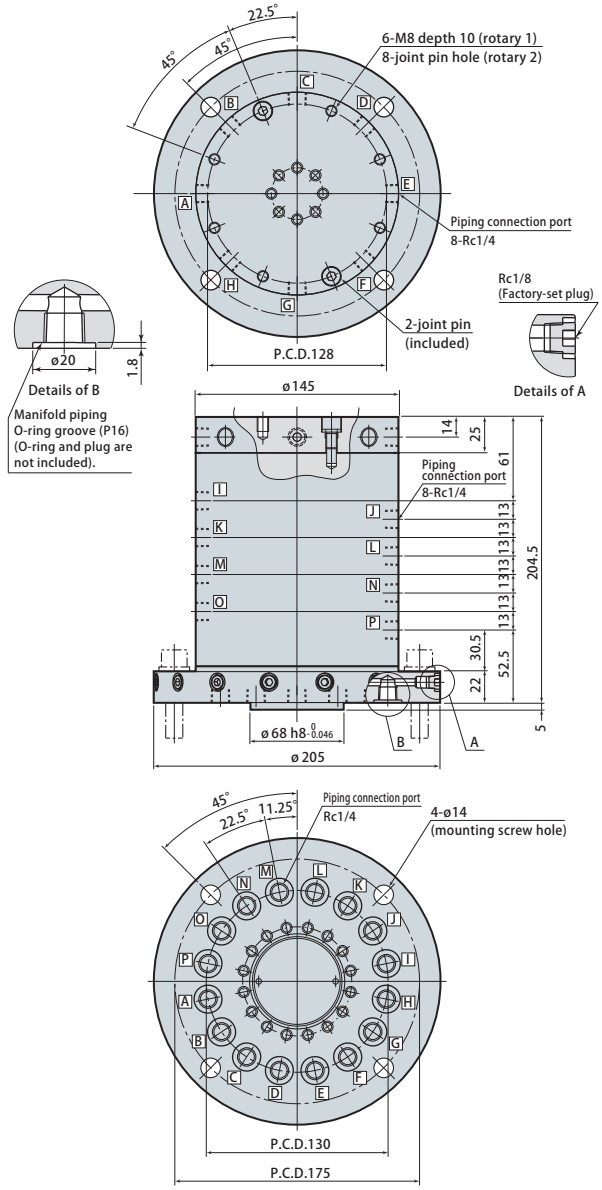
WRA66



Each piping connection port is marked with code A through L.

16 circuits

WRA88



Each piping connection port is marked with code A through P.

Mounting screws are not included.

Rotary joint

model
WRB

Single rotary flange | 7MPa

Rotary joint model WRB was developed for low pressure applications. Aluminum is adopted as body material to reduce the weight. This is a center through type, which the through bore of rotary shaft can be used for coolant piping.

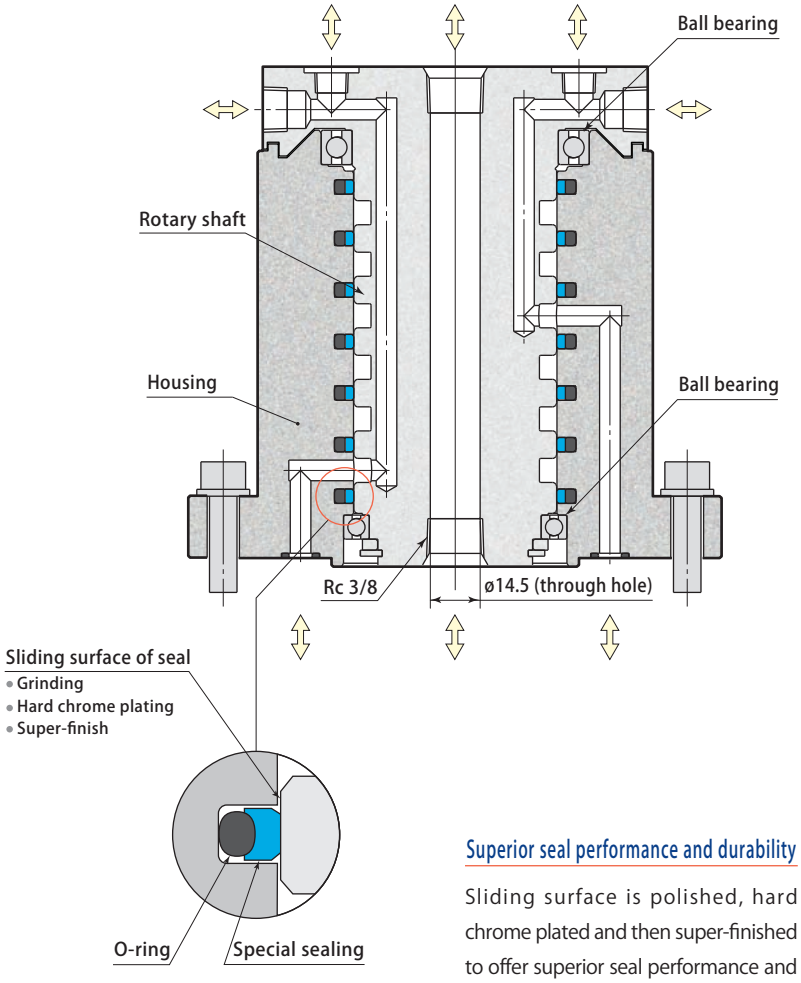
Single rotary flange is a compact type rotary joint with mounting section of the body shaped in the form of flange to keep the overall height low. Four types are available with 2 to 8 circuits, and each circuit can be used independently. Fluid should be supplied from flange side of the body with manifold piping.

Low starting torque

Special seal with lower resistance has been adopted to minimize sliding friction to realize low starting torque.

Usable for both oil and air

Superior sealing capability of special seal can be utilized not only for hydraulic circuits but also for air circuits.

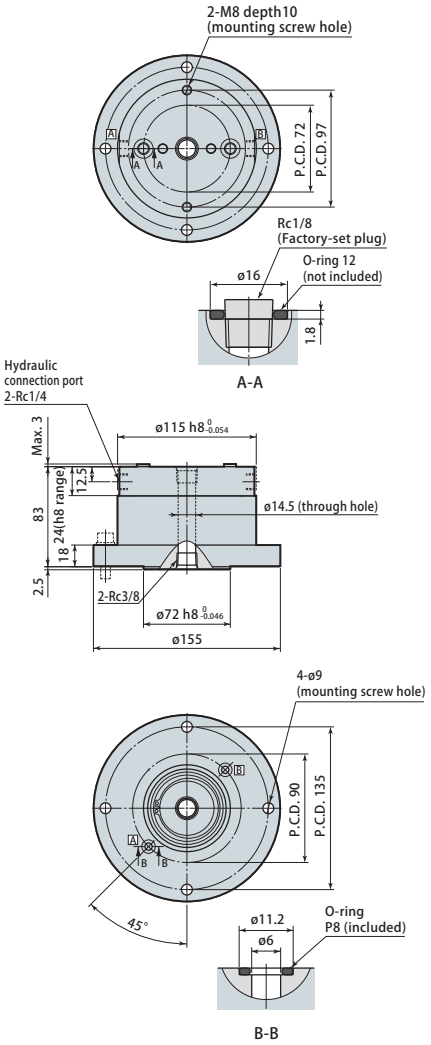


Superior seal performance and durability

Sliding surface is polished, hard chrome plated and then super-finished to offer superior seal performance and durability.

2 circuits

WRB2



Each piping connection port is marked with code A and B. Mounting surface finish must be no rougher than Rz6.3 (ISO4287:1997).

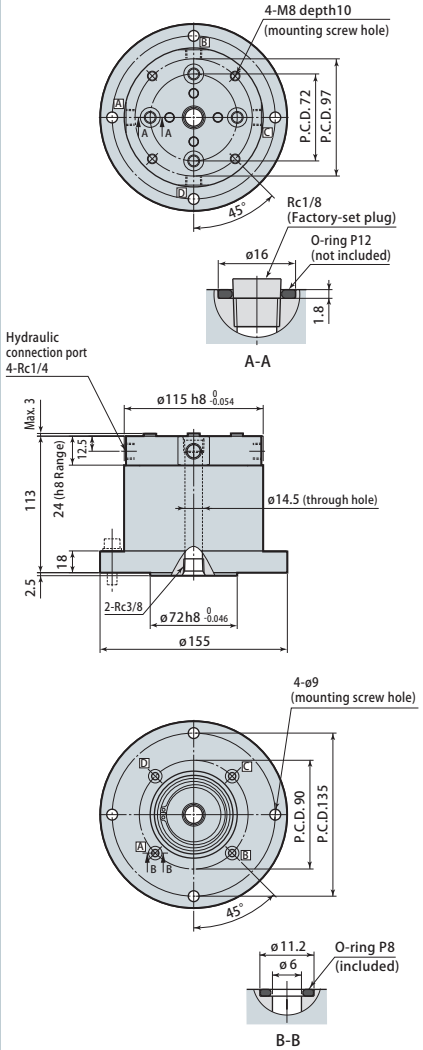
Specifications

Model	WRB2	WRB4	WRB6	WRB8
Number of circuits	2 circuits + 1 circuit *	4 circuits + 1 circuit *	6 circuits + 1 circuit *	8 circuits + 1 circuit *
Fluid used	General mineral based hydraulic oil (ISO-VG32 equivalent) or air (center through circuit: coolant)			
Max. working pressure (MPa)	7			
Allowable rotations	Varies depending on fluid pressure (**page →231** for details on allowable rotations)			
Operating temperature (°C)	0 ~ 70			
Piping connection port dimensions	Body lower surface is manifold piping, upper surface is Rc1/8, side surface is Rc1/4, center through is Rc3/8			
Mass (kg)	4.5	5.5	6.5	7.5

* : +1 circuit indicates a center through circuit (coolant).

4 circuits

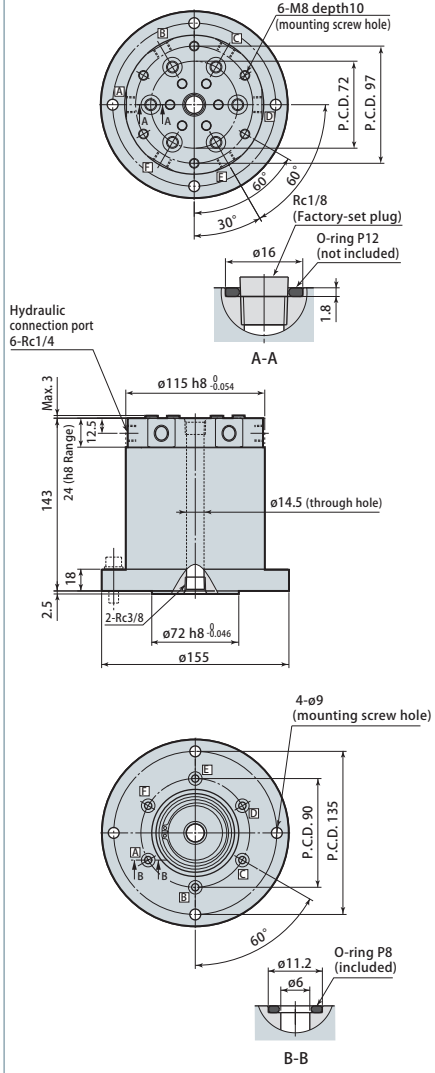
WRB4



Each piping connection port is marked with code A through D.
Mounting surface finish must be no rougher than Rz6.3 (ISO4287:1997).

6 circuits

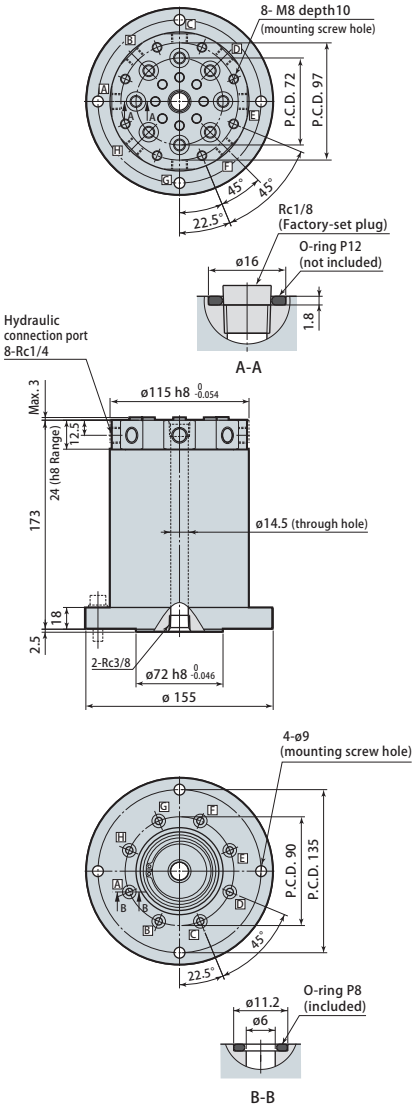
WRB6



Each piping connection port is marked with code A through F.
Mounting surface finish must be no rougher than Rz6.3 (ISO4287:1997).

8 circuits

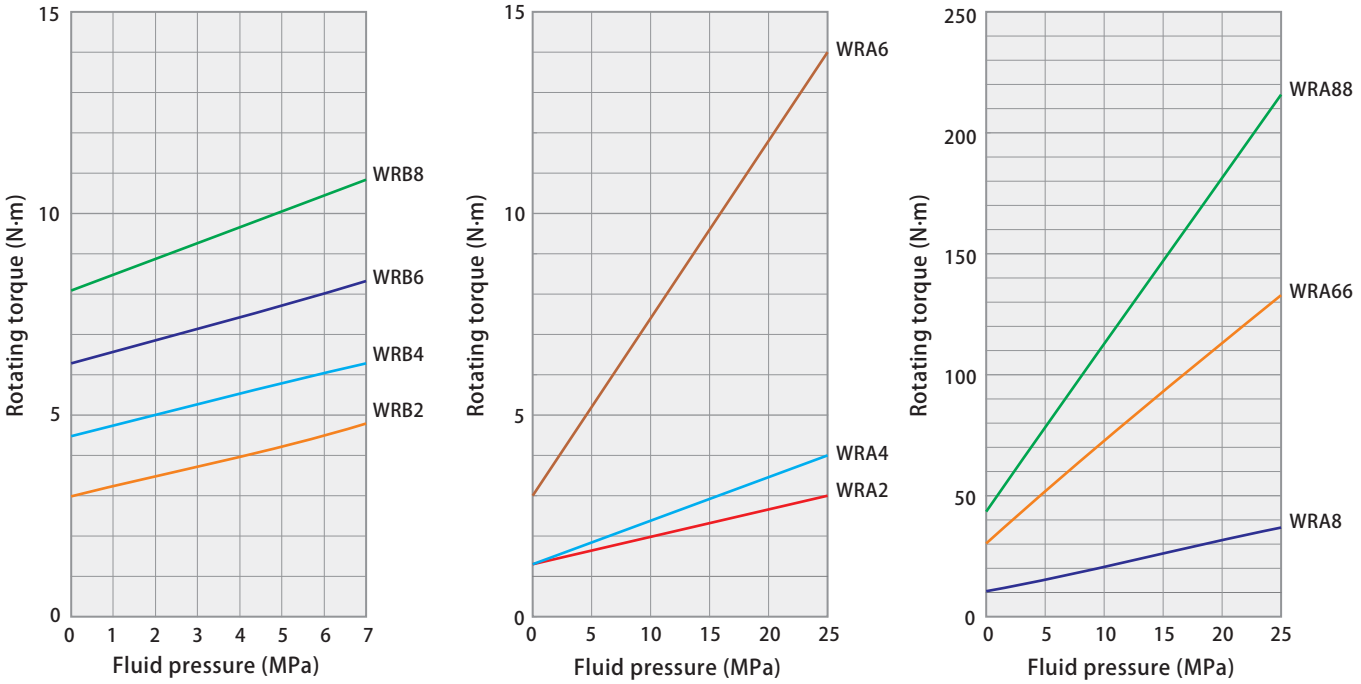
WRB8



Each piping connection port is marked with code A through H.
Mounting surface finish must be no rougher than Rz6.3 (ISO4287:1997).

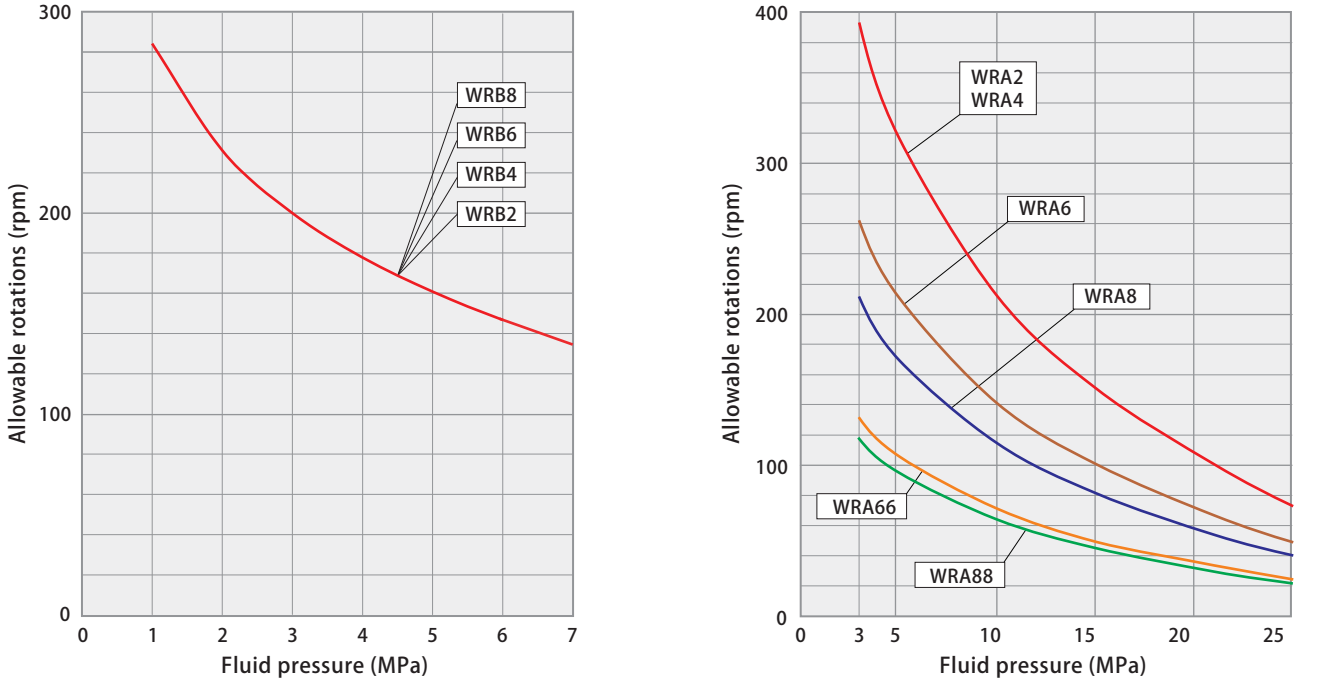
Mounting screws are not included.

Rotating torque (reference)



1. Diagram above depicts torque (sliding resistance of packing) for stable rotation.
2. Starting torque may become twice as much as torque during stable rotation.
3. There is variance of torque with each product.
4. Rotating torque values indicated above are reference values.

Allowable rotations



1. Diagram above depicts allowable rotation when proper lubrication oil film has been formed.
2. Simultaneous use of maximum values is not possible, since used fluid pressure, rotating speed and operating temperature mutually affect each other.

1. Fluid applied is limited to mineral hydraulic oil or air. Contact us concerning other fluid. When applying air, lubricator should be used.
2. When applying hydraulic oil to rotary joint, oil film leakage to adjacent circuits is inevitable. When the oil and air circuits are being allocated in one rotary joint, be sure to allocate a circuit between them as a drain circuit. (If the air circuit can tolerate the oil leakage, drain circuit is not mandatory.)
3. Non-stop operation should be avoided, as heat from packing's sliding resistance is generated.
4. At installation, fixate the rotating side. For the stationary side, only the rotational restraint should be provided to avoid an eccentric overload. (Refer to diagram below.)
5. Flexible hose is recommended for piping rather than steel hose.
6. When using mineral hydraulic oil, drain port should have an independent piping to return the oil directly to tank.