

ROTARY COUPLINGS

without/with Leakage oil return, pmax. 400 bar



Application example:

13 passage rotary coupling with 6 connections for compressed air, 6 connections for cooling water, 1 connection for forming gas; with electronic control 12 x 24V, 2A per line. For more application examples please refer to our catalogue and under www.hydrokomp.de.

Important operating instruction:

For the operating circumstances operating pressure and torque must be aligned. Please see the diagrams on page 3 and 4. Operating temperature range: -10°C to +60°C

Mounting:

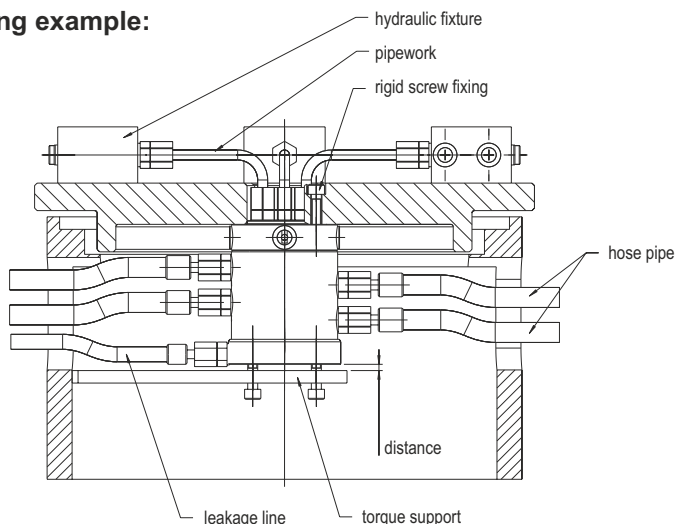
The rotary coupling must be mounted in a way that no transverse moment is effected on the standing or rotating element. It has proven to be best to screw the rotating housing with its ports towards the clamping devices and to protect the rotating piston only against twisting (no initiation of bearing forces).

The line connection from the torque support to the rotating piston should be done via hoses only to avoid the initiation of torque into the housing

The rotary coupling may only be taken into operation when all junction levels are connected to the power unit in order to guarantee the necessary seal lubrication

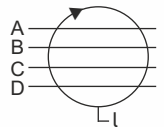
The multiple passage rotary couplings have axial and radial G1/4 threaded ports in the rotating piston. In addition, they can be connected axially at the rotating piston with O-Rings 16 x 2. In this case, please calculate the necessary screw forces of the fixing screws imperatively.

Mounting example:



Webcode: 050003

We also design and manufacture special designs



General information:

Rotary couplings transfer hydraulic oil from a fixed to a rotating machine part. The assembly is done in the rotation axis of the subassembly. Depending on the number of junction levels several single or double acting hydraulic elements can be connected.

On principle, the rotary coupling is only suitable for hydraulic oil. If pneumatic shall be transferred, the catalogued elements can be used providing that the air is filtered and lubricated to guarantee seal greasing and corrosion protection.

In the design stage it needs to be considered that the rotation movement is obstructed by the seal friction. This frictional drag is pressure dependant and must be considered for the drive torque of the rotary table. Corresponding information can be found in the reling diagrams which show the starting torques existing while all junction levels are pressurised.

Order information:

When placing an enquiry or an order, the operating circumstances should be stated. These are for example operating pressure, medium, functionality (sa, da) and cycle time.

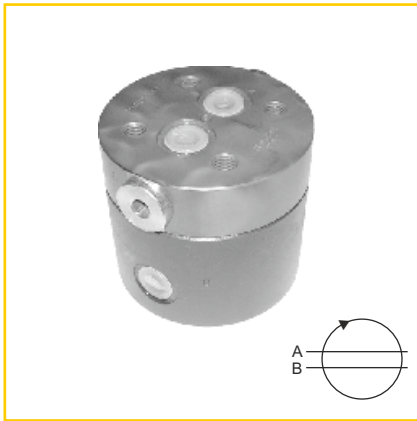


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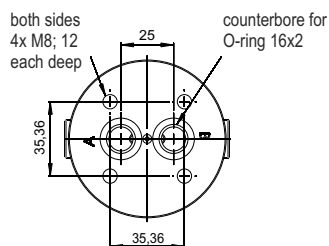
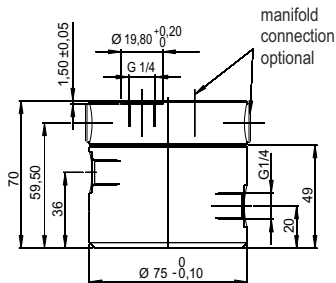
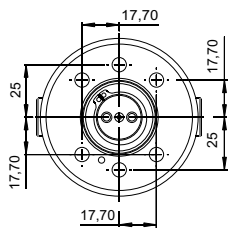


Rotary couplings



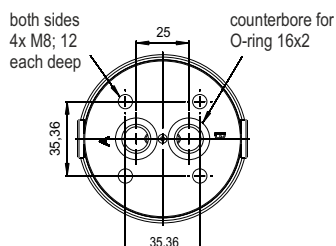
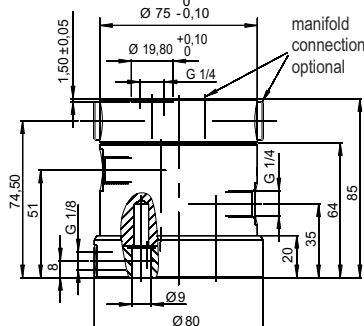
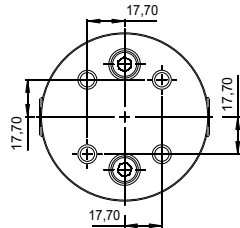
Twin passage, without leakage return

| | |
|--------------------------|--------------|
| Connections | 2 |
| Nominal diameter | 5 |
| Operating pressure, max. | 0-400 bar |
| Leakage rate, max. | 30 ccm/100h |
| Weight | 2,2 kg |
| Order no. | DR-020-5-001 |



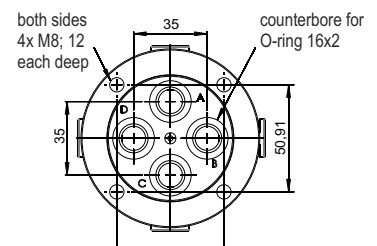
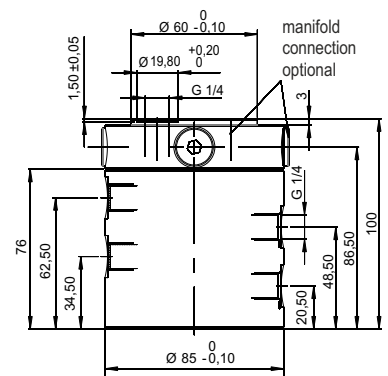
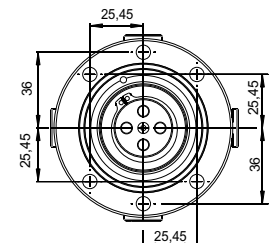
Twin passage, with leakage return

| | |
|--------------------------|--------------|
| Connections | 2 |
| Nominal diameter | 5 |
| Operating pressure, max. | 0-400 bar |
| Leakage rate, max. | - |
| Weight | 2,5 kg |
| Order no. | DR-020-5-002 |

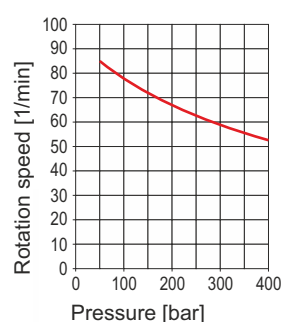
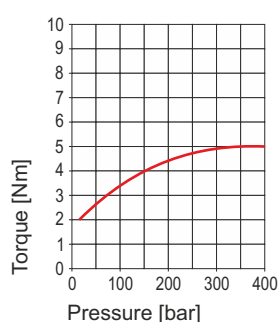


Four passage, without leakage return

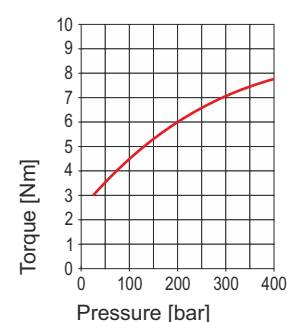
| | |
|--------------------------|--------------|
| Connections | 4 |
| Nominal diameter | 5 |
| Operating pressure, max. | 0-400 bar |
| Leakage rate, max. | 50 ccm/100h |
| Weight | 3,8 kg |
| Order no. | DR-040-5-001 |

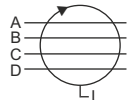


Twin passage



Four passage

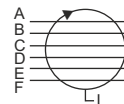




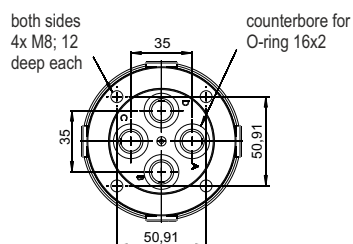
| | |
|--------------------------|---------------------|
| Connections | 4 |
| Nominal diameter | 5 |
| Operating pressure, max. | 0-400 bar |
| Leakage rate, max. | - |
| Weight | 4,2 kg |
| Order no. | DR-040-5-003 |



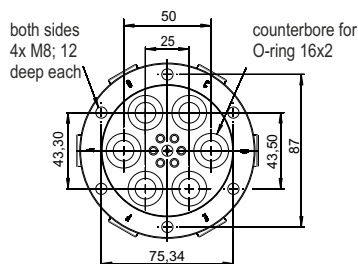
| | |
|--------------------------|---------------------|
| Connections | 6 |
| Nominal diameter | 5 |
| Operating pressure, max. | 0-400 bar |
| Leakage rate, max. | 60 ccm/100h |
| Weight | 5,8 kg |
| Order no. | DR-060-5-001 |



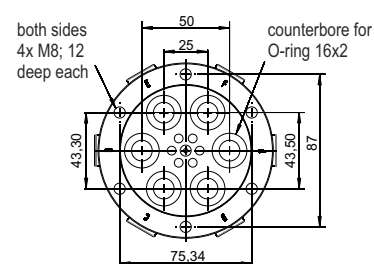
| | |
|--------------------------|---------------------|
| Connections | 6 |
| Nominal diameter | 5 |
| Operating pressure, max. | 0-400 bar |
| Leakage rate, max. | - |
| Weight | 6,2 kg |
| Order no. | DR-060-5-005 |



| Pressure [bar] | Rotation speed [1/min] |
|----------------|------------------------|
| 100 | 48 |
| 200 | 38 |
| 300 | 30 |
| 400 | 25 |



| Pressure [bar] | Torque [Nm] |
|----------------|-------------|
| 50 | 5.5 |
| 100 | 7.0 |
| 150 | 8.5 |
| 200 | 10.0 |
| 250 | 11.5 |
| 300 | 12.5 |
| 350 | 13.5 |
| 400 | 14.0 |

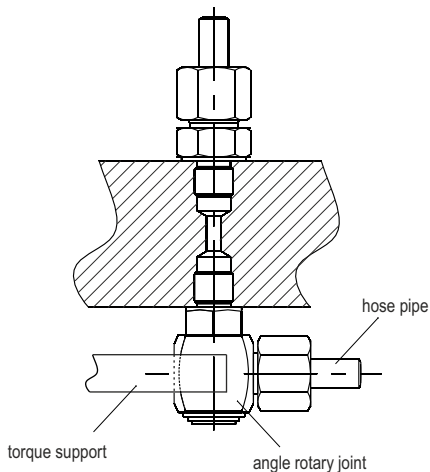
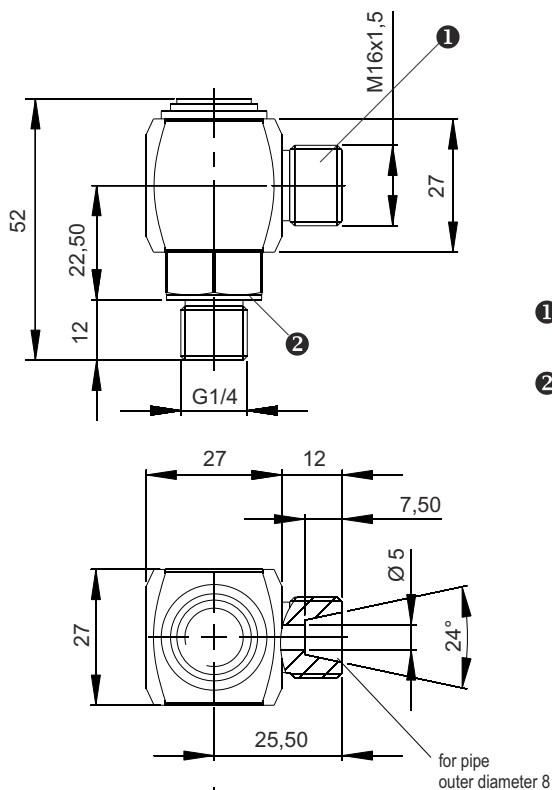


| Pressure [bar] | Rotation speed [1/min] |
|----------------|------------------------|
| 75 | 38 |
| 100 | 35 |
| 150 | 32 |
| 200 | 30 |
| 250 | 29 |
| 300 | 28.5 |
| 350 | 28 |



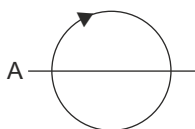
Single passage rotary couplings (rotary joints)

Angle rotary joint



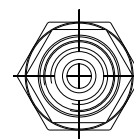
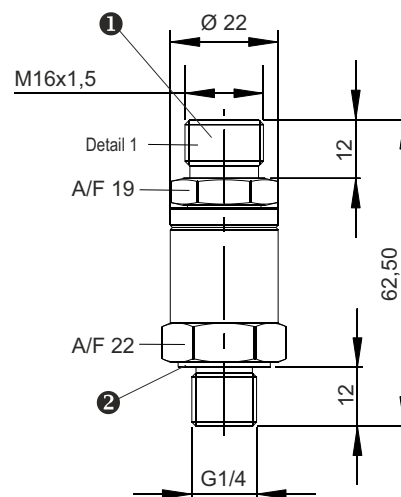
Rotary couplings are used to connect pressure-retaining lines from stationary positions to rotating or swivelling machine parts. Their function is to prevent torsion and bends at a tight radius of moveable lines.

Operating temperature range:
-10° up to 60°C

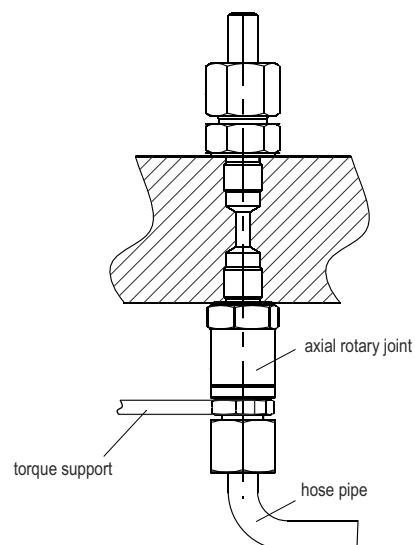


- ❶ Connection for cutting ring screw joint 8S
- ❷ with elastic seal, connection according to DIN 3852 B max. 60 Nm

Axial rotary joint



Mounting example:



Order numbers:

| Type | Angle rotary joint |
|--------------------------------|--------------------|
| Nominal diameter | 5 |
| Operating pressure, max. [bar] | 500 |
| Rotation speed, max. [1/min] | 20 |
| Weight [kg] | 0,18 |
| Order no. | DR-010-5-002 |

| Type | Axial rotary joint |
|--------------------------------|--------------------|
| Nominal diameter | 5 |
| Operating pressure, max. [bar] | 500 |
| Rotation speed, max. [1/min] | 20 |
| Weight [kg] | 0,11 |
| Order no. | DR-010-5-001 |