

Rotary couplings

without/with leak oil recirculation, nominal diameters 5/10, pmax. 400/350 bar

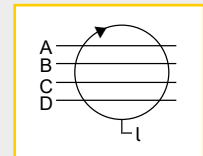
500-3
Issue: 10/2022



Application example: 13-passage rotary coupling with 6 connections for compressed air, 6 connections for cooling water, 1 connection for forming gas; with electronic slip ring 12 x 24V, 2A per line. For more examples refer to our catalogue or to www.hydrokomp.de.



Webcode: 050003



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 (single/double acting) and cycle time.

We also design and manufacture customized variants!

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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:

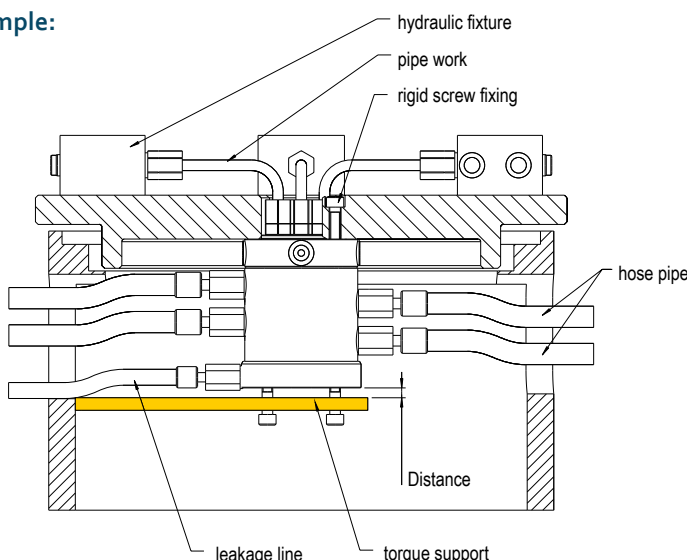
The rotary coupling must be mounted in a way that no transverse moment is effected on the standing or rotating element. It has proven to be best to screw the standing housing with its ports towards the clamping fixture and to protect the rotating piston only against twisting (no initiation of bearing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





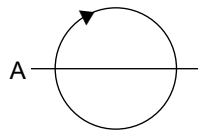
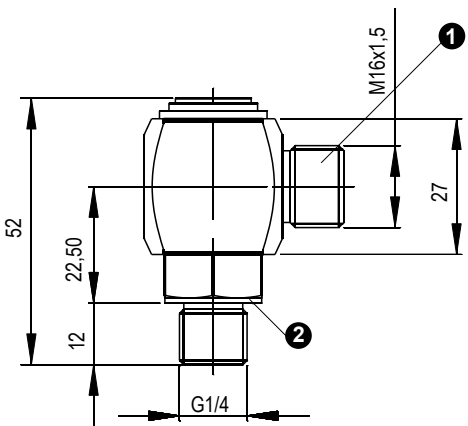
Angle rotary joint:



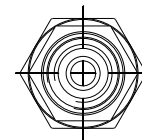
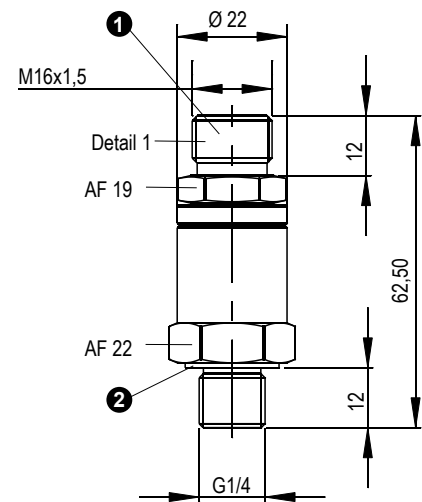
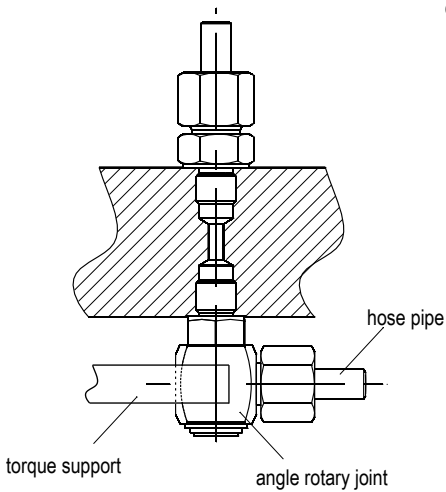
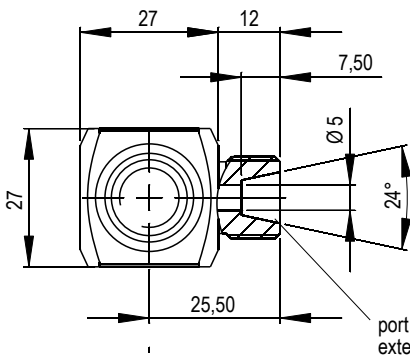
Rotary couplings are used to connect pressure-retaining lines from stationary positions to rotating or swivelling machine parts. Their function is to prevent torsion and bends at a tight radius of moveable lines.

Range of operating temperature:
-10° up to 60°C

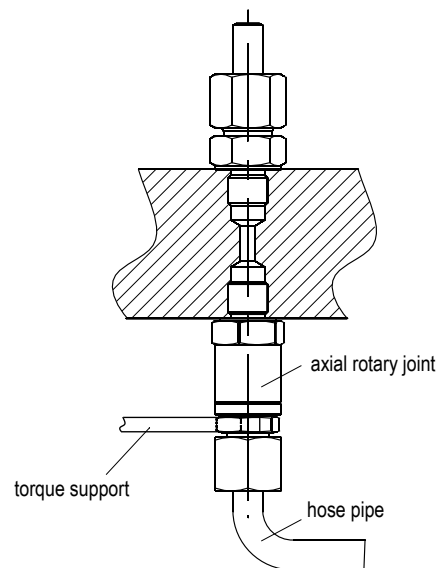
Axial rotary joint:



- 1 Port for cutting ring screw joint 8S
- 2 Port for connection with elastic seal, according to DIN 3852 B max. 60 Nm

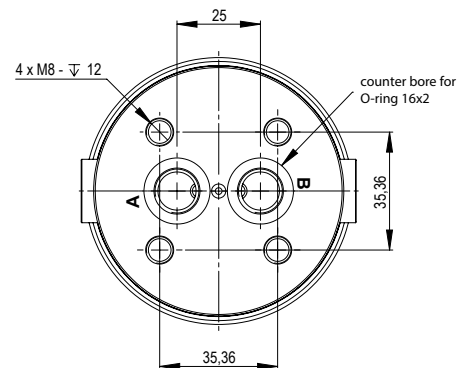
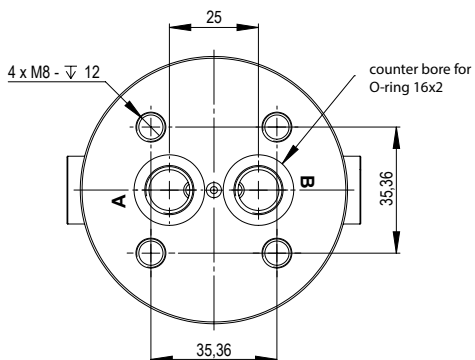
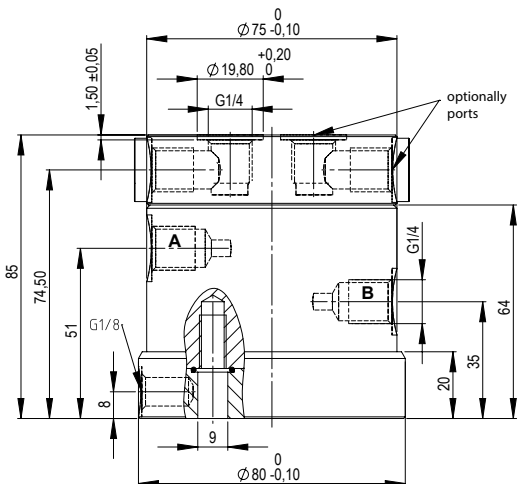
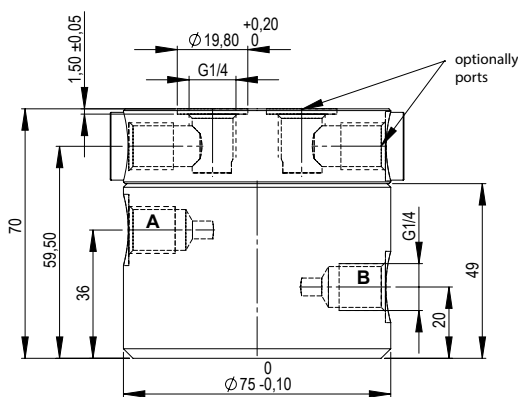
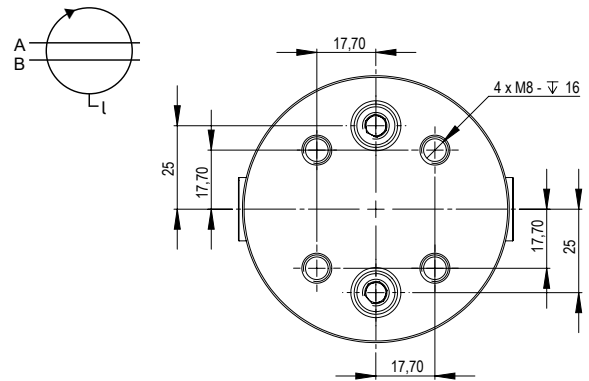
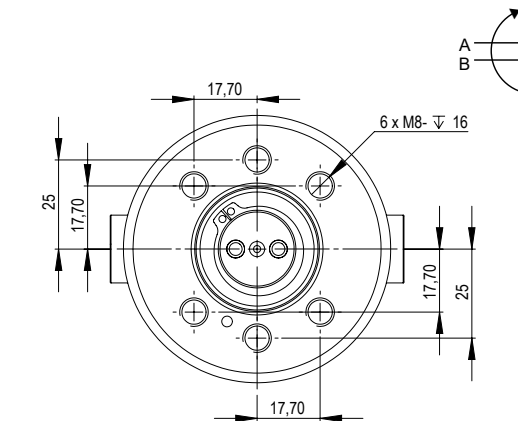
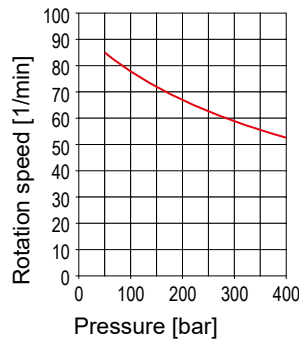
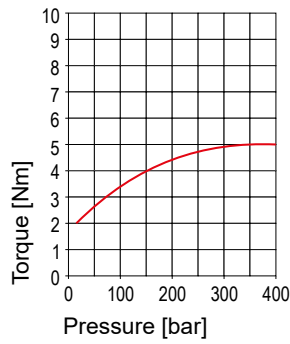


Mounting examples:



Angle rotary joint	
Passages	1
Nominal diameter	5
Range of operating pressure	0-500 bar
Rotation speed, max.	20 1/min
Weight	0,18 kg
Order number	DR-010-5-002

Axial rotary joint	
Passages	1
Nominal diameter	5
Range of operating pressure	0-500 bar
max. Rotation speed	20 1/min
Weight	0,11 kg
Order number	DR-010-5-001



two-passage without leak oil recirculation

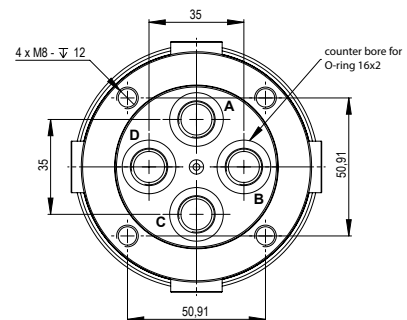
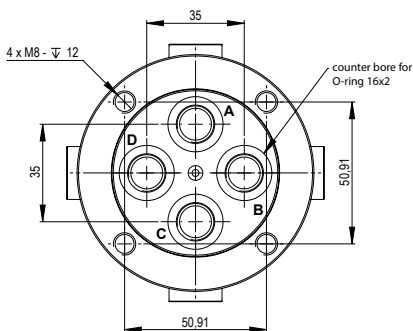
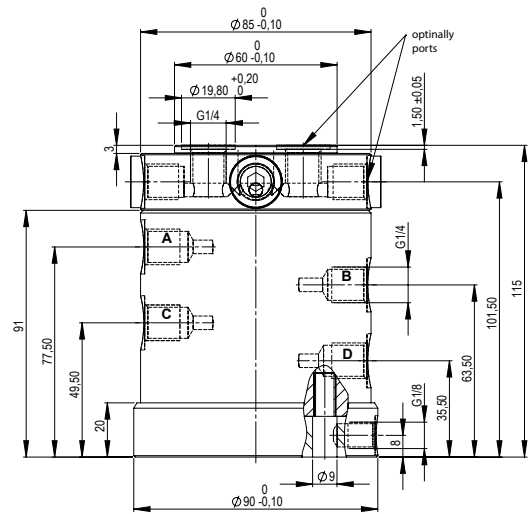
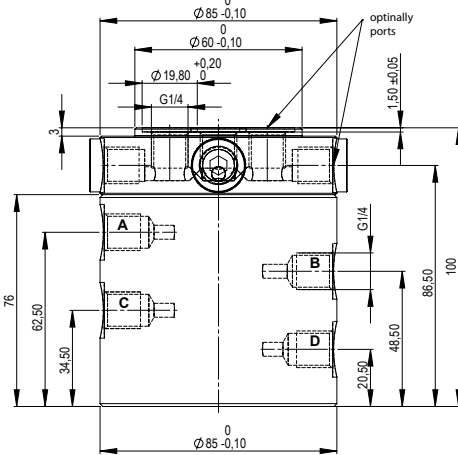
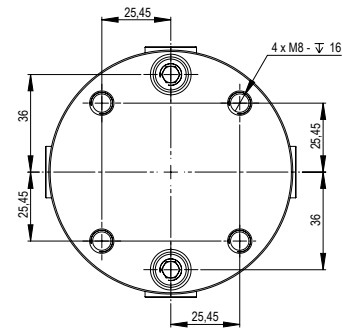
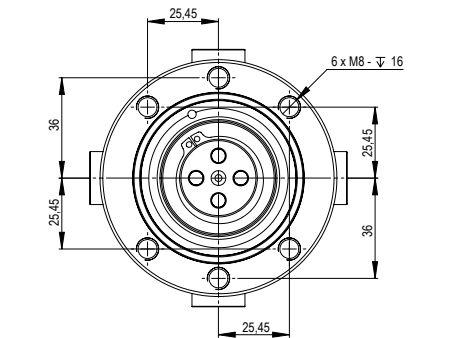
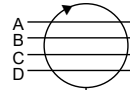
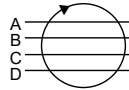
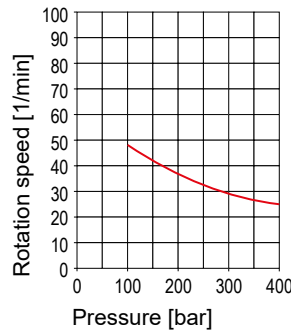
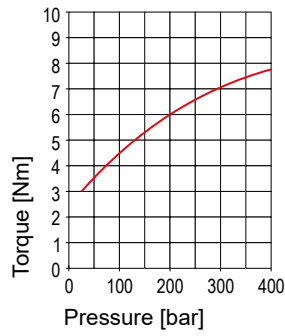
Passages	2
Nominal diameter	5
Range of operating pressure	0-400 bar
max. Leakage	30 ccm/100h
Weight	2,2 kg

Order number DR-020-5-001

two-passage with leak oil recirculation

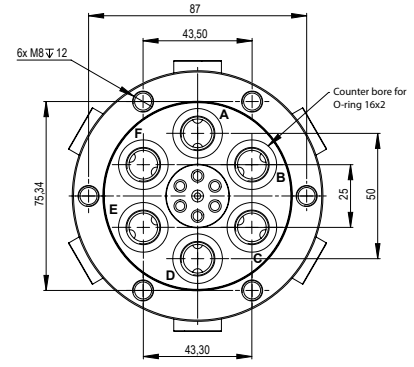
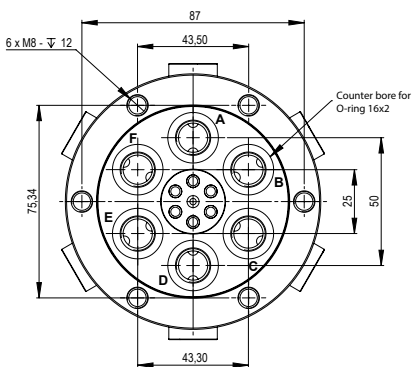
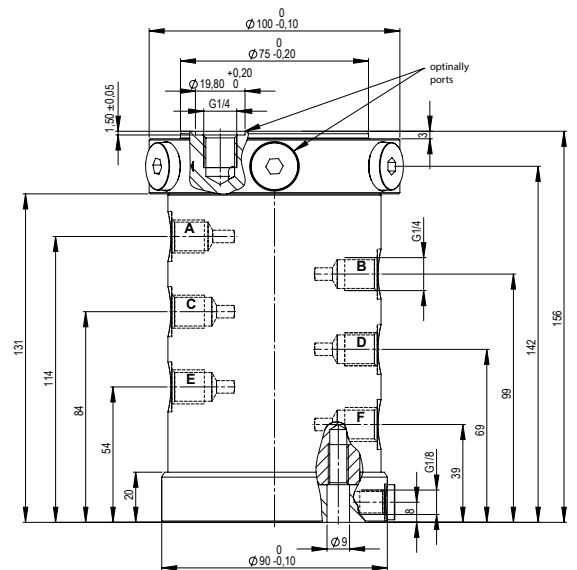
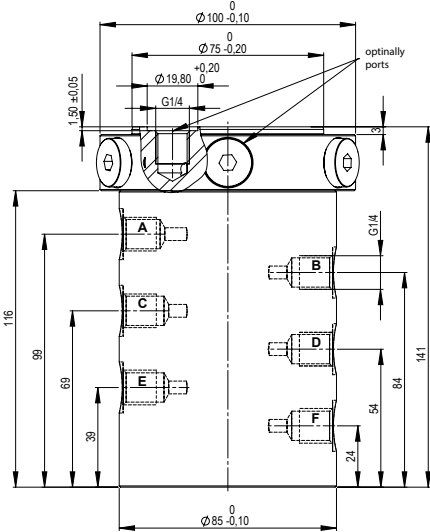
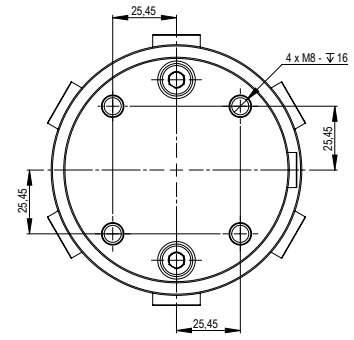
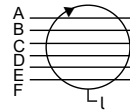
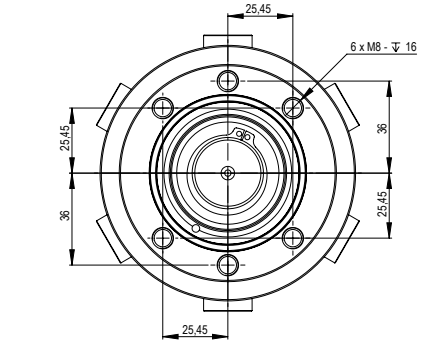
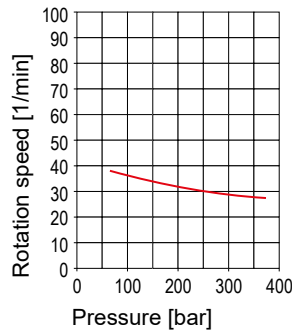
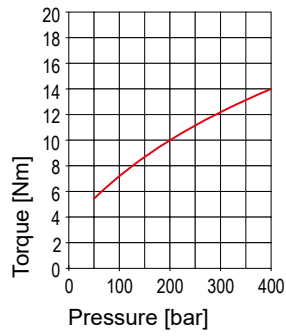
Passages	2
Nominal diameter	5
Range of operating pressure	0-400 bar
max. Leakage	-
Weight	2,5 kg

Order number DR-020-5-002



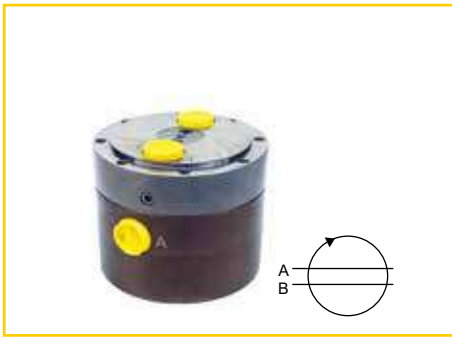
four-passage without leak oil recirculation	
Passages	4
Nominal diameter	5
Range of operating pressure	0-400 bar
max. Leakage	50 ccm/100h
Weight	3,8 kg
Order number	DR-040-5-001

four-passage with leak oil recirculation	
Passages	4
Nominal diameter	5
Range of operating pressure	0-400 bar
max. Leakage	-
Weight	4,2 kg
Order number	DR-040-5-003



six-passage without leak oil recirculation	
Passages	6
Nominal diameter	5
Range of operating pressure	0-400 bar
max. Leakage	60 ccm/100h
Weight	5,8 kg
Order number	DR-060-5-001

six-passage with leak oil recirculation	
Passages	6
Nominal diameter	5
Range of operating pressure	0-400 bar
max. Leakage	-
Weight	6,2 kg
Order number	DR-060-5-005

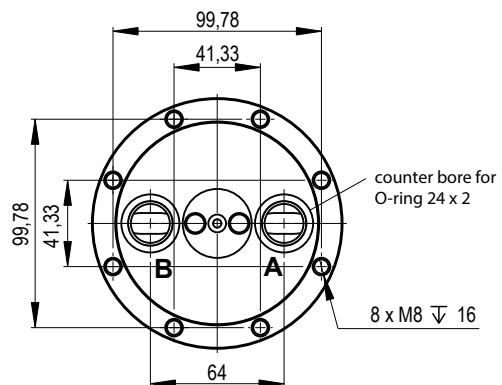
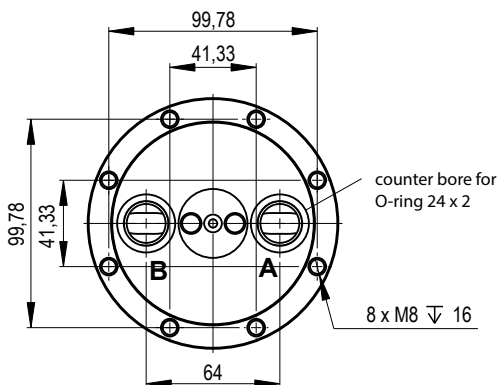
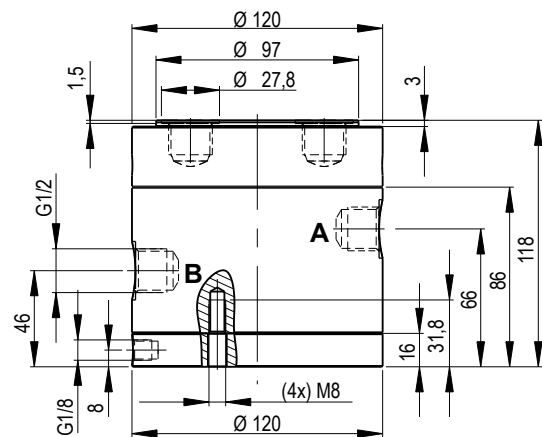
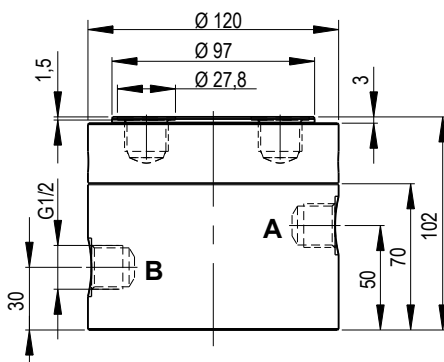
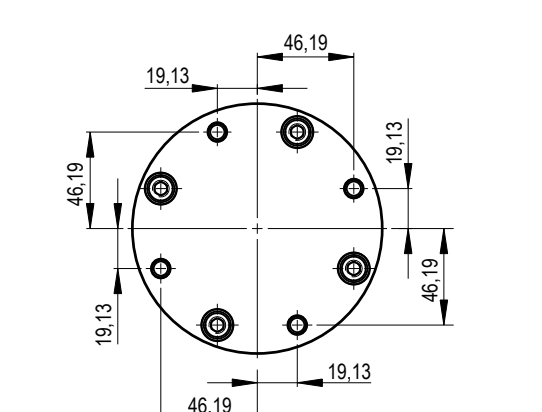
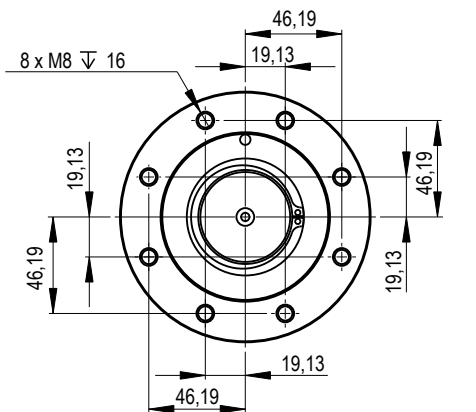


Ports:

in the housing
radial G1/2

axially in the rotary piston
G1/2 and manifold with
O-ring 24x2

leakage port
radial G1/8



two-passage without leak oil recirculation

Passages	2
Nominal diameter	10
Range of operating pressure	0-350 bar
Starting torque, depressurized	16 Nm
Rotation speed at 50 bar	40 1/min
Rotation speed at 350 bar	20 1/min
Weight	8 kg

Order No. DR-020-10-005

two-passage with leak oil recirculation

Passages	2
Nominal diameter	10
Range of operating pressure	0-350 bar
Starting torque, depressurized	16 Nm
Rotation speed at 50 bar	40 1/min
Rotation speed at 350 bar	20 1/min
Weight	9,5 kg

Order No. DR-020-10-004

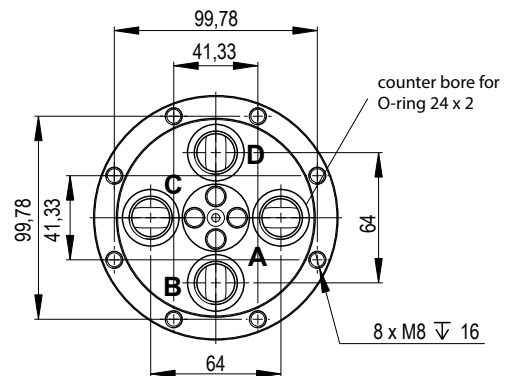
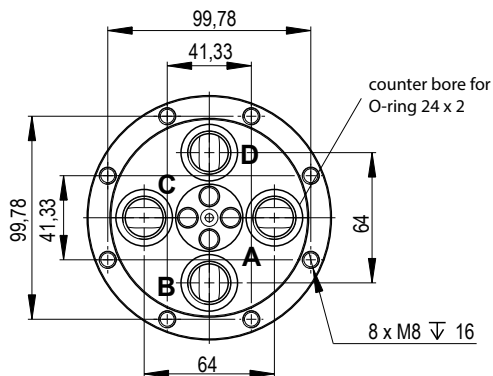
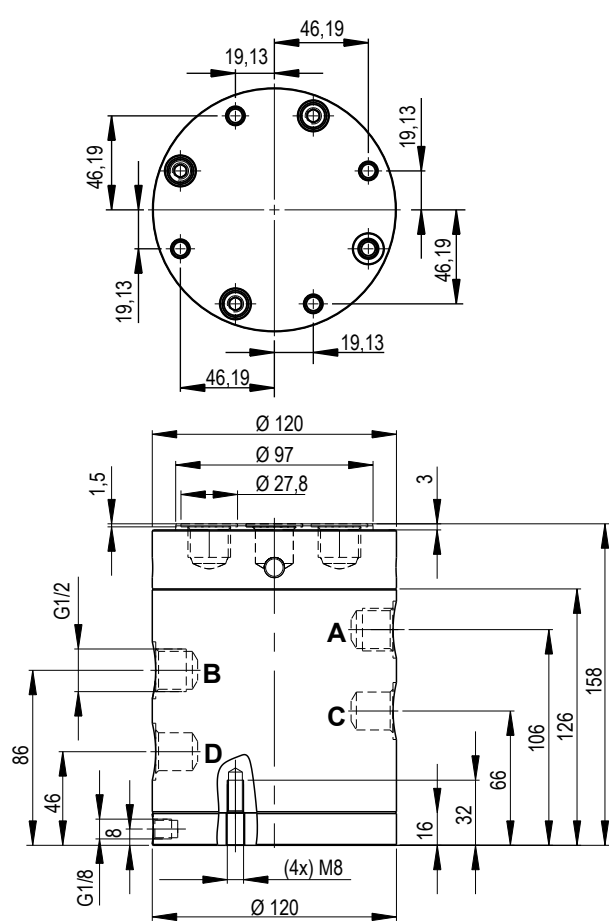
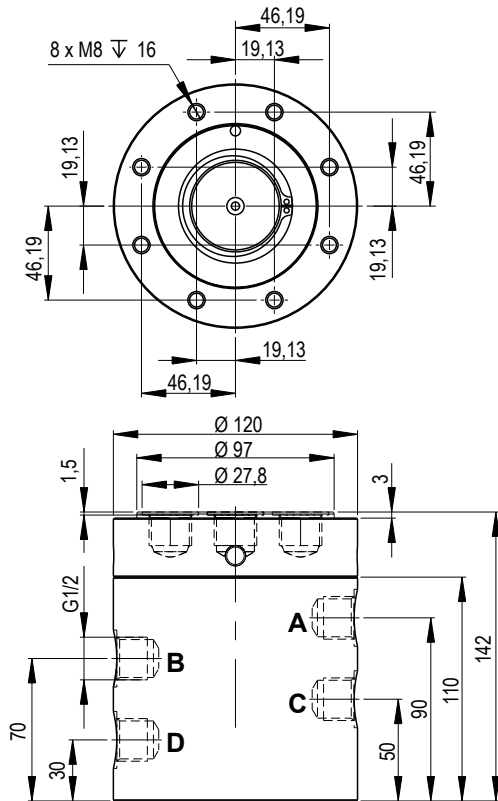


Ports:

in the housing
radial G1/2

axially in the rotary piston
G1/2 and manifold with
O-ring 24x2

leakage port
radial G1/8



four-passage without leak oil recirculation

Passages	4
Nominal diameter	10
Range of operating pressure	0-350 bar
Starting torque, depressurized	25 Nm
Rotation speed at 50 bar	30 1/min
Rotation speed at 350 bar	15 1/min
Weight	11 kg

Order No. DR-040-10-005

four-passage with leak oil recirculation

Passages	4
Nominal diameter	10
Range of operating pressure	0-350 bar
Starting torque, depressurized	25 Nm
Rotation speed at 50 bar	30 1/min
Rotation speed at 350 bar	15 1/min
Weight	12,5 kg

Order No. DR-040-10-004