

Rotary valve couplings

nominal diameter 5, for single/double acting clamping elements, pmax. 350 bar

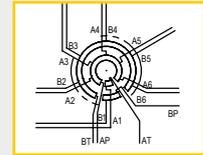
500-4
Issue: 10/2022



Application example: Rotary valve coupling built into the support bearing of a reversible clamping fixture. The design of the rotary valve coupling only permits loading and unloading when the device is turned to a predefined position. This means that it is impossible for the item to become unclamped in the machining positions. Installation in the thrust bearing is extremely compact, saving valuable machining space for the clamping of workpieces.



Webcode: 050004



General information:

Rotary valve couplings transmit hydraulic fluid to revolving tables. The structure is designed as a rotary slide valve, which permits several hydraulic devices to be supplied simultaneously with hydraulic fluid under pressure, and independently of that, a loading and unloading station to clamped or unclamped by means of distributing valves (see specimen circuit).

Technical data:

- Max. operating pressure: 350 bar
- Operating temperature: -10° C up to +60° C
- Max. flow rate in AT and BP: 133 cm³/s (8 l/min)
- Hydraulic oil connection:
 - G 1/4 threaded port in the housing and rotary piston, radial
 - manifold with O-ring in the rotary piston, axial

Important operating instructions:

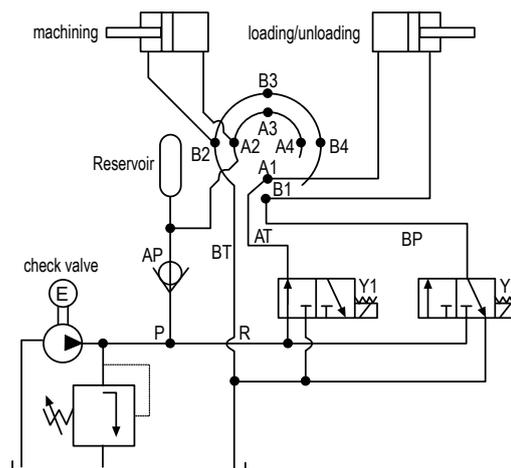
The rotary valve coupling must only be operated with hydraulic fluid. All levels must be connected to the pressure generator in order to guarantee lubrication of the seals. Operation must only be carried out with the screw connections fitted. Rotary valve couplings should only be used for phased operation.

The Rotary Valve Coupling must be fitted in such a way that no bending moment is exerted on either the stationary or the rotating component. It has proven effective to bolt the rotating housing with the connectors to the clamping devices and merely to secure the standing piston against twisting (prevent initiation of bearing forces).

Only hoses should be used for the pipe connection between the torque brace and the rotary piston.

At an operating pressure of about 200 bar and above, it is recommended that a hydraulic reservoir with a storage-safety device be fitted between the check valve and connector level A (permanent pressure area). This reservoir is for the purpose of compensating for minor fluid loss through leakage, when the machine is at rest in the loading and unloading station. You are recommended to use only directional valves to control the rotary valve coupling (see specimen circuit).

Specimen circuit:

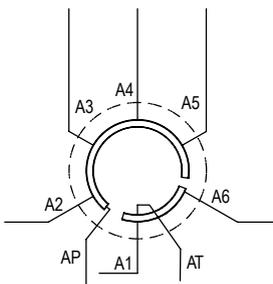
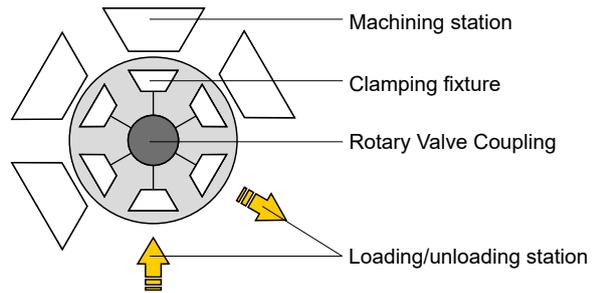
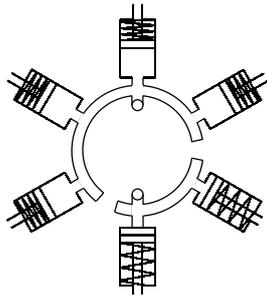


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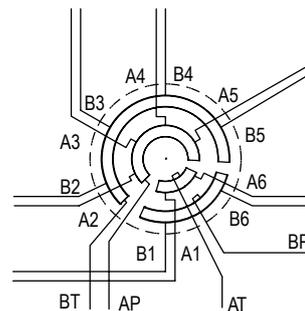
Technology that connects



Single-acting,
2 stations (loading/unloading)
triggered simultaneously

Circuit description:

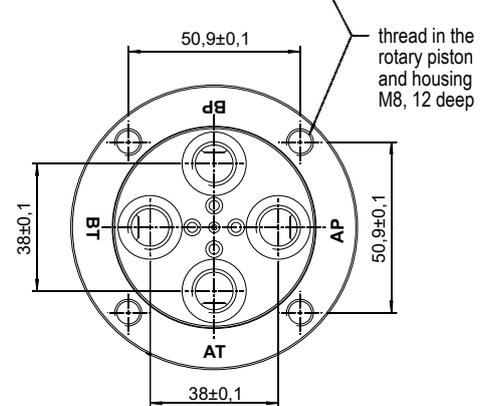
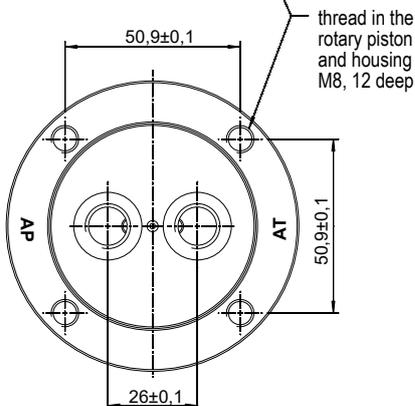
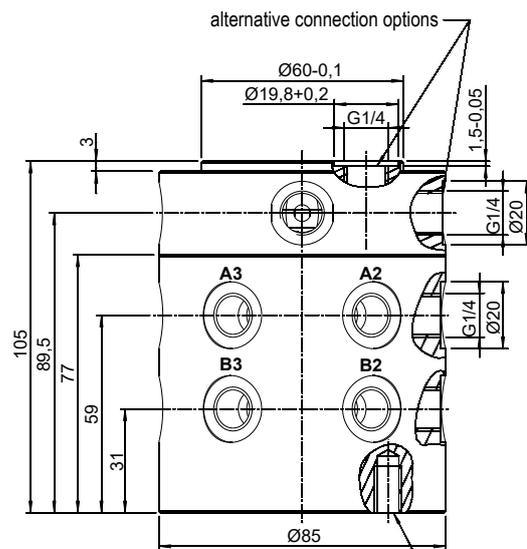
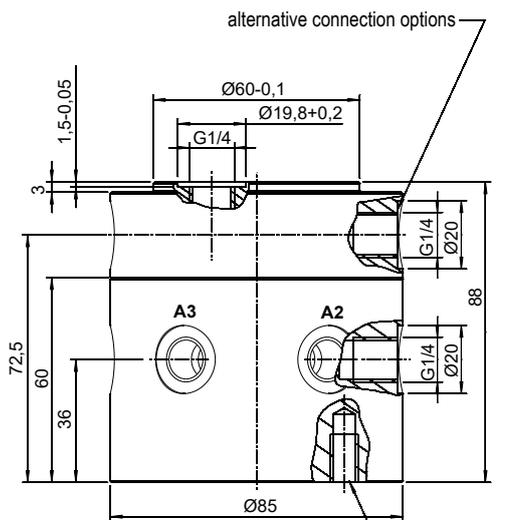
AT to A1 + An
AP to A2 - An-1
BP to B1 - Bn
BT to B2 - Bn-1



Double-acting,
2 stations (loading/unloading)
triggered simultaneously

Circuit description:

AT to A1 + An
AP to A2 - An-1
BP to B1 - Bn
BT to B2 - Bn-1

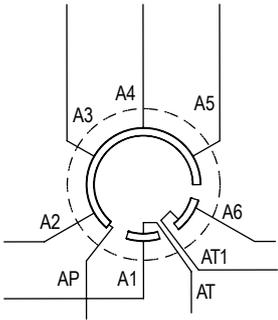
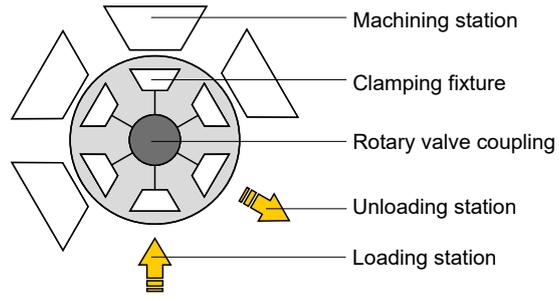
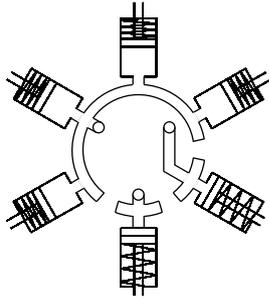


for single acting clamping elements

Stations:	Order number:
6	DRG-5-EW6-002
8	DRG-5-EW8-002
10	DRG-5-EW10-002
2 Stations loading/unloading, triggered simultaneously	

for double acting clamping elements

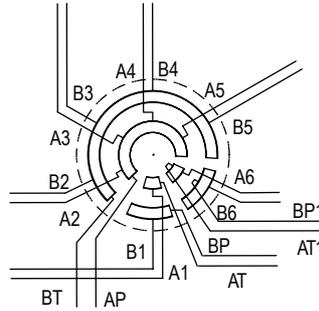
Stations:	Order number:
6	DRG-5-DW6-002
8	DRG-5-DW8-002
10	DRG-5-DW10-002
2 Stations loading/unloading, triggered simultaneously	



Single-acting,
2 stations (loading/unloading)
triggered separately

Circuit description:

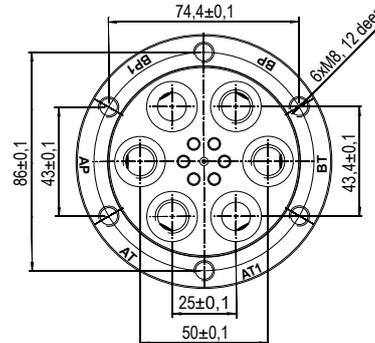
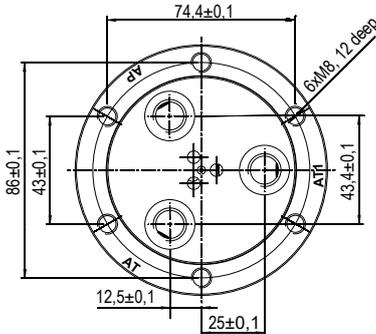
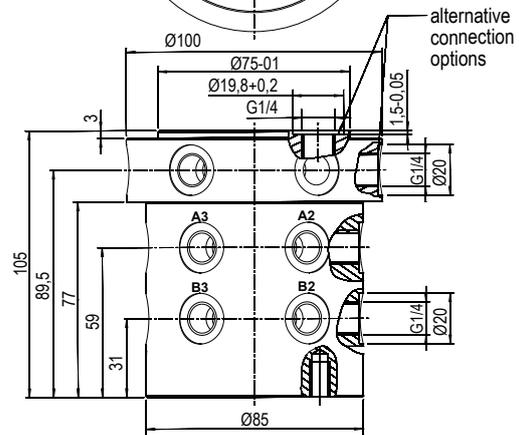
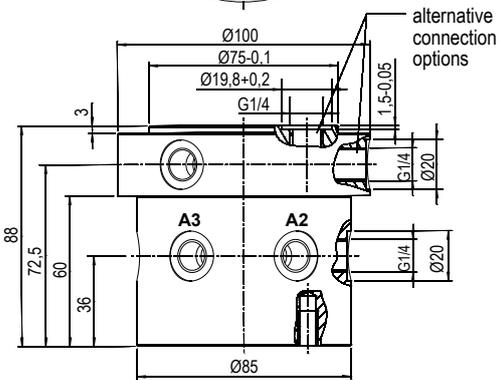
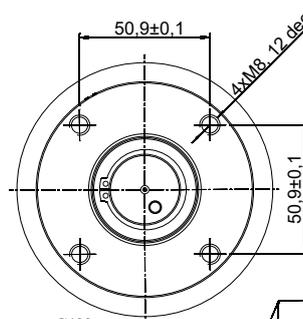
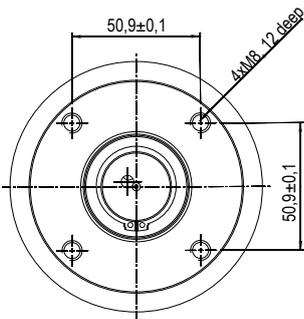
AT to A1
AT1 to An
AP to A2 – An-1



Double-acting,
2 stations (loading/unloading)
triggered separately

Circuit description:

AT to A1
AT1 to An
AP to A2 – An-1
BP to B1
BP1 to Bn
BT to B2 – Bn-1



for single acting clamping elements

Stations:	Order number:
6	DRG-5-EW6-003
8	DRG-5-EW8-003
10	DRG-5-EW10-003

2 Stations loading/unloading, triggered separately

for double acting clamping elements

Stations:	Order number:
6	DRG-5-DW6-003
8	DRG-5-DW8-003
10	DRG-5-DW10-003

2 Stations loading/unloading, triggered separately