Shut-off valve type DA

Product documentation

Operating pressure p_{max}:	250 bar
Flow rate Q_{max}:	150 lpm

DISCONTINUED PRODUCT

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HAWE HYDRAULIK

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1 Overview of type DA shut-off valve

Directional seated valves are a type of directional valve. Their function is to direct the flow of hydraulic medium in certain directions, therefore connecting the relevant connections, or shutting off the flow with zero leakage. By this means they control the movement of the actuators in a hydraulic system.

The manually operated 2/2 directional valves are for shutting off a pipeline in both directions with zero leakage.

Features and advantages

- Shutting off a pipeline with zero leakage
- Shuts off on two sides

Intended applications

- Hydraulic systems

Shut-off valve type DA

2 Available versions

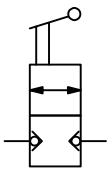
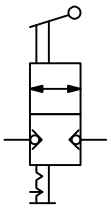
Ordering example

DA 2 -PYD

2.2 "Seal"

2.1 "Basic type and size"

2.1 Basic type and size

Type	Description	Pressure p_{max} (bar)	Flow rate Q_{max} (lpm)	Connection (ISO 228-1)	Circuit symbol
				A, B	
DA 2	Version with control lever, double-acting, with M8 bore at shaft journal	250	60	G 3/4	
DA 3	Version with selector shaft, double-acting, with notch and M8 bore at shaft end	250	150	G 1	

2.2 Seal

Coding	Description
-PYD	Series, FKM

3 Parameters

3.1 General data

Designation	Ball seated valve
Model	Pipeline valve
Material	Steel, functional internal parts hardened, ground, valve balls made from rolling bearing steel
Attachment	▪ DA 2: on line section ▪ DA 3: on line section or M8 bore, see Chapter 4, "Dimensions"
Installation position	▪ DA 2: horizontal, lever upwards ▪ DA 3: any, in the event of potential vibrations horizontal, lever upwards
Actuation forces and torques	**max. force on ball handle at 250 bar:** ▪ DA 2: approx. 40 N ▪ DA 3: approx. 150 N **max. torque at 250 bar:** ▪ DA 2: approx. 8 Nm ▪ DA 3: approx. 30 Nm
Hydraulic fluid	Hydraulic fluid, according to DIN 51 524 Parts 1 to 3; ISO VG 10 to 68 according to DIN ISO 3448 Viscosity range: 4 - 1500 mm²/s Optimal operating range: approx. 10 - 500 mm²/s Also suitable for biologically degradable hydraulic fluids type HEPG (polyalkylene glycol) and HEES (synthetic ester) at operating temperatures up to approx. +70°C.
Cleanliness level	**ISO 4406** 21/18/15...19/17/13
Temperatures	Environment: approx. -40 to +80 °C, hydraulic fluid: -25 to +80 °C, pay attention to the viscosity range. Start temperature: down to -40 °C is permissible (take account of the start viscosities!), as long as the steady-state temperature is at least 20 K higher during subsequent operation. Biologically degradable hydraulic fluids: note manufacturer specifications. With consideration for the seal compatibility, not above +70°C.

3.2 Weight

Type	
DA 2	= approx. 1.5 kg
DA 3	= approx. 3.2 kg

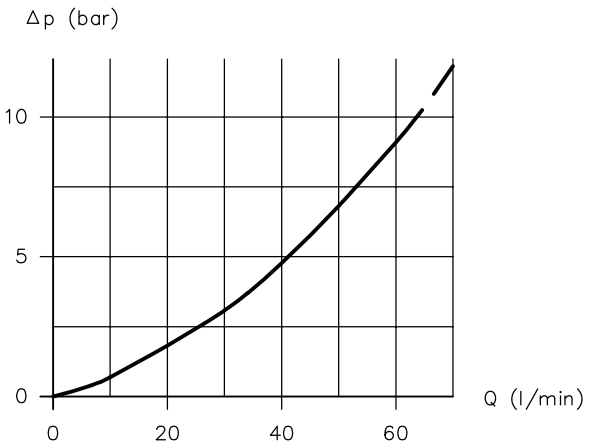
3.3 Pressure and volumetric flow

Operating pressure	p_{max} = 250 bar
Flow rate	Q_{max} = 150 lpm
Static overload capacity	2.0 x p_{max}

3.4 Characteristic lines

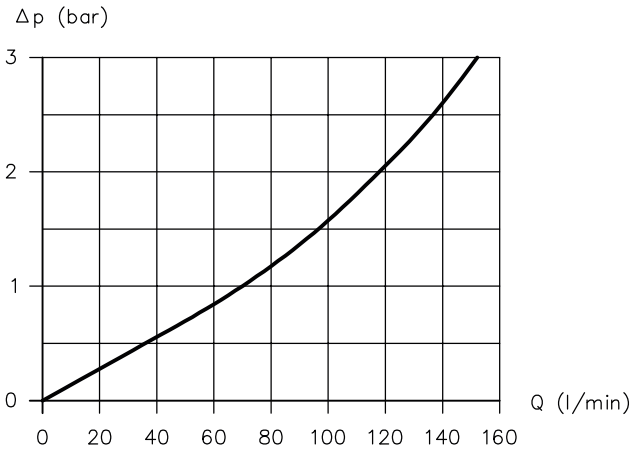
Viscosity of the hydraulic fluid approx. 60 mm²/s

DA 2



Q flow rate (lpm); Δp flow resistance (bar)

DA 3

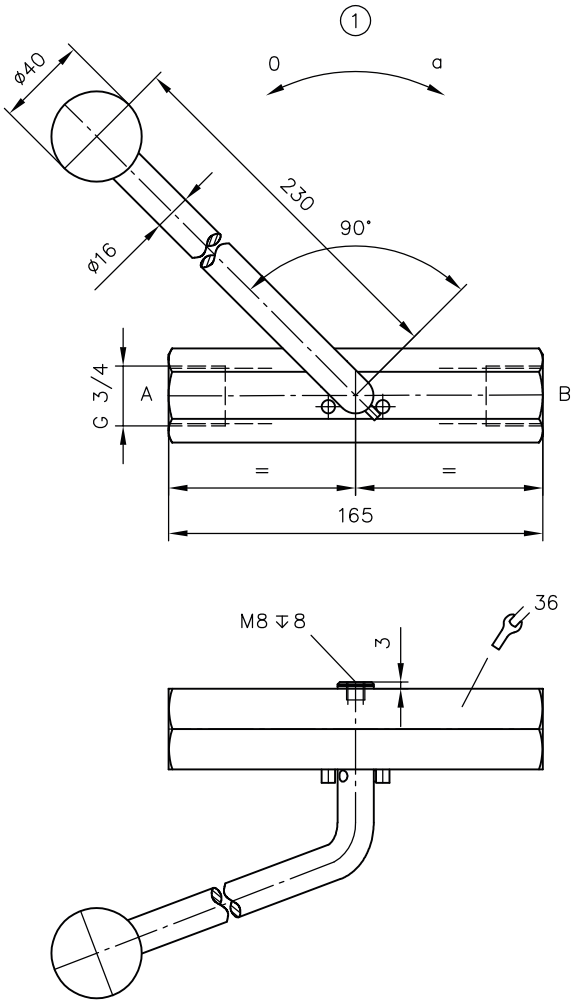


Q flow rate (lpm); Δp flow resistance (bar)

4 Dimensions

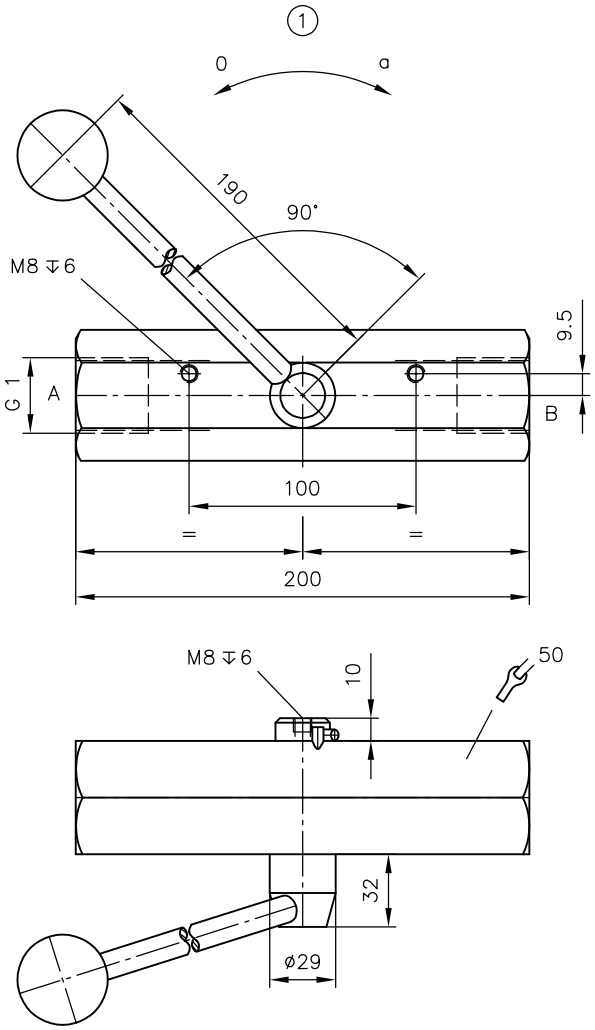
All dimensions in mm, subject to change.

DA 2



1 Switching position

DA 3



1 Switching position

5 Installation, operation and maintenance information

Observe the document B 5488 “General operating instructions for assembly, commissioning, and maintenance.”

5.1 Intended use

This product is intended exclusively for hydraulic applications (fluid technology).

The user must observe the safety measures and warnings in this document.

Essential requirements for the product to function correctly and safely:

- ► All information in this documentation must be observed. This applies in particular to all safety measures and warnings.
- ► The product must only be assembled and put into operation by specialist personnel.
- ► The product must only be operated within the specified technical parameters described in detail in this document.
- ► All components must be suitable for the operating conditions when using an assembly.
- ► The operating instructions for the components, assemblies and the specific complete system must also always be observed.

If the product can no longer be operated safely:

1. Remove the product from operation and mark it accordingly.
   ✓ It is then not permitted to continue using or operating the product.

5.2 Assembly information

The product must only be installed in the complete system with standard and compliant connection components (screw fittings, hoses, pipes, fixtures etc.).

The product must be shut down correctly prior to disassembly (in particular in combination with hydraulic accumulators).

⚠ **DANGER**

Sudden movement of the hydraulic drives when disassembled incorrectly

Risk of serious injury or death

- ► Depressurise the hydraulic system.
- ► Perform safety measures in preparation for maintenance.

5.3 Operating instructions

Observe product configuration and pressure/flow rate.

The statements and technical parameters in this document must be strictly observed.
The instructions for the complete technical system must also always be followed.

NOTICE

- ► Read the documentation carefully before usage.
- ► The documentation must be accessible to the operating and maintenance staff at all times.
- ► Keep documentation up to date after every addition or update.

⚠ **CAUTION**

Overloading components due to incorrect pressure settings.

Risk of minor injury.

- Pay attention to the maximum operating pressure of the pump, valves and fittings.
- Always monitor the pressure gauge when setting and changing the pressure.

Purity and filtering of the hydraulic fluid

Fine contamination can significantly impair the function of the product. Contamination can cause irreparable damage.

Examples of fine contamination include:

- Swarf
- Rubber particles from hoses and seals
- Dirt due to assembly and maintenance
- Mechanical debris
- Chemical ageing of the hydraulic fluid

NOTICE

New hydraulic fluid from the manufacturer may not have the required purity.

Damage to the product is possible.

- ► Filter new hydraulic fluid to a high quality when filling.
- ► Do not mix hydraulic fluids. Always use hydraulic fluid that is from the same manufacturer, of the same type, and with the same viscosity properties.

For smooth operation, pay attention to the cleanliness level of the hydraulic fluid (cleanliness level see Chapter 3, "Parameters").

Additionally applicable document: D 5488/1 Oil recommendations

5.4 Maintenance information

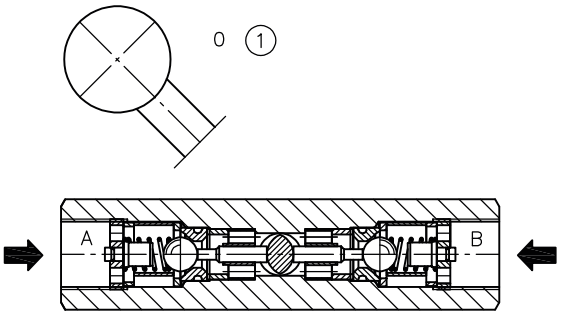
Check regularly (at least once a year) by visual inspection whether the hydraulic connections are damaged. If external leakages are found, shut down and repair the system.

Clean the surface of the device regularly (at least once a year) (dust deposits and dirt).

6 Other information

6.1 Functional diagram

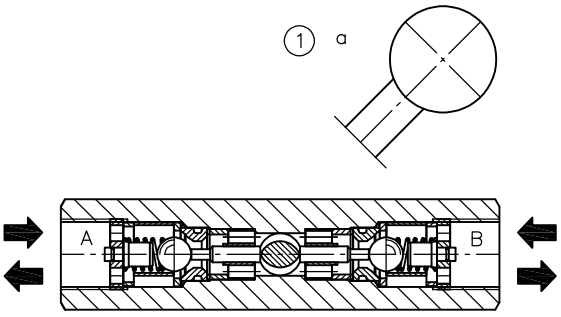
Switching position 0



1 Switching position 0

Flow closed off in both directions

Switching position a



1 Switching position a

Flow unhindered in both directions

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