

Pressure sequence valve, direct operated

RE 26099/05.11
Replaces: 02.03

1/8

Type DZ 10 DP

Size 10
Component series 4X
Maximum operating pressure 210 bar
Maximum flow 80 l/min

K4786

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Features

- For subplate mounting
- Porting pattern according to ISO 5781-06-07-0-00
- 4 pressure ratings
- 4 adjustment types:
 - Rotary knob
 - Setscrew with hexagon and protective cap
 - Lockable rotary knob with scale
 - Rotary knob with scale
- With pressure gauge connection
- Check valve, optional
- More information:
 - Subplates

Data sheet 45062

Information on available spare parts:
www.boschrexroth.com/spc

Ordering code

DZ 10 DP -4X/ / / / *

Pressure sequence valve, direct operated, size 10

Adjustment type

- Rotary knob = 1
- Setscrew with hexagon and protective cap = 2
- Lockable rotary knob with scale = 3 ¹⁾
- Rotary knob with scale = 7

Component series 40 to 49 = 4X
(40 to 49: unchanged installation and connection dimensions)

Maximum sequencing pressure

- 25 bar = 25
- 75 bar = 75
- 150 bar = 150
- 210 bar = 210

Standard types and standard units are contained in the EPS (standard price list).

Further details in the plain text

Seal material

- No code = NBR seals
- V = FKM seals

(other seals upon request)
Attention!
Observe compatibility of seals with hydraulic fluid used!

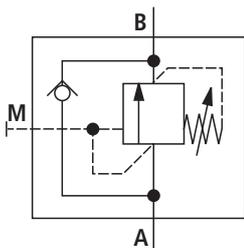
- No code = With check valve
- M = Without check valve

- No code = Pilot oil supply internal, leakage oil discharge internal
- X = Pilot oil supply external, leakage oil discharge internal
- Y = Pilot oil supply internal, leakage oil discharge external
- XY = Pilot oil supply external, leakage oil discharge external

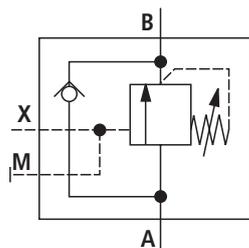
¹⁾ H-key with Material no. **R900008158** is included in the delivery.

Symbols

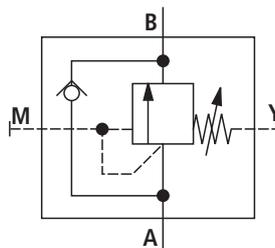
"No code" version



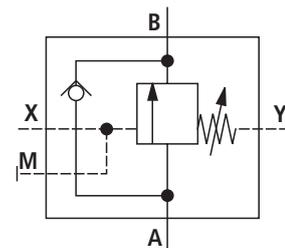
"X" version



"Y" version



"XY" version



Function, section

The valve type DZ 10 DP is a direct operated pressure sequence valve. It is used for the pressure-dependent sequencing of a second system. The sequencing pressure is set via the adjustment type (1).

The compression spring (2) holds the control spool (3) in the initial position - the valve is blocked. Via the pilot line (4), the pressure in channel A is applied to the spool face of the control spool (3) vis-à-vis the compression spring (2).

If the pressure in channel A reaches the set value of the compression spring (2), the control spool (3) is pushed to the right and the connection A to B is opened. The system connected at channel B is sequenced without a drop of the pressure in channel A.

The control signal is provided internally, via the control line (4) from channel A, or externally, via port X.

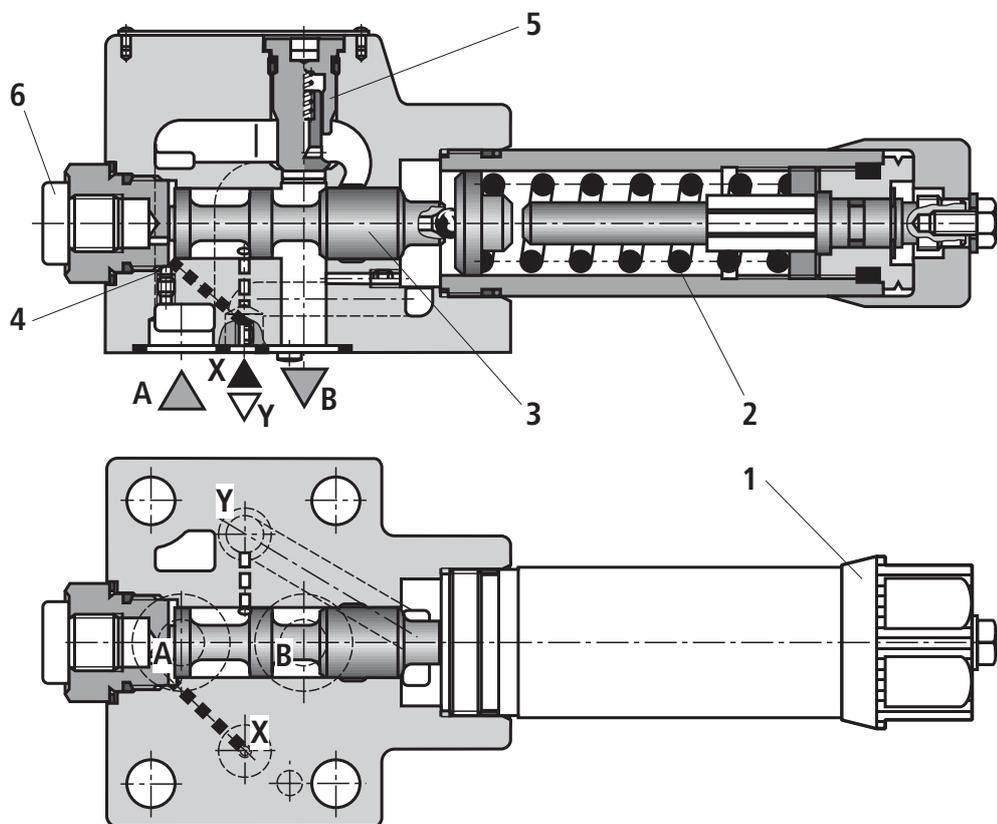
Depending on the valve use, the leakage oil discharge is designed externally, via port Y or internally, via B.

Attention!

With **internal** leakage oil discharge, the **set** cracking pressure is increased by the pressure in channel B.

For the free flow back of the hydraulic fluid from channel B to channel A, you can optionally install a check valve (5).

A pressure gauge connection (6) allows for the control of the sequencing pressure at the valve.



Type DZ 10 DP1-4X/.XY..

Technical Data (For applications outside these parameters, please consult us!)

general

Weight	kg	Approx. 3
Installation position		Any
Ambient temperature range	°C	-30 to +80 (NBR seals) -20 to +80 (FKM seals)

hydraulic

Maximum operating pressure – Port A, X	bar	210
– Port Y	bar	160
Maximum sequencing pressure (adjustable)	bar	25; 75; 150; 210
Maximum flow	l/min	80
Hydraulic fluid		See table below
Hydraulic fluid temperature range	°C	-30 to +80 (NBR seals) -20 to +80 (FKM seals)
Viscosity range	mm ² /s	10 to 800
Maximum permitted degree of contamination of the hydraulic fluid - cleanliness class according to ISO 4406 (c)		Class 20/18/15 ¹⁾

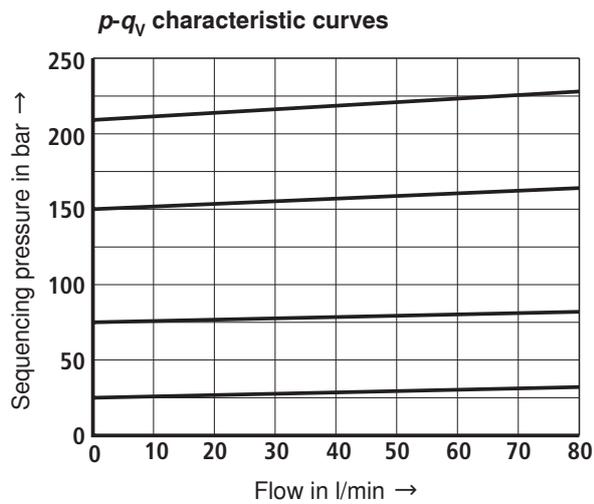
Hydraulic fluid	Classification	Suitable sealing materials	Standards
Mineral oils and related hydrocarbons	HL, HLP, HLPD	NBR, FKM	DIN 51524
Environmentally compatible	– Insoluble in water	HETG	ISO 15380
		HEES	
	– Soluble in water	HEPG	ISO 15380
Flame-resistant	– Water-free	HFDU, HFDR	ISO 12922
	– Water-containing	HFC (Fuchs Hydrotherm 46M, Petrofer Ultra Safe 620)	ISO 12922

<p> Important information on hydraulic fluids!</p> <ul style="list-style-type: none"> – For more information and data on the use of other hydraulic fluids refer to data sheet 90220 or contact us! – There may be limitations regarding the technical valve data (temperature, pressure range, service life, maintenance intervals, etc.)! 	<p>– Flame-resistant – water-containing:</p> <ul style="list-style-type: none"> • Maximum operating pressure 210 bar • Maximum hydraulic fluid temperature 60 °C • Expected service life as compared to HLP hydraulic oil 30 % to 100 %
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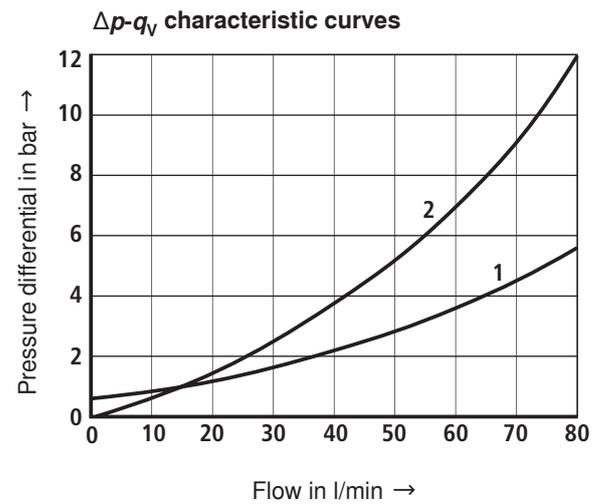
¹⁾ The cleanliness classes specified for the components must be adhered to in hydraulic systems. Effective filtration prevents faults and at the same time increases the service life of the components.

For the selection of the filters see www.boschrexroth.com/filter.

Characteristic curves (measured with HLP46, $\vartheta_{\text{oil}} = 40 \pm 5 \text{ }^\circ\text{C}$)



The characteristic curves apply to the pressure at the valve output $p = 0$ bar across the entire flow range.



- 1 Via check valve B to A
- 2 A to B

Unit dimensions

- 1 Name plate
- 2 Adjustment type "1"
- 3 Adjustment type "2"
- 4 Adjustment type "3"
- 5 Adjustment type "7"
- 6 Space required to remove the key
- 7 Valve mounting bores
- 8 Lock nut SW24
- 9 Hexagon SW10
- 10 Identical seal rings for ports A and B
Identical seal rings for ports X and Y
- 11 Pressure gauge connection G1/4, 12 deep;
Internal hexagon SW6;
Tightening torque $M_A = 20 \text{ Nm} \pm 10 \%$
- 12 Locating pin
- 13 Porting pattern according to ISO 5781-06-07-0-00

Subplates according to data sheet 45062 (separate order)

G 460/01 (G3/8)

G 461/01 (G1/2)

Valve mounting screws

(separate order)

4 hexagon socket head cap screws

ISO 4762 - M10 x 60 - 10.9-fIZn-240h-L

Friction coefficient $\mu_{\text{total}} = 0.09$ to 0.14 ,

Tightening torque $M_A = 60 \text{ Nm} \pm 10 \%$,

Material No. **R913000116**

Notes

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