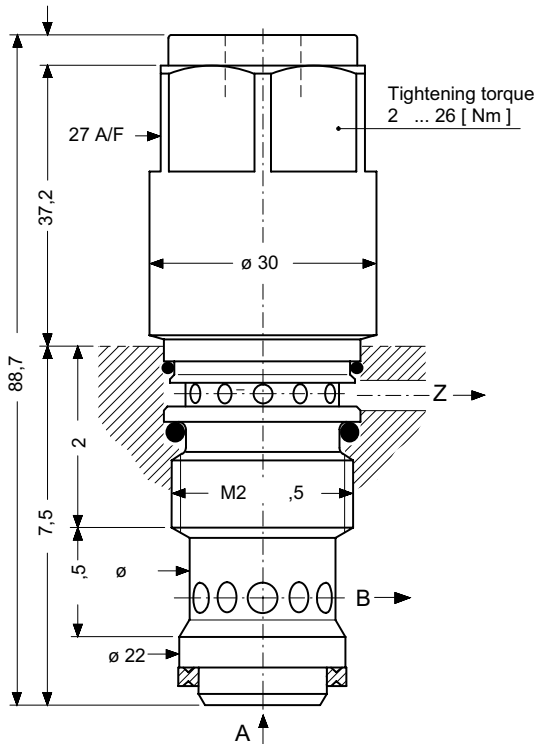


-W Priorit Flow Control, 1 mm Series MVR- D-1 ...

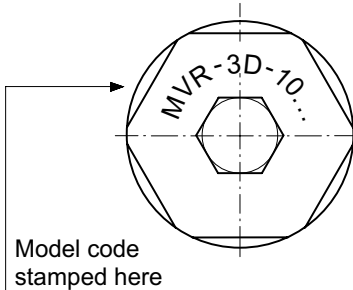
- Flow control cartridge for HTF cavity type MDD
- Priority flow control in 7 standard settings from 0,5 ... l/min
- Line mounting body HCAA available (see page 3)

1 mm nom.
m x. 1 [b r]
QA m x. 6 [l/min]
QZ m x. 19 [l/min]

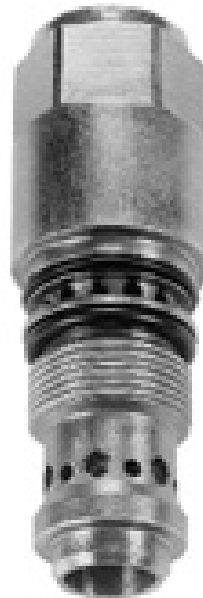
DIMENSIONS



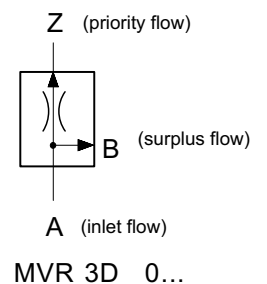
Cavit e MDD
see data sheet i 5.7



Model code stamped here



SYMBOL



DESCRIPTION

The MVR 3D 0 ... priority flow control valve uses all available incoming flow to give priority to the achievement of a fixed outflow at port Z.

Only when the inlet flow reaches, and then exceeds, this level is any excess made available at port B as surplus flow.

The outlet ports Z and B can be subjected to different pressures without affecting the priority flow control function.

The MVR 3D 0 ... priority flow control valve is a 3 way unit and is available with 7 fixed settings for the outlet flow at port Z (QZ) (see Model Code Key).

The controlled outflow at port Z is influenced by the pressure difference Δp ($p_B - p_Z$) and by the inlet flow at port A (Q_A) see Performance Characteristics.

NOTE: If, for whatever reason, flow cannot leave from port Z, then the valve will also prevent flow from port B. If this possibility exists in the proposed application, port A must be protected by a pressure relief valve.

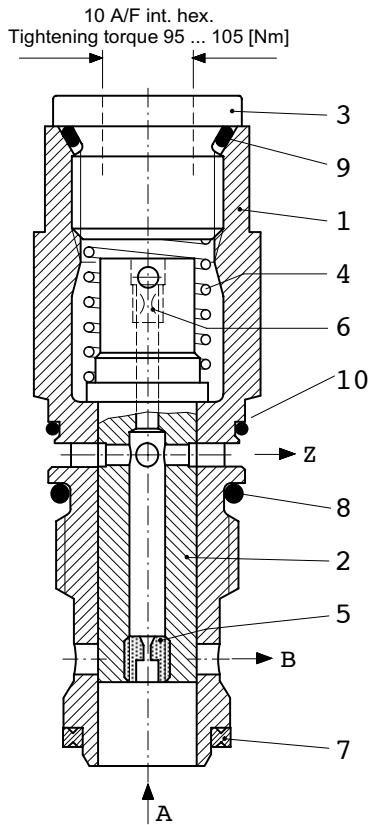
PRINCIPAL CHARACTERISTICS

Type	3 way priority flow control valve
Design	spool
Mounting method	screw in cartridge
Size	10 mm nom. size, HTF cavity MDD
Mass	0,28 kg
Mounting attitude	unrestricted
Flow direction	A = inlet (supply flow) B = outlet (surplus flow) Z = controlled priority flow
Operating pressure	... 3 5 bar in A, B and Z

Fluids	hydraulic oils HL and HLP to DIN 5152 other fluids contact HTF
Minimum fluid cleanliness	8/ to ISO 06 / CETOP RP70H 8 ... to NA 638
Fluid temperature range	20° ... +60° C
Viscosity range	0 ... 300 cSt
Flow rate QA max.	60 l/min
Flow rate QZ max.	19 l/min

M3Z-1.6 SUBJECT TO CHANGE WITHOUT NOTICE

SCHMATIC SECTION



SERVICE PARTS

It.	Qty.	Description	
1	1	Cartridge body	∅ 30 x 84,7
2	1	Control spool	∅ 16 x 56
3	1	Threaded plug	M20 x 1,5 DIN 908
4	1	Spring	1,6 x 17 x 43,3 iG = 7,5
5	1	Orifice plug	M6 / ∅ **)
6	1	Orifice plug	M4 / ∅ 0,3
	1	Seal kit no. DS-206, comprising *):	
7	1*)	Seal	∅ 22,1 / 17,1 x 2,5
8	1*)	O-ring no. 117	∅ 20,29 x 2,62 N90
9	1*)	O-ring no. 018	∅ 18,77 x 1,78 N90
10	1*)	O-ring no. 020	∅ 21,95 x 1,78 N90

*) = part of seal kit no. DS-206

▲ = available as service part

**) Orifice ∅ - see Model Code Key

TO ORDER SERVICE PARTS, STATE:

- complete unit model code, including design number
- data sheet number, including issue date
- part item number from above list
- part description from above list
- quantity required

INSTALLATION AND SERVICING

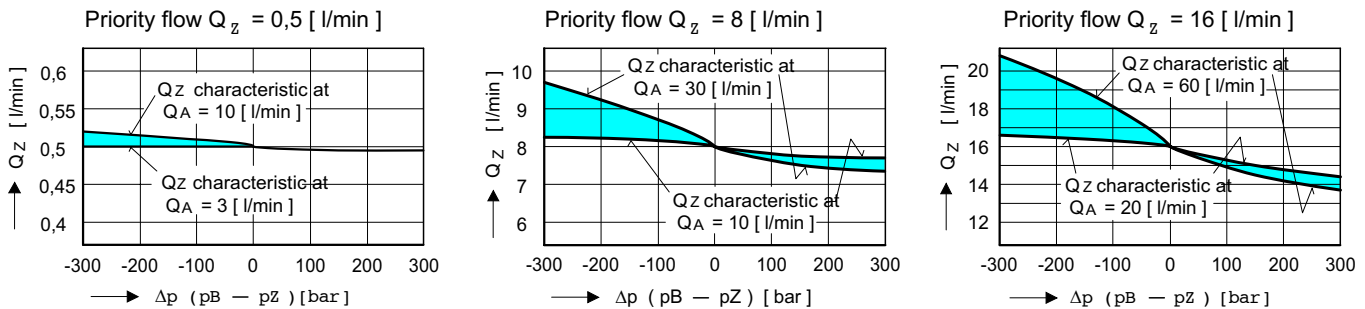
MUST BE CARRIED OUT WITH CARE,
AND BY QUALIFIED PERSONNEL ONLY.

Use the correct tightening torque when fitting the cartridge.

When changing seals, the new seals must be thoroughly oiled or greased before fitting them to the valve.

Use the correct tightening torque when refitting the threaded plug item 3, for example, after a seal change.

PERFORMANCE CHARACTERISTICS (oil viscosity 33 cSt)



EXAMPLE: Priority flow = 8 l/min
 Flow in at A (Q_A) = 30 l/min
 Pressure at B (p_B) = 200 bar
 Pressure at Z (p_Z) = 300 bar
 $\Delta p B \rightarrow Z = 200 \text{ bar} - 300 \text{ bar} = -100 \text{ bar}$
 Priority flow from Q_z characteristic = 8,7 l/min

MODEL CODE KEY

z.B. MVR - 3 D - 10 - 80 - [] - 1

- Priority flow control
- 3 = 3-way design
- D = for HTF cavity type MDD
- 10 = nominal size 10 mm
- 05 = 0,5 l/min (orifice ∅ 0,6 mm)
- 20 = 2,0 l/min (orifice ∅ 1,2 mm)
- 50 = 5,0 l/min (orifice ∅ 1,7 mm)
- 80 = 8,0 l/min (orifice ∅ 2,1 mm)
- 120 = 12,0 l/min (orifice ∅ 2,4 mm)
- 160 = 16,0 l/min (orifice ∅ 2,7 mm)
- 190 = 19,0 l/min (orifice ∅ 3,0 mm)
- (blank) = Nitrile seals (standard)
- V = Viton seals
- For special seals, contact HTF
- 1...9 = design number (omit when ordering)

Priority flow Q in Z (Q_z) in 1/10 l/min
(for other values, contact HTF)

M-16.50

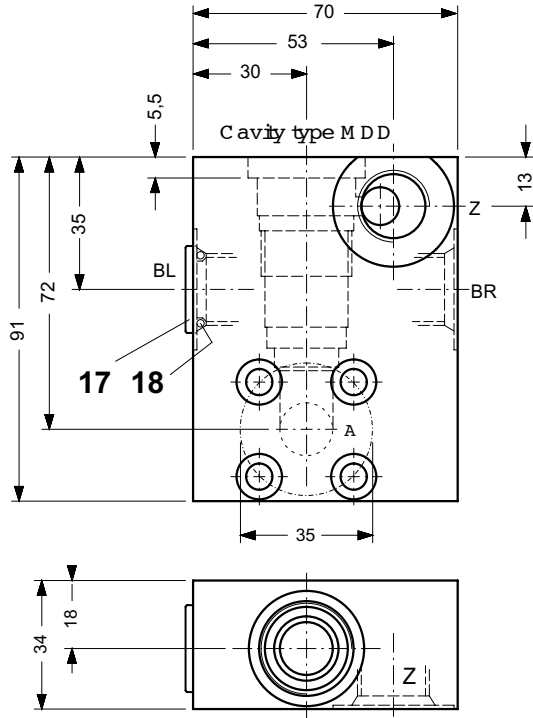
SUBJECT TO CHANGE WITHOUT NOTICE

Line- and Flange Mounting Body, 10 mm Type HCAA1



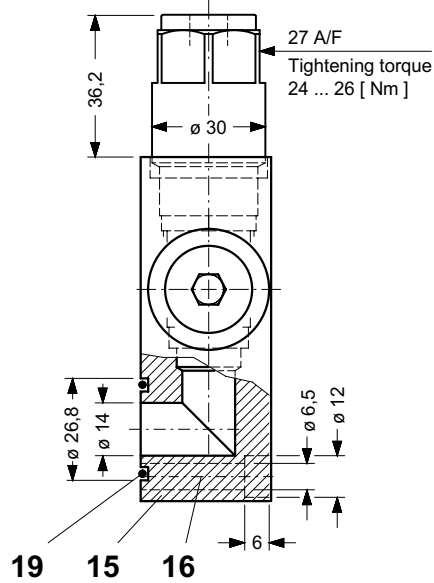
- Ports BL, BR and Z = 3/4"-16 UNF - 2B
- Material: steel
- Surface treatment: A3C to DIN / ISO 4042
- Mass: 1.30 kg

DIMENSIONS



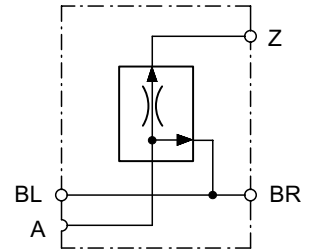
Cavity type MDD
see data sheet i -45.7

shown with
3-way priority flow control
MVR-3D-10 ... assembled



Supplied complete with one
3/4"-16 UNF plug and O-ring
(items 17 and 18).
5/16" (7.9 mm) A/F internal hex.
Tightening torque Ma = 90 ... 110 Nm

SYMBOL



MVR-3D-10 ...
HCAA1

Supplied complete with
four M6 x 35 hex. skt.
cap hd. screws (it. 16).
Tightening torque
Ma = 8 ... 10 Nm

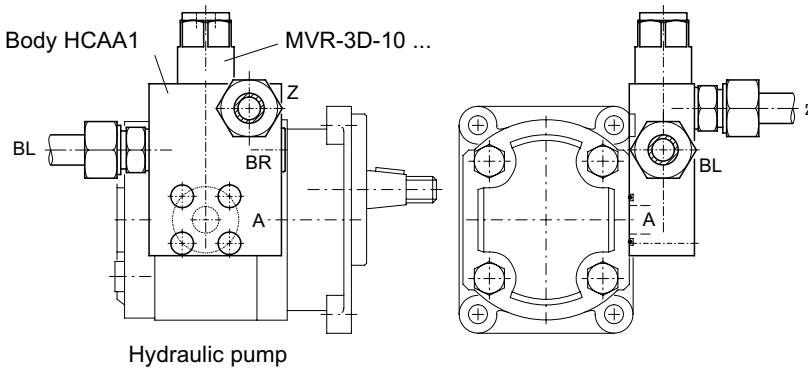
DESCRIPTION

The HCAA1 line- and flange mounting body is intended for direct mounting on the outlet port of a hydraulic pump (see APPLICATION EXAMPLE). Port Z is connected to the actuator requiring priority flow and surplus flow can be taken either from port BL or port BR.

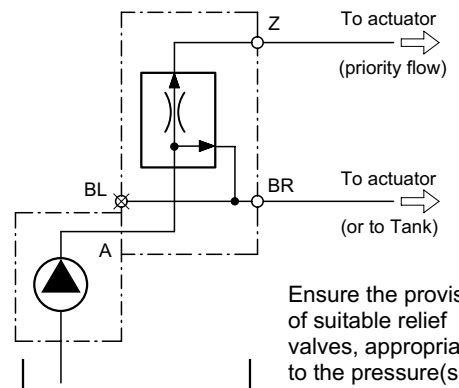
SERVICE PARTS

It.	Qty.	Description	▲ = available as service part
15	1	Line- & flg. mtg. body type HCAA1	
16	4	Hex. skt. cap hd. screw M6 x 35 8.8 DIN 912	
17	1	Plug 3/4"-16 UNF	
18	1	O-ring ø 17 x 2 N90	
19	1	O-ring no. 118 ø 21,89 x 2,62 N90	

APPLICATION EXAMPLE



Application suggestion: with steering pumps.
The provision of a priority flow in hydrostatic steering systems



Ensure the provision of suitable relief valves, appropriate to the pressure(s) in the service line(s).