Pressure valves





Pressure reducing valves type ADM and VDM

The task of pressure reducing valves in a hydraulic circuit is to maintain a rather constant outlet pressure despite a higher and changing inlet pressure. These valves are usually used when a secondary circuit has to be fed with a lower but constant pressure level by a main (primary) circuit with a higher and varying pressure level. These valves are either directly controlled (type ADM) or hydraulically piloted (type VDM). There is a design related permanent leakage flow apparent at L, which has to be led back to the tank via a de-pressurized line. A reversal of the direction of flow is possible up to approx. 50% of Q_{max}. A by-pass check valve has to be provided for higher reversed flow. The pressure reducing valves type ADM feature a override compensation i.e. acting like a pressure limiting valve, if the pressure on the secondary side exceeds the set pressure e.g. due to external forces.

Features and benefits:

- With safety valve function
- Various adjustment options
- Various additional functions

Intended applications:

- General hydraulics
- Jiqs
- Test benches



Nomen- clature:	Pressure-reducing valve (directly controlled or piloted)
Design:	Individual valve for pipe connection Individual valve Manifold mounting
Adjustment:	Tool adjustable Manually adjustable
p _{max P} : p _{max A} :	300 400 bar 250 400 bar
Q _{max} :	120 lpm

Design and order coding example



Basic type, size Type ADM (non-piloted), size 1 to 3



Basic type, size Type VDM (hydraulically piloted), size 3 to 5

 Hydraulically piloted pressure-reducing valve type VDX (pressure-limiting valve at port L)

Function

ADM..







Manifold mounting valve



Valve for pipe connection



Manifold mounting valve

General parameters and dimensions

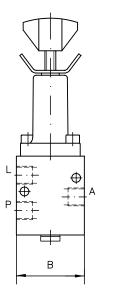
ADM 22 DR

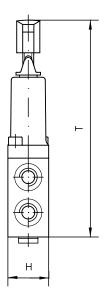
Directly controlled pressure reducing valve type ADM size 2, for pipe connection (tapped ports G 3/8 (BSPP), coding 2), pressure range 30 to 120 bar (coding D), pressure manually adjustable (coding R) Directly controlled pressure-reducing valve type ADM, size 2 for pipe connection (ports G 3/8 (BSPP), coding 2), Pressure range 30 to 120 bar (coding D),

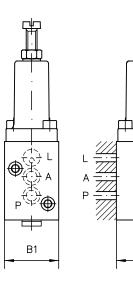
Manually adjustable pressure (coding R)

ADM...P

Manifold mounting valve







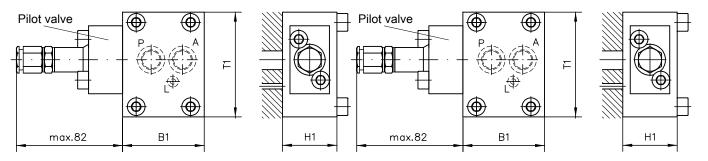
Н1



VDM...G Valve for pipe connection

VDM 5 PH - 250

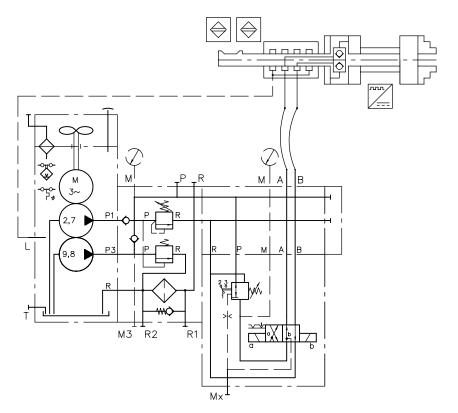
Piloted pressure reducing valve type VDM size 5, manifold mounting (coding P), pressure range 10 to 400 bar (coding H), pressure tool adjustable to 250 bar Piloted pressure-reducing valve type VDM, size 5 for manifold mounting (coding P), pressure range 10 to 400 bar (coding H), tool adjustable pressure to 250 bar



	Q _{max} [lpm]	p _{max} [bar]	p _{max A} [bar]	Ports (BSPP) ²⁾	Leakage flow Q leak [lpm]	Dimensions [mm]						m _{max} [kg] ³⁾
						Н	H1	В	B1	T	T1	
ADM 1	12	300	F: 30	G 1/4	approx. <0.05	30	35	45	35	141	-	0.6/0.6
ADM 2	25		D: 120 C: 160 A: 250	G 1/4, G 3/8	approx. <0.05	30	40	50	40	162	-	0.7/0.85
ADM 3	60		F: 25 D: 100 C: 160 A: 250	G 3/8, G 1/2	approx. <0.07	30	40	50	40	174	-	1.0/1.1
VDM 3	40	400	N: 100	G 1/2	approx. <0.4	30	-	60	-	66	-	1.1/
VDM 4	70		H: 400 ¹⁾	G 3/4		40	40	65	60	71	78	1.5/2.0
VDM 5	120			G 1		50	50	80	88	73	81	2.0/2.5

- 1) Max. pressure difference is 300 bar between inlet and outlet
- 2) Design for pipe connection
- Version for pipe connection / manifold mounting

- -AN 21 F 2-D45-F50
- -BA 2
- -NSMD 2 K/GRK/0
- -1-G 24



Associated technical data sheets:

- Pressure-reducing valves type ADM: <u>D 7120</u>
- Pressure-reducing valves type VDM, VDX: <u>D 5579</u>

Similar products:

- Miniature pressure-reducing valves type ADC etc.: <u>D 7458</u>
- Miniature prop. pressure-reducing valves type PM, PMZ: <u>D 7625</u>
- Pressure-reducing valves type CDK: <u>D 7745</u>
- Prop. pressure-reducing valves type PDM: <u>D 7486</u>, <u>D 7584/1</u>