

# BENCOR (Pty) Ltd.

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. They are used when an hydraulic circuit with a higher pressure level (primary side) is to supply another circuit with a lower pressure level (secondary side), without affecting the higher pressure in the primary circuit.

These valves are either directly controlled (type ADM) or hydraulically piloted (type VDM).

There is a design related leakage flow which has to be led pressureless via port L to the tank. 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.



**Nomenclature:** Pressure reducing valve (directly controlled or piloted)

**Design:** Individual valve for pipe connection  
Individual valve, manifold mounting

**Adjustability:** Tool adjustable  
Manually adjustable

$p_{max P}$ : 300 ... 400 bar

$p_{max A}$ : 250 ... 400 bar

$Q_{max}$ : 120 l/min

### Basic types and general parameters

Basic type	ADM				VDM		Symbol	
	directly controlled				hydraulically piloted		ADM...	VDM...
Function							valve for pipe connection	
Size	1	2	3	3	4	5		
Flow $Q_{max}$ (l/min)	12	25	60	40	70	120		
Pressure $p_{max P}$ (bar)								
pressure range:	300		300		400			
$p_{max A}$ (bar)	F: 30 D: 120 C: 160	F: 30 D: 120 C: 160	F: 25 D: 100 C: 160		N: 100 H: 400 <sup>1)</sup>			
Tapped ports. <sup>2)</sup>	A: 250	A: 250	A: 250					
Leakage flow	G 1/4	G 1/4, G 3/8	G 3/8, G 1/2	G 1/2	G 3/4	G 1		
$Q_{leak}$ (l/min)	approx. < 0,05	approx. < 0,05	approx. < 0,07		approx. < 0,4			

<sup>1)</sup> max. pressure difference is 300 bar between inlet and outlet

<sup>2)</sup> Design for pipe connection

### Additional versions

- Hydraulically piloted pressure reducing valve type VDX (pressure limiting valve at port L)  
( see also "additional information")

### Order examples

#### ADM 22 DR

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

#### 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