### Fittings and Accessories

## Relief valves

These valves are installed in distributor systems fitted with a pump without pressure relief equipment, mainly in the main line downstream from the pump.

With longer main lines and high viscosity oils, the pressure relief time, which influences the reversing of the distributors, can become too long. The installation of the second relief valve at a suitable position in the main line, e.g. at half the main line length, may remedy this problem..

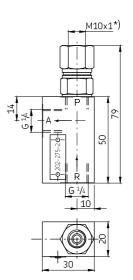
### Order No. 202-275-2



A = Outlet

P = Inlet

R = Return

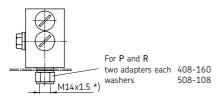


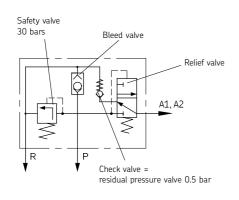
## Relief valve with bleed valve and safety valve

### Order No. 202-175-30

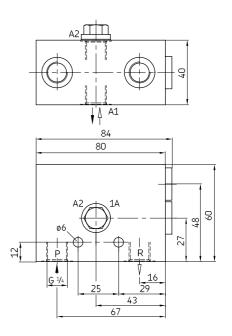
Adaptors \*) for tube diam. 6: Order No. 406-054 for tube diam. 8: Order No. 301-020 for tube diam. 10: Order No. 410-163

#### Fitted to reservoir





<sup>\*)</sup> Ports tapped for solderless tube connection



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## Safety valves, adjustable (poppet valve)

### Hydraulic characteristics

Order No.	Rated flow rate [I/min]	,	e Operating ge pres. max. [bar]	Oil temperature max.	Viscosity range mm <sup>2</sup> /s	Seal
WVN200-10E6 WVN200-10E12 WVN200-10E12-S8 WVN200-10E25 WVN200-10E25-S8 WVN200-10E35 WVN200-10E60 WVN200-10E60-S8	see pressure- loss parameter	1 to 6 3 to 12 3 to 12 4 to 25 4 to 25 4 to 35 12 to 60 12 to 60	40 40 40 40 40 40 70	80 °C	20 to 1000	NBR NBR FKM (FPM) NBR FKM (FPM) NBR NBR FKM (FPM)

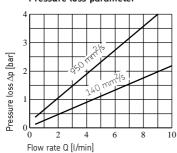
### General characteristics

Design: poppet valve with hydraulic cushioning

directly controlled

Lubricant: oil
Connecting thread: G <sup>1</sup>/<sub>4</sub>
Mounting position: optional

### Pressure loss parameter



With increasing flow rate, the pressure upstream from the valve will also rise in accordance with the curves.

## Adaptors $\star$ )

for valves	WVN200-10E6 to WVN200-10E35			
for tube diam.	8: Order No. 301-020			

for tube diam. 10: Order No. 410-163 for tube diam. 12: Order No. 412-163

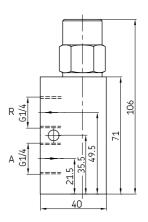
Washer: Order No. 508-108

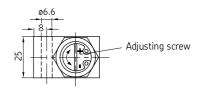
for valve WVN200-10E60

for tube diam. 8: Order No. 408-403W for tube diam. 10: Order No. 410-403W

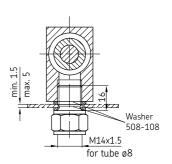
Washer: Order No. 508-108

If installed on a reservoir, use two special adapters 408-160 with long tube ends.







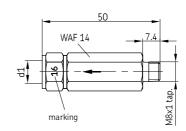


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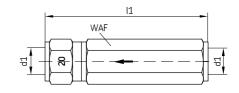
<sup>\*)</sup> Ports tapped for solderless tube connection

# Safety valves, (ball valves) for flow rates from 0.5 to 2 l/min

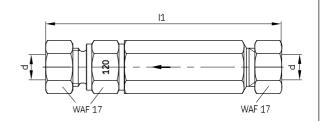
	Tube	Opening pro	essure	,	
Order No.	diam.	[bar]	Marking	d1 *)	
WVN200-4A0.4		0.4	04		
WVN200-4A5		5	5		
WVN200-4A8	4	8	8	M8×1	
WVN200-4A12	7	12	12	1110111	
WVN200-4A16		16	16		
WVN200-4A25		25	25		
WVN200-4A0.4-S1	6	0.4	04	M10×1	



Order No.	Tube diam.	Opening pro [bar]	essure Marking	d1 *)	l1	WAF
WVN200-6B0.5 WVN200-6B3 WVN200-6B8 WVN200-6B12 WVN200-6B16	6	0.5 3 8 12 16	05 3 8 12 16	M10×1	61	14
WVN200-6B20 WVN200-6B40		20 40	20 40			
WVN200-8B0 WVN200-8B3 WVN200-8B5 WVN200-8B12 WVN200-8B16 WVN200-8B20 WVN200-8B32	8	0.04 3 5 12 16 20 32	0 3 5 12 16 20 32	M14×1.5	71	17
WVN200-10B0 WVN200-10B0.5 WVN200-10B1 WVN200-10B32	10	0.04 0.5 12 32	0 05 12 32	M16×1.5	80	19
161-212-054 <sup>1)</sup>	8	20	20	M14×1.5	84.5	17



	Tube	Opening pressure			
Order No.	diam. d	[bar]	Marking	l1	
WVN200-8D50		50	50		
WVN200-8D75	8	75	75	84	
WVN200-8D120		120	120		
WVN200-8D220		220	220		
WVN200-10D120-S1 WVN200-10D220-S1	10	120 220	120 220	87	
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Cutting sleeve screw unions according to DIN 2353

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<sup>1)</sup> This valve is designed as a plunger valve. Because of this design it can also be used for regulating tasks, whereas the ball valves should be used as safety valves.

<sup>\*)</sup> Ports tapped for solderless tube connection