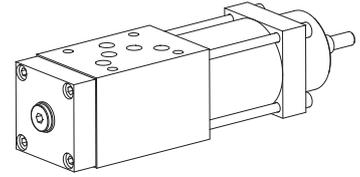


**Pressure reducing valve  
 Flange- and sandwich construction**

- $Q_{max}$  = 80 l/min
- $p_{max}$  = 315 bar
- $p_{N red max}$  = 160 bar

**NG10**  
 ISO 4401-05

**DESCRIPTION**

Flange or sandwich type directly operated 3-way pressure reducing valve. The valve reduces the inlet pressure to a preset output pressure. The integrated pressure relief function prevents the reduced pressure from being exceeded as a result of external forces. Two types of setting and four pressure stages are available. A pressure gauge connection is provided in the reduced connection. In the sandwiches with control in A or B line by-pass check valves are integrated. The flange valve body is painted, the other parts are phosphated.

**FUNCTION**

The spool is held in the home position by the spring. The connection to the consumer is fully open. The reduced pressure can be adjusted at the adjustment spindle, irrespective of the inlet pressure. If the reduced pressure increases, it displaces the valve towards the spring. The volume flow at the valve inlet is then throttled, controlling the reduced pressure. If forces acting on the consumer allow the reduced pressure to be increased above the set value, the spool is displaced until the valve inlet closes and the tank port opens. The pressure increase is then limited to a low value, controlled by the spring.

**APPLICATION**

Pressure reducing valves are used for keeping the pressure constant in a consumer, irrespective of pressure fluctuations on the supply side. If several consumers are used, the reduced pressure can be set individually with the aid of one pressure control valve for each consumer. Generally speaking, pressure control valves are used for reducing a hydraulic pressure to a lower level. The integrated pressure relief function obviates the need for any additional pressure relief valve in the reduced pipe. Directly operated pressure reducing valves also keep the reduced pressure stable, even under very difficult operating conditions.

**TYPE CODE**

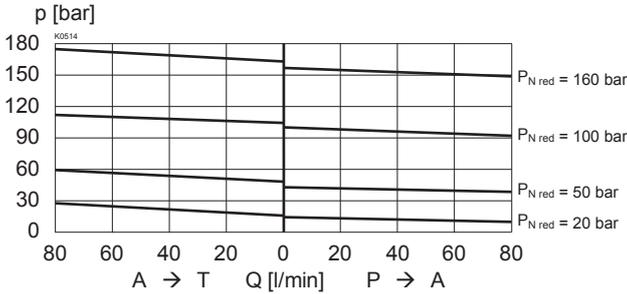
		A	DRV	d	<input type="checkbox"/>	10	<input type="checkbox"/>	/	<input type="checkbox"/>	#	<input type="checkbox"/>		
Mounting interface acc. to Wandfluh standard,													
Pressure reducing valve													
Direct operated													
Type list / function													
Flange design		<input type="checkbox"/> N											
Sandwich design, $P_{red}$ in P		<input type="checkbox"/>											
Sandwich design, $P_{red}$ in A		<input type="checkbox"/> A											
Sandwich design, $P_{red}$ in B		<input type="checkbox"/> B											
Interface NG10													
Type of adjustment													
Key		<input type="checkbox"/>											
Control knob		<input type="checkbox"/> D											
Cover		<input type="checkbox"/> H											
Pressure range $p_{N red}$		20 bar		<input type="checkbox"/> 20		50 bar		<input type="checkbox"/> 50		100 bar		<input type="checkbox"/> 100	
		160 bar		<input type="checkbox"/> 160									
Design-Index (Subject to change)													

**GENERAL SPECIFICATIONS**

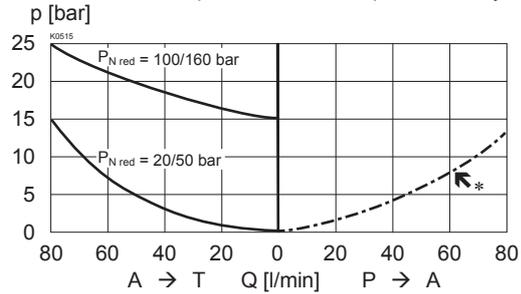
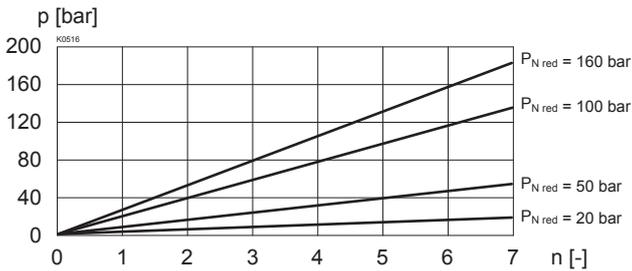
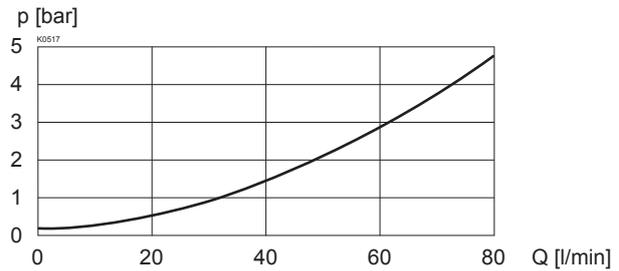
Description	Direct operated pressure control valve
Nominal size	NG10 acc. to ISO 4401-05
Construction	Flange- or sandwich
Mounting	4 mounting holes for zyl. screws M6 or double ended screws M6
Connection	Threaded connection plates Multi-flange subplates Longitudinal stacking system
Ambient temperature	-20...+50 °C
Mounting position	any
Fastening torque	$M_0 = 9,5 \text{ Nm}$ (quality 8.8)
Weight	$m = 4,2 \text{ kg}$

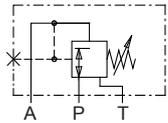
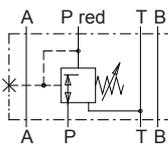
**HYDRAULIC SPECIFICATIONS**

Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 18/16/13 (Required filtration grade $\beta_{6...10} \geq 75$ ) refer to data sheet 1.0-50/2
Viscosity range	12 mm <sup>2</sup> /s...320 mm <sup>2</sup> /s
Fluid temperature	-20...+70 °C
Peak pressure	$p_{max} = 315 \text{ bar}$
Tank load in connection T	$p_{T max} = 50 \text{ bar}$
Nominal pressure	$p_{N red} = 20 \text{ bar}$ , $p_{N red} = 100 \text{ bar}$
	$p_{N red} = 50 \text{ bar}$ , $p_{N red} = 160 \text{ bar}$
Opening pressure to non-return valve	$p_0 = 0,2 \text{ bar}$
Volume flow	$Q = 0...80 \text{ l/min}$

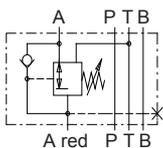
**CHARACTERISTICS** oil viscosity  $\nu = 30 \text{ mm}^2/\text{s}$ 
 $p_{\text{red}} = f(Q)$  Pressure volume flow characteristics  
 (Maximal adjustable pressure)

 $p_{\text{red}} = f(Q)$  Pressure volume flow characteristics  
 (Minimal adjustable pressure)

\* Consumption resistance dependent on system

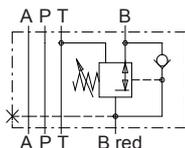

 $p_{\text{red}} = f(n)$  Pressure adjustment characteristics  
 [at  $Q = 0 \text{ l/min}$  (static)]

 $\Delta p = f(Q)$  Pressure loss/flow characteristics  
 over non-return valve

**TYPES / DIMENSIONS**

 Flange construction  
 ADRVdN10

 Sandwich construction  
 ADRVd10


ADRVdA10



ADRVdB10

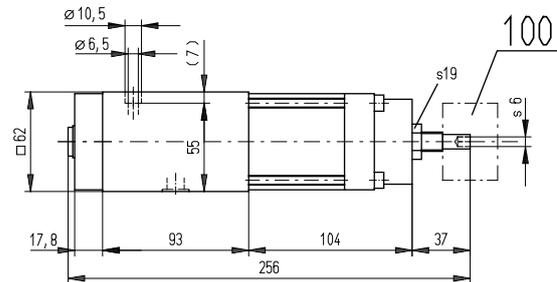
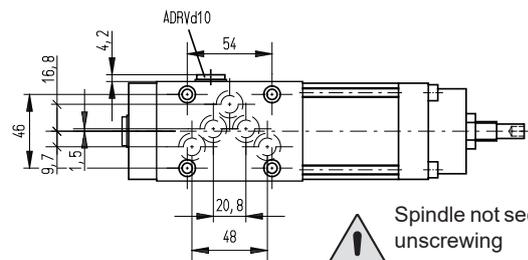
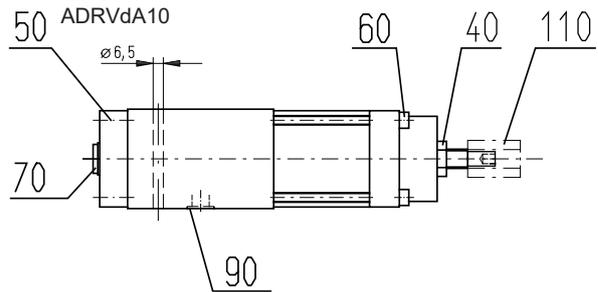


For sandwich red. pressure in B the adjusting parts are on A-side

**PARTS LIST**

Position	Article	Description
40	153.1601	Hexagonal nut 0,5D M12
50	246.3121	Zyl. screw M6 x 20 DIN912
60	246.3190	Zyl. screw M6 x 90 DIN912
70	238.2406	Plug VSTI G1/4"-ED
90	160.2093	O-Ring ID 14,00 x 1,78
100	114.1100	Knob
110	154.7100	Cap nut

ADRVdN10


 ADRVd10  
 ADRVdA10

**ACCESSORIES**

Threaded connection plate and multi-flange subplates

Reg. 2.9

Technical explanation see data sheet 1.0-100