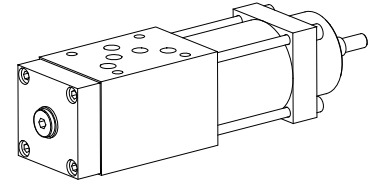


**Pressure reducing valve
 Flange- and sandwich construction**

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

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. A by-pass non-return valve plate for the flange valve for free flow from A to P (B and To port not drilled) can be ordered separately. 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.

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TYPE CODE

	A		DRV		d		10		/		#	
International mounting interface ISO												
Pressure reducing valve												
Direct operated												
Flange												
Sandwich pressure red in P												
Sandwich pressure red in A												
Sandwich pressure red in B												
Nominal size 10												
Setting versions:	Key											
	Knob											
	Cover											
Standard nominal pressure ranges:	$p_{N \text{ red}} = 20 \text{ bar}$											
	$p_{N \text{ red}} = 50 \text{ bar}$											
	$p_{N \text{ red}} = 100 \text{ bar}$											
	$p_{N \text{ red}} = 160 \text{ bar}$											
Design-Index (Subject to change)												

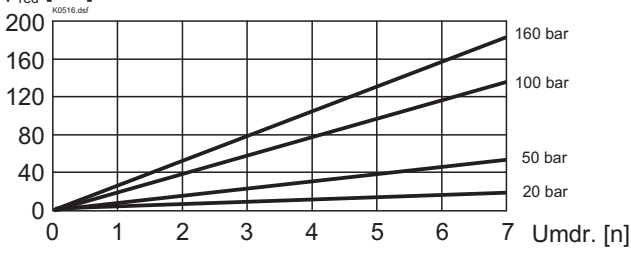
GENERAL SPECIFICATIONS

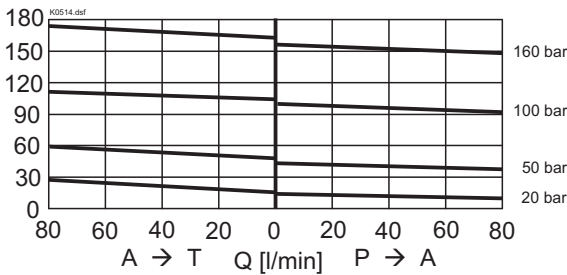
Description	Direct operated pressure control valve
Nominal size	NG10 acc. to ISO 4401-05
Construction	Flange- or sandwich
Mounting	4 mounting holes for zyl. screws M6 or double ended screws M6
Connection	Threaded connection plates Multi-flange subplates Longitudinal stacking system
Ambient temperature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

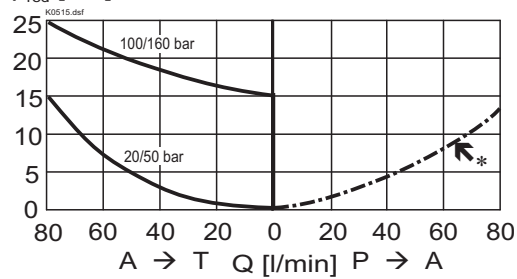
HYDRAULIC SPECIFICATIONS

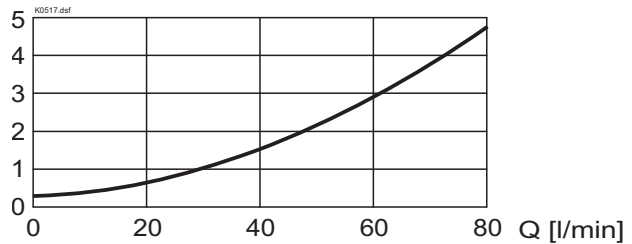
Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 18/16/13 (Required filtration grade $\beta_{6...10} \geq 75$) refer to data sheet 1.0-50/2
Viscosity range	12 mm ² /s...320 mm ² /s
Fluid temperature	-20...+70°C
Peak pressure	$p_{max} = 315 \text{ bar}$
Tank load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

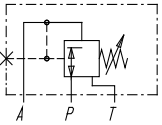
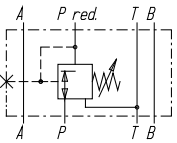
CHARACTERISTICS oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$
 $p_{\text{red}} = f(\alpha)$ Pressure adjustment characteristics

 $p_{\text{red}} [\text{bar}]$ $Q = 0 \text{ l/min}$ (static)

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

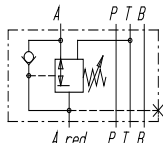
 $p_{\text{red}} [\text{bar}]$

 $p_{\text{min}} = f(Q)$ Minimal pressure loss/flow characteristics

 $p_{\text{red}} [\text{bar}]$ * Consumption resistance dependent on system

 $\Delta p = f(Q)$ Pressure loss/flow characteristics over RV

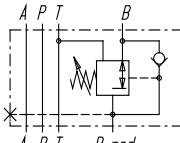
 $\Delta p [\text{bar}]$

TYPES / DIMENSIONS

 Flange construction
 ADRVdN10

 Sandwich construction
 ADRVd10


ADRVdA10



ADRVdB10



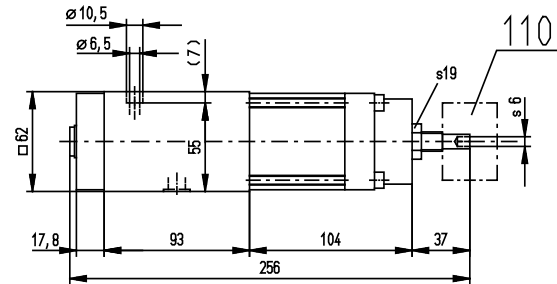
For sandwich red. pressure in B the adjusting parts are on A-side

PARTS LIST

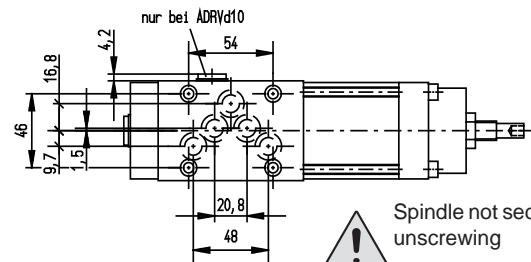
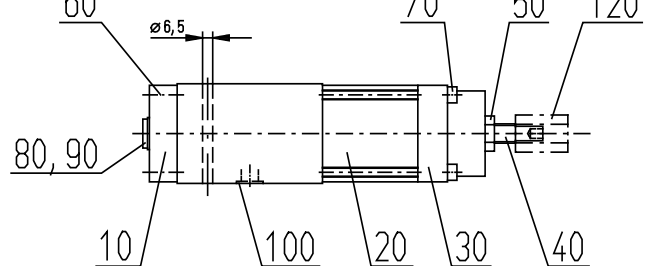
Position	Article	Description
10	59.2702	Lid
20	89.1800	Housing
30	59.2600	Lid
40	80.3107	Adjustment screw
50	153.1601	Hexagonal nut 0,5D M12
60	246.3120	Cylinder screw M6x20 DIN912
70	246.3190	Cylinder screw M6x90 DIN912
80	238.2204	Plug G1/4" DIN908
90	49.2132	Seal ring ID 13,7x20x1,5
100	160.2140	O-ring ID 14,00x1,78
110	114.1100	Knob
120	154.7100	Cap nut

Technical explanation see data sheet 1.0-100

Flange construction



Sandwich construction



Spindle not secured against unscrewing

ACCESSORIES

 Threaded connection plate and multi-flange subplates
 Bypass non-return valve ADRVp10

Reg. 2.9