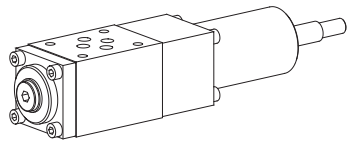
Pressure reducing valve
Flange- and sandwich construction
- Q_{max} = 30 l/min
- p_{max} = 315 bar
- $p_{N\ red\ max}$ = 200 bar

NG6
ISO 4401-03



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 five 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 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 zinc-nickel coated.

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 if 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 ☐ 6 ☐ / ☐ # ☐

International mounting interface ISO		
Pressure reducing valve		
Direct operated		
Type list / function		
Flange design		N
Sandwich design, P_{red} in P		☐
Sandwich design, P_{red} in A		A
Sandwich design, P_{red} in B		B
Interface NG6		
Type of adjustment	Key	☐
	Control knob	D
	Cover	H
Pressure range $p_{N\ red}$	31,5 bar	31,5
	63 bar	63
	125 bar	125
	160 bar	160
	200 bar	200
Design-Index (Subject to change)		

GENERAL SPECIFICATIONS

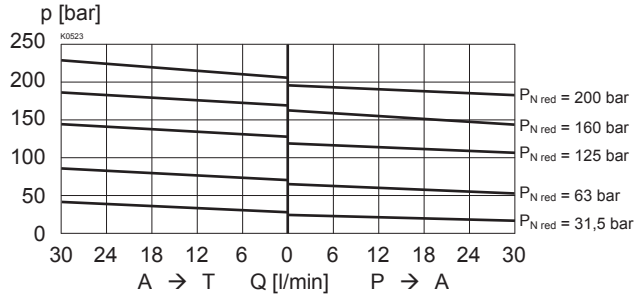
Description	Direct operated pressure control valve
Nominal size	NG6 acc. to ISO 4401-03
Construction	Flange- or sandwich
Mounting	4 mounting holes for zyl. screws M5 or double ended screws M5
Connection	Threaded connection plates Multi-flange subplates Longitudinal stacking system
Ambient temperature	-20 ...+50 °C
Mounting position	any
Fastening torque	M_D = 5,5 Nm (Quality 8.8)
Weight	m = 2,0 kg

HYDRAULIC SPECIFICATIONS

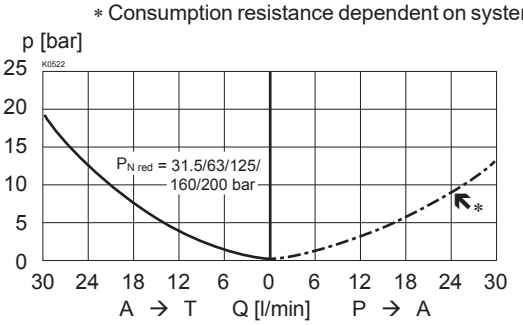
Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 18/16/13 (Required filtration grade ß 6…10≥75) refer to data sheet 1.0-50/2
Viscosity range	12 mm²/s…320 mm²/s
Fluid temperature	-20...+70 °C
Peak pressure	p_{max} = 315 bar
Tank load in connection T	$p_{T\ max}$ = 50 bar
Nominal pressure	$p_{N\ red}$ = 31,5 bar, $p_{N\ red}$ = 63 bar $p_{N\ red}$ = 125 bar, $p_{N\ red}$ = 160 bar $p_{N\ red}$ = 200 bar
Opening pressure to non-return valve	$p_{ö}$ = 0,2 bar
Volume flow	Q = 0…30 l/min

CHARACTERISTICS oil viscosity υ = 30 mm²/s

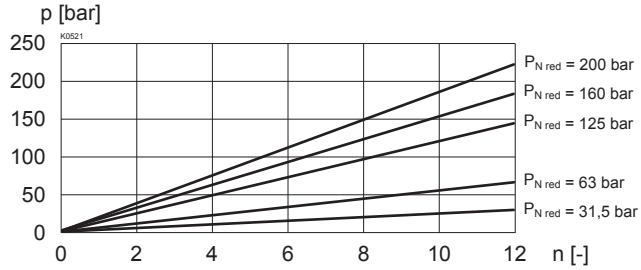
p_{red} = f (Q) Pressure volume flow characteristics
(Maximal adjustable pressure)



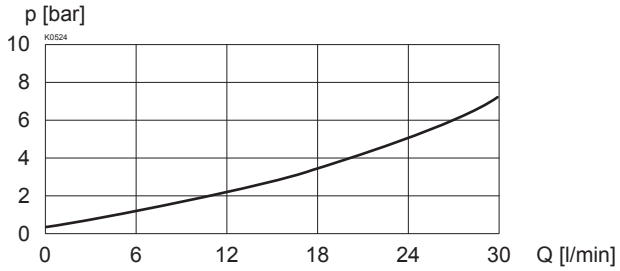
p_{red} = f (Q) Pressure volume flow characteristics
(Minimal adjustable pressure)
∗ Consumption resistance dependent on system



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

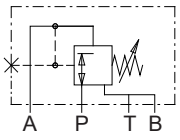


Δp = f (Q) Pressure loss/flow characteristics
over non-return valve

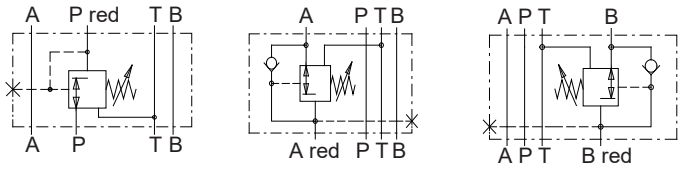


TYPES / DIMENSIONS

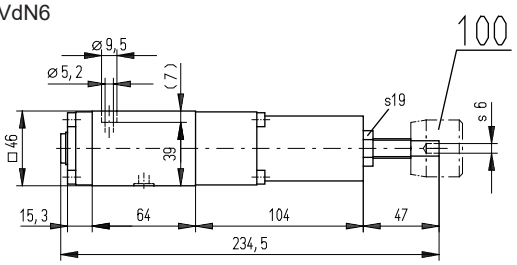
Flange construction
ADRVdN6



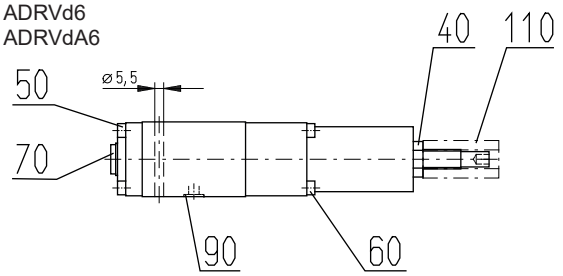
Sandwich construction
ADRVd6 ADRVdA6 ADRVdB6

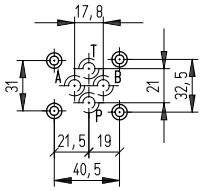


ADRVdN6



ADRVd6
ADRVdA6





Spindle not secured against unscrewing

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	246.2117	Zyl. screw M5 x 16 DIN912
60	246.2146	Zyl. screw M5 x 45 DIN912
70	238.2406	Plug VSTI G1/4"-ED
90	160.2093	O-Ring ID 9,25 x 1,78
100	114.1202	Knob
110	154.7100	Cap nut

ACCESSORIES

Threaded connection plate and multi-flange subplates Reg. 2.9
Bypass non-return valve ADRVP6

Technical explanation see data sheet 1.0-100