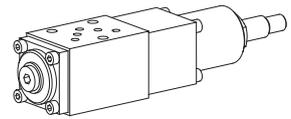


**Pressure reducing valve
 Flange- and sandwich construction**

- Q_{max} = 20 l/min
- p_{max} = 315 bar
- $p_{N red max}$ = 200 bar

NG4-Mini[®]

DESCRIPTION

Flange or sandwich type directly operated 3-way pressure reducing valve NG4-Mini in accordance with Wandfluh standard. 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 bypass non-return valve plate for the flange valve – for free flow from A to P – can be ordered separately. 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 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. Mini-4 valves are used where both, reduced dimensions and weight are important.

TYPE CODE

B DRV d 4 / #

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 NG4-Mini _____

Type of adjustment

Key	<input type="checkbox"/>
Control knob	<input type="checkbox"/> D
Cover	<input type="checkbox"/> H

Pressure range $p_{N red}$

40 bar	<input type="checkbox"/> 40
80 bar	<input type="checkbox"/> 80
160 bar	<input type="checkbox"/> 160
200 bar	<input type="checkbox"/> 200

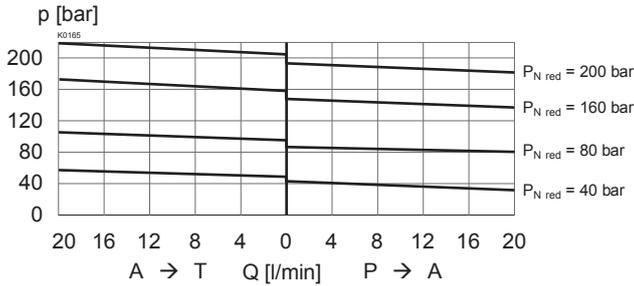
Design-Index (Subject to change))

GENERAL SPECIFICATIONS

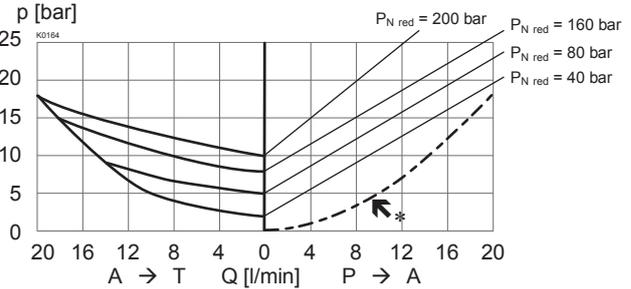
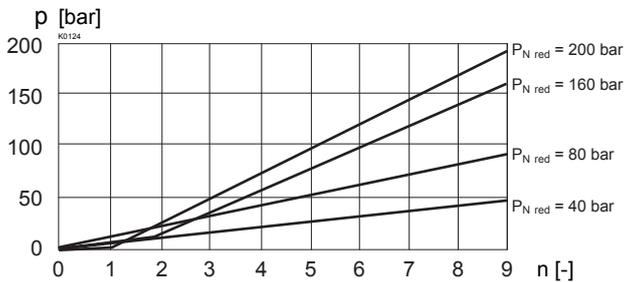
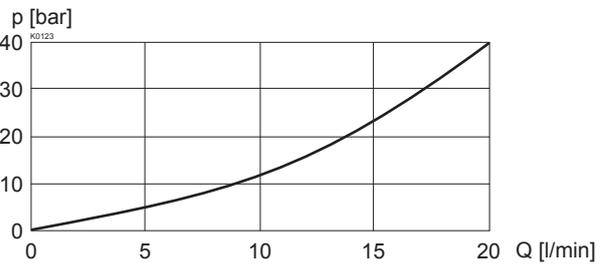
Description	Direct operated pressure control valve
Nominal size	NG4-Mini acc. to Wandfluh standard
Construction	Flange- or sandwich
Mounting	3 mounting holes for zyl. screws M5 or double ended screws M5
Connection	Threaded connection plates Multi-flange subplates Longitudinal stacking system
Ambient temperature	-20...+50 °C
Mounting position	any
Fastening torque	$M_D = 5,5 \text{ Nm}$ (quality 8.8)
Weight	$m = 1,0 \text{ kg}$

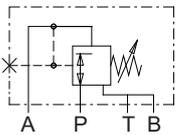
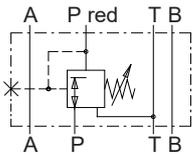
HYDRAULIC SPECIFICATIONS

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	$p_{T max} = 50 \text{ bar}$
Nominal pressure ranges	$p_{N red} = 40 \text{ bar}$, $p_{N red} = 160 \text{ bar}$ $p_{N red} = 80 \text{ bar}$, $p_{N red} = 200 \text{ bar}$
Opening pressure to non-return valve	$p_o = 2,2 \text{ bar}$
Volume flow	$Q = 0...20 \text{ l/min}$

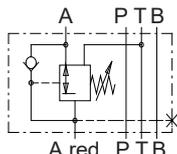
CHARACTERISTICS oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$
 $p_{\text{red}} = f(Q)$ Pressure volume flow characteristics
 (Maximal adjustable pressure)

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

* Consumption resistance dependent on system

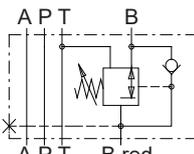

 $p_{\text{red}} = f(n)$ Pressure adjustment characteristics
 [at $Q = 0 \text{ l/min}$ (static)]

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

TYPES / DIMENSIONS

 Flange
 BDRVdN4

 Sandwich
 BDRVd4


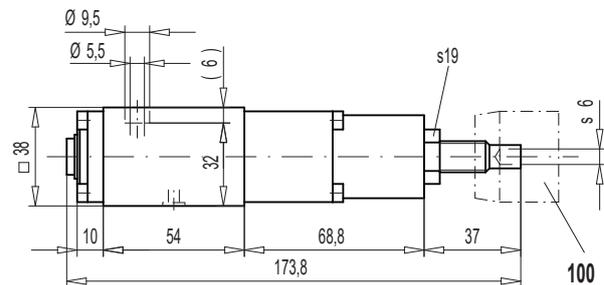
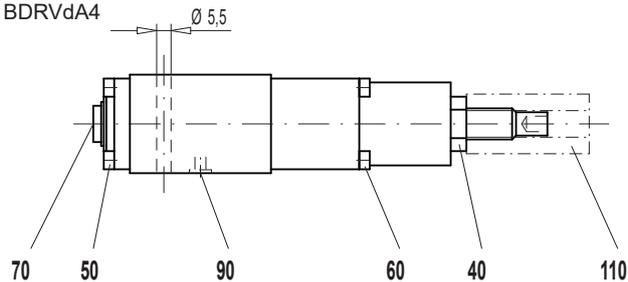
BDRVdA4



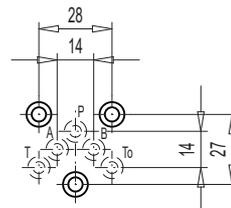
BDRVdB4



BDRVdN4


 BDRVd4
 BDRVdA4

PARTS LIST

Position	Article	Description
40	153.1601	Hexagonal nut 0,5D M12
50	246.1113	Zyl. screw M4 x 12 DIN912
60	246.1141	Zyl. screw M4 x 40 DIN912
70	238.1405	Plug VSTI G1/8"-ED
90	160.2052	O-Ring ID 5,28 x 1,78
100	114.1202	Knob
110	154.7100	Cap nut


 Spindle not secured against
 unscrewing

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

ACCESSORIES

 Threaded connection plates and Multi-flange subplates Register 2.9
 Bypass non-return valve BDRVp4

Technical explanation see data sheet 1.0-100