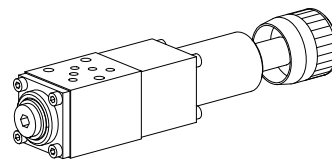


## Pressure reducing valve Flange- and sandwich construction

- $Q_{\max}$  = 8 l/min
- $p_{\max}$  = 315 bar
- $p_{N \text{ red max}}$  = 200 bar

**NG3-Mini®**



### DESCRIPTION

Flange or sandwich type directly operated 3-way pressure reducing valve NG3-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 phosphatised.

### 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-3 valves are used where both, reduced dimensions and weight are important.

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### TYPE CODE

M		D			A03	-		-		#	
Pressure reducing valve											
Direct operated											
Setting versions: screw adjustment		S									
knob adjustment		D									
Flange construction		F									
Sandwich construction		S									
Interface NG3-Mini											
Sandwich construction											
Pressure control in:		P	P								
		A	A								
		B	B								
Flange construction											
Pressure control from:		P to A	P/A								
Standard nominal		$p_{N \text{ red}}$ = 32 bar	32								
pressure range:		$p_{N \text{ red}}$ = 80 bar	80								
		$p_{N \text{ red}}$ = 200 bar	200								
Design-Index (Subject to change)											

### GENERAL SPECIFICATIONS

Description	Direct operated pressure reducing valve
Nominal size	NG3-Mini according to Wandfluh standard
Constructions	Flange- or sandwich
Mounting	3 mounting holes for zyl. screws M4 or double ended screws M4
Connections	Threaded connection plates Multi-flange plates Longitudinal stacking system
Ambient temperature	-20...+50 °C
Mounting position	any
Fastening torque	$M_D$ = 2,8 Nm (quality 8.8)
Weight	m = 0,54 kg (Flange, Sandwich P) m = 0,67 kg (Sandwich A/B)

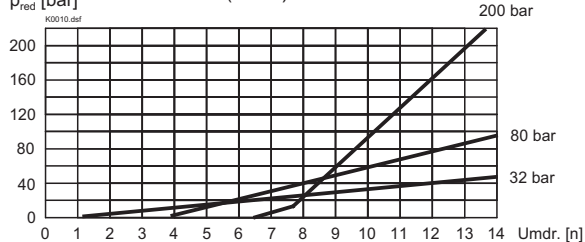
### HYDRAULIC SPECIFICATIONS

Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 1816/13 (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 bar
Tank load in connection T	$p_{T \text{ max}}$ = 50 bar
Nominal pressure	$p_{N \text{ red}}$ = 32 bar, 80 bar and 200 bar
Volume flow	Q = 0...8 l/min

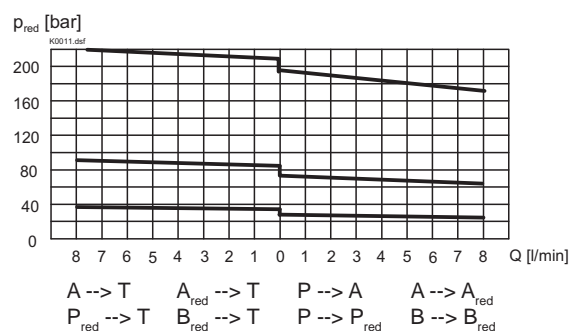
**CHARACTERISTICS** oil viscosity  $\nu = 30 \text{ mm}^2/\text{s}$

$p_{\text{red}} = f(\alpha)$  Pressure adjustment characteristics

$Q = 0 \text{ l/min}$  (static)



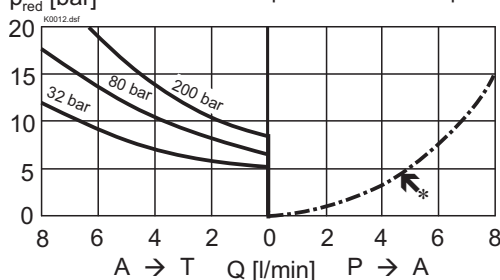
$p_{\text{red}} = f(Q)$  Pressure volume flow characteristics



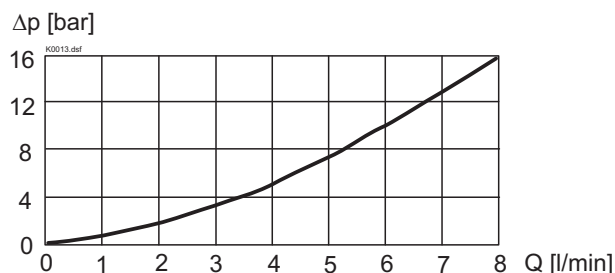
$p_{\text{min}} = f(Q)$

Minimal pressure loss/flow characteristics

\* Consumption resistance dependent on system



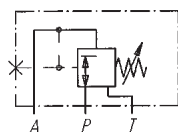
$\Delta p = f(Q)$  Pressure loss/flow characteristics over RV



**TYPES / DIMENSIONS**

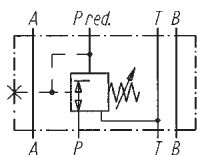
Flange construction

red. pressure in A  
MD.FA03-P/A

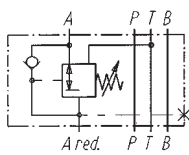


Sandwich construction

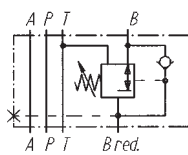
red. pressure in P  
MD.SA03-P



red. pressure in A  
MD.SA03-A

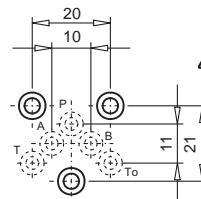
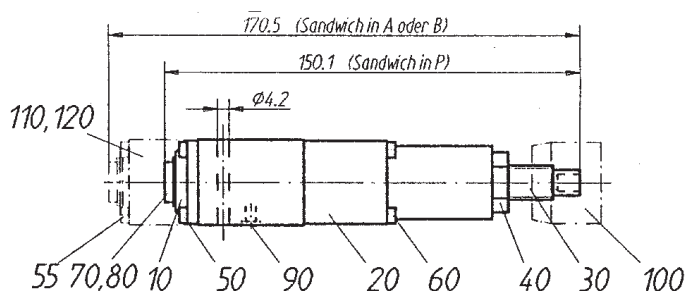
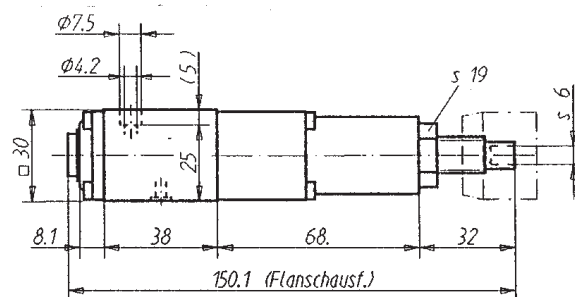


red. pressure in B  
MD.SA03-B



**PARTS LIST**

Position	Article	Description
10	56.4700	Lid
20	84.4800	Case
30	80.3127	Adjustment screw
40	153.1605	Hexagonal nut 0,5 D M12x1
50	246.0108	Cylinder screw M3x8-DIN912
55	246.0130	Cylinder screw M3x30-DIN912
60	246.0135	Cylinder screw M3x35-DIN912
70	238.1202	Plug screw G1/8" DIN908
80	49.2102	Seal ring ID10,7x17x1,5
90	160.2045	O-Ring ID 4,5x1,5
100	114.1226	Turning knob
110	56.4300	Lid
120	94.7065	Non-return valve



Spindle not secured against unscrewing

For model red. pressure in B the adjusting parts are on A end

**ACCESSORIES**

Threaded connection plates and multi flange plates  
By-Pass non-return plates RNNSA03-A/P

Register 2.9

Technical explanation see data sheet 1.0-100