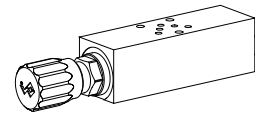


**Throttle valve
Sandwich construction**

- $Q_{max} = 15 \text{ l/min}$
- $Q_{Nmax} = 8 \text{ l/min}$
- $p_{max} = 315 \text{ bar}$

NG3-Mini®

DESCRIPTION

Sandwich type throttle valves based on an M18x1,5 screw type throttle cartridge in accordance with ISO 7789 (see data sheet no. 2.4-510). The sandwich plate is in clear anodised aluminium, for weight saving and corrosion protection.

FUNCTION

A fine thread on the adjustable throttle reveals an annular gap or triangular notch. The volume flow is zero when the throttle is screwed in (the metal sealing edge seals completely). The valve flow is bidirectional.

APPLICATION

Sandwich type throttle valves can be used anywhere where volume flows have to be infinitely controlled in both directions without taking pressure fluctuations into account. These sandwich valves are ideal for machine tools and also all types of handling operation. Mini-3 throttle valves are used wherever light, extremely compact hydraulic control units are needed.

TYPE CODE

		DN	<input type="checkbox"/>	S	A03	-	<input type="checkbox"/>	-	<input type="checkbox"/>	#	<input type="checkbox"/>
Throttle valve											
Type of adjustment	Screw	<input type="checkbox"/>	Knob	<input type="checkbox"/>							
Sandwich construction											
Mounting interface acc. to Wandfluh standard, NG3-Mini											
Type list / function											
in A	<input type="checkbox"/>	in B	<input type="checkbox"/>								
in A and B	<input type="checkbox"/>										
in P	<input type="checkbox"/>	in T	<input type="checkbox"/>								
Nominal volume flow rate Q_N	0,32 l/min	<input type="checkbox"/>	3,2 l/min	<input type="checkbox"/>	8 l/min	<input type="checkbox"/>					
Design-Index (Subject to change)											

GENERAL SPECIFICATIONS

Denomination	Throttle valve
Nominal size	NG3-Mini according to Wandfluh standard
Construction	Sandwich construction
Mounting	3 holes for socket head cap screw M4 or studs M4
Connections	Threaded connection plates, Multi-flange plates, Longitudinal stacking system
Ambient temperature	-20...+50 °C
Mounting position	any
Fastening torque	$M_D = 2,8 \text{ Nm}$ (Qual. 8.8) for fastening screws $M_D = 30 \text{ Nm}$ for screw-in cartridge
Weight	Depending on the type 0,22...0,40 kg

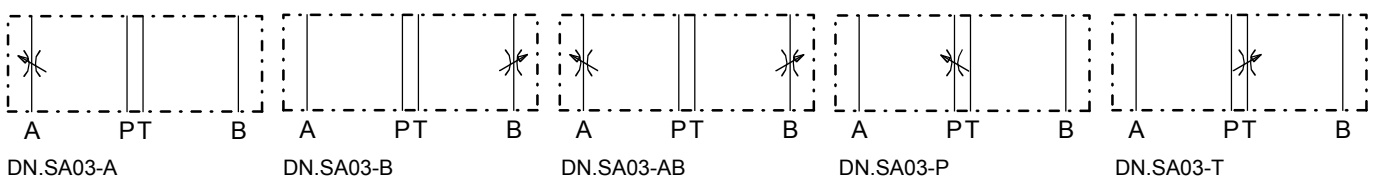
HYDRAULIC SPECIFICATIONS

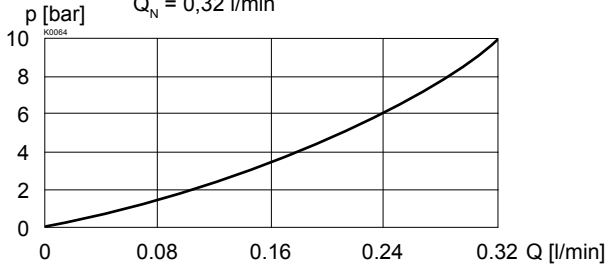
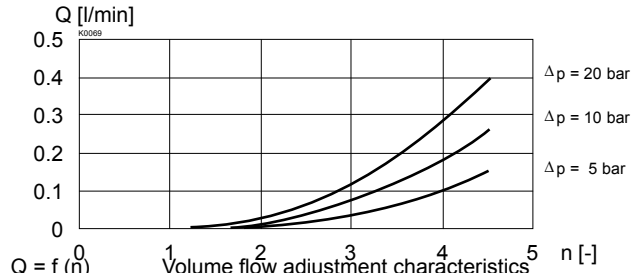
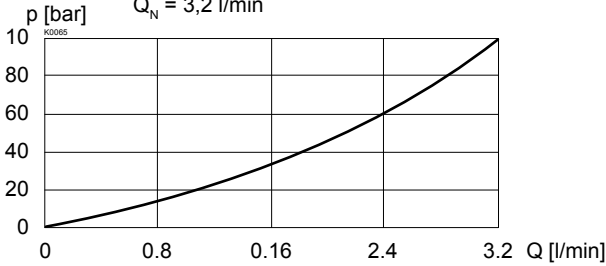
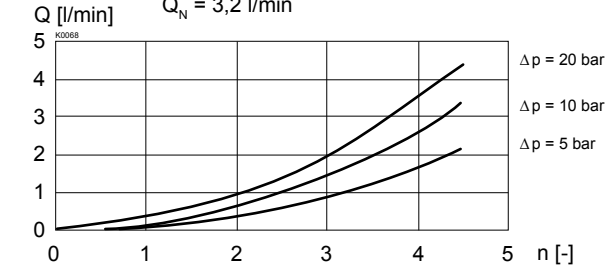
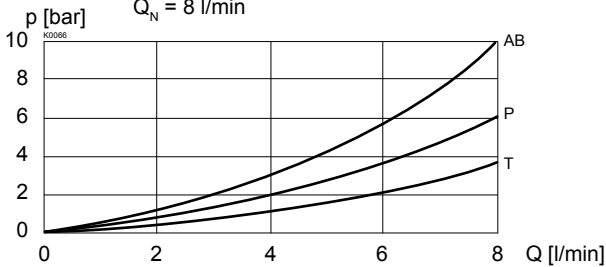
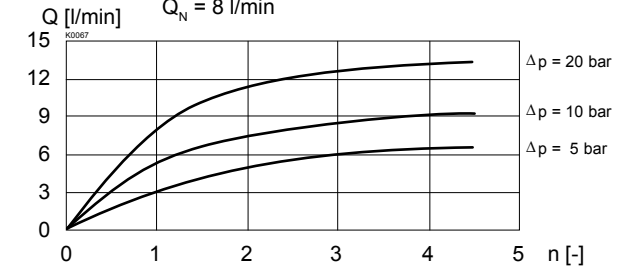
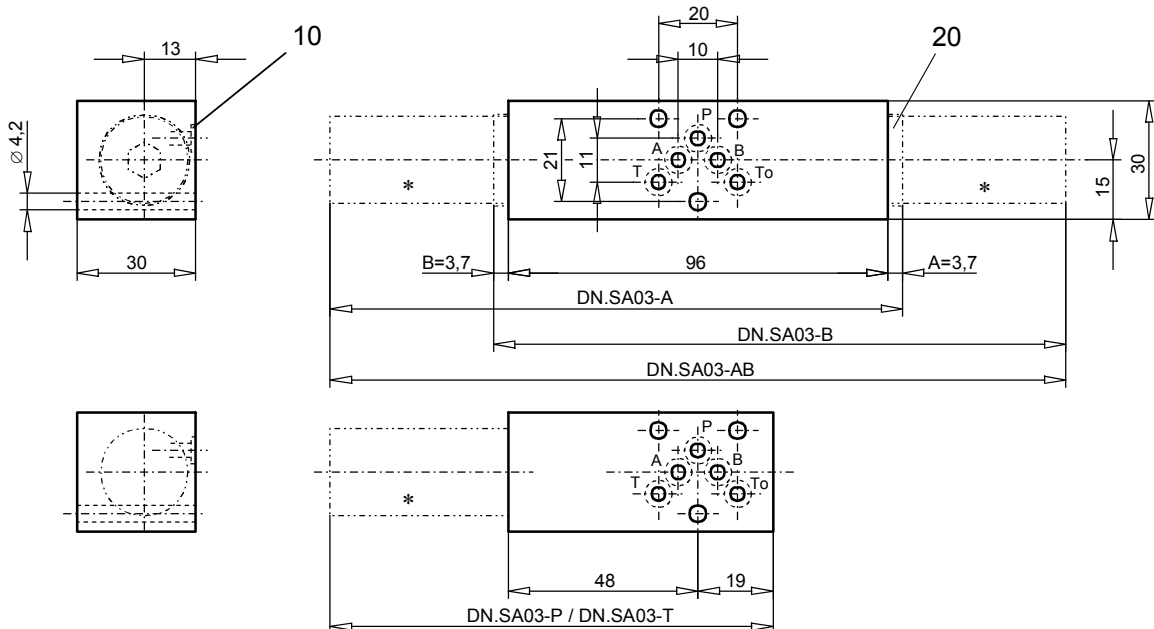
Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 20/18/14...21/19/15 (Required filtration grade $\beta_{10...25} \geq 75$) refer to data sheet 1.0-50/2
Viscosity range	12 mm ² /s...320 mm ² /s
Fluid temperature	-20...+70 °C
Peak pressure	$p_{max} = 315 \text{ bar}$
Nominal volume flow rates	$Q_N = 0,32 \text{ l/min}$, $Q_N = 3,2 \text{ l/min}$ $Q_N = 8 \text{ l/min}$ Q_N at 10 bar valve pressure loss
Max. volume flow	$Q_{max} = 15 \text{ l/min}$
Leakage volume flow	Almost leak free with closed restrictor
For additional informations refer to data sheet no 2.4-510. (For $Q_N = 8 \text{ l/min}$ please take the screw-in cartridge DN.PM18-25)	

SCREW-IN CARTRIDGES INSTALLED

The following screw-in cartridges are used in either the flange body or the sandwich body:

Type	Designation	Data sheet no.
DN.PM18	Throttle valve	2.4-510

TYPE LIST / FUNCTION


CHARACTERISTICS oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$
 $\Delta p = f(Q)$ Pressure drop/flow characteristics
 $Q_N = 0,32 \text{ l/min}$

 $Q = f(n)$ Volume flow adjustment characteristics
 $Q_N = 0,32 \text{ l/min}$

 $\Delta p = f(Q)$ Pressure drop/flow characteristics
 $Q_N = 3,2 \text{ l/min}$

 $Q = f(n)$ Volume flow adjustment characteristics
 $Q_N = 3,2 \text{ l/min}$

 $\Delta p = f(Q)$ Pressure drop/flow characteristics
 $Q_N = 8 \text{ l/min}$

 $Q = f(n)$ Volume flow adjustment characteristics
 $Q_N = 8 \text{ l/min}$

DIMENSIONS

PARTS LIST

Position	Article	Description
10	160.2045	O-ring ID 4,5 x 1,50 (NBR)
20	238.4401	Plug VSTI M18 x 1,5-OR

* The exterior dimensions of the screw-in cartridge can be obtained from the corresponding data sheet no. 2.4-510

Technical explanation see data sheet 1.0-100