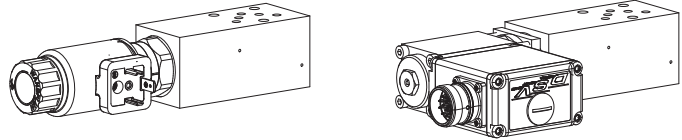


Proportional throttle valve
Flange and sandwich construction

- Direct operated, not pressure compensated
- $p_{max} = 350 \text{ bar}$

NG4-Mini[®]

DESCRIPTION

Directly operated proportional throttle valve in sandwich construction. Screw-in cartridge M22x1,5 in accordance with ISO 7789. In sandwich types for A and B line, a by-pass check valve for reversed free flow is incorporated. The flange body is painted, the sandwich plates are phosphatised.

FUNCTION

The force controlled proportional solenoid running in the fluid acts directly on the control spool which opens or closes the triangular shaped throttling notches in the cartridge body. The throttle opening, and therefore the flow volume, changes proportionally to the current absorption of the proportional solenoid. When the solenoid is without current, the control spool is held in the closed position by a spring. To control the valve proportional amplifiers are available from Wandfluh (see register 1.13).

APPLICATION

Proportional throttle valves are suitable for precise feed control systems. An extremely sensitive opening and closing response allows a smooth control of movements in stationary or mobile installations, e.g. machine tools, public vehicles. Mini-4 proportional throttle valves are used where hydraulic systems have to be both light and compact.

TYPENSCHLÜSSEL

Throttle valve	D N <input type="checkbox"/> <input type="checkbox"/> A04 - <input type="checkbox"/> - <input type="checkbox"/> # <input type="checkbox"/>				
Normally closed					
Proportional	<input type="checkbox"/> P				
Proportional with integrated electronics	<input type="checkbox"/> V				
Flange construction	<input type="checkbox"/> F				
Sandwich construction	<input type="checkbox"/> S				
Interface NG4-Mini					
Flange throttle in:	A to B	<input type="checkbox"/> A/B			
Sandwich throttle in:	P	<input type="checkbox"/> P			
	A and B	<input type="checkbox"/> AB	A	<input type="checkbox"/> A	
	T	<input type="checkbox"/> T	B	<input type="checkbox"/> B	
Nominal volume flow level, etc.: see data sheet of the screw-in cartridges					
Examples:	DNPFA04 - A/B - <input type="checkbox"/> 6,3 - G24/WD - HBO				
	DNVSA04 - P - <input type="checkbox"/> 10 - 12A1				
Design-Index (Subject to change)					

GENERAL SPECIFICATIONS

Description	Proportional throttle valve
Nominal size	NG4-Mini acc. to Wandfluh standard
Construction	Flange and sandwich
Operations	Proportional solenoid
Mounting	3 mounting holes for. cyl.screws M5 or double ended screws M5
Connection	Threaded connection plates Multi-flange subplates Longitudinal stacking system
Weight	Depending on the type $m = 0,95...1,2 \text{ kg}$

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.	Q_{max}^*
DNPPM22	normally closed	2.6-531	32 l/min
D.PPM22**	normally closed, normally open	2.6-530	32 l/min
DNVPM22	stromlos geschlossen, with integrated electronics	2.6-540	32 l/min

* Can deviate from the values on the data sheets of the screw-in cartridges.
 ** Do not use anymore for new applications.


REMARK!

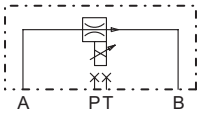
Detailed performance data and additional hydraulic and electric specifications may be drawn from the data sheets of the corresponding installed screw-in cartridge.


CAUTION!

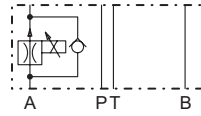
The performance data, especially the „**pressure-flow-characteristic**“, on the data sheets of the screw-in cartridges, refer to the screw-in cartridges only. The additional pressure drop of the flange body, resp. sandwich body must be taken into consideration.

SYMBOLS / DIMENSIONS

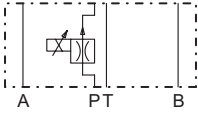
DN.FA04-A/B



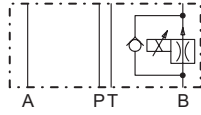
DN.SA04-A



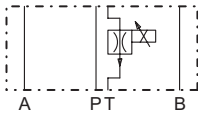
DN.SA04-P



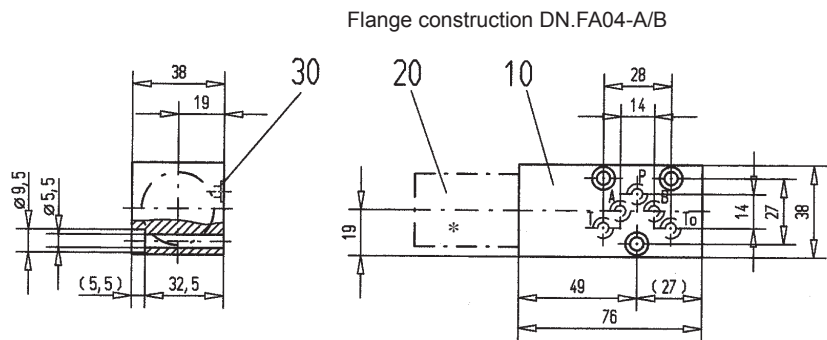
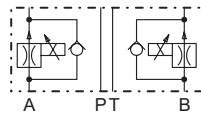
DN.SA04-B



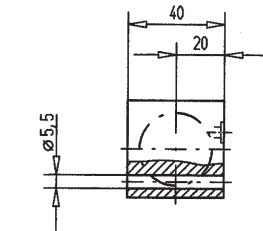
DN.SA04-T



DN.SA04-AB



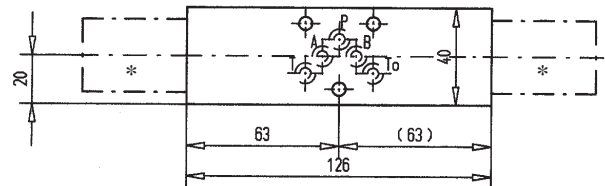
Flange construction DN.FA04-A/B



Sandwich construction DN.SA04-P, T, A

On sandwich type DN.SA04-B cartridge is located on B-side

Sandwich construction DN.SA04-AB



* The envelop dimensions of the screw-in cartridge are show on their corresponding data sheets.

PARTS LIST

Position	Article	Description
10	130.5200	Flange body
	130.5617	Sandwich plate P
	130.5624	Sandwich plate T
	130.6617	Sandwich plate A
	130.6618	Sandwich plate B
	130.6614	Sandwich plate AB
20	642.3 . . .	Screw-in cartridge
30	160.2052	O-ring ID 5,28x1,78

ACCESSORIES

Proportional amplifier
 Technical explanation see data sheet 1.0-100

Register 1.13