

## STEAM PRESSURE REDUCING VALVES DN 15 – DN 100

Low-maintenance proportional regulators requiring no auxiliary energy.

- Frictionless plug stem seal with stainless steel bellows.
- Control line kit available for tapping the pressure directly at the valve body.
- Wide set point range and convenient set point adjustment using a nut.
- Exchangeable actuator and set point springs
- Spring-loaded, single-seated valve with upstream and downstream pressure balancing by a stainless steel bellows.
- Soft-seated plug for high shut-off requirements.
- Low-noise standard plug.
- All wetted parts free of non-ferrous metal.

*Note: To protect the actuator diaphragm on steam applications a WS4 water seal pot must be installed in the downstream pressure signal line to the actuator.*

### Installation

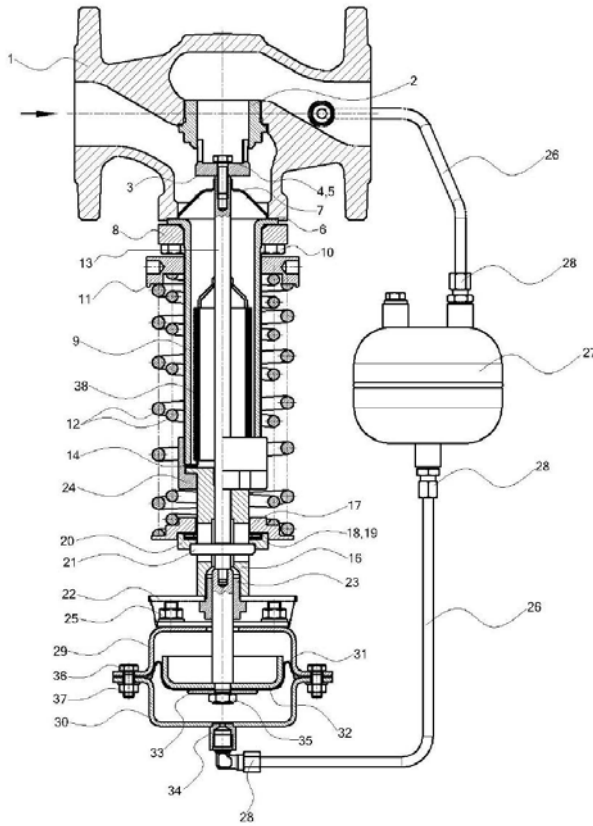
Normally, the valve is installed with the actuator suspended downwards. Install pipelines horizontally with a slight downward slope on both sides of the valve for drainage of the condensate.

- The direction of flow must correspond with the arrow on the valve body.
- The control line must be adapted to match the onsite conditions and is not delivered with the valve. On customer request, a control line kit for pressure tapping directly at the valve body is available.

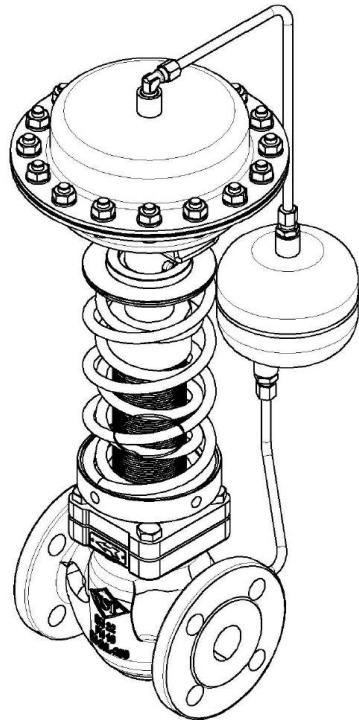


Valve	NST-BDV			
Pressure rating	PN 16, 25 or 40			
Valve size	DN 15 to 50	DN 65 to 80	DN 100	
Max. perm. differential pressure $\Delta p$	16 bar ... 25 bar	16 bar ... 25 bar	16 bar	
Leakage class according to IEC 60534-4	Metal seal: Leakage rate I ( $\leq 0.05$ % of KVS)			
<b>Diaphragm actuator</b>				
Set point ranges	0.05 to 0.25 bar, 0.1 to 0.6 bar, 0.2 to 1.2 bar, 0.8 to 2.5 bar, 2 to 5 bar, 4.5 to 10 bar, 8 to 16 bar			
Max. permissible temperature	Gases 350 °C, however, max. 80 °C at the actuator · Liquids 150 °C, with compensation chamber max. 350 °C · Steam with compensation chamber max. 350 °C			
Diaphragm cases	1.0332 / 1.4301			
Diaphragm	EPDM with fabric insert (Standard version)			
Pressure rating	PN 16	PN 25	PN40	
Max. permissible temperature	300 °C	350 °C	350 °C	350 °C
Body	Cast iron EN-GJL-250	Spheroidal graphite iron EN-GJS-400-18-LT	Cast steel 1.0619	Stainless steel 1.4408
Seat	CrNi steel			
Plug	CrNi steel			
Balancing bellows and bellows seal	Stainless steel 1.4571			

## MATERIALS



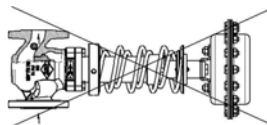
Poz	Part	Material
1	Body	EN-GJL-250, EN-GJS-400-18-LT 1.0619, 1.4408
2	Valve seat	CrNi steel
3	Plug	CrNi steel
4	Washer	A4-70
5	Bolt	A4-70
6	Body Gasket	Reinforced exfoliated graphite
7	Centering plate	1.4404
8	Top Flange	St-37, 1.4301
9	Bellows Pipe	P460NH(1.8935), 1.4404
10	Bolt	8.8, 1.4301
11	Adjustment Wheel	St-37, 1.4301
12	Spring(s)	Chrome Vanadium
13	Balancing bellows assembly	Stainless steel
14	Bellows Pipe Gasket	Reinforced exfoliated graphite
16	Actuator Unit Carrier Nipple	St-37, 1.4301
17	Spring plate	St-37, 1.4301
18	Needle roller thrust bearings	high-carbon chrome steel
19	Needle roller thrust bearings washer	high-carbon chrome steel
20	Needle roller thrust bearings wheel	high-carbon chrome steel
21	Bellows shaft pin	1.2067
22	Crossbeam	St-37, 1.4301
23	Crossbeam fixing Nipple	St-37, 1.4301
24	Fastening nut	St-37, 1.4301
25	Nut(s)	A4-70
26	Control line	1.4404
27	Compensation chamber	St-37, 1.4301
28	Control line connection	St-37, 1.4301
29	Diaphragm actuator cases up	St-37, 1.4301
30	Diaphragm actuator cases down	St-37, 1.4301
31	Diaphragm	EPDM
32	Diaphragm plate	St-37, 1.4301
33	Diaphragm Washer	St-37, 1.4301
34	Diaphragm actuator connection	St-37, 1.4301
35	Diaphragm nut	St-37, 1.4301
36	Bolt(s)	A4-70
37	Nut(s)	A4-70



Standard mounting position  
For gases, liquids and steam



Alternative mounting position  
for gases and liquids at medium  
temperature up to 80 °C.  
Not for steam.



Not permissible

## DIMENSIONS

Diaphragm actuator					
Actuator area cm <sup>2</sup>	640	320	160	80	40
Set point ranges bar	0.05 to 0.25 0.1 to 0.6	0.2 to 1.2	0.8 to 2.5	2 to 5	4.5 to 10 8 to 16

Anma Çapı Nominal size	DN	15	20	25	32	40	50	65	80	100	
Akış Miktarı Flow rate	kvs	4	6,3	8	16	20	32	50	75	90	
İzin verilen fark basıncı Permissible differential pressure	Max. Δp	25 bar						20 bar	16 bar		
İzin verilen sıcaklık Permissible differential temperature	°C max.	350 °C									
Akış karakteristik Flow characteristics		Linear									
L mm	Ölçüler Dimension	130	150	160	180	200	230	290	310	350	
H mm		323			374			459		485	
H1 mm		40 - 80 - 160 - 320cm <sup>2</sup>				122 / 640cm <sup>2</sup>		153			
D mm		40-80cm <sup>2</sup>		170 / 160cm <sup>2</sup>		225 / 320cm <sup>2</sup>		285 / 640cm <sup>2</sup>			380
AĞIRLIK / WEIGHTS (KG)		13,7	14,3	14,8	17,8	18,5	19,5	30,2	32	58	

