

TDS BLOWDOWN CONTROL VALVES VPC26

DESCRIPTION

When a steam boiler is in operation there is continuous evaporation of boiler water which causes an undesirable increase in TDS (Total Dissolved Solids) concentration. A typical problem that results from this is water foaming, which leads to reduced boiler performance and wet steam. Furthermore, dissolved and suspended solids will carry over into the steam lines, contaminating valves, tubes, heat exchangers and steam traps, leading to corrosion, scaling and erosion. For these reasons, a certain amount of boiler water must be discharged continuously or periodically to ensure TDS concentration is kept within the recommended parameters.

The ADCATrol VPC26 is a control valve specially designed for this purpose and features a multi-stage trim to progressively reduce the energy of the fluid. This makes it ideal for discharge of boiler blowdown at high differential pressures where flashing is a concern.

The valve is suitable for both continuous and on/off TDS control via a PA series reverse action pneumatic actuator or AV series fail-safe spring return actuator.

MAIN FEATURES

- Minimized vibrations due to continuous stem guiding.
- Seat and plug sealing surfaces are protected from erosion at low stroke positions.
- Compact and modular design.
- Multi stage trim for controlled velocity and pressure drop.
- Hardened stainless steel trim with stellite faced plug and seat.
- Tool-free quick exchangeable clamped-in seats, allowing fast and easy insite maintenance procedures.

OPTIONS AND

ACCESSORIES: Sample valve bottom connection.
NV400B sample valve.

USE: TDS blowdown control in steam boilers and other applications with high pressure drops and low flow rates where cavitation and flashing phenomenon are likely to occur.

AVAILABLE

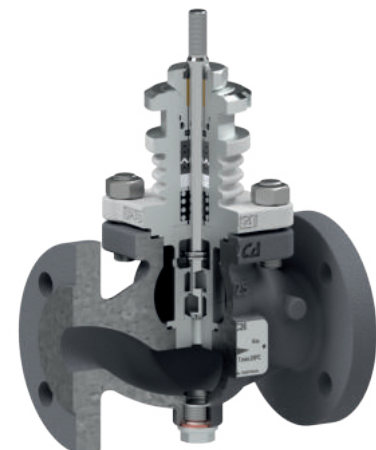
MODELS: VPC26S – carbon steel.
VPC26I – stainless steel.

SIZES: 1/2" to 1 1/2"; DN 15 to DN 40.

CONNECTIONS: Flanged EN 1092-1 PN 40.
Flanged ASME B16.5 Class 300.

AVAILABLE

ACTUATORS: PA206 linear pneumatic actuator.
AVF234S linear electric actuator.



CE MARKING – GROUP 2 (PED – European Directive)

PN 40	Category
1/2" to 1" – DN 15 to 25	SEP
1 1/2" – DN 40	1 (CE marked)

BODY LIMITING CONDITIONS

VPC26S				VPC26I	
FLANGED PN 40 *		FLANGED CLASS 300 **		FLANGED PN 40 *	
ALLOWABLE PRESSURE	RELATED TEMPERATURE	ALLOWABLE PRESSURE	RELATED TEMPERATURE	ALLOWABLE PRESSURE	RELATED TEMPERATURE
40 bar	-10 / 50 °C	50 bar	-10 / 50 °C	40 bar	-10 °C / 50 °C
33,3 bar	200 °C	43,9 bar	200 °C	33,7 bar	200 °C
27,6 bar	300 °C	36,9 bar	350 °C	29,7 bar	300 °C
25,7 bar	350 °C	34,6 bar	400 °C	28,5 bar	350 °C
23,8 bar	400 °C	–	–	27,4 bar	400 °C

* Rating according to EN 1092-1:2018; ** Rating according to EN 1759-1:2004.

STEM SEALING

PTFE/GR V-RINGS
(V1.2)

-10 °C to 250 °C

FLOW RATE COEFFICIENTS (m³/h)

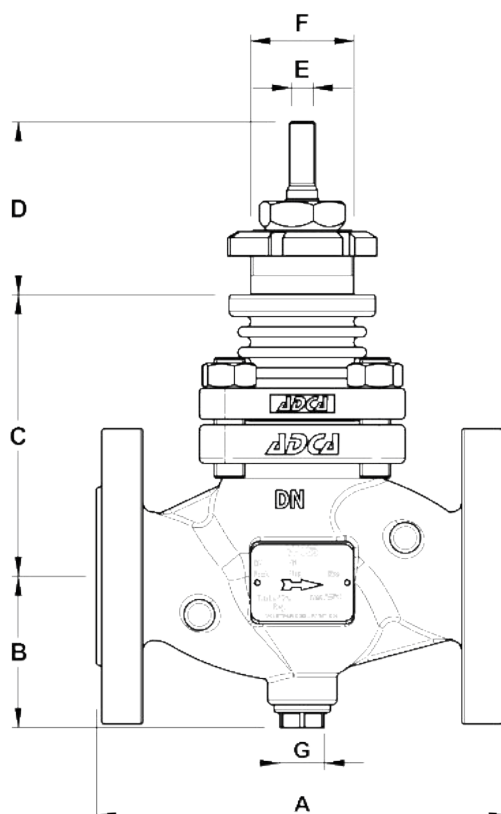
SIZE	1/2" – DN 15	3/4" – DN 20	1" – DN 25	1 1/2" – DN 40
Kvs	1,2	1,2	1,2	1,8

For conversion Kvs = Cv (US) x 0,855.

VALVE STROKE (mm)

SIZE	1/2" – DN 15	3/4" – DN 20	1" – DN 25	1 1/2" – DN 40
STROKE	6			8

DIMENSIONS



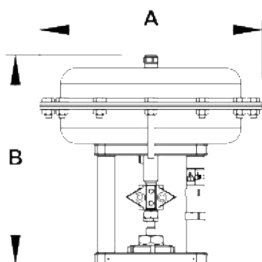
DIMENSIONS (mm)					
DIMENSION		SIZE			
		1/2" – DN 15	3/4" – DN 20	1" – DN 25	1 1/2" – DN 40
A	EN	130	150	160	200
	ASME	190 *	194 *	197	235
B		61	61	61	70
C		104	104	109	193
D		70	70	70	70
E		M10 x 1			
F		M40 x 1,5			
G **		3/8"			

* With welded-on flanges;

** As standard, in versions with EN flanges, this connection is female threaded ISO 228. In versions with ASME flanges, this connection is female threaded NPT.

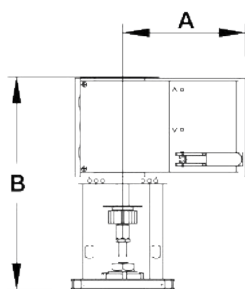
WEIGHTS (kg)					
		SIZE			
		1/2" – DN 15	3/4" – DN 20	1" – DN 25	1 1/2" – DN 40
EN		5,3	6,1	6,9	12,6
ASME		5,3	6,2	7,4	13,8

PA SERIES PNEUMATIC ACTUATORS



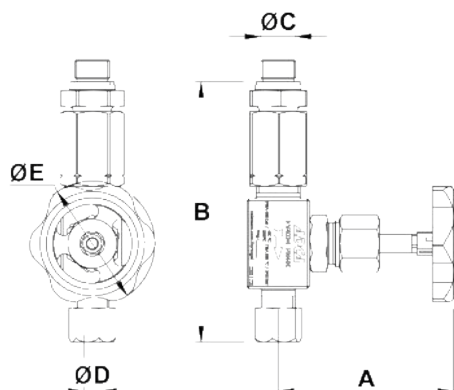
DIMENSIONS (mm)	
DIMENSION	PA206
A	209
B	236
WEIGHT (kg)	6,2

AV SERIES ELECTRIC ACTUATORS

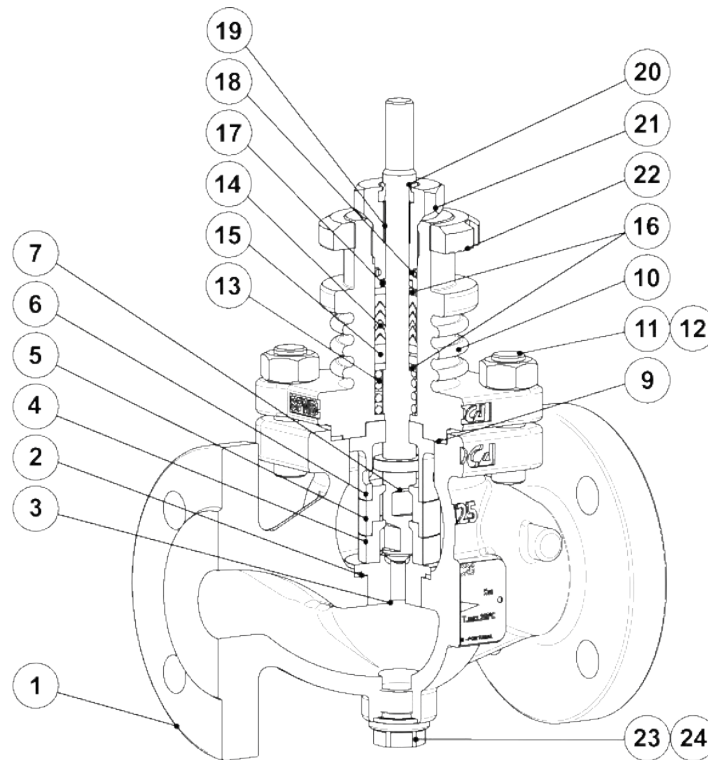


DIMENSIONS (mm)	
DIMENSION	AVF234S
A	166
B	289
WEIGHT (kg)	4,1

NV400B SAMPLE VALVE



DIMENSIONS (mm)	
DIMENSION	NV400B
A	90 (maximum)
B	125
C	3/8"
D	8
E	60
WEIGHT (kg)	0,63



MATERIALS

POS. N°	DESIGNATION	MATERIAL
1	Valve body (VPC26S)	A216 WCB / 1.0619 GP240GH / 1.0619
	Valve body (VPC26I)	A351 CF8M / 1.4408
2	* Seat gasket	Stainless steel / Graphite
3	* Seat	AISI 316L / 1.4404 stellite faced
4	Lower guide sleeve	AISI 420 / 1.4021
5	Middle guide sleeve	AISI 420 / 1.4021
6	Upper guide sleeve	AISI 420 / 1.4021
7	* Valve plug	AISI 316L / 1.4404 stellite faced
9	* Gasket	Stainless steel / Graphite
10	Bonnet	A351 CF8M / 1.4408
11	Nuts (VPC26S)	Steel 8.8
	Nuts (VPC26I)	Stainless steel A2-70
12	Studs (VPC26S)	34CrNiMo6 / 1.6582
	Studs (VPC26I)	Stainless steel A2-70
13	* Spring	AISI 304 / 1.4310
14	* Chevron packing set	PTFE; Graphite filled PTFE
15	* Wiper ring	Stainless steel / PTFE
16	Washer	AISI 304 / 1.4301
17	* O-ring	Viton
18	* O-ring	EPDM
19	* Plain bearing	Bronze / PTFE
20	* Scraper ring	Viton
21	* Gland nut	AISI 303 / 1.4301
22	Lock nut	A351 CF8 / 1.4308
23	** Gasket	Copper
24	Plug	AISI 316 / 1.4401

* Available spare parts; ** Not applicable in NPT version.

ORDERING CODES VPC26 a)									
Valve model	VPC26	1	S	XX	1	A3	N	15	
TDS blowdown control valve, two way, straight body	VPC26								
Valve series									
Series 1		1							
Body material									
A216 WCB / 1.0619 carbon steel			S						
A351 CF8M / 1.4408 stainless steel			I						
Versions									
Valve without sample valve bottom connection				XX					
Valve with sample valve bottom connection and plug				BX					
Stem sealing									
PTFE/GR V-Rings (V1.2)					1				
Flow rate coefficient									
Kvs 1,2 (available only for 1/2" to 1" and DN 15 to DN 25)						A3			
Kvs 1,8 (available only for 1 1/2" and DN 40)						A4			
Pipe connection									
Flanged EN 1092-1 PN 40							N		
Flanged ASME B16.5 Class 300 b)							V		
Size									
1/2" or DN 15								15	
3/4" or DN 20								20	
1" or DN 25								25	
1 1/2" or DN 40								40	
Special valves / Extras									
Full description or additional codes have to be added in case of a non-standard combination									E

- a) Codification for valve only. For actuator codes, refer to the appropriate information sheet.
b) Not available with A351 CF8M / 1.4408 stainless steel body (VPC26I).