FLOWSERVE

Kämmer® Series 132000

Corrosive Application Valves

Experience In Motion

Series 132000

Description

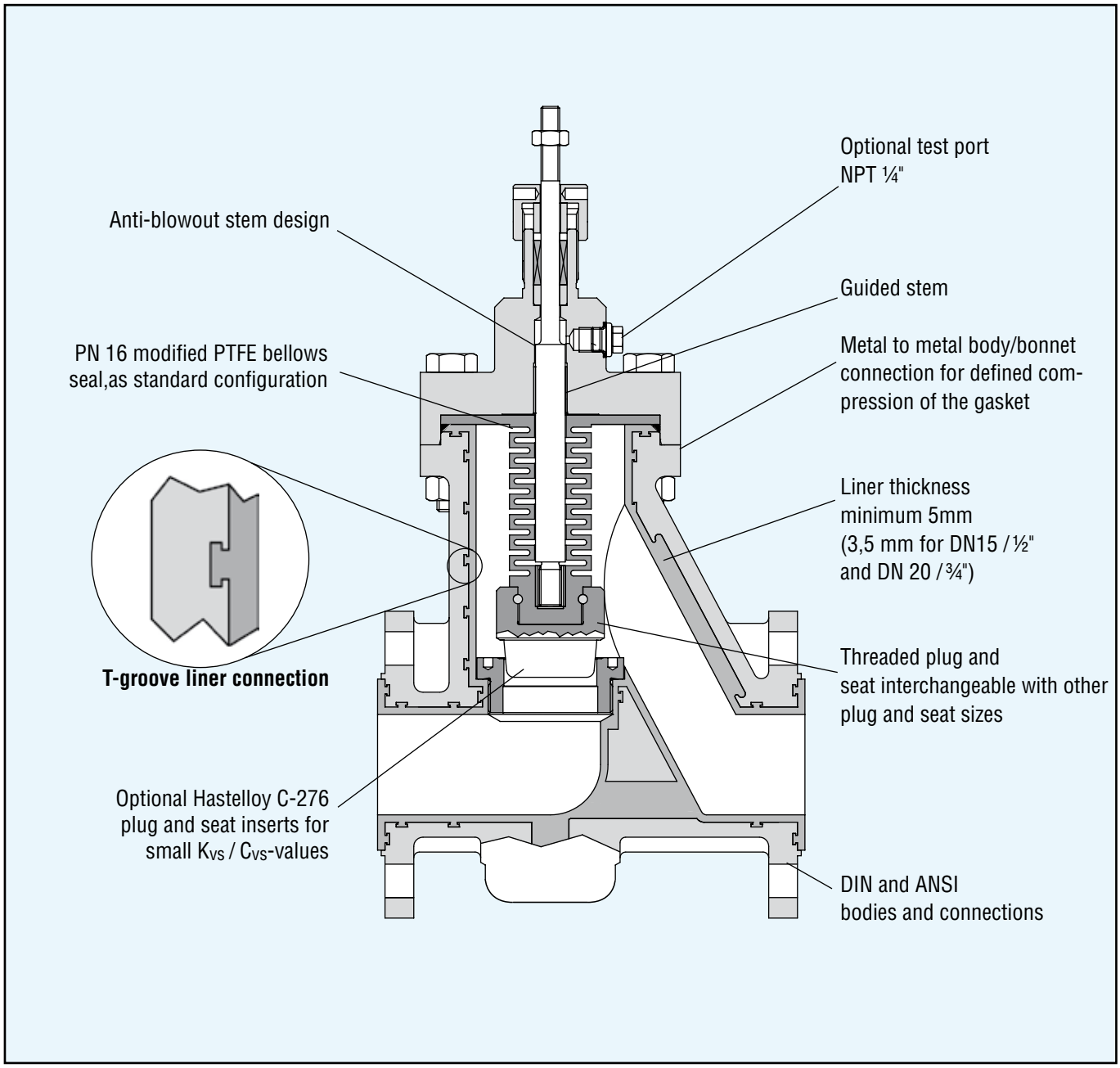

Figure 1: 132000 Body Assembly

The new series 132000 control valve completes the range of lined valves within the FLOWSERVE corporation. Many years of experience in the manufacture of lined ball and plug valves and the sophisticated experience of manufacturing excellent reproducible trims for linear valves are combined in this new product.

High quality lining materials such as PFA (standard), PVDF, PP, ETFE and FEP as well as PFA antistatic cover most mediums and applications. The revolutionary PTFE bellows design allows a standard pressure rating of PN 16. The increased flow capacity means that the most economical valve can be chosen for the application.

Series 132000

Features and Benefits

Features	Benefits
Liner materials	High Quality liner materials PFA (standard), FEP, PVDF, PP, ETFE for most corrosive applications.
Liner thickness	A minimum liner material thickness of 3,5 - 5 mm provides highest protection from the medium.
Liner connection	T-grooves ensure a positive mechanical connection between the liner material and the valve body.
Bellows seal	Standard PN 16 bellows seal manufactured from modified PTFE permit universal valve applications.
Hastelloy plug and seat inserts	Hastelloy C276 plug and seat inserts for small K_{VS}/C_V values. Reproducible K_{VS}/C_V values and characteristics as well as large rangeability.
Face-to-Face	DIN bodies PN 16, integral flanges, DIN face-to-face dimensions DIN bodies with integral flanges drilled in accordance with ANSI Class 150. ANSI bodies with ANSI face-to-face dimensions and ANSI Class 150 flanges.
Safety	Anti-blowout stem design for all sizes, optional test connection for bellows seal leak detection and safety packing ensure maximum safety

Trim Design

Threaded plug and seat design for easy replacement and maintenance. Excellent reproduceable trims and C_V-values based on long term experience even for small and very small C_V-values

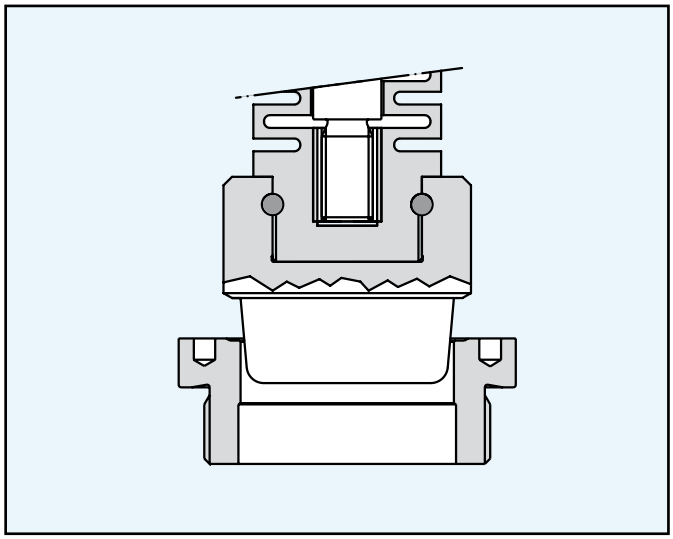

Figure 2: Plug and seat PTFE

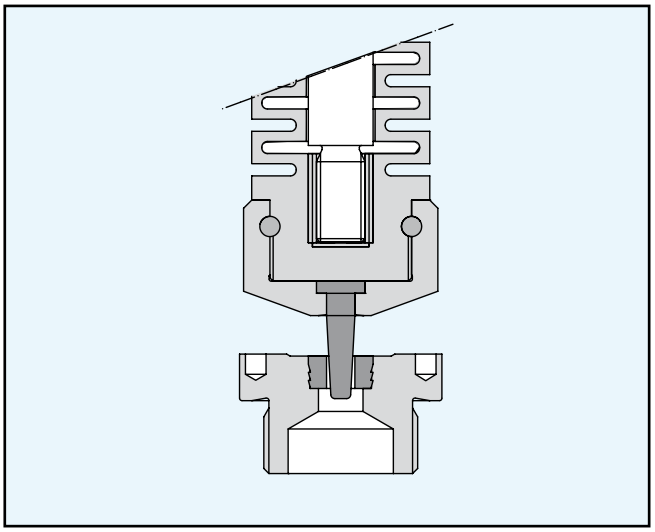

Figure 3: Hastelloy plug and seat inserts

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Lining Materials

The liner material, the seat and the bellows seal are the only parts which are in contact with the medium. High quality lining materials such as PFA, (Perfluoroalkoxy resin) protect the metal parts of the valve assembly. T-grooves provide an extremly positive connection between the liner and the valve metal body, especially important in vacuum applications. Liner thickness is at least 5mm (3,5 mm liner thickness for DN 15 / ½" and DN 20 / ¾").

Liner materials are available in most common combinations. PFA, FEP, PP, PVDF ETFE or antistatic PFA cover most application requirements.

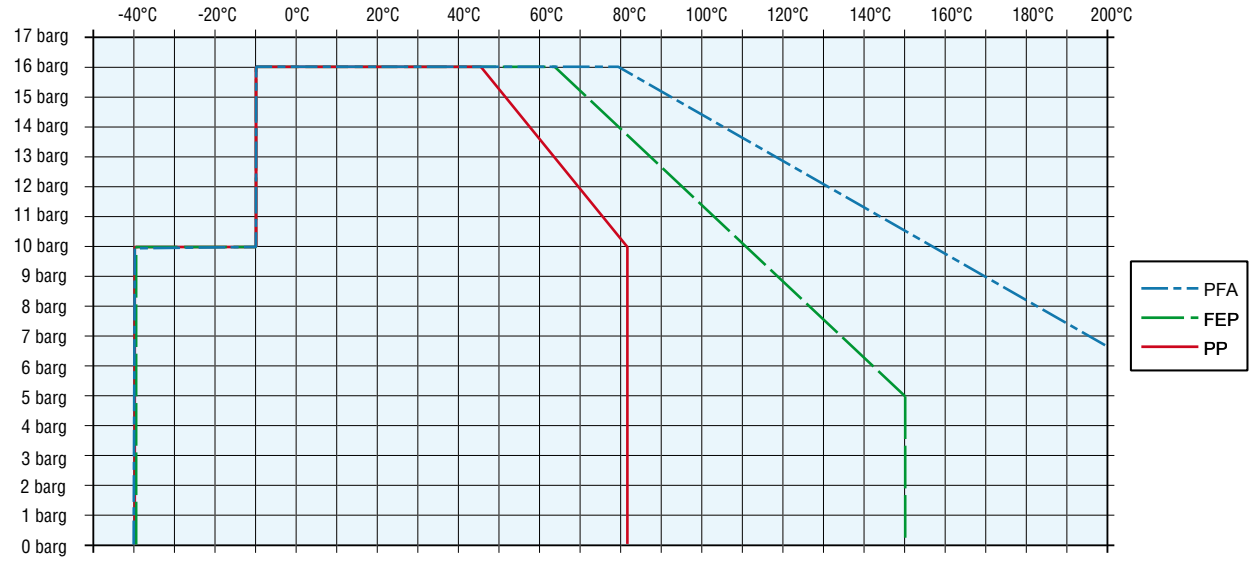

Figure 4: Pressure Temperature Diagram

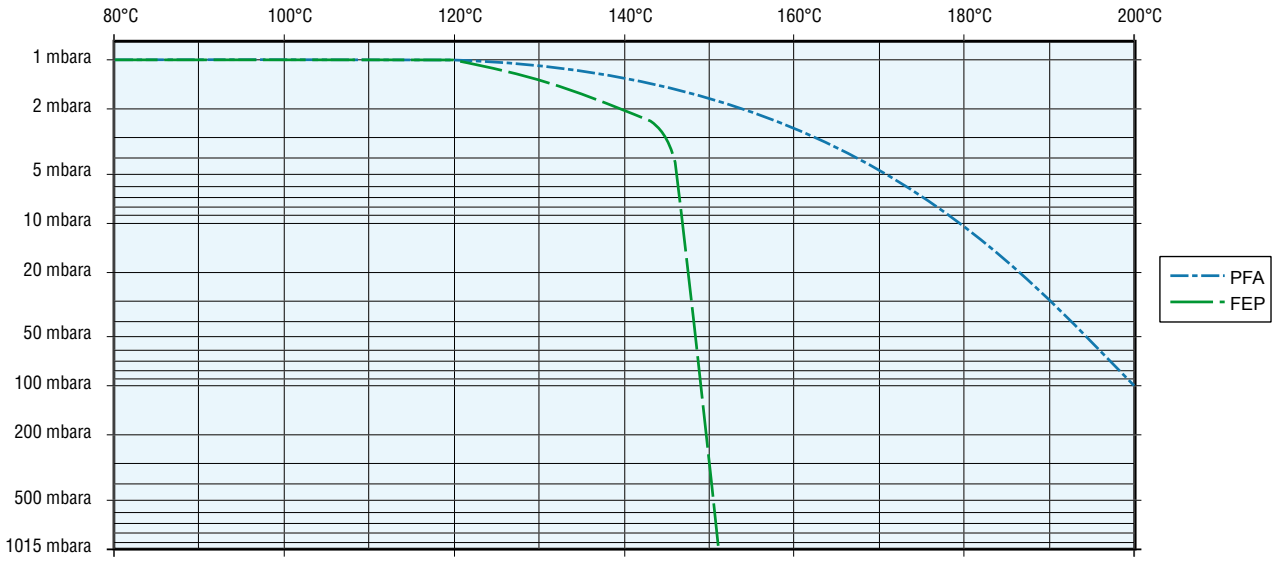

Figure 5: Vacuum Temperature Diagram

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K_{VS} / C_V Table

Body Size DIN	Stroke mm	Seat Diameter mm	Flow Coefficient K_V	Standard Plug Material	Standard Seat Material	Rangeability
15 20	10	3	0.011	Hastelloy C-276 [1]	Hastelloy C-276 [1]	50 : 1
			0.017			
			0.025			
			0.040			
			0.063			
		4.5	0.10	Hastelloy C-276 [1, 2]	TFM 1600 [2, 3]	
			0.16			
			0.25			
			0.40			
			0.63			
		7	1.0	TFM 1600 [3]		
			1.6			
		10	2.5	TFM 1600	TFM 1600	
		15	5.0			
25	10	3	0.011	Hastelloy C-276 [1]	Hastelloy C-276 [1]	50 : 1
			0.017			
			0.025			
			0.040			
			0.063			
	20	4.5	0.10	Hastelloy C-276 [1, 2]	TFM 1600 [2, 3]	
			0.16			
			0.25			
			0.40			
			0.63			
		7	1.0	TFM 1600 [3]		
			1.6			
		10	2.5	TFM 1600	TFM 1600 [3]	
		12	4.0			
		16	6.3			
		25	13			
40	20	12	4.0	TFM 1600	TFM 1600	50 : 1
		16	6.3			
		20	10			
		25	16			
		40	32			
50	20	16	6.3	TFM 1600	TFM 1600	
		20	10			
		25	16			
		32	25			
		50	47			
80	40	25	16	TFM 1600	TFM 1600	
		32	25			
		40	40			
		50	63			
		80	120			
100	40	40	40	TFM 1600	TFM 1600	
		50	63			
		63	100			
		100	180			

[1] Hastelloy C-176 inserts (other materials upon request).
[2] TFM 1600 valve plug and seat rings are available for Cv sizes 0.1 to 0.74 with1 : 25 rangeability.
[3] optional hastelloy C-276 inserts.

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Standard Materials of Construction

Table 1: Body and Lining materials

Body/Bonnet material	0.7043 (GGG 40.3)
Body pressure class	PN 16 ANSI Class 150
End connections	Integral flanges: DIN PN 16 ANSI Class 150
Lining material	PFA, FEP, PVDF PFA antistatic ETFE
Liner thickness	3,5 - 6 mm

Table 2: Trim

K_{VS}-values	See table 2
Rangeability	50 : 1
Material	Modified PTFE for small Kvs / Cv: Hastelloy C276 plug and /or seat inserts
Leakage class	≤ 0,01 of rated K_{VS}/C_V-value, class VI acc. to DIN IEC 534
Characteristics	Equal percentage Linear On - Off

Table 3: Bellows seal

Material	Modified PTFE TF 1620 for DN 15, 20, 25 TFM 1600 for DN 40, 50, 80, 100
Pressure	16 bar at 120 °C

Table 4: Options

Bellows seal	Hastelloy C276
Stem	Hastelloy C276

Valve Code

1	3	2	3	P	3

Body type

132	Globe valve	Series 132000

Bonnet

3	Bellows seal

Actuator

P2, P3 P4, P5	Pneumatic
E3, E4, E5	Electric motor

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Dimensions (mm) and Weights (kg)

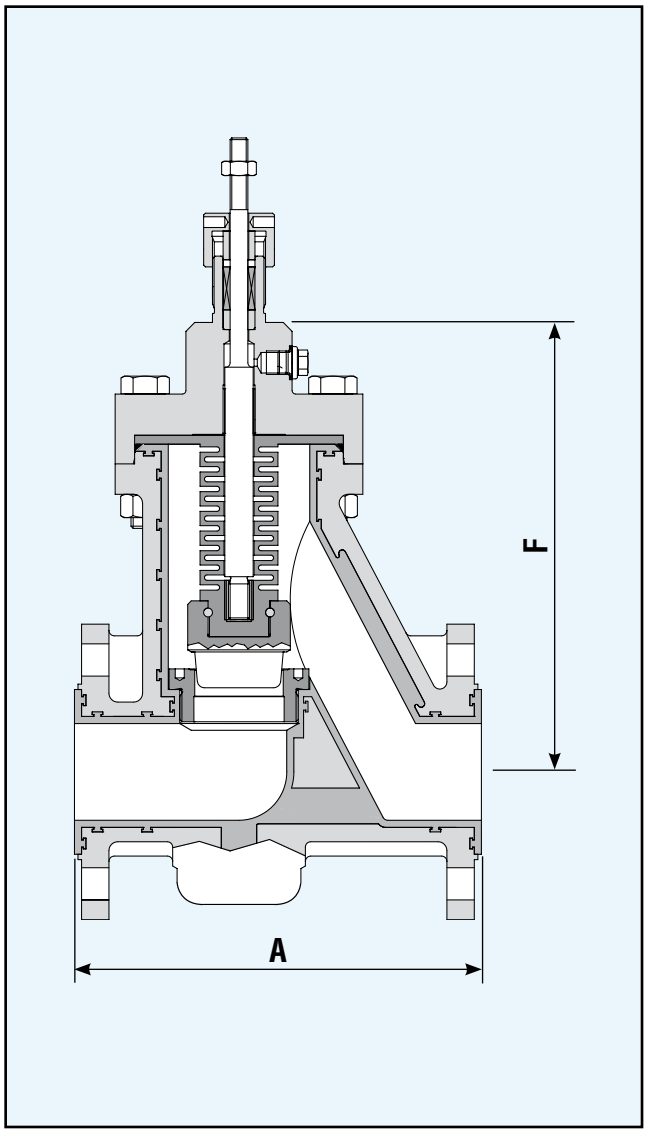

Table 5: Dimensions

Size	Dimensions			
	A DIN PN 16	A Class 150 DIN	A Class 150 ANSI	F
DN 15 / ½"	130	130	130	185
DN 20 / ¾"	130	130	130	185
DN 25 / 1"	160	160	184	240
DN 40 / 1½"	200	200	222	245
DN50 / 2"	230	230	254	250
DN 80 / 3"	310	310	298	400
DN 100 / 4"	350	350	350	450

Table 6: Weights

Size	Type	
	DIN	ANSI
DN 15 / ½"	6	6
DN 20 / ¾"	6	6
DN 25 / 1"	11	12
DN 40 / 1½"	17	19
DN50 / 2"	19	21
DN 80 / 3"	39	37
DN 100 / 4"	44	44

Flowserve Essen GmbH
Kämmer Ventile
Manderscheidtstrasse 19
45141 Essen
Germany
Tel.: +49 (0) 201 89 19 5
Fax.: +49 (0) 201 89 19 662

Your Contact:

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