



Kämmer® Series 132000

Corrosive Application Valves



Experience In Motion

Kammer Series 132000

Description

Flowserve's Kammer 132000 Series control valves combine many years of expertise in manufacturing both plastic lined valve bodies and precision globe control valves. With a variety of high quality lin-

ings available, this valve can be used in many corrosive mediums, and the unique bellows design allows for working pressures of up to 232 psig. In addition, the 132000 series has high flow capacities verified by flow testing.

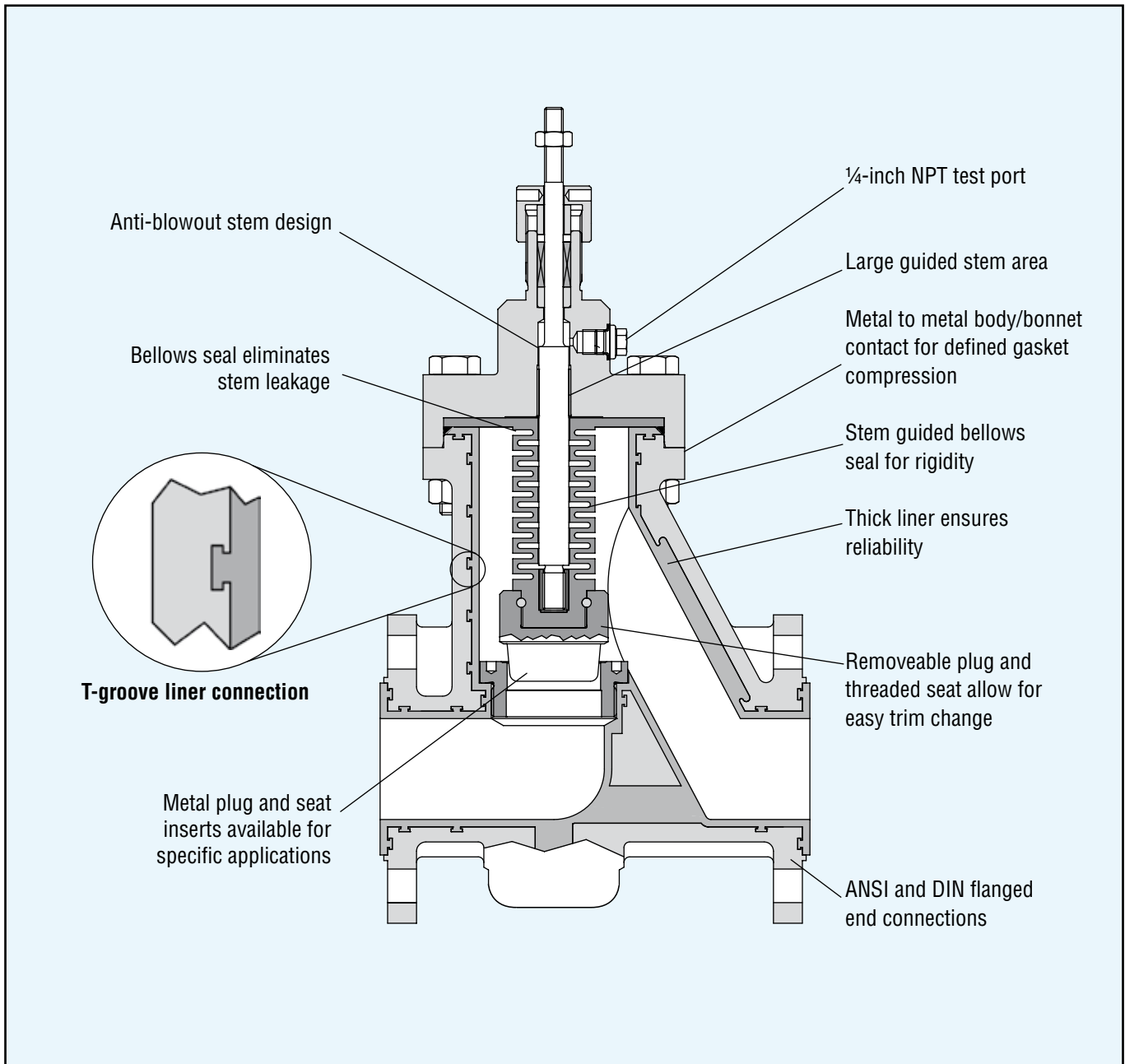


Figure 1: 132000 Series Body Assembly

Kammer Series 132000

Features and Benefits

Table 1: 132000 Series Features and Benefits

Features	Benefits
Liner Materials	Multiple high quality liner materials are available to cover most corrosive applications, including: PFA, FEP, PVDF, PP, ETFE, and anti-static PFA.
Liner Thickness	The liner thickness provides a high degree of protection from corrosive medias.
Liner Connection	T-grooves ensure a positive mechanical connection between the liner material and the valve body. This feature is especially important in vacuum applications.
Bellows Seal	The unique bellows design allows for working pressures up to 232 psig. Very high cycle life bellows (based on extensive cycle testing) are separable from plug to allow easy maintenance.
Trim Design	Large selection of precision and custom flow curves High rangeability Very large flow capacity (Cv) per valve size Separable plug head and threaded seat ring for easy maintenance
Metal Plug and Seat Inserts	Metal plug and seat inserts enable smaller Cv values Wear resistance Higher rangeability
End Connections	ANSI 150# flanges with ANSI face-to-face ANSI 150# flanges with DIN face-to-face DIN PN 16 flanges with DIN face-to-face
Safety	Anti-blowout stem design ¼-inch NPT leak detection port Backup packing for additional protection

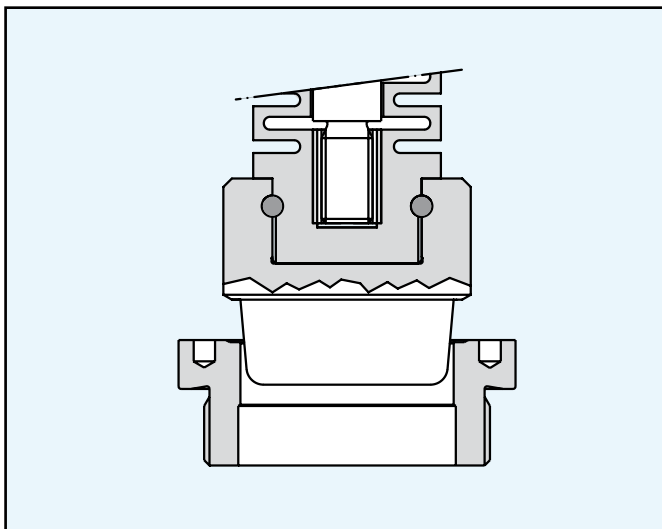


Figure 2: Separable Plug, Seat and Bellows

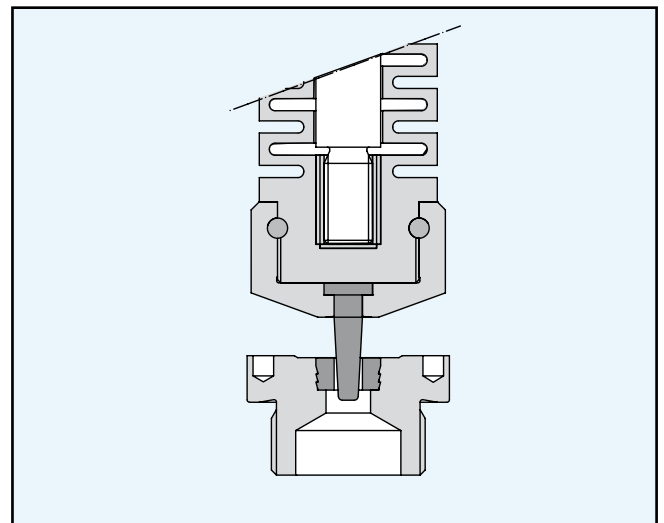


Figure 3: Metal Plug and Seat Inserts

Kammer Series 132000

Lining Materials

High quality lining material, such as PFA (Perfluoroalkoxy resin), protects the metal parts of the valve assembly. T-grooves provide an extremely reliable connection between the liner and the metal valve body, which is especially important in vacuum applications. The liner thickness is at least 5 mm for

1-inch to 4-inch (DN 25-100) valve sizes (3.5 mm liner thickness for ½-inch and ¾-inch (DN 15-20) valves). A variety of other liner materials including FEP, PP, PVDF, ETFE and anti-static PFA are available to meet the requirements for most applications.

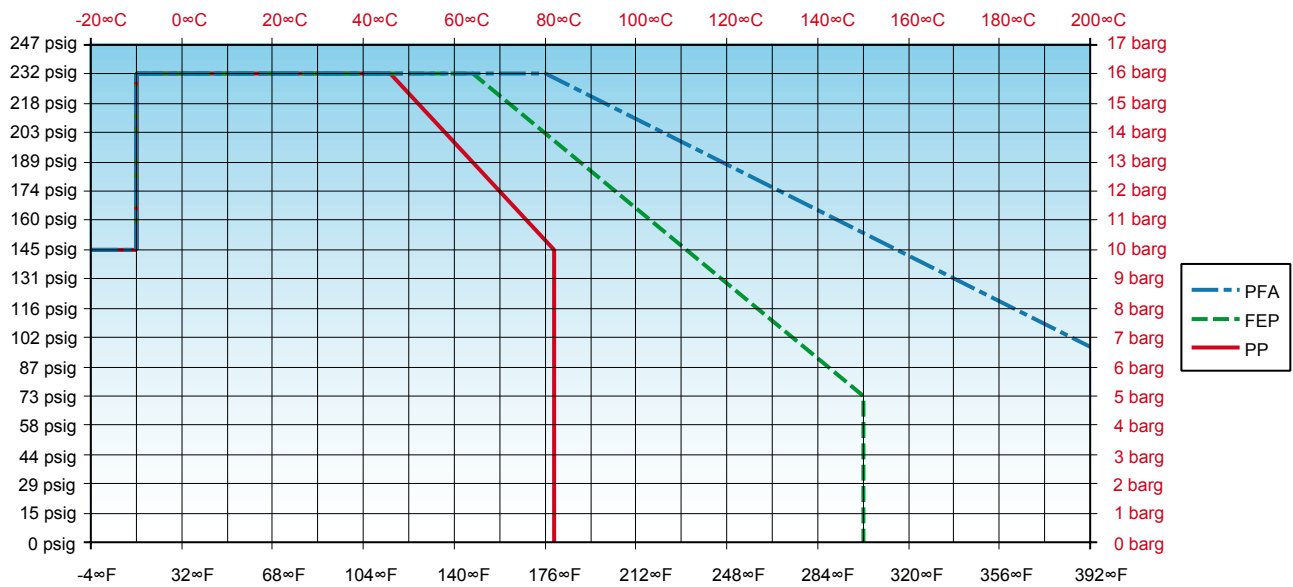


Figure 4: Pressure Temperature Diagram

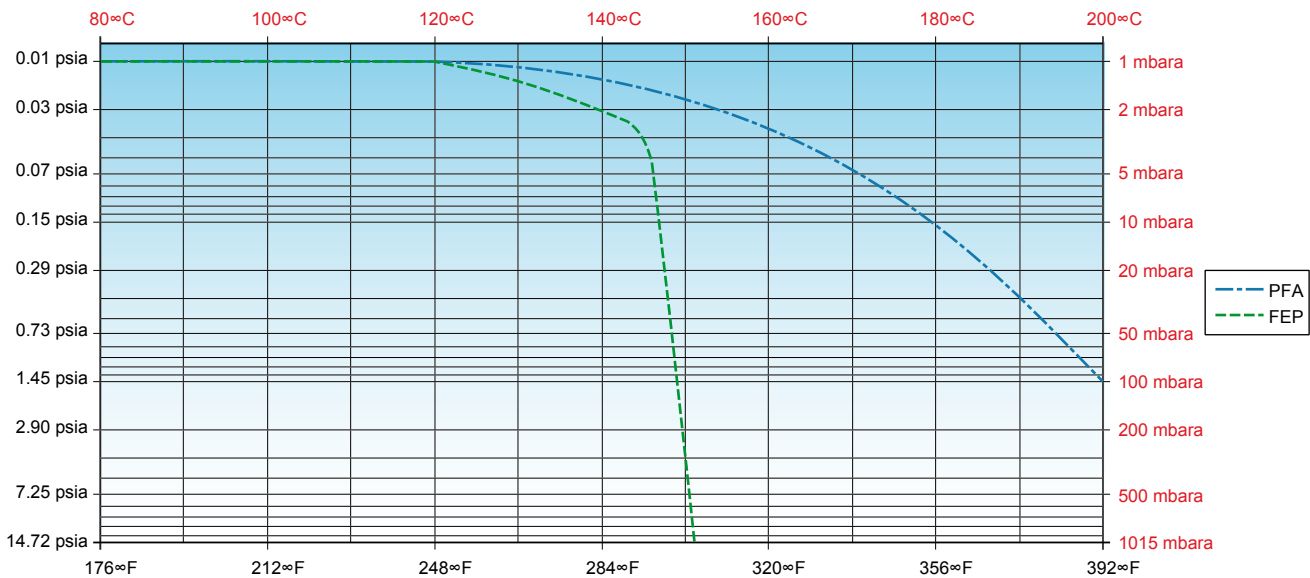


Figure 5: Vacuum Temperature Diagram

Kammer Series 132000

Specifications

Table 2: 132000 Series Flow Metrics

Body Size		Stroke		Seat Diameter		Flow Coefficient		Standard Plug Material	Standard Seat Material	Rangeability
Inches	DIN	Inches	mm	Inches	mm	C _v	K _v			
0.50 0.75	15 20	0.39	10	0.12	3	0.013	0.011	Hastelloy C-276 ¹	Hastelloy C-276 ¹	50 : 1
						0.020	0.017			
						0.029	0.025			
						0.047	0.040			
						0.074	0.063			
				0.18	4.5	0.12	0.10	Hastelloy C-276 ^{1,2}	TFM 1600 ^{2,3}	
						0.19	0.16			
						0.29	0.25			
						0.47	0.40			
				0.28	7	1.2	1.0	TFM 1600 ³		
						1.9	1.6			
				0.39	10	2.9	2.5	TFM 1600	TFM 1600	
5.8	5.0									
1	25	0.39	10	0.12	3	0.013	0.011	Hastelloy C-276 ¹	Hastelloy C-276 ¹	50 : 1
						0.020	0.017			
						0.029	0.025			
						0.047	0.040			
						0.074	0.063			
		0.18	4.5	0.12	0.10	Hastelloy C-276 ^{1,2}	TFM 1600 ^{2,3}			
				0.19	0.16					
				0.29	0.25					
				0.47	0.40					
		0.28	7	1.2	1.0	TFM 1600 ³				
				1.9	1.6					
		0.39	10	2.9	2.5	TFM 1600	TFM 1600 ³			
				4.7	4.0					
		0.63	16	7.4	6.3	TFM 1600	TFM 1600 ³			
				0.98	0.85					
1.5	40	0.79	20	0.47	12	4.7	4.0	TFM 1600	TFM 1600	
				0.63	16	7.4	6.3			
				0.79	20	12	10			
				0.98	25	19	16			
				1.57	40	37	32			
2	50	0.79	20	0.63	16	7.4	6.3	TFM 1600	TFM 1600	
				0.79	20	12	10			
				0.98	25	19	16			
				1.26	32	29	25			
3	80	1.57	40	1.97	50	55	47	TFM 1600	TFM 1600	
				0.98	25	19	16			
				1.26	32	29	25			
				1.57	40	47	40			
4	100	1.57	40	1.97	50	74	63	TFM 1600	TFM 1600	
				3.15	80	140	120			
				1.57	40	47	40			
				1.97	50	74	63			
4	100	1.57	40	2.48	63	120	100	TFM 1600	TFM 1600	
				3.94	100	210	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 with 1 : 25 rangeability.

³ optional hastelloy C-276 inserts.

Kammer Series 132000

Specifications

Table 3: Body and Lining materials

Body/Bonnet material	0.7043 (Ductile Iron)
Working Pressure Rating	See Figures 4 and 5
End Connections	ANSI Class 150 RFFlanges DIN PN 16 Flanges
Lining material	PFA (standard), FEP, PVDF PP, ETFE antistatic PFA
Liner thickness	3.5 mm (minimum) for ½-inch & ¾-inch valve sizes 5 mm (minimum) for 1-inch to 4-inch valve sizes

Table 4: Trim

C_v-values	See table 2
Rangeability	50 : 1
Valve Plug and Seat Ring Material	See Table 2
Leakage class	ANSI Class VI
Characteristics	Equal percentage Linear On - Off

Table 5: Bellows seal

Material	TF 1620 for ½-inch to 1-inch valve sizes TFM 1600 for 1 ½-inch to 4-inch valve sizes
Working Pressure	232 psig at 250 °F

Table 6: Options

Bellows seal	Hastelloy C276
Stem	Hastelloy C276

Table 7: Bellows Seal Options

Size		Effective Area		Stroke	
ANSI	DIN	Inches ²	cm ²	Inches	mm
0.5	DN 15	0.99	6.4	0.39	10
0.75	DN 20	0.99	6.4	0.39	10
1	DN 25	1.33	8.6	0.79	20
1.5	DN 40	1.33	8.6	0.79	20
2	DN 50	1.33	8.6	0.79	20
3	DN 80	2.05	13.2	1.57	40
4	DN 100	2.05	13.2	1.57	40

Kammer Series 132000

Dimensions in. (mm) and Weights lbs. (kg)

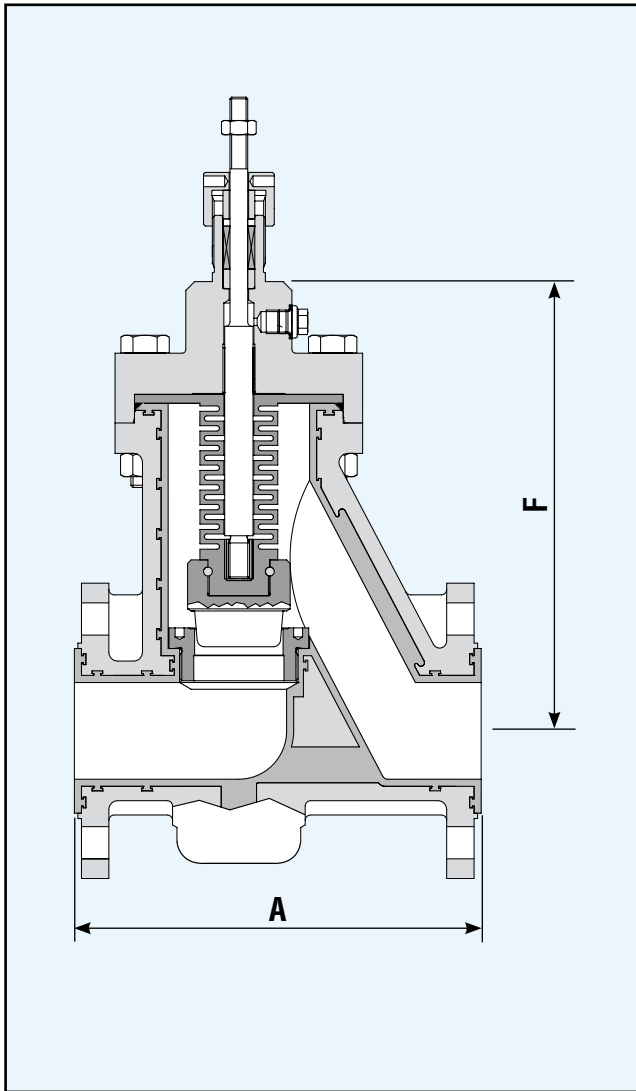


Figure 6: 132 Series Dimensions

Table 8: Dimensions

Size		Dimensions							
		A DIN PN 16		A Class 150 DIN		A Class 150 ANSI		F	
Inches	DN	Inches	mm	Inches	mm	Inches	mm	Inches	mm
0.5	DN 15	5.1*	130	5.1*	130	5.1*	130	7.3	185
0.75	DN 20	5.1*	130	5.1*	130	5.1*	130	7.3	185
1	DN 25	7.25	160	6.3	160	6.3	184	9.4	240
1.5	DN 40	8.75	200	7.9	200	7.9	222	9.6	245
2	DN50	10.0	230	9.1	230	9.1	254	9.8	250
3	DN 80	11.75	310	12.2	310	12.2	298	15.7	400
4	DN 100	13.87	350	13.8	350	13.8	350	17.7	450

Table 9: Weights

Size		ANSI		DIN	
Inches	DN	lb	kg	lb	kg
0.5	DN 15	13	6	13	6
0.75	DN 20	13	6	13	6
1	DN 25	26	11	26	12
1.5	DN 40	42	17	42	19
2	DN50	46	19	46	21
3	DN 80	82	39	82	37
4	DN 100	97	44	97	44

Valve Code

1 3 2 3 P 3

Body type	
132	132 Series 132000 Globe Valve

Bonnet	
3	Bellows seal

Actuator	
H2, H3, H4, H5	Manual handwheel
P2, P3, P4, P5 37, 38, 39, 3D 47, 48, 49, 4D	Pneumatic
E2, E3, E4, E5	Electric



Your Contact:



KMENBR3221-01 - 09/08

Flowserve Corporation has established industry leadership in the design and manufacture of its products. When properly selected, this Flowserve product is designed to perform its intended function safely during its useful life. However, the purchaser or user of Flowserve products should be aware that Flowserve products might be used in numerous applications under a wide variety of industrial service conditions. Although Flowserve can (and often does) provide general guidelines, it cannot provide specific data and warnings for all possible applications. The purchaser/user must therefore assume the ultimate responsibility for the proper sizing and selection, installation, operation, and maintenance of Flowserve products. The purchaser/user should read and understand the Installation Operation Maintenance (IOM) instructions included with the product, and train its employees and contractors in the safe use of Flowserve products in connection with the specific application.

While the information and specifications contained in this literature are believed to be accurate, they are supplied for informative purposes only and should not be considered certified or as a guarantee of satisfactory results by reliance thereon. Nothing contained herein is to be construed as a warranty or guarantee, express or implied, regarding any matter with respect to this product. Because Flowserve is continually improving and upgrading its product design, the specifications, dimensions and information contained herein are subject to change without notice. Should any question arise concerning these provisions, the purchaser/user should contact Flowserve Corporation at any one of its worldwide operations or offices.

© 2006 Flowserve Corporation, Irving, Texas, USA. Flowserve is a registered trademark of Flowserve Corporation.

Worldwide Regional Headquarters

Flowserve Corporation

Flow Control
1350 N. Mt. Springs Parkway
Springville, UT 84663
USA
Phone: +1 801 489 8611
Fax: +1 801 489 3719

Flowserve (Austria) GmbH

Control Valves - Villach Operation
Kasernengasse 6
9500 Villach
Austria
Phone: +43 (0)4242 41181 0
Fax: +43 (0)4242 41181 50

Flowserve India Controls Pvt. Ltd

Plot # 4, 1A, E.P.I.P, Whitefield
Bangalore Karnataka
India 560 066
Phone: +91 80 284 10 289
Fax: +91 80 284 10 286

Kammer Products

Europe, Middle East, Africa, Asia, Pacific

Flowserve Essen GmbH

Manderscheidtstr. 19
45141 Essen
Germany
Phone: +49 (0)201 8919 5
Fax: +49 (0)201 8919 662

Kammer Products

Americas

Flowserve (FCD)

Kammer Valves INC.

1300 Parkway View Drive
Pittsburgh, Pa 15205
USA
Tel.: +1 412 787 8803
Fax: +1 412 787 1944