



# *Kämmer® HpFlow™ - 011000, 015000*

## *High Pressure Valves*

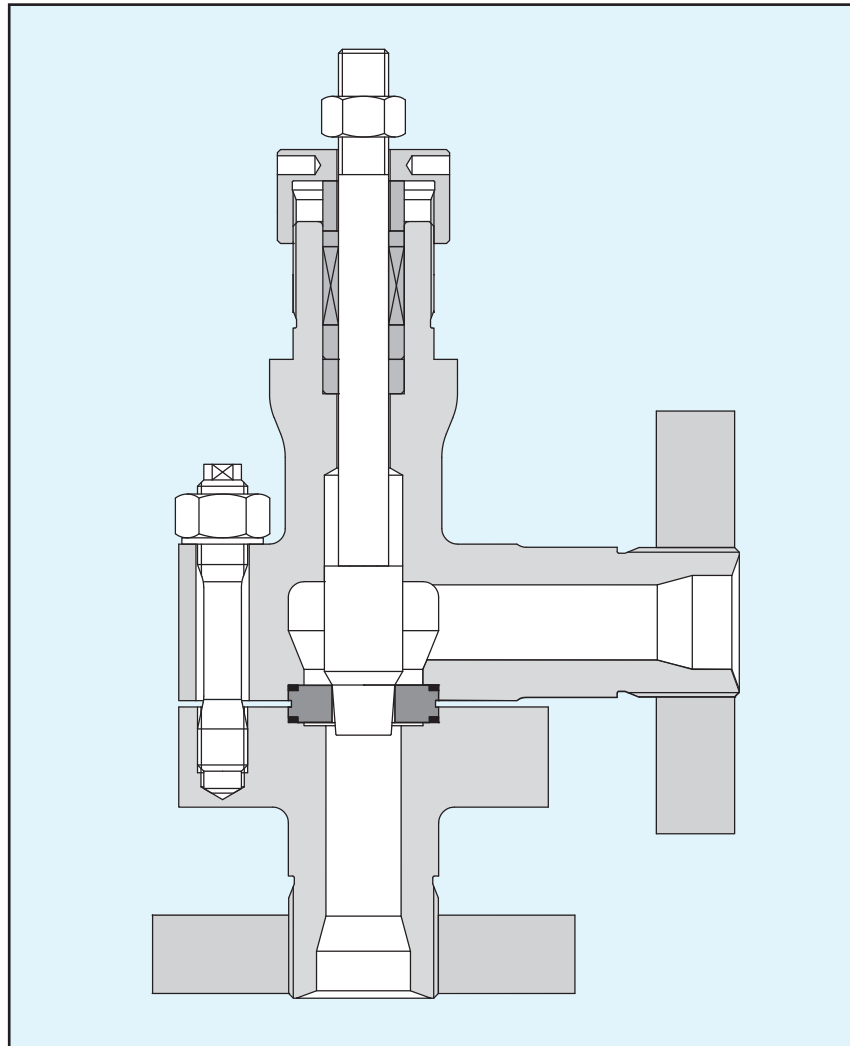


*Experience In Motion*

***HpFlow™ - 011000, 015000***

**Description**

High pressure angle valves with split body. Connections manufactured to IG standards. Other high pressure screwed connections or flanges are possible. These valves provide a basis for high pressure relief special designs e.g. with wear bushes, dissipator sleeves, additional aperture plates. Furthermore, due to their unique construction, they can be manufactured from almost any desired material.



Standard valve with flange connections

# HpFlow™ - 011000, 015000

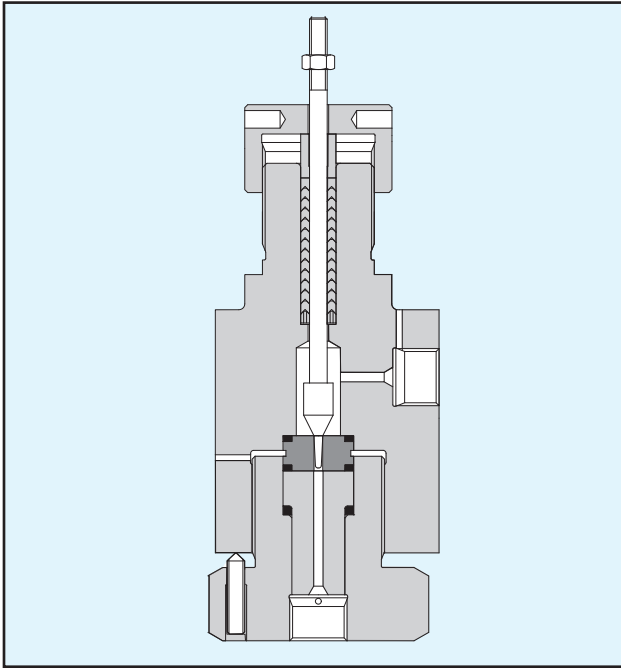
## Technical Data

Series	011000	015000
Valve body style	Angle	
Characteristics	Equal%, Linear, On-Off	
Seat leakage, standard	≤ 0.01 of C <sub>vs</sub> value	
Material for plug/seat ring	316Ti Optional: 1.4122, Stellite ceramics, tungsten carbide	316Ti Optional: Alloy 6, Hastelloy C titanium, ceramics, tungsten carbide
PTFE-soft seat T = max. 150 °C (300 °F)	In seat ring C <sub>vs</sub> 0.12 – 2.9 for tighter seating	In plug from C <sub>vs</sub> 1.2 for tighter seating
Packing	PTFE for temperatures up to +200 °C (392 °F) Grafoil for temperatures over +200 °C (392 °F) PTFE for oxygen services Packing according to German clean air act (TA-Luft)	
Body gaskets	PTFE for temperatures from up to +200 °C (392 °F) 316Ti for temperatures over +200 °C (392 °F)	
Extensions	Standard, normalizing fins, bellows seal, cryogenic	
C <sub>vs</sub> values	See tables pages 6/7	
Connections	Screwed internal* DN 3 - 10, PN 325 - 4000 Screwed flanges acc. to IG Std. NW 3-16, ND 325-700 ANSI-flanges ½", Class 1500 - 2500	Screwed flanges acc. to IG Std. NW 16-45, ND 325-700 ANSI-flanges 1" - 2", Class 1500 - 2500
Valve body	316Ti, WNR 1.4429 Optional: Hastelloy C or other materials according to pressure rating	

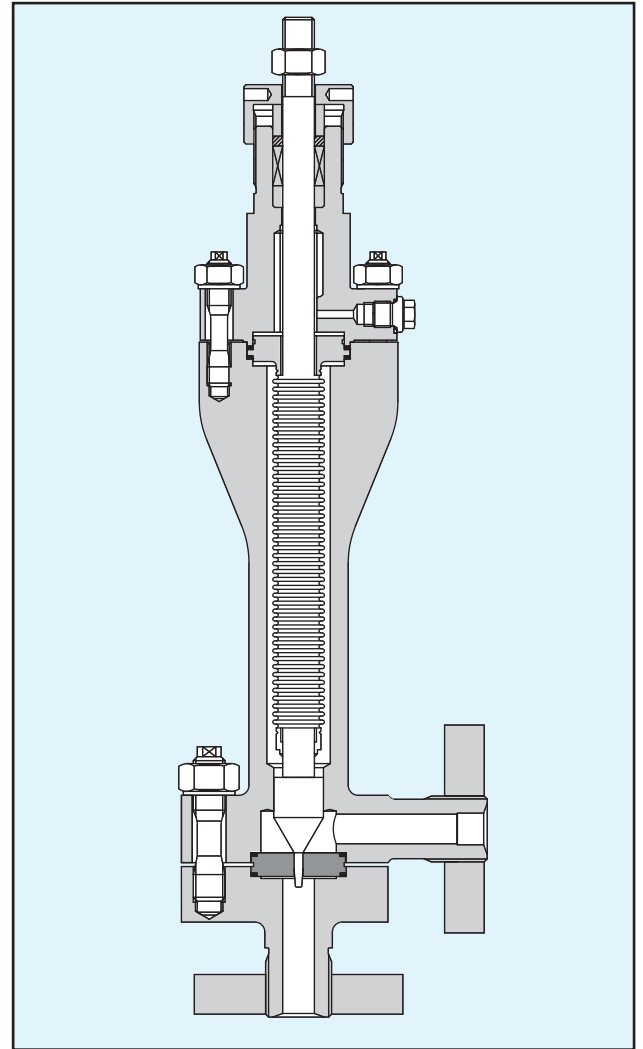
\* Manufactured according to customers requirements; suitable for superpressure connectors.

**HpFlow™ - 011000, 015000**

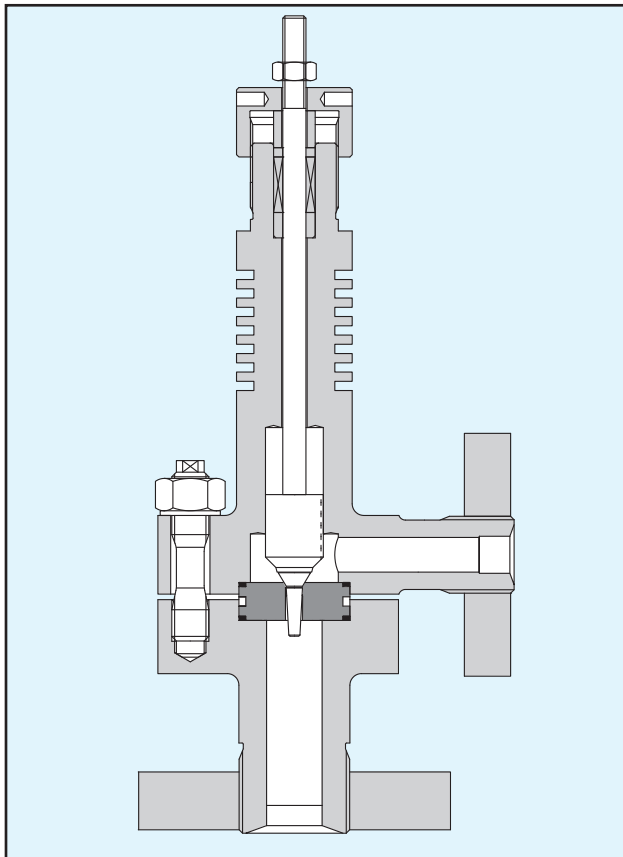
**Designs**



Super pressure valve PN 4000 (60 000 lbs)



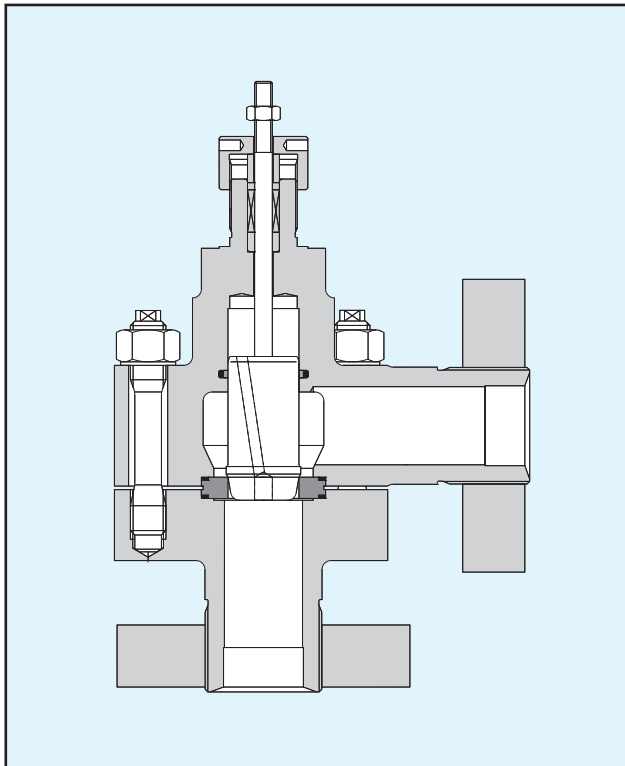
Valve with bellows seal



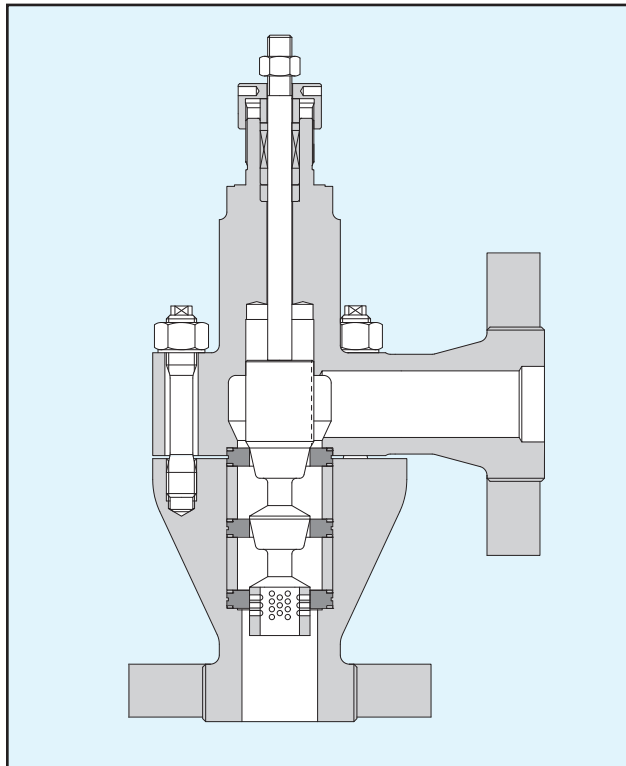
Valve with normalizing fins -30 to 0 °C (-22 to 32 °F)  
resp. 250 to 400 °C (482 to 750°F)

# HpFlow™ - 011000, 015000

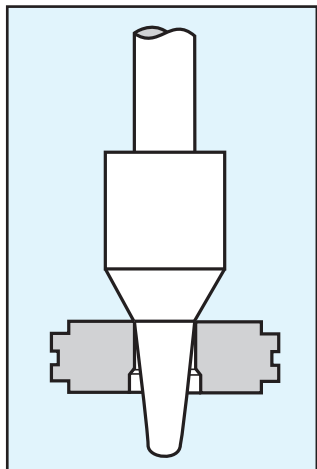
## Designs



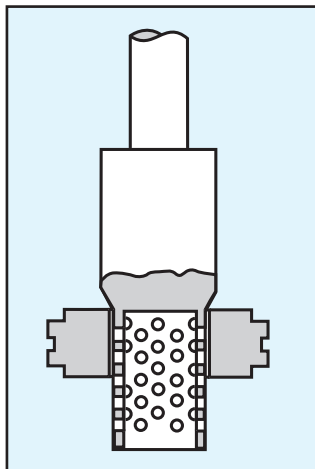
Valve with partially balanced plug



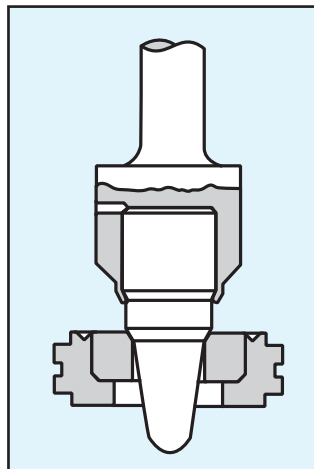
Multi-stage high pressure letdown valve for low noise and reduced wear



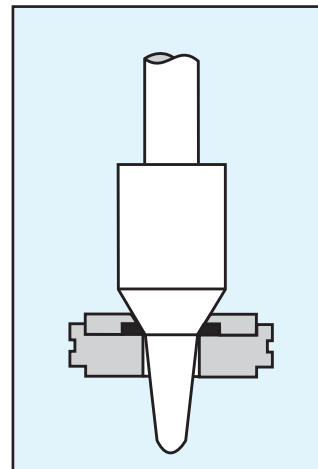
Standard trim



Low noise cage trim



Ceramics or tungsten carbide plug tip and seat insert



Trim with PTFE soft seat for temperatures up to +150 °C (300 °F) (series 011000)

# HpFlow™ - 011000, 015000

## Standard C<sub>vs</sub> Values Series 011000

Size NW	3	6	10	16	C <sub>vs</sub> -value (Turbulent)*	Seat diameter mm (in.)	Rangeability**	Plug material, standard	Seat material, standard	Characteristics, lin	Characteristics, gl	Alternative materials for seat/plug	
												Tungston carbide; Hastelloy C	Nickel; Monel; Titanium; Alloy 6
Stroke mm (in.)	10 (0.39)	10 (0.39)	10 (0.39)	10 (0.39)									
Stem diameter mm (in.)	6 (0.24)	6 (0.24)	6 (0.24)	6 (0.24)									
					0.000063	2 (0.08)	25:1	Alloy 6	1.4122	-	X	-	-
				0.000079	-					X	-	-	
				0.000098	-					X	-	-	
				0.00012	-					X	-	-	
				0.00015	-					X	-	-	
				0.00019	-					X	-	-	
				0.00023	-					X	-	-	
				0.00029	-					X	-	-	
				0.00036	-					X	-	-	
				0.00045	-					X	-	-	
				0.00056	-					X	X	-	
				0.00075	-					X	X	-	
				0.00098	-					X	X	-	
				0.0013	-					X	X	-	
				0.0017	-					X	X	-	
				0.0022	-					X	X	-	
				0.0029	-					X	X	-	
				0.0038	-					X	X	-	
				0.0054	-					X	X	-	
				0.0079	-					X	X	-	
				0.013	3 (0.12)	50:1	1.4571	X	X	X	X		
				0.020				X	X	X	X		
				0.029				X	X	X	X		
				0.047				X	X	X	X		
				0.074				X	X	X	X		
				0.12				X	X	X	X		
				0.19				X	X	X	X		
				0.29				X	X	X	X		
				0.47				X	X	X	X		
				0.74				X	X	X	X		
				1.2	7	X	X	X					
				1.9	(0.28)	X	X	X					
				2.9	10 (0.39)	X	X	X					

\* Further special C<sub>vs</sub> values on request.

\*\*For calibrating conditions

### Valve Code

0 1 1 0 P 3

Body type		
	Series	
011	Angle valve	011 000
015	Angle valve	015 000

Bonnet	
0	Standard
1	Normalizing fins
3	Bellows seal
5	Cryogenic extension

Actuator	
H3, H4, H5	Manual handwheel
P2, P3 P4, P5	Pneumatic, series 2
37, 38 39, 3D	Pneumatic, series 4 with integral positioner
E2, E3 E4, E5	Electric

# HpFlow™ - 011000, 015000

## Standard C<sub>vs</sub> Values Series 015000

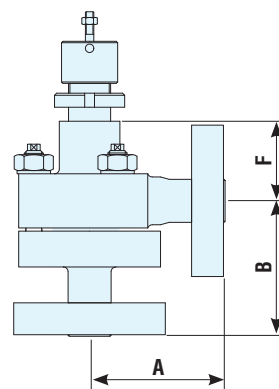
Size NW	16	24	30	45	C <sub>vs</sub> value *	Seat diameter mm (in.)	Rangeability**	Seat material (standard)	Plug material (standard)
Size DIN / ANSI	-	-	25/1"	50/2"					
Stroke mm (in.)	20 (0.79)	20 (0.79)	20 (0.79)	20 (0.79)					
Stem diameter*** mm (in.)	10 (0.39)	10 (0.39)	10 (0.39)	16 (0.63)					
					0.12	4.5 (0.18)	50:1	1.4571	1.4571
					0.19	4.5 (0.18)			
					0.29	4.5 (0.18)			
					0.47	4.5 (0.18)			
					0.74	4.5 (0.18)			
					1.2	7.0 (0.28)			
					1.9	7.0 (0.28)			
					2.9	10 (0.39)			
					4.7	12 (0.47)			
					7.4	16 (0.63)			
					12	20 (0.79)			
					19	25 (0.98)			
					29	32 (1.26)			
					47	40 (1.57)			

\* Further special C<sub>vs</sub> values on request.

\*\* For calibrating conditions.

\*\*\* For thrusts ≥ 1000 daN stem diameter = 16 mm (0.63 in.)

## Dimensions mm (in.) and Weights kg (lb.)



NW	Dimensions A/B			Height F			Weight			
	ND 325	ND 500	ND 700	Standard	Fins	Bellows	Standard	Fins	Bellows	
011000	3	85 (3.35)	85 (3.35)	85 (3.35)	-	-	-	4 (8.8)	4.5 (9.9)	7 (15.5)
	6	85 (3.35)	85 (3.35)	85 (3.35)	41 (1.61)	81 (3.19)	227 (8.94)	4 (8.8)	4.5 (9.9)	7 (15.5)
	10	85 (3.35)	85 (3.35)	85 (3.35)	41 (1.61)	81 (3.19)	227 (8.94)	5 (11.0)	5.5 (12.0)	8 (17.6)
	16	95 (3.74)	95 (3.74)	95 (3.74)	41 (1.61)	81 (3.19)	227 (8.94)	6 (13.2)	6.5 (14.3)	9 (19.8)
015000	16	95 (3.74)	95 (3.74)	95 (3.74)	80 (3.15)	140 (5.51)	294 (11.57)	8 (17.6)	9 (19.8)	18 (39.7)
	24	110 (4.33)	110 (4.33)	120 (4.72)	75 (2.95)	135 (5.31)	289 (11.38)	12 (26.5)	13 (28.7)	22 (48.5)
	30	120 (4.72)	120 (4.72)	-	72 (2.83)	132 (5.20)	286 (11.26)	14 (30.9)	15 (33.0)	24 (62.9)
	45	150 (5.90)	-	-	145 (5.71)	145 (5.71)	301 (11.85)	23 (50.7)	25 (55.1)	32 (70.5)



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