

Fig. 440 Packing ring

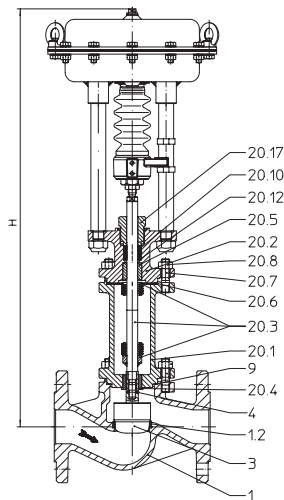


Fig. 441 Bellows seal

Applications:

Fig. 440

- Cooling water
- Cooling brine
- Warm water
- Hot water
- Steam
- Gas

Fig. 441

- Refrigerant
- Cooling water
- Warm water
- Hot water
- Thermal oil
- Steam

Features:

- Compact design
- Precision guided stem
- Burnished stem
- Tapered seat joint
- Positioning ratio 50:1
- Spring-loaded PTFE-V-ring packing unit
- Two-ply bellows seal
- Travel indicator



DN		15	20	25	32	40	50	65	80	100
DP 32	ØA (mm)	250								
	...440 H (mm)	442	442	450	450	457	463	476	491	510
	PN16/PN25-40 (kg)	12.6 / 13.4	13.3 / 14.2	14.2 / 15.5	15.8 / 17.3	17.7 / 19.8	20.6 / 22.5	25.7 / 29.7	31.4 / 35.9	42 / 49
	...441 H (mm)	627	627	635	635	626	628	712	724	740
PN16/PN25-40 (kg)	17 / 19	17 / 20.5	18 / 23	20.5 / 26	23 / 32	25.5 / 34.5	28.5 / 41.5	39.5 / 51.5	55 / 68	
DP 33	ØA (mm)	300								
	...440 H (mm)	497	497	505	505	512	518	531	546	565
	PN16/PN25-40 (kg)	18.6 / 19.4	19.3 / 20.2	20.2 / 21.5	21.8 / 23.3	23.7 / 25.8	26.6 / 28.5	31.7 / 35.7	37.4 / 41.9	48 / 55
	...441 H (mm)	682	682	690	690	681	683	767	779	795
PN16/PN25-40 (kg)	23 / 25	23 / 26.5	24 / 29	26.5 / 32	29 / 38	31.5 / 40.5	34.5 / 47.5	45.5 / 57.5	61 / 74	
DP 34	ØA (mm)	405								
	...440 H (mm)	-	-	-	-	-	-	666	681	680
	PN16/PN25-40 (kg)	-	-	-	-	-	-	61.7 / 65.7	67.4 / 71.9	78 / 85
	...441 H (mm)	-	-	-	-	-	-	902	914	930
PN16/PN25-40 (kg)	-	-	-	-	-	-	64.5 / 77.5	75.5 / 87.5	91 / 104	

Please indicate when ordering

- Figure - No.
- Nominal diameter (DN)
- Nominal pressure (PN)
- Body material
- Plug design
- Kvs - value
- Flow characteristic
- Stem sealing
- Actuator
- Special design / accessories

Example

Figure 35.440; Nominal diameter DN 100; Pressure PN 40; body material 1.0619+N; Parabolic plug; Kvs 160; Equal percentage; Stem sealing PTFE-V-ring unit; Pneumatic actuator DP 34 Spring range 0.4-1.2 bar

Dimensions in mm.; Weight in kg.; Pressure in barg (gauge)

1 bar $\hat{=}$ 105; Pa = 0.1 Mpa; Kvs in 03/h

1 Kvs $\hat{=}$ 0.85 Cv

Closing Pressure with DP

Max. permissible closing pressure on flow-to-open $P_2 = 0$

Spring closes on air failure													
DN		15	20	25	32	40	50	65	80	100			
Seat - Ø (mm)		21	21	27	31	41	51	66	81	101			
Standard Kvs-Values		4	6.3	10	16	25	40	63	100	160			
Reduced Kvs Values		2.5	4; 2.5	6.3	10	16	25	40	63	100			
Travel (mm)		20							30				
Actuator DP 32	control signal (bar)	0.2 - 1.0	1.2	I	5.5	5.5	2.6	1.6	-	-	-	-	-
				II	2.3	2.3	-	-	-	-	-	-	-
				III	-	-	-	-	-	-	-	-	-
		0.4 - 1.2	1.4	I	18.6	18.6	10.7	7.8	3.9	2.2	-	-	-
				II	15.4	15.4	8.7	6.2	3	1.6	-	-	-
				III	8.6	8.6	7.1	5	1.7	-	-	-	-
		0.8 - 2.4	2.7	I	40	40	26.8	20.1	11	6.8	3.7	2.2	1.2
				II	40	40	24.8	18.6	10.2	6.3	3.2	1.9	1
				III	26.4	26.4	23.2	17.3	8.9	5.4	2.9	1.7	-
		1.5 - 2.5	2.8	I	-	-	40	40	23.5	15	-	-	-
				II	-	-	40	40	22.7	14.4	-	-	-
				III	40	40	40	38.9	21.4	13.6	-	-	-
		2.0 - 3.3	3.6	I	-	-	-	-	32.5	20.8	-	-	-
				II	-	-	-	-	31.6	20.2	-	-	-
				III	-	-	-	40	30.3	19.4	-	-	-
Actuator DP 33	control signal (bar)	0.2 - 1.0	1.2	I	13.3 c)	13.3 c)	7.4 c)	5.2 c)	2.4 c)	1.2 c)	-	-	-
				II	10.1 c)	10.1 c)	5.4 c)	3.7 c)	1.5 c)	-	-	-	
				III	5 a)	5 a)	3.8 a)	2.5 c)	-	-	-	-	
		0.4 - 1.2	1.4	I	34.2 c)	34.2 c)	20.2 c)	15.1 c)	8.1 c)	4.9 c)	2.5	1.4	-
				II	31 a)	31 a)	18.3 c)	13.6 c)	7.3 c)	4.4 c)	2.1	1.1	-
				III	19.1 a)	19.1 a)	16.6 a)	12.3 a)	5.9 a)	3.5 a)	1.8	-	-
		0.8 - 2.4	2.7	I	40 a)	40 a)	40 a)	34.7 a)	19.5 a)	12.3 a)	7	4.4	2.6
				II	40 a)	40 a)	40 a)	33.2 a)	18.6 a)	11.8 a)	6.5	4.1	2.4
				III	40	40	40	31.9	17.3	10.9	6.2	3.9	2.3
		1.5 - 3.0	3.3	I	-	-	-	-	-	-	14.8	9.6	6
				II	-	-	-	-	-	-	14.3	9.3	5.8
				III	-	-	-	-	-	-	14	9.1	5.7
		1.7 - 2.7	3.1	I	-	-	-	40 a)	40 a)	29 a)	-	-	-
				II	-	-	-	40 a)	40 a)	28.4 a)	-	-	-
				III	-	-	-	40	40	27.6	-	-	-
		2.0 - 4.0	4.5	I	-	-	-	-	-	-	20.3	13.3	8.4
				II	-	-	-	-	-	-	19.9	12.9	8.2
				III	-	-	-	-	-	-	19.6	12.8	8.1
2.3 - 3.7	4.5	I	-	-	-	-	-	40	-	-	-		
		II	-	-	-	-	-	-	39.5	-	-		
		III	-	-	-	-	-	-	38.6	-	-		
Actuator DP 34	control signal (bar)	0.2 - 1.0	1.2	I	-	-	-	-	-	-	2.5 b)	1.5 b)	-
				II	-	-	-	-	-	-	2.1 b)	1.2 b)	-
				III	-	-	-	-	-	-	1.8 e)	1 e)	-
		0.4 - 1.2	1.4	I	-	-	-	-	-	-	7 b)	4.4 b)	2.7 b)
				II	-	-	-	-	-	-	6.6 b)	4.1 b)	2.5 b)
				III	-	-	-	-	-	-	6.3 d)	3.9 d)	2.3 d)
		0.8 - 2.4	2.7	I	-	-	-	-	-	-	16	10.4	6.5
				II	-	-	-	-	-	-	15.5	10.1	6.3
				III	-	-	-	-	-	-	15.2 b)	9.9 b)	6.2 b)
		2.1 - 3.0	3.3	I	-	-	-	-	-	-	40	29.7	19
				II	-	-	-	-	-	-	40	29.4	18.8
				III	-	-	-	-	-	-	40 a)	29.2 a)	18.7 a)
2.4 - 3.6	4.5	I	-	-	-	-	-	-	-	34.2	21.9		
		II	-	-	-	-	-	-	-	33.9	21.7		
		III	-	-	-	-	-	-	-	-	-		

I. Fig. 440 : PTFE-V-ring unit II. Fig. 440 : PTFE-/ pure graphite-packing III. Fig. 441 : Bellows seal

Air supply pressure max. limit of control valve : a) 5 bar / b) 4.5 bar / c) 4 bar / d) 3.5 bar / e) 3 bar / Air supply pressure max. of pneumatic actuators DP : 6 bar

Air supply pressure max. of pneumatic actuators DP: 6 bar

1) Other Kvs-value-reductions are possible with series 445/446 (stainless body with screwed seating) / Max. permissible operating pressure refers to separate data sheet

*last updated 10/16

