



max. permissible closing pressures with flow direction against the closing direction of the plug and $P_2 = 0$ (Observe regulations, see page 11)

Fig. 440 / 441 with parabolic plug													
DN		15	20	25	32	40	50	65	80	100			
Seat- \varnothing (mm)		21	21	27	31	41	51	66	81	101			
Standard Kvs-values (m ³ /h)		4	6,3	10	16	25	40	63	100	160			
Reduced Kvs-values ³⁾ (m ³ /h)		2,5	4; 2,5	6,3	10	16	25	40	63	100			
Stroke (mm)		20						30					
Actuator ¹⁾ FR 2.1 1 kN	Closing pressure (bar)	I.			18	18	10,3	7,4	3,6	2,0	1,2	0,5	0,3
		II.			15,9	15,9	9,0	6,4	3,1	1,7	0,4	--	--
		III.			8,9	8,9	7,3	5,1	1,8	0,8	--	--	--
	Operating time ²⁾ (s)		69						105				
Operating time at voltage failure (s)		5,5						8,5					
Actuator ¹⁾ FR 2.2 2,2 kN	Closing pressure (bar)	I.			40	40	30,7	23	12,7	7,9	4,3	2,6	1,5
		II.			40	40	28,7	21,5	11,9	7,4	3,8	2,3	1,3
		III.			30,7	30,7	27,1	20,2	10,6	6,5	3,5	2,1	1,1
	Operating time ²⁾ (s)		69						105				
Operating time at voltage failure (s)		5,5						8,5					
I. Fig. 440: PTFE-V-ring unit; II. Fig. 440: Pure graphite packing; III. Fig. 441: Bellow seal													

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Fig. 440-D / 441-D with pressure balanced plug ⁴⁾													
DN						40	50	65	80	100			
Seat- \varnothing (mm)						41	51	66	81	101			
Standard Kvs-values (m ³ /h)						25	40	63	100	160			
Reduced Kvs-values (m ³ /h)						16	25	40	63	100			
Stroke (mm)						20		30					
Actuator ¹⁾ FR 2.1 1 kN	Closing pressure (bar)	I.							20	16	16	16	12
		II.							20	16	16	--	--
		III.							16	15	2	--	--
	Operating time ²⁾ (s)								69		105		
Operating time at voltage failure (s)								5,5		8,5			
Actuator ¹⁾ FR 2.2 2,2 kN	Closing pressure (bar)	I.							40	40	40	40	28
		II.							40	40	40	40	28
		III.							40	40	40	40	40
	Operating time ²⁾ (s)								69		105		
Operating time at voltage failure (s)								5,5		8,5			
I. Fig. 440: PTFE-V-ring unit; II. Fig. 440: Pure graphite packing; III. Fig. 441: Bellow seal													

Operating unit type 440 - FR 2.1 and Type 440-D - FR 2.1 acc. to DIN 32730 for cast iron, nodular iron and cast steel

1) Motor voltage: 230V 50Hz
Other voltages: 24V 50/60Hz; 230V 60Hz
Technical data for actuator see data sheet FR 2.1

2) The indicated operating times are valid for the frequency 50 Hz

3) Other Kvs-value-reductions are possible with Fig. 445 / 446 stainless steel body with screwed seating (see page 10).
Max. permissible closing pressures on request.

4) Representation see page 14