

2106 ELEMENT 3/2-Wege

Pneumatically operated 3 way seat valve ELEMENT



- For mixing or distributing mediums
- Decentralized automation with control head
- Flow optimized body in stainless steel
- Long service life and maintenance-free operation
- Control Head is connected without external tubing

Type 2106 can be combined with...



Type 8690

Pneum. control unit
with feedback



Type 8691

Control head



Type 8695

Control head



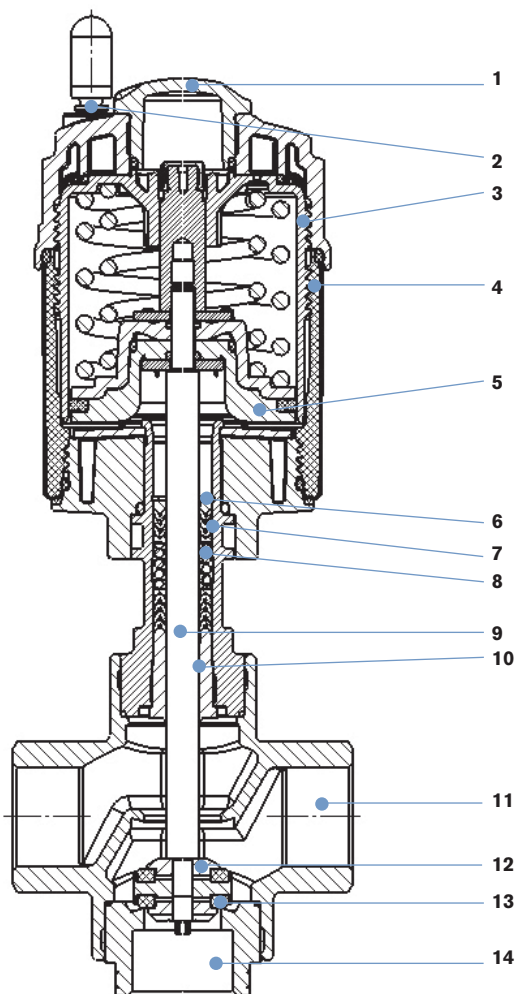
The Bürkert 3 way seat valve, Type 2106, consists of a pneumatically operated ELEMENT actuator and a 3 way stainless steel valve body. Interchanging of pressure and service ports enables different fluidic circuit functions, such as the mixing or distributing of mediums. The flow-optimized valve body of Type 2106 allows excellent flow rates. The tried and tested self-adjusting gland secures a high level of tightness and thus ensures reliable operation over years. The design of the 3 way valve, Type 2106, offers all the advantages of a modern, decentralized automation: The directly connected control head and actuator provide a compact and smooth design, integrated pneumatic lines, protection class IP65/67/ NEMA4X, and a high chemical resistance. An optionally integrated fieldbus interface through to an explosion-proof control head are further advantages of the 3 way shut-off valve. For the user, the compact Type 2106 is thus often an economical alternative to two single valves.

Technical data	
Orifice	DN15 to DN50
Port connections	G thread acc. to EN ISO 228-1 NPT acc. to ANSI B 1.20.1 (RC thread on request)
Body material	Cast stainless steel 316L
Nominal pressure	PN16 (Body)
Actuator material	PPS / Stainless steel 1.4561 (316Ti)
Sealing material	PTFE
Medium	Water, alcohol, oils, fuels, hydraulic fluids, salt solution, alkali solutions, organic solvents, steam
Viscosity	max. 600 mm ² /s
Spindle packing	PTFE V-rings with spring compensation
Medium temperature	-10 to +185°C
Ambient temperature	0 to +55°C (integrated control head) 0 to +60°C (push-in air ports)
Control medium	Neutral gases, air
Max. pilot pressure	max. 10 bar; actuator size 130 mm, 7 bar
Pilot air ports	Push-in connector for external ø 6 mm or 1/4" tube, thread G1/8 (on request)
Installation	As required, preferably with actuator in upright position
Approval and Conformity	EGV 1935/2004 (standard) FDA (optional)

Content

Valve specifications		System spec. On/Off ELEMENT		Request for quotation	
Type 2106		Type 8801-GE		Type 8801-GE	
Technical data & ordering info.	p. 5	Technical data & ordering info.	p. 6		p. 7

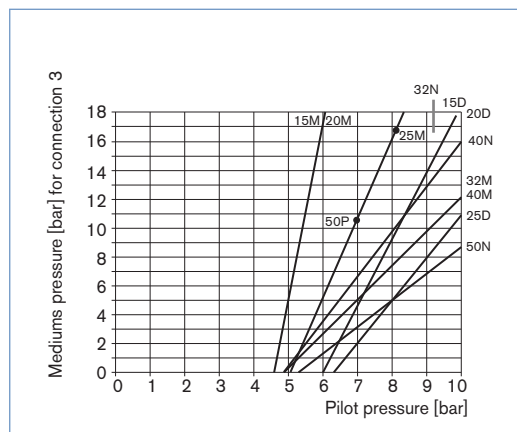
Materials



1 Transparent cap	Polysulfone PSU
2 Pilot air ports	Hose connectors PP (standard) <i>On request:</i> <i>G1/8" thread, stainless steel 1.4305</i>
3 Actuator	PPS
4 Case	Stainless steel 1.4561 (316Ti)
5 Piston seal	FKM
6 Spring	Stainless steel 1.4310
7 Tube	Stainless steel 1.4401 (316)/1.4404 (316L)
8 Spindle seal	PTFE
9 Spindle	Stainless steel 1.4401 (316)/1.4404 (316L)
10 Spindle guide	PEEK
11 Valve body	Stainless steel 1.4404 (316L)
12 Body closer	Stainless steel 1.4404 (316L)
13 Seal	PTFE
14 Seat nipple	Stainless steel 1.4404 (316L)

The lubricants for stem packing and driving are classified according to NSF H1

Pilot pressure chart



Key to actuator size D, M, N, P, see first column of table on page 4

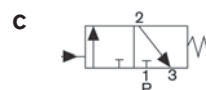
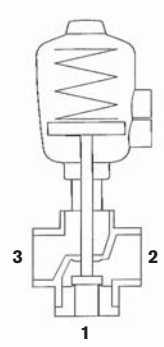
Connections for fluidic circuit functions C, D, E and F

Actuator with control function A

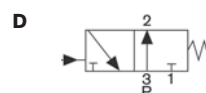
When de-energised port connection 1 is closed with spring

Fluidic circuit function	Connection - port		
	1	2	3
C	P	A	R
D	R	A	P
E	P1	A	P2
F	A	P	B

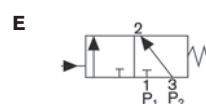
A, B service ports
P, P1, P2 pressure ports
R exhaust port



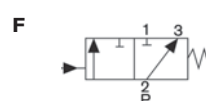
When de-energised, pressure port 1 closed, service port 2 exhausted



When de-energised, pressure port 3 connected to service port 2, exhaust port 1 closed

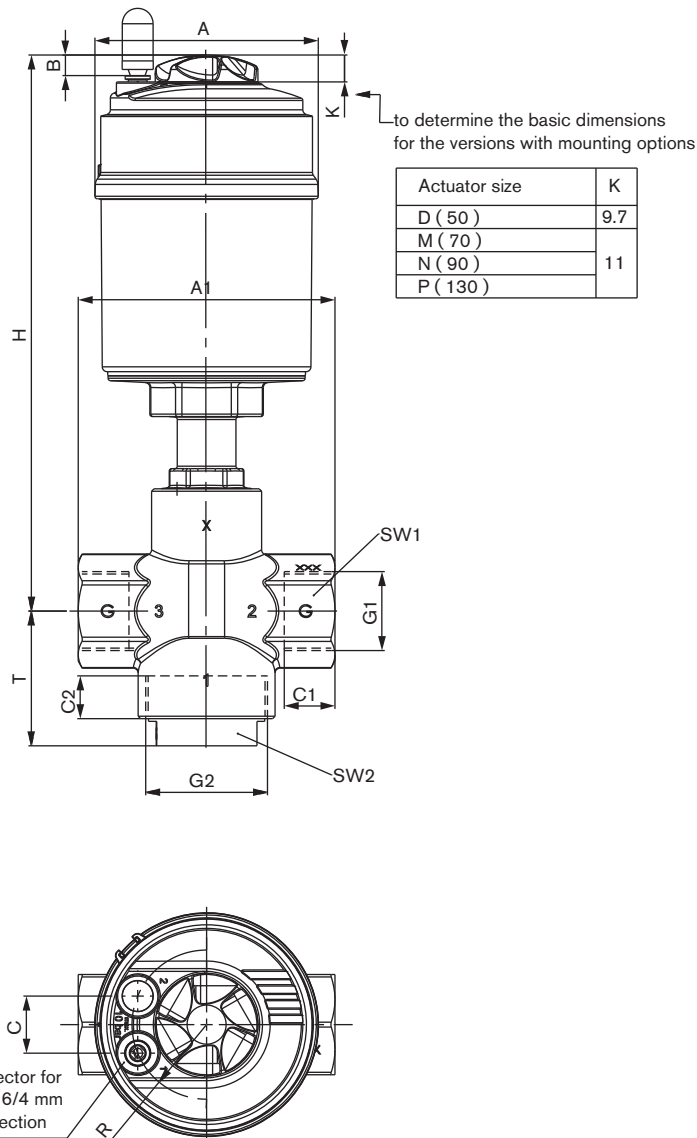


Mixer valve
When de-energised, pressure port 3 connected to service port 2, pressure port 1 closed



Distributor valve
When de-energised, pressure port 2 connected to service port 3 service port 1 closed

Dimensions [mm]



DN	Actuator size Ø	Ø A	B	C	R	H	All threaded bodies					G			NPT			RC		
							A1	T	G2	SW1	SW2	G1	C1/C2	LTA	G1	C1/C2	LTA	G1	C1/C2	LTA
15	D(50)	64.5	6.0	19.8	19.8	202.4	85	58.3	M40x1.5	32	30	G 1/2	14	GM84	NPT 1/2	13.7	NM84	RC 1/2	13.2	RC84
	M(70)	91	8.5	23.3	30.5	202.4	85	58.3	M40x1.5	32	30	G 1/2	14	GM84	NPT 1/2	13.7	NM84	RC 1/2	13.2	RC84
20	D(50)	64.5	6.0	19.8	19.8	202.4	85	58.3	M40x1.5	32	30	G 3/4	16	GM85	NPT 3/4	14.0	NM85	RC 3/4	14.5	RC85
	M(70)	91	8.5	23.3	30.5	202.4	85	58.3	M40x1.5	32	30	G 3/4	16	GM85	NPT 3/4	14.0	NM85	RC 3/4	14.5	RC85
25	D(50)	64.5	6.0	19.8	19.8	227.4	105	54.9	M50x2	41	41	G 1	18	GM86	NPT 1	16.8	NM86	RC 1	16.8	RC86
	M(70)	90	8.5	23.3	30.5	227.4	105	54.9	M50x2	41	41	G 1	18	GM86	NPT 1	16.8	NM86	RC 1	16.8	RC86
32	M(70)	91	8.5	23.3	30.5	234.7	130	67.8	M70x2	55	55	G 1 1/4	20	GM87	NPT 1 1/4	17.3	NM87	RC 1 1/4	19.1	RC87
	N(90)	120				294.4	130	78.1	M70x2	55	55	G 1 1/4	20	GM87	NPT 1 1/4	17.3	NM87	RC 1 1/4	19.1	RC87
	P(130)	159				346.7	130	68.0	M70x2	55	55	G 1 1/4	20	GM87	NPT 1 1/4	17.3	NM87	RC 1 1/4	19.1	RC87
40	M(70)	91	8.5	23.3	30.5	234.7	130	68.0	M70x2	55	55	G 1 1/2	22	GM88	NPT 1 1/2	17.3	NM88	RC 1 1/2	19.1	RC88
	N(90)	120				294.4	130	68.3	M70x2	55	55	G 1 1/2	22	GM88	NPT 1 1/2	17.3	NM88	RC 1 1/2	19.1	RC88
	P(130)	159				346.7	130	68.0	M70x2	55	55	G 1 1/2	22	GM88	NPT 1 1/2	17.3	NM88	RC 1 1/2	19.1	RC88
50	M(70)	91	8.5	23.3	30.5	245.5	150	72.0	M84x2	70	70	G 2	24	GM89	NPT 2	17.6	NM89	RC 2	23.4	RC89
	N(90)	120				310.7	150	72.0	M84x2	70	70	G 2	24	GM89	NPT 2	17.6	NM89	RC 2	23.4	RC89
	P(130)	159				353.7	150	72.0	M84x2	70	70	G 2	24	GM89	NPT 2	17.6	NM89	RC 2	23.4	RC89

Ordering chart Type 2106, flow direction below the seat (for gases and liquids)

G thread acc. to EN ISO 228-1

Control function	Port connection	Orifice [mm]	Actuator size Ø [mm]	Kv value water [m³/h]		Min. pilot pressure [bar]	Max. operating pressure to 180°C [bar]		Weight [kg]	Item no. PA actuator
				1 ↗ 2	2 ↗ 3		1 ↗ 2	2 ↗ 3 2 ↗ 1		
A 3/2 way, normally closed (NC) (port 1)	G 1/2	15	50	7	4.5	5.5	16	16	1.5	282 698
			70	7	4.5	4.5	16	16	2.2	282 701
	G 3/4	20	50	9	6.2	5.5	16	16	1.4	282 702
			70	9	6.2	4.5	16	16	2.1	282 704
	G 1	25	50	17	11	5.5	9	11	1.9	282 705
			70	17	11	4.5	16	16	2.6	282 706
	G 1 1/4	32	70	32	21	4.5	8	11	3.9	282 707
			90	32	21	5.1	11	16	5.4	282 709
	G 1 1/2	40	70	35	24	4.5	7	11	3.7	282 711
			90	35	24	5.1	12	16	5.2	282 712
	G 2	50	90	51	35	5.1	9	8	7.3	282 715
			130	51	35	4.9	16	16	10.4	282 716

NPT thread acc. to ANSI B 1.20.1

Control function	Port connection	Orifice [mm]	Actuator size Ø [mm]	Kv value water [m³/h]		Min. pilot pressure [bar]	Max. operating pressure to 180°C [bar]		Weight [kg]	Item no. PA actuator
				1 ↗ 2	2 ↗ 3		1 ↗ 2	2 ↗ 3 2 ↗ 1		
A 3/2 way, normally closed (NC) (port 1)	NPT 1/2	15	50	7	4.5	5.5	16	16	1.5	292 478
			70	7	4.5	4.5	16	16	2.2	292 531
	NPT 3/4	20	50	9	6.2	5.5	16	16	1.4	292 532
			70	9	6.2	4.5	16	16	2.1	292 533
	NPT 1	25	50	17	11	5.5	9	11	1.9	292 534
			70	17	11	4.5	16	16	2.6	292 535
	NPT 1 1/4	32	70	32	21	4.5	8	11	3.9	292 536
			90	32	21	5.1	11	16	5.4	292 537
	NPT 1 1/2	40	70	35	24	4.5	7	11	3.7	292 538
			90	35	24	5.1	12	16	5.2	292 539
	NPT 2	50	90	51	35	5.1	9	8	7.3	292 540
			130	51	35	4.9	16	16	10.4	292 541



Further versions on request



Port connection
NPT thread, RC thread