bürkert
FLUID CONTROL SYSTEMS

Pneumatically operated 3/2 way seat valve CLASSIC

- For mixing or distributing of media
- Controlled by a pilot valve or centrally by a valve island
- Flow optimised body in stainless steel
- Long life time and maintenance-free operation

Product variants described in the data sheet may differ from the product presentation and description.

Can be combined with

Type 8697 ▸
Pneumatic control for decentralised automation of ELEMENT process valves

Type 8640 ▸
Modular valve island for pneumatics

Type 8644 ▸
Remote Process Actuation Control System AirLINE

Type 6012 ▸
Plunger valve 3/2 way direct-acting

Type 6014 ▸
Plunger valve 3/2 way direct-acting

Type 8840 ▸
Modular process valve cluster - distribution and collecting

Type description

The Bürkert 3/2 way seat valve Type 2006 consists of a pneumatically operated CLASSIC actuator and a 3-way valve body. The actuator is available in two different materials, PA or PPS, depending on the ambient temperature. Interchanging of pressure and working connections enables different fluidic control functions, such as the mixing or distributing of media. The flow-optimised valve body Type 2006 allows excellent flow values. The tried-and-tested self-adjusting packing gland secures a high level of tightness and thus ensures reliable operation over years. The 3-way valve Type 2006 is controlled by a pilot valve or by centralised automation using a valve island. It can be equipped easily with electrical position feedback. For the user, the compact Type 2006 is thus often an economic alternative instead of two single shut-off valves.

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Visit product website ▸

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1. General technical data

Product properties	
Dimensions	Detailed information can be found in chapter "4. Dimensions" on page 6.
Material	
Body	Stainless steel 316L
Actuator	PA (PPS on request)
Seal	PTFE
Packing gland (with silicone grease)	PTFE V-rings with spring compensation
Nominal diameter	DN15…50
Performance data	
Nominal pressure	PN16 (body)
Pilot pressure (max.)	10 bar 7 bar with actuator size Ø 125
Medium data	
Medium	Water, alcohol, oils, fuels, hydraulic fluid, alkaline solutions, salt solution, organic solutions, hot water, steam
Medium temperature	-10…+180 °C
Viscosity	Max. 600 mm^2/s
Control medium	Neutral gases, air
Process/Port connection & communication	
Port connection	
Threaded connection	G acc. to EN ISO 228-1 NPT acc. to ANSI B 1.20.1 (Rc on request)
Approvals and certificates	
Conformity	EGV 1935/2004 (optional) FDA (optional)
Environment and installation	
Ambient temperature	
PA actuator	-10…+60 °C
PPS actuator	
Actuator size Ø 50…80 mm	+5…+140 °C
Actuator size Ø 125 mm	+5…+90 °C (short-term up to 140 °C)
Installation position	As required, preferably with actuator in upright position

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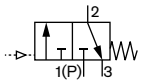
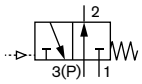
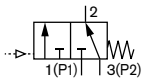
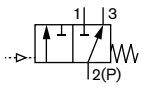
2. Circuit functions

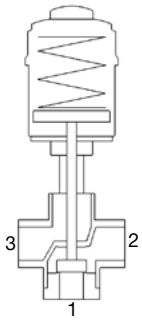
2.1. Control function

Control function	Description
	**SF: C, pneumatically operated process valve** 3/2 way When de-energised, pressure port 1 closed, service port 2 exhausted
	**SF: D, pneumatically operated process valve** 3/2 way When de-energised, pressure port 3 connected to service port 2, exhaust port 1 closed
	**SF: E, pneumatically operated mixer valve** 3/2 way When de-energised, pressure port 3 connected to service port 2, pressure port 1 closed
	**SF: F, pneumatically operated distributor valve** 3/2 way When de-energised, pressure port 2 connected to service port 3, service port 1 closed

2.2. Pin assignment for fluidic circuit functions C, D, E and F

Note:

- Actuator with Control function A
- When de-energised port connection 1 is closed with spring



Fluidic circuit function	Connection		
	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

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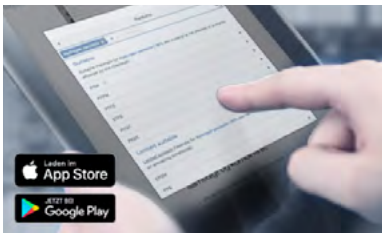
3. Materials

3.1. Chemical Resistance Chart – Bürkert resistApp

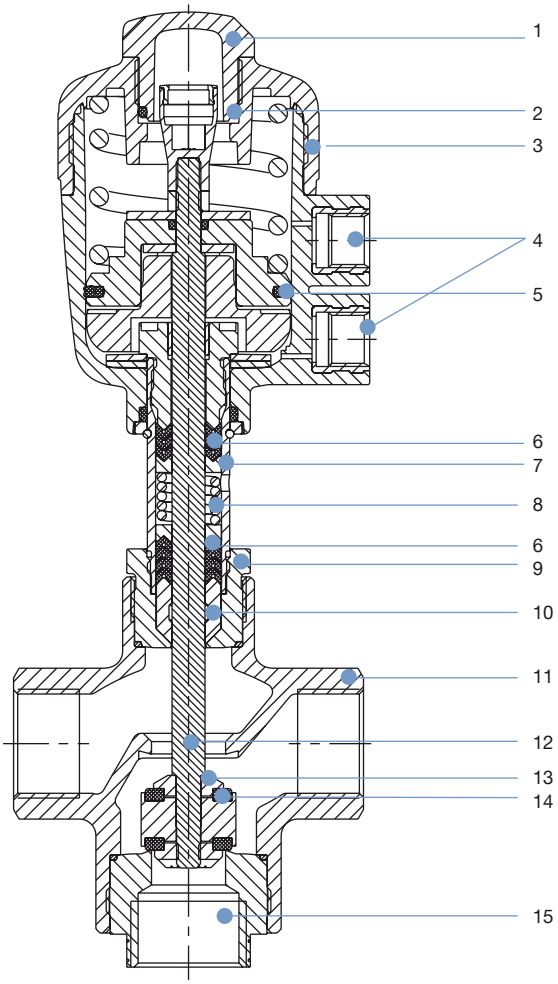


Bürkert resistApp – Chemical Resistance Chart

You want to ensure the reliability and durability of the materials in your individual application case? Verify your combination of media and materials on our website or in our resistApp.

Start Chemical Resistance Check

3.2. Material specifications



No.	Element	Material
1	Optical position indicator	Polycarbonate (PC) (with PPS - actuator PSU)
2	O-Ring	FKM
3	Actuator	Polyamide (PPS)
4	Pilot air ports G ¼	Stainless steel 1.4305
5	Piston seal	NBR (with PPS - actuator FKM)
6	Spindle seal	PTFE
7	Tube[1.)]	Stainless steel 1.4401 / 316 Stainless steel 1.4404 / 316L[2.)]
8	Spring	Stainless steel 1.4310
9	Nipple[1.)]	Stainless steel 1.4401 / 316 Stainless steel 1.4404 / 316L[2.)]
10	Wiper	PTFE PEEK[3.)]
11	Valve body	Stainless steel 1.4404 / 316L
12	Spindle	Stainless steel 1.4404 / 316L
13	Plug	Stainless steel 1.4404 / 316L
14	Seals	PTFE
15	Seat nipple	Stainless steel 1.4404 / 316L

1.) One-piece with the drive sizes 63 mm to 125 mm

2.) For actuator sizes 63 mm to 125 mm

3.) For actuator size 125 mm

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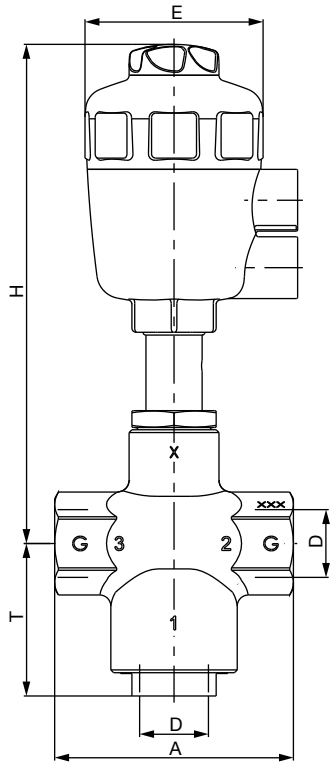
4. Dimensions

Note:
Dimensions in mm



Nominal diameter	Actuator size Ø	Port connection D	A	E	H	T
15	50	G ½	85	64	178	54
	63			80	220	54
20	50	G ¾	85	64	178	54
	63			80	220	54
25	63	G 1	105	80	220	54
32	80	G 1¼	130	101	249	68
	125			158	345	68
40	63	G 1½	130	80	226	68
	80			101	249	68
	125			158	345	68
50	125	G 2	150	158	352	72

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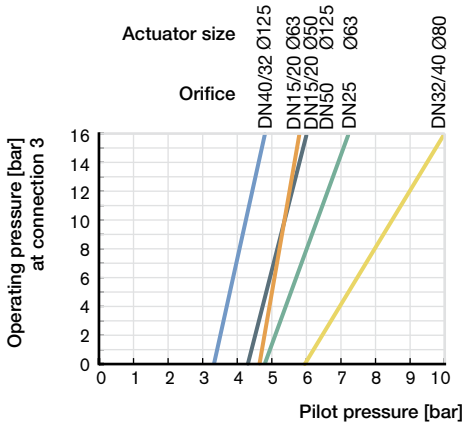
5. Performance specifications

5.1. Fluidic data

Pilot pressure diagram

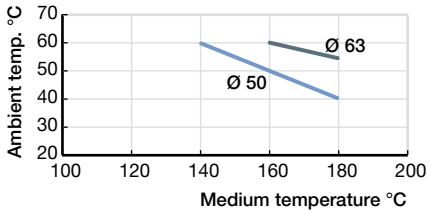
Note:
CFA, flow direction 3 → 2



5.2. Operating limits

Operating limits ambient and medium temperature

Note:
For PA actuators in the sizes 50 and 63, the combination of max. media temperature and max. ambient temperature is as shown in the following chart



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6. Ordering information

6.1. Bürkert eShop – Easy ordering and quick delivery

Bürkert eShop – Easy ordering and fast delivery

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Order online now

6.2. Bürkert product filter

Bürkert product filter – Get quickly to the right product

You want to select products comfortably based on your technical requirements? Use the Bürkert product filter and find suitable articles for your application quickly and easily.

Try out our product filter

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6.3. Ordering chart

Note:

- Port 1 closed by spring action
- Further versions on request

Control function	Port connection	Nominal diameter	Actuator size Ø	K_v value water		Min. pilot pressure	Max. operating pressure up to 180 °C		Weight	Article no.	
										PA actuator	PPS actuator
		[mm]	[mm]	[m³/h]		[bar]	[bar]		[kg]		
				1→2	2→3		1→2	2→3 2→1			
Threaded connection acc. to EN ISO 228-1											
CFA 3/2 way, normally closed (NC) (port1)	G ½	15	50	7	4.5	4.4	11	16	1.3	287191	287202
			63	8	4.5	4.7	16	16	1.6	287192	287203
	G ¾	20	50	9	6.2	4.4	11	16	1.3	287193	287204
			63	11	5.6	4.7	16	16	1.6	287194	287205
	G 1	25	63	17	11	4.9	10	16	2.1	287195	287206
	G 1¼	32	80	32	21	6.0	9	16	4.3	287196	287207
			125	35	24	3.4	14	16	8.1	287197	287208
	G 1½	40	80	35	24	6.0	9	16	4.3	287199	287210
			125	35	24	3.4	14	16	8.1	287200	287211
	G 2	50	125	51	35	4.3	10	16	9.5	287201	287212
Threaded connection with NPT thread acc. to ANSI B 1.20.1											
CFA 3/2 way, normally closed (NC) (port1)	NPT ½	15	50	7	4.5	4.4	11	16	1.3	292542	292553
		15	63	8	4.5	4.7	16	16	1.6	292543	292554
	NPT ¾	20	50	9	6.2	4.4	11	16	1.3	292544	292555
		20	63	11	5.6	4.7	16	16	1.6	292545	292556
	NPT 1	25	63	17	11	4.9	10	16	2.1	292546	292557
	NPT 1¼	32	80	32	21	6.0	9	16	4.3	292547	292558
		32	125	35	24	3.4	14	16	8.1	292548	292559
	NPT 1½	40	80	35	24	6.0	9	16	4.3	292550	292560
		40	125	35	24	3.4	14	16	8.1	292551	292561
	NPT 2	50	125	51	35	4.3	10	16	9.5	292552	292562

Further versions on request

Process connection
Rc thread

6.4. Ordering chart accessories

3/2 way pilot valves with banjo bolts

Note:

- Seal material valve FKM, seal material banjo bolt NBR
- For further accessories see the accessories data sheet **Type 2XXX** ▸ for the full options programme.

Valve for actuator size Ø	Type	Pressure inlet P (valve body)	Service port A (banjo bolt)	Nominal diameter	Q_{Nn} value air	Pressure range	Electrical coil connection industry standard	Power consumption	Article no. per voltage/frequency [V/Hz]	
[mm]				[mm]	[l/min]	[bar]		[W]	024/DC	230/50
50…63	6012P	Tube fitting Ø6 mm	G ¼	1.2	48	0…10	Form B	4	552283	552286
50…125	6014P	G ¼	G ¼	2	120	0…10	Form A	8	424103	424107

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Cable plug Type 2507, Form B or Type 2508, Form A

Version	Voltage	Article no.
Type 2507, Form B industry standard, without circuitry (Type 6012 P)	0…250 V	423845
Type 2508, Form A acc. to DIN EN 175 301-803, without circuitry (Type 6014 P, Type 0331P)	0…250 V	008376

Type 8697 pneumatic position feedback unit

Note:
cULus only valid for versions without ATEX approval

End position feedback						Electrical connection	ATEX / IECEx Cat. 3D/G Zone 22/2[1.]	ATEX / IECEx Cat. 2D/G Zone 21/1[2.]	ATEX/ IECEX Cat. 2G Zone 1[3.]	cULus	Article no. Actuator series CLASSIC Type 20xx
Inductive Switch 3-wire PNP	Inductive Switch 2-wire NAMUR	Inductive Switch 2-wire 24 V DC	Micro Switch 24 V DC	Micro Switch 50…250 V AC/DC	Feedback status LEDs						
Feedback (without pilot valve)											
2	–	–	–	–	Yes	Cable gland	–	–	–	Yes	248827
2	–	–	–	–	Yes	Cable gland	Yes	–	–	–	255851
2	–	–	–	–	Yes	M12 multipole	Yes	–	–	–	255858
2	–	–	–	–	Yes	M12 multipole	–	–	–	Yes	250472
–	2	–	–	–	Yes	Cable gland	–	Yes	–	–	248831
–	2	–	–	–	Yes	Cable gland	–	–	Yes	–	255863
–	–	2	–	–	Yes	Cable gland	–	–	–	Yes	248826
–	–	2	–	–	Yes	Cable gland	Yes	–	–	–	255850
–	–	–	2	–	–	Cable gland	–	–	–	Yes	248833
–	–	–	–	2	–	Cable gland	–	–	–	Yes	248825

1.) II 3D Ex tc IIIC T135 / II 3G Ex nA IIC T4 Gc

2.) II 2D Ex ia IIIC T135 °C IP64 / II 2G Ex ia IIC T4 Gb

3.) II 2G Ex ia IIC T4 Gb

Adapter kits

Note:
For further information see data sheet **Type 8697** ▶

Description	Actuator size	Control function	Article no.
Position feedback	Ø50/63/80 mm	Universal	682264
Position feedback	Ø125 mm	Universal	682265

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