









## 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

	<b>Type 8697</b> ▶ Pneumatic control for decentralised automation of ELEMENT process valves
	<b>Type 8640</b> ▶ Modular valve island for pneumatics
	<b>Type 8644</b> ▶ Remote Process Actuation Control System AirLINE
	<b>Type 6012</b> ▶ Plunger valve 3/2 way direct-acting
	<b>Type 6014</b> ▶ Plunger valve 3/2 way direct-acting
	<b>Type 8840</b> ▶ 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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## 1. General technical data

Product properties	
Dimensions	Detailed information can be found in chapter <a href="#">“5. Dimensions”</a> on page 7.
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	DN 15...50
Performance data	
Nominal pressure	PN 16 (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 <sup>2</sup> /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	Food contact 1935/2004(EG), FDA Drinking water Pressure equipment directive Gas Appliances Regulation Machinery Directive,
Explosion proof	Explosion proof ATEX / IECex, see <a href="#">“3. Approvals”</a> on page 5
Material certificate	2.2, 3.1
Environment and installation	
Ambient temperature	
PA actuator	-10...+60 °C
PPS actuator	
Actuator size Ø 50(D)...80(F) mm	+5...+140 °C
Actuator size Ø 125(H) mm	+5...+90 °C (short-term up to 140 °C)
Installation position	As required, preferably with actuator in upright position

## 2. Circuit functions

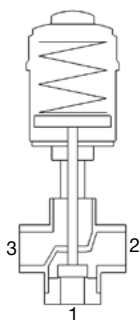
### 2.1. Control function

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

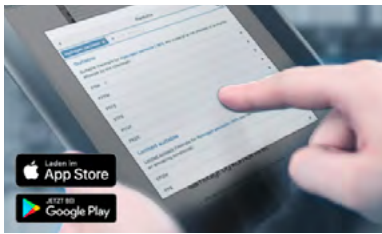
A, B Service ports  
 P, P1, P2 Pressure ports  
 R Exhaust port

### 3. Approvals

Approvals	Description
FDA 	<b>Food contact</b> Materials in contact with the medium conform to EC Regulation 1935/2004 Materials in contact with the medium conform to FDA (option)
	<b>Drinking water</b> Suitable for use with drinking water for medium temperatures up to 85 °C in accordance with the Drinking Water Ordinance §17 and the assessment principles of the Federal Environment Agency (option).
	<b>Oxygen</b> Suitable for use with gaseous oxygen with medium temperature up to 60 °C and operating pressure up to 20 bar(g) (option)
 	<b>Explosion proof</b> As category 2 device suitable for zone 1/21 and zone 2/22 (option)  <b>ATEX:</b> II 2G Ex h IIC T4 Gb II 2D Ex h IIIC T135 °C Db  <b>IECEX:</b> Ex h IIC T4 Gb Ex h IIIC T135 °C Db
	<b>Fuel gases</b> Approval according to the European Gas Appliance Regulation (EU) 2016/426, DVGW DIN EN 161 and DIN EN 16678, Class A or Class D, suitable for medium temperature 0...60 °C, ambient temperature -10...100 °C and operating pressure 0...16 bar(g) (option)
	<b>Safety requirements</b> Evaluation of functional safety according to IEC 61508 (on request)

## 4. Materials

### 4.1. Chemical Resistance Chart – Bürkert resistApp

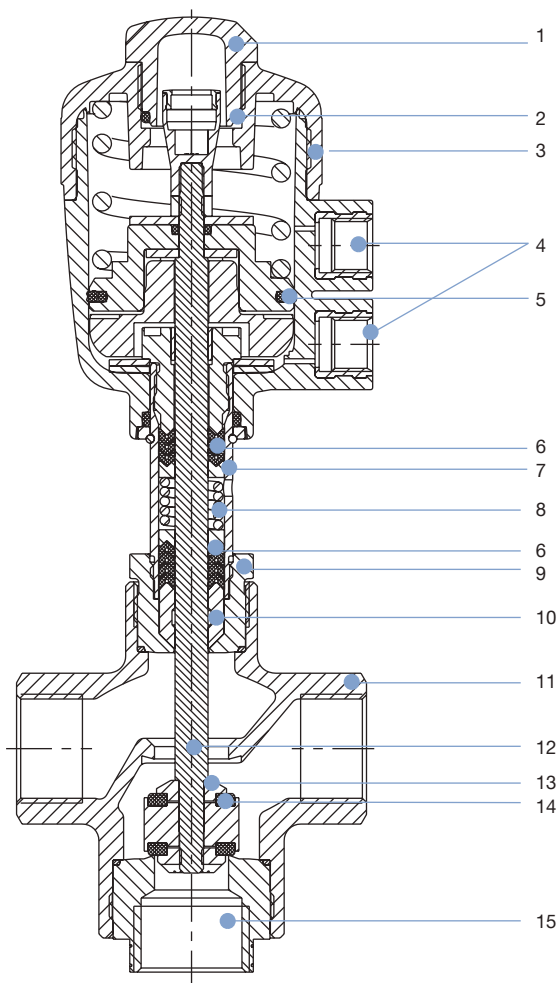


**Bürkert resistApp – Chemical Resistance Chart**

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](#)

### 4.2. 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 <sup>1.)</sup>	Stainless steel 1.4401 / 316 Stainless steel 1.4404 / 316L <sup>2.)</sup>
8	Spring	Stainless steel 1.4310
9	Nipple <sup>1.)</sup>	Stainless steel 1.4401 / 316 Stainless steel 1.4404 / 316L <sup>2.)</sup>
10	Wiper	PTFE PEEK <sup>3.)</sup>
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

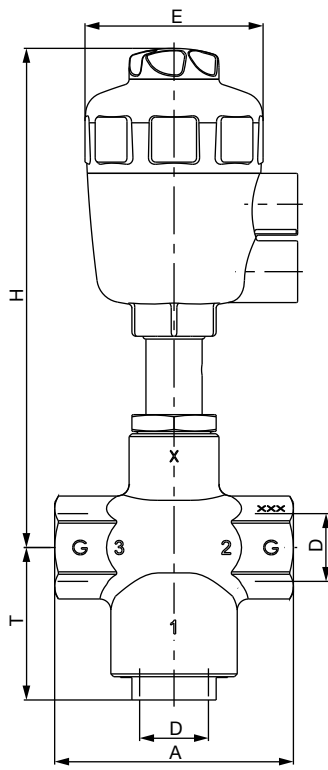
2.) For actuator sizes 63 mm to 125 mm

3.) For actuator size 125 mm

## 5. Dimensions

### Note:

Dimensions in mm



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

## 6. Performance specifications

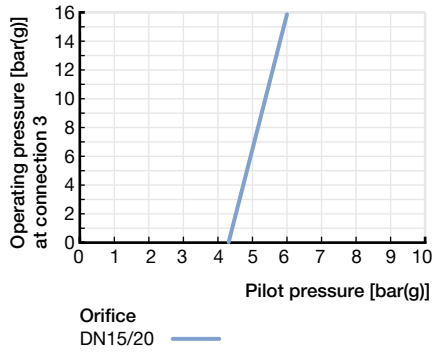
### 6.1. Fluidic data

#### Pilot pressure diagram

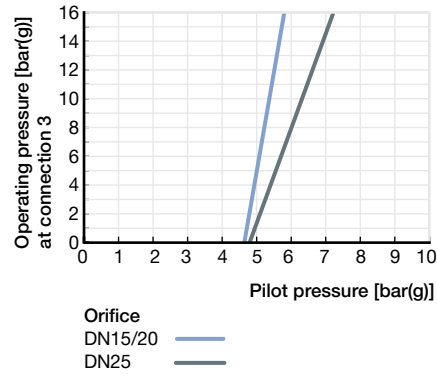
**Note:**

CF: A, flow direction 3 → 2

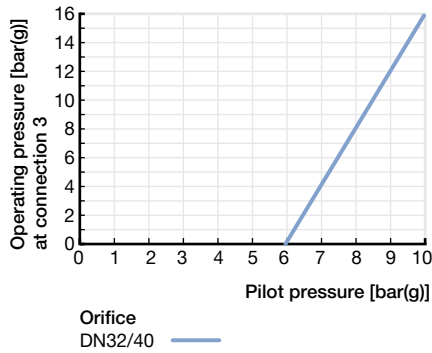
Actuator size Ø50



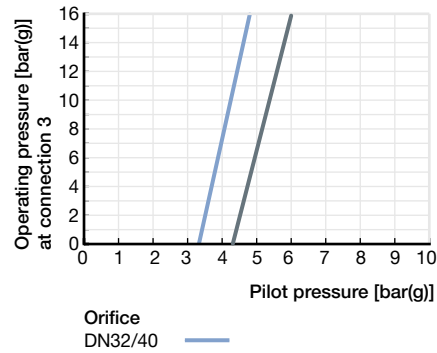
Actuator size Ø63



Actuator size Ø80



Actuator size Ø125



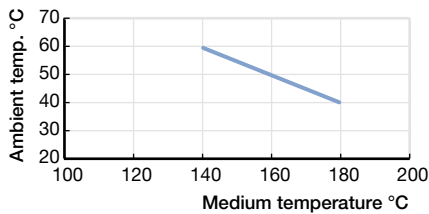
### 6.2. Operating limits

#### Operating limits ambient and medium temperature

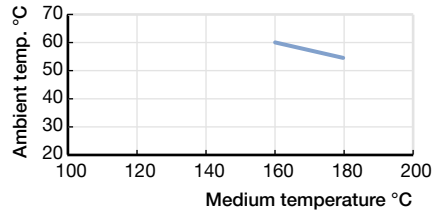
**Note:**

For PA actuators in the sizes 50(D) and 63(E), the combination of max. media temperature and max. ambient temperature is as shown in the following chart

Actuator size Ø50



Actuator size Ø63





## 7. Ordering information

### 7.1. Bürkert eShop – Easy ordering and quick delivery

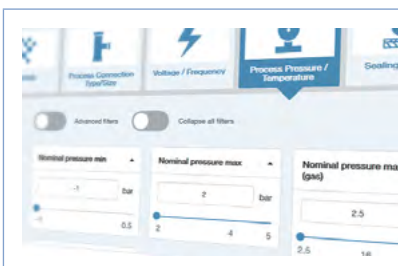


#### Bürkert eShop – Easy ordering and fast delivery

You want to find your desired Bürkert product or spare part quickly and order directly? Our online shop is available for you 24/7. Sign up and enjoy all the benefits.

[Order online now](#)

### 7.2. 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](#)

## 7.3. Ordering chart threaded connection

## Note:

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

Control function	Nominal diameter	Port connection	Actuator size Ø	K <sub>v</sub> value water		Min. pilot pressure	Max. operating pressure up to 180 °C			Weight	Article no.		
				[m <sup>3</sup> /h]			[bar(g)]	[bar(g)]			[kg]	PA actuator	PPS actuator
	[mm]		[mm]	1 → 2	2 → 3	1 → 2		2 → 3	2 → 1				
<b>Threaded connection acc. to EN ISO 228-1</b>													
<b>CF: A</b> 3/2 way, normally closed (NC) (port1) <sup>1.)</sup> . See "2.2. Pin assignment for fluidic circuit func- tions C, D, E and F" on page 4	15	G ½	50(D)	7	4.5	4.4	11	16	1.3	287191	287202		
			63(E)	8	4.5	4.7	16	16	1.6	287192	287203		
	20	G ¾	50(D)	9	6.2	4.4	11	16	1.3	287193	287204		
			63(E)	11	5.6	4.7	16	16	1.6	287194	287205		
	25	G 1	63(E)	17	11	4.9	10	16	2.1	287195	287206		
	32	G 1¼	80(F)	32	21	6.0	9	16	4.3	287196	287207		
			125(H)	35	24	3.4	14	16	8.1	287197	287208		
	40	G 1½	80(F)	35	24	6.0	9	16	4.3	287199	287210		
			125(H)	35	24	3.4	14	16	8.1	287200	287211		
	50	G 2	125(H)	51	35	4.3	10	16	9.5	287201	287212		
	<b>Threaded connection with NPT thread acc. to ANSI B 1.20.1</b>												
	<b>CF: A</b> 3/2 way, normally closed (NC) (port1) <sup>1.)</sup> . See "2.2. Pin assignment for fluidic circuit func- tions C, D, E and F" on page 4	15	NPT ½	50(D)	7	4.5	4.4	11	16	1.3	292542	292553	
63(E)				8	4.5	4.7	16	16	1.6	292543	292554		
20		NPT ¾	50(D)	9	6.2	4.4	11	16	1.3	292544	292555		
			63(E)	11	5.6	4.7	16	16	1.6	292545	292556		
25		NPT 1	63(E)	17	11	4.9	10	16	2.1	292546	292557		
32		NPT 1¼	80(F)	32	21	6.0	9	16	4.3	292547	292558		
			125(H)	35	24	3.4	14	16	8.1	292548	292559		
40		NPT 1½	80(F)	35	24	6.0	9	16	4.3	292550	292560		
			125(H)	35	24	3.4	14	16	8.1	292551	292561		
50		NPT 2	125(H)	51	35	4.3	10	16	9.5	292552	292562		

1.) Further information in chapter "2. Circuit functions" on page 4.

## Further versions on request



**Process connection**  
Rc thread

## 7.4. 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)	Working port A (banjo bolt)	Nominal diameter	Q <sub>Nn</sub> value air	Pressure range	Electrical coil connection industry standard	Power consumption	Article no. per voltage/frequency [V/Hz]	
				[mm]	[l/min]	[bar]			[W]	024/DC
50(D)...63(E)	6012P	Tube fitting Ø6 mm	G ¼	1.2	48	0...10	Form B	4	552283	552286
50(D)...125	6014P	G ¼	G ¼	2	120	0...10	Form A	8	424103	424107

### 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 <sup>1)</sup>	ATEX / IECEx Cat. 2D/G Zone 21/1 <sup>2)</sup>	ATEX / IECEx Cat. 2G Zone 1 <sup>3)</sup>	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(D)/63(E)/80(F) mm	Universal	682264
Position feedback	Ø125 mm	Universal	682265

# Bürkert – Close to You

For up-to-date addresses  
please visit us at  
[www.burkert.com](http://www.burkert.com)

DTS 1000257612 EN Version: G Status: RL (released | freigegeben | validé) printed: 21.07.2022



## Product Enquiry Form - Pneumatic Shut-off Valves

Thank you for your interest in our products! In order to provide you with optimum advice, please fill out the following form and send it to your **Bürkert representative** or e-mail address: [info@burkert.com](mailto:info@burkert.com). All information submitted will of course be kept strictly confidential.

Please fill in the required fields!  \*

\*Note: The interactive functions of this PDF may be restricted depending on the PDF reader used.

Personal Information				
Company			Contact person	
Customer no.			Department	
Street			Postcode / Town	
Telephone no.			Email	

Delivery	
Quantity	Required delivery date

Operating data				
Function <small>(Function of the control valve in the process / process description)</small>				
Pipeline	DN			PN
Operating medium				
Type of medium	Fluid	Steam	Gas	
Operating pressure			Unit	
Medium temperature			°C /	°F
Ambient temperature			°C /	°F

Valve body				
Construction	Angle seat valve		Globe valve	
Actuator material	Stainless steel/PPS		Stainless steel	PPS PA
Housing material	Stainless steel		Gunmetal	
Seat seal	PTFE EPDM		NBR Other	PEEK FKM
DN / Nominal pressure	DN		PN	
Flow coefficient	$K_v$	$m^3/h$	$C_v$	GPM(US)
Connection	Flange	DIN EN 1092-1		ANSI B16.5 JIS 10K
	Thread	G		NPT RC
	Weld	DIN EN ISO 1127 / ISO 4200		DIN 11850 2 / DIN 11866 A ASME BPE
	Clamp	ASME BPE		DIN 32676 A (tube ISO 4200) DIN 32676 B (tube DIN 11850)
	Other			

Valve data	
Circuit Function	A: Normally closed B: Normally open I: Double acting
Control pressure	Min. Max.

DTS 1000257612 EN Version: G Status: RL (released | freigegeben | valide) printed: 21.07.2022

Approvals / Conformities
For use with food (conform to EG regulation no. 1935/2004)
For use with food (conform to FDA)
Explosion protection in accordance with ATEX II 2GD mech. / IECex
European Gas Appliances Directive (EU) 2016/426, DVGW DIN EN 161 and DIN EN 16678
Suitable for drinking water <sup>1.)</sup>
Certificate for the fulfilment of the order EN-ISO 10204 2.1 (Article no. 440788)
Test report EN-ISO 10204 2.2 (Article no. 803722)
Conformity certification for raw material EN-ISO 10204 3.1 (included)

1.) For use with drinking water for medium temperatures up to 85 °C in accordance with the Drinking Water Ordinance §17 and the assessment principles of the Federal Environment Agency.

Additional Requirements / Comment

DTS 1000257612 EN Version: G Status: RL (released | freigegeben | valide) printed: 21.07.2022

## Control heads / pneumatic control for on/off process valves of the CLASSIC series

For actuator size ø40 to 225 mm

### Electrical position feedback Type 8697 ▶



- Optical position indicator
- Mechanical or inductive limit switches for end position registering
- Optional intrinsically safe version acc. to ATEX / IECEx

#### Electrical connection

Cable gland

M12 connector<sup>1.)</sup>

#### Number of end position feedback switches

2x Micro or inductive

#### Approvals

ATEX cat. 3GD, IECEx

ATEX cat. 2DG, IECEx

Without

#### Position feedback switch

Micro switch 24 V DC

Micro switch 50...225 V DC/AC

Inductive switch 3-wire PNP

Inductive switch 2-wire NAMUR

Inductive switch 2-wire 24 V DC

Without

1.) Applicable only with inductive switch 3-wire PNP