## **DATA SHEET**



# Electromotive 2-way angle seat control valve

- · Good and fast control
- Weather, impact and vibration resistant design
- Easy cleaning by its design according hygienic demands
- Position controller and process controller available







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

#### Can be combined with



# Type 3320 Electromotive 2/2-way

angle seat valve (ON/ OFF)



# Type 3321

Electromotive 2/2-way globe valve (ON/OFF)



## Type 3361

Electromotive 2-way globe control valve



#### Type 8098

FLOWave SAW flowmeter

•



# Type ME43 Fieldbus gateway

#### Type description

The innovative process controller Bürkert valve Type 3360 is the solution when it comes to control tasks under demanding operating conditions.

The electromotive actuator with ball screw positions the control cone with highest precision. A unique feature is its high positioning speed up to 6 mm/s, that reacts quasi delay-free to process signals, and can be varied according to customer demands. Pressure variations or shocks in the medium aren't transferred to the valve position. If necessary, the safety position can be approached by an optional energy storage in case of power failure.

Actuator and valve are adapted perfectly to each other with closed design and robust surface. This ensures the hygienic requirements of a fast and residue-free cleaning.

Harsh environments are no problem for the Type 3360 because of the protection class IP65 / IP67 and its high impact and vibration resistance. Unrivalled cycle life and sealing integrity is guaranteed by the proven self adjusting spindle packing with exchangeable V-seals.

The fieldbus suitable Type 3360 provides many helpful functions for process monitoring, valve diagnostics and predictive maintenance and thus offers the decisive advantage of a modern process automation.



# **Table of contents**

1.	Gene	General technical data				
2.	Appr	rovals	5			
	др	<u>ovalo</u>	Ť			
3.	Mate	erials	6			
2. 4. 1 3. 1 4. 1 5. 1	3.1.	Bürkert resistApp	6			
	3.2.	Material specifications	6			
4.	Dime	ensions	8			
	4.1.	Actuator	8			
		AG2				
		AG3	. 10			
	4.2.	Body with threaded connection	. 12			
	4.3.	Body with welded connection	. 13			
	4.4.	Body with clamp connection				
5.	Perf	ormance specifications	15			
	5.1.	Fluidic data	. 15			
		Flow characteristics	. 15			
		Overview of flow characteristics with flow below seat	. 15			
	5.2.	Operating limits	. 16			
		Operating limits for medium temperature and operating pressure				
		Operating limits for ambient and medium temperature				
		Operating limits for seat seal				
		Operating limits for optional versions				
	5.3.	Electrical control and interfaces	. 19			
		Interface diagram	. 19			
6.	Prod	luct design and assembly	20			
	6.1.	Product features	. 20			
	6.2.	Product assembly	. 22			
		AG2	. 22			
		AG3	. 23			
7.	Orde	ering information	24			
	7.1.	Bürkert eShop	. 24			
	7.2.	Bürkert product filter				
	7.3.	Ordering chart accessories				
	-	Standard accessories				
		Accessories cable				
		Bürkert accessories				
	7.4.	Bürkert Product Enquiry Form	. 25			



# 1. General technical data

## Note:

- AG2: Actuator size 2 with a nominal force of 1300 or 2500 N for seat size 15...50
- AG3: Actuator size 3 with a nominal force of 7700 or 10000 N for seat size 40...65

Product properties						
Dimensions	Detailed information can be found in chapter "4. Dimensions" on page 8.					
Material	Detailed information can be found in chapter "3. Materials" on page 6.					
Design Nominal diameter	Angle seat control valve					
	DN 1565, NPS ½2 ½  With SAFEPOS energy-pack: open, closed or freely programmable					
Safety setting in case of power failure	Without SAFEPOS energy-pack: blocked in last position					
Flow direction	Against closing direction (below seat)					
Controller versions	Position controller or process controller (optional)					
Weight	Actuator depending on version up to: AG2: 5.5 kg AG3: 16 kg (Total weight including valve body depending on port connection)					
Performance data						
Operating pressure	025 bar(g) (see "5.1. Fluidic data" on page 15) Vacuum version up to -0.9 bar(g) (optional)					
Nominal pressure	PN 25 (DIN EN 1333), Class 150 (DIN EN 1759)					
K <sub>vs</sub> value	5.090 m <sup>3</sup> /h (see "5.1. Fluidic data" on page 15)					
Flow characteristic	Modified equal percentage (see "5.1. Fluidic data" on page 15)					
Seat leakage (DIN EN 60534-4)	Class III, IV and VI (see "5.1. Fluidic data" on page 15)					
Closing time <sup>1.)</sup>	AG2: 2.36.6 s AG3: 8.7 s (Depending on travel speed, stroke and operating conditions)					
Travel speed <sup>1.)</sup>	6 mm/s (for AG2 actuator force 1300 N) 4 mm/s (for AG2 actuator force 2500 N) 3 mm/s (for AG3 actuator load 7700 N and 10000 N) (Depending on operating conditions)					
Dead band of the position control	±0.1%					
Electrical data						
Operating voltage	24 V DC ± 10 % (max. residual ripple 10 %)					
Operating current <sup>1.)</sup>	AG2: Max. 3 A (at max. load and including 1 A charging current of the optional SAFEPOS energy-pack). At minimum operating temperature additionally 2 A AG3: Max. 5 A (at max. load and including charging current of the optional SAFEPOS energy-pack). At minimum operating temperature additionally 6 A					
Protection class (DIN EN 61140)	3					
Duty cycle	100 %					
Standby consumption <sup>1.)</sup>	25 W					
Communication and control						
Standard signal (analogue)	Setpoint: 0/420 mA, 05/10 V and digital input (further inputs and outputs optional, see "5.3. Electrical control and interfaces" on page 19)					
Fieldbus (digital)	Bürkert system bus (büS) CANopen (optional) EtherNet/IP, PROFINET, Modbus/TCP (optional via integrated gateway)					
Media data						
Process medium	Steam, neutral gases, water, alcohols, oils, fuels, hydraulic fluids, salt solutions, lyes, organic solvents, oxygen (optional)					
Medium temperature	-40 °C+230 °C (see "5.2. Operating limits" on page 16)					
Viscosity	Up to 600 mm <sup>2</sup> /s					

Visit product website ▶ 3 | 26



Process/Port connection & commu	io abio a
Process/Port connection & commi	unication
Welded connection	DIN EN ISO 1127/ISO 4200/DIN11866 B
	DIN 11850 2/DIN 11866 A
	ASME BPE/DIN 11866 C SMS 3008
Clamp connection	DIN 32676 B (pipe ISO 4200)
Clamp connection	DIN 32676 A (pipe DIN 11850 2)
	ASME BPE
Threaded connection	G (EN ISO 228-1)
	Rc (ISO 7/1 /DIN EN 10226-2)
	NPT (ASME B 1.20.1)
Electrical connection	
Actuator	Terminal strip with cable gland, 3 x M20 (only AG2) or
	2 M12 circular plugs, 5-pin and 8-pin, 1 M12 circular socket, 5-pin (only for process control-
E'alalla a cala	ler function)
Fieldbus gateway	2 M12 circular sockets, 4-pin (only with Industrial Ethernets)
Approvals and certificates	
Conformity	Food EGV 1935/2004
	FDA (optional)
Approval	Explosion protection ATEX/IECEx (optional) (see "2. Approvals" on page 5) cULus Cert. No. 238179 (optional) (only AG2) (see "2. Approvals" on page 5)
Ignition protection class	II 3G Ex ec IIC T4 Gc
ignition protection class	II 3D Ex te IIIC T135 °C De
Detergent resistance	According to Ecolab test method: R&D/P3-E No. 40-1
Environment and installation	
Ambient temperature	-25+65 °C (only without additional modules)
	(Derating see "Operating limits for ambient and medium temperature" on page 17)
Degree of protection	IP65/IP67 (DIN EN 60529),
	NEMA 4X
Installation position	Any, preferably actuator face up

<sup>1.)</sup> All values refer to a supply voltage of 24 V at 25  $^{\circ}\text{C}.$ 

<sup>2.)</sup> Others on request



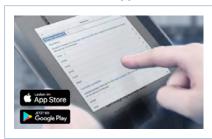
# 2. Approvals

Approvals/ Conformity/ Certificate	Description						
뀠	Food produce contact Materials in contact with medium conform to EC regulation 1935/2004 Materials in contact with medium conform to FDA (optional)						
H <sub>2</sub> O	Drinking water Suitable for use with drinking water according to KTW, W270 (optional)						
02	Oxygen Suitable for use with gaseous oxygen (optional)						
$\langle \xi_{\rm X} \rangle$	Explosion proof As category 3 device suitable for zone 2/22 (optional)						
	ATEX						
TECEN	II 3G Ex ec IIC T4 Gc						
TECEX	• II 3D Ex to IIIC T135 °C Do						
	IECEx						
	Ex ec IIC T4 Gc						
	Ex tc IIIC T135 °C Dc						
	Safety requirements						
(nr)	UL-listed cULus Cert. No. 238179 (optional) (only AG2)						
ECOLAB° PROTECTING WHAT'S VITAL	Detergent resistance Material compatibility tested with common Ecolab products and certified according to Ecolab test method: R&D/P3-E No. 40-1						
Standards	Description						
powered by	Field device for integration into the EDIP platform via Bürkert system bus (büS)						
FDID							
EDIP							



#### 3. Materials

#### 3.1. Bürkert resistApp



#### Bürkert resistApp - Chemical resistance chart

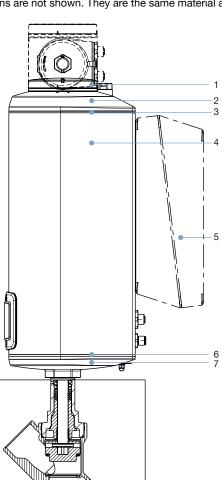
You want to ensure the reliability and durability of the materials in your individual application case? Verify your combination of media and materials on our website or in our resistApp.

Start chemical resistance check

#### 3.2. Material specifications

#### Note:

The Type 3360 angle seat valve is supplied with various port connections (thread, weld end and clamp connections). These connections are not shown. They are the same material as the valve body.

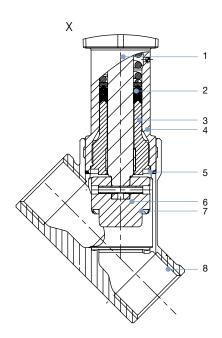


#### AG2

No.	Component	Material		
1	Display housing/Blind cover /Gateway housing	PPS (Standard), Stainless steel 1.4301 (for ATEX/IECEx)		
2	Actuator cover	PPS		
3	Seal	EPDM		
4	Actuator housing	Aluminium powder coated		
6	Seal	EPDM		
7	Actuator base	PPS		

### AG3

No.	Component	Material		
1	Display housing/Blind cover /Gateway housing	PPS (Standard), Stainless steel 1.4301 (for ATEX/IECEx)		
2	Actuator cover	PC EPDM		
3	Seal			
4	Actuator housing	Aluminium powder coated		
5	SAFEPOS energy pack	PC		
6	Seal	EPDM		
7	Actuator base	Stainless steel 1.4308		



No.	Component	Material
1	Spindle	Stainless steel 1.4401 (316)/1.4404 (316L)
2	Spindle seal	PTFE V-seals (filled) with spring compensation
3	Spindle guidance	Stainless steel 1.4404 (316L)
4	Packing gland tube	Stainless steel 1.4401 (316)
5	Seal valve body	Graphite or PTFE
6	Control cone	Stainless steel 1.4571
7	Seat seal	Stainless steel 1.4571/PTFE or PEEK seal washer
8	Valve body	Stainless steel CF3M

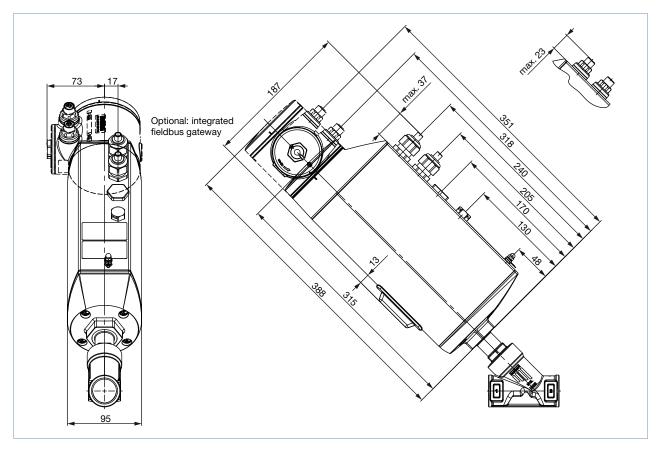
Visit product website ▶ 7 | 26

# 4. Dimensions

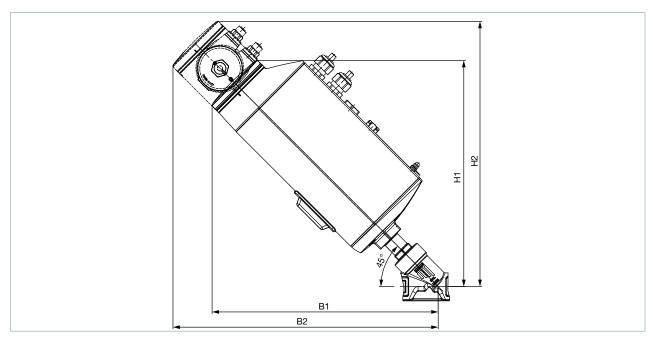
#### 4.1. Actuator

AG2

Note:







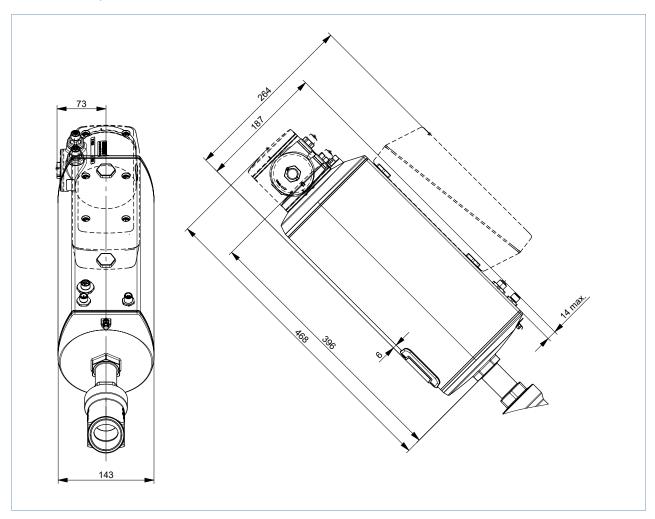
Nominal diameter (Pip	e)	Height/Width <sup>1.)</sup>		
DN	NPS	H1/B1 Standard version	H2/B2 <sup>2.)</sup> Fieldbus version (KOMM ≠ G, N, L)	
15	1/2	311	362	
20	3/4	319	369	
25	1	334	385	
32	11/4	349	399	
40	1½	352	403	
50	2	367	418	

- 1.) Dimensions without tight-closing function: in closed position the actuator additionally lifts by approx. 2 mm
- 2.) Optional: integrated fieldbus gateway

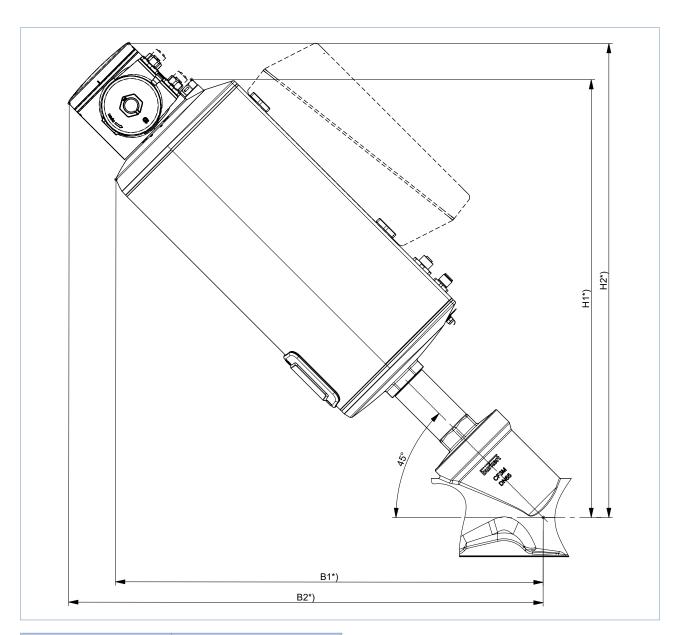
# <u>burkert</u>

AG3

#### Note:





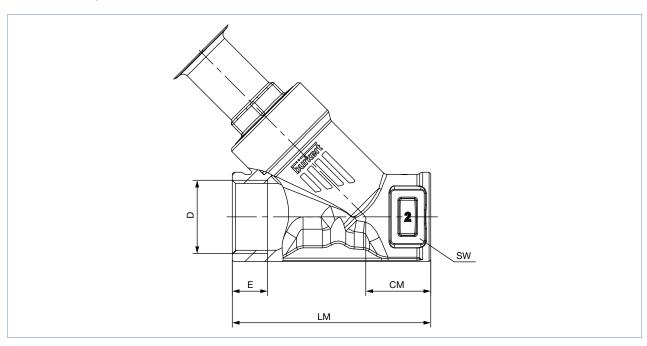


Nominal diam	eter (Pipe)	Height/Width <sup>1,)</sup>			
DN	NPS	H1/B1 Standard version	H2/B2 <sup>2.)</sup> Fieldbus version (KOMM ≠ G, N, L)		
40	1½	439	479		
50	2	454	494		
65	21/2	467	507		

- $1.) \ Dimensions \ without \ tight-closing \ function: in \ closed \ position \ the \ actuator \ additionally \ lifts \ by \ approx. \ 2 \ mm$
- 2.) Optional: integrated fieldbus gateway

# 4.2. Body with threaded connection

#### Note

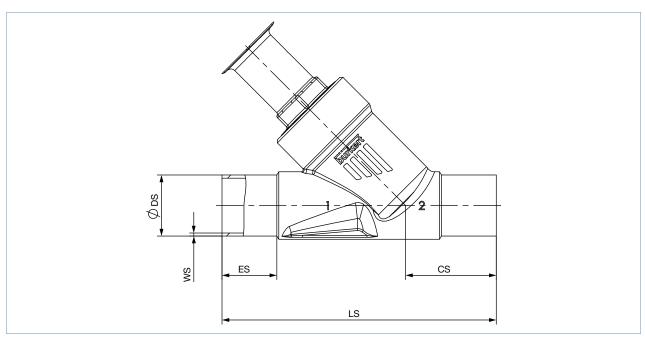


Nominal diameter	G (DIN IS	G (DIN ISO 228-1), NPT (ASME B 1.20.1), Rc (ISO7-1)								
(Pipe)	D	E				LM	SW			
DN	NPS	G	G NPT Rc							
15	1/2	14	13.7	13.2	24	65	27			
20	3/4	16	14.0	14.5	27	75	34			
25	1	18	16.8	16.8	29.5	90	41			
32	11/4	16	17.3	19.1	36	110	50			
40	11/2	18	17.3	19.1	35	120	55			
50	2	24	17.6	23.4	45	150	70			
65	21/2	26	23.7	26.7	57	185	85			



# 4.3. Body with welded connection

#### Note



Nominal diameter (Pipe)						DIN 11850 2 DIN 11866 A				
DN	ES CS LS ØDS WS			ES	CS	LS	ØDS	ws		
15	19	34	100	21.3	1.6	19	34	100	19	1.5
20	20	39	115	26.9	1.6	20	39	115	23	1.5
25	26	43	130	33.7	2.0	26	43	130	29	1.5
32	26	45	145	42.4	2.0	26	45	145	35	1.5
40	26	49	160	48.3	2.0	26	49	160	41	1.5
50	26	50	175	60.3	2.0	26	50	175	53	1.5
65	26	50	210	76.1	2.3	26	50	210	70	2

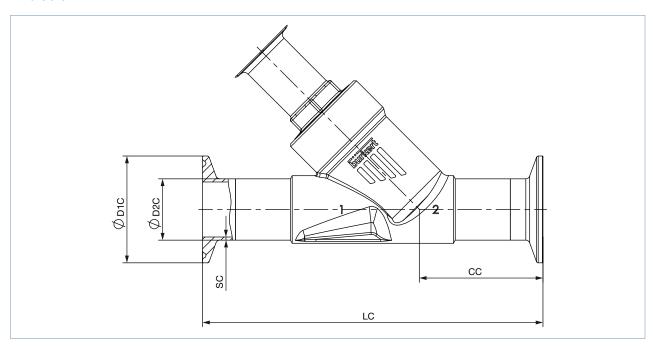
Nominal diameter (Pipe)	ASME BPE DIN 11866 C										
NPS	ES	ES CS LS ØDS WS									
1/2	30	46	135	12.7	1.65						
3/4	30	52	145	19.05	1.65						
1	30	51	152	25.4	1.65						
11/2	30	60	182	38.1	1.65						
2	30	64	210	50.8	1.65						
2½	26	56	230	63.5	1.65						



# 4.4. Body with clamp connection

#### Note

Dimensions in mm



Nominal diameter (pipe)	Clamp: DIN 32676 B Pipe: EN ISO 1127 1, ISO 4200, DIN 11866 B					DIN 326 Pipe:	Clamp: DIN 32676 A (DN 15 similar DIN 32676 B) Pipe: DIN 11850 2, DIN 11866 A				
DN	LC	CC	ØD1 C	ØD2 C	SC	LC	CC	ØD1 C	ØD2 C	SC	
15	156	49.0	50.5	21.3	1.6	130	49.5	34.0	19	1.5	
20	150	56.5	50.5	26.9	1.6	150	57.0	34.0	23	1.5	
25	160	58.0	50.5	33.7	2.0	160	58.5	50.5	29	1.5	
32	200	57.5	50.5	42.4	2.0	180	58.0	50.5	35	1.5	
40	200	69.0	64.0	48.3	2.0	200	69.5	50.5	41	1.5	
50	230	77.5	77.5	60.3	2.6	230	78.0	64.0	53	1.5	
65	265	77.5	91	76.1	2.0	265	78	91	70	2.0	

Nominal diameter (pipe)	Clamp: ASME BPE Pipe: ASME BPE, DIN 11866 C						
NPS	LC	CC	ØD1 C	ØD2 C	SC		
1/2	130	49.0	25.0	12.7	1.65		
3/4	150	56.5	25.0	19.05	1.65		
1	160	58.0	50.5	25.4	1.65		
1½	200	69.0	50.5	38.1	1.65		
2	230	77.5	64.0	50.8	1.65		
2½	286	83	77.5	63.5	1.65		



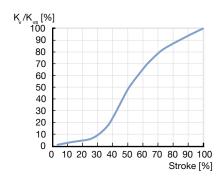
# 5. Performance specifications

#### 5.1. Fluidic data

## Flow characteristics

- Flow characteristic acc. to DIN EN 60534-2-4
- Modified equal percentage flow characteristic theoretical rangeability: K<sub>vs</sub>/K<sub>v0</sub>=50:1
- K<sub>VR</sub> value<sup>1.)</sup> at 5 % of stroke

1.)  $K_{VR}$  value = smallest  $K_{V}$  value at which the inclination tolerance according to DIN EN 60534-2-4 can still be maintained.



#### Overview of flow characteristics with flow below seat

#### Note:

- K<sub>v</sub> value [m³/h]: Measured with water acc. to DIN EN 60534-2-4
- Operating limits, see "5.2. Operating limits" on page 16

Nominal diameter (Pipe)		Actu- ator	(seat leakage class)		Characteristic curve (theoreti-	K <sub>v</sub> value at stroke						K <sub>vs</sub> value				
		force <sup>1.)</sup>			cal rangeability)											
			Stainless steel	PTFE	PEEK		5%	10%	30 %	50%	70%	90 %				
DN	NPS	[N]		[bar(g)]					[r	n³/h]		[m³/h]				
15	1/2 <sup>2.)</sup>	1300	25 (IV)	_	25 (VI)	Equal	0.16	0.17	0.4	2.7	4.0	4.8	5			
20	3/42.)		25 (IV)	25 (VI)	25 (VI)	percentage	0.26	0.27	1.1	5.9	8.3	9.6	10			
25	<b>1</b> <sup>2.)</sup>		25 (IV)	25 (VI)	20 (VI)	(50:1)	0.34	0.36	1.5	8.9	13.0	15.4	16			
32	11/42.)	11/4 <sup>2.)</sup> 1300	16 (IV)	16 (VI)	10 (VI)		0.40	0.46	2.5	13.9	19.5	23.5	25			
		2500	25 (IV)	25 (VI)	20 (VI)											
40	11/22.)	1300	10 (III)	10 (VI)	6 (VI)		0.48	0.48	0.48	0.48	48 0.66 5. <sup>-</sup>	5.1 2	20	28.5	34.5	36
		2500	18 (IV)	18 (VI)	14 (VI)											
				7700	25 (IV)	_	25 (VI)									
50	22.)	1300	6 (III)	6 (VI)	_		0.87	1.2	4	26	40.5	48	53			
		2500	10 (III)	10 (VI)	8 (VI)											
		7700	25 (IV)	_	25 (VI)											
65	21/22.)	10000	25 (IV)	_	25 (VI)		1.7	2	20	48	67	83	90			

<sup>1.)</sup> AG2: Actuator size 2 with a nominal force of 1300 or 2500 N AG3: Actuator size 3 with a nominal force of 7700 or 10000 N

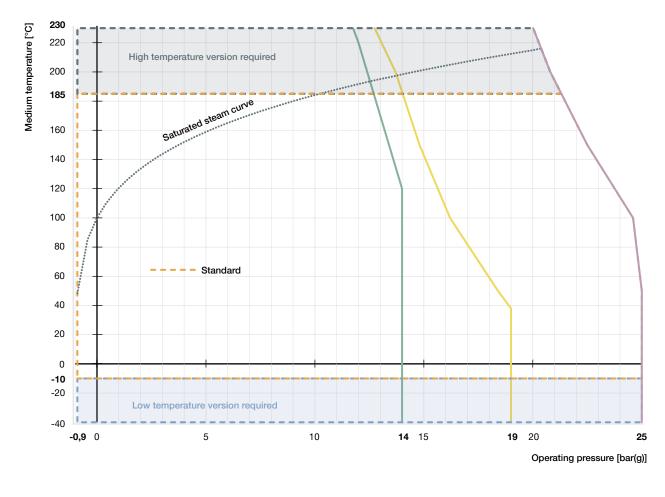
 $<sup>2.) \</sup> Deviation for line connections according to ASME \ BPE: the next larger nominal connection size is used, e.g. \ NPS \ 1 instead of NPS \ \% \ ASME \ NPS \ 1 instead \ NPS \ 1 instead \ NPS \ 1 instead \ NPS \ 2 instead \ NPS \ 3 instead \ NPS \ 4 instead \ 1 instead \$ 



## 5.2. Operating limits

#### Operating limits for medium temperature and operating pressure

The operating range of Bürkert process valves is in addition to the maximum operating pressures limited by the nominal pressure according to the relevant standard.



Operating limits for PN25 acc. to DIN EN 12516-1
Operating limits for flange 10K acc.to JIS B 2220

Operating limits for Class 150 acc. to ASME B16.34

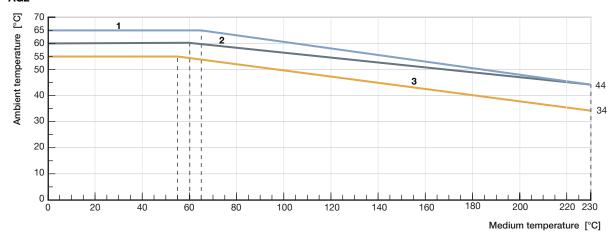
..... Saturated steam curve for water



#### Operating limits for ambient and medium temperature

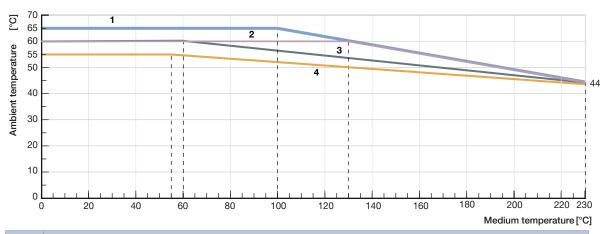
The maximum permissible temperature for the environment and the medium are dependent on each other. The maximum allowable temperature curves of different device variants can be seen in the temperature chart. The curves were determined for maximum operating conditions (max. operating pressure and motor power). For deviating operating conditions an individual verification can be performed. Please contact your Bürkert office for more information.

#### AG2



No.	Description
1	Devices without module
2	Devices with display
3	Devices with SAFEPOS energy-pack or fieldbus gateway, with/without display module

## AG3



ı	۱o.	Description
	1	Devices without module
	2	Devices with SAFEPOS energy-pack
	3	Devices with display module with/without SAFEPOS energy-pack
	4	Devices with fieldbus gateway with/without display module with/without SAFEPOS energy-pack



#### Operating limits for seat seal

Tight sealing required	Leakage class (DIN EN 60534-4)	Medium temperature	Seat seal
No An additional shut-off valve is recommended	III/IV (metal seals)  Metal-sealed valves have larger leakages (0.1 % or 0.01 % of the nominal flow rate are permissible).  Metallic seals are impervious even under demanding process conditions.	-40230 °C	Stainless steel
Yes	VI (soft seals)  By using plastics as sealing material, the control valves can close tightly.	-40130 °C (recommended for ≤130 °C)	PTFE
An additional shut-off valve is often unnecessary.	Their use is not recommended in cases of increased erosion due to demanding process conditions.	-10230 °C (recommended for >130 °C)	PEEK

#### Operating limits for optional versions

#### High temperature version

By adapting the spindle sealing this version is suitable for applications with steam, neutral gases and other heat transfer mediums up to 230 °C.

#### **Drinking water version**

Materials in contact with the medium are tested for suitability with drinking water up to 85 °C.

#### Vacuum version

Without leakage bore, this design is suitable for pressures down to -0.9 bar(g).

#### Low temperature version

Suitable for minimum medium temperatures down to -40 °C

## Version for oxygen

Non-metallic materials in contact with the medium are tested for suitability with oxygen. Suitable for operating pressures up to 25 bar(g) and medium temperatures up to 60 °C.



#### 5.3. Electrical control and interfaces

#### Interface diagram

The position of the actuator is controlled according to the position setpoint. The position setpoint is given either by an external standard signal (analogue) or via a fieldbus (digital).

#### Analogue control

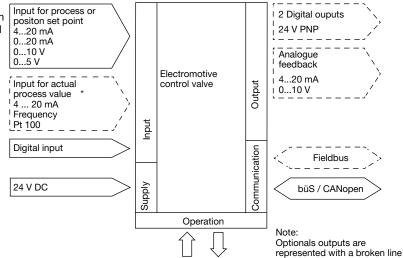
For the analogue control 2 variants each are available for the inputs and outputs and the connection interface.

#### Inputs and outputs:

- 1 analogue input, 1 digital input
- 1 analogue input, 1 digital input,
   1 analogue output, 2 digital output
   (optional)
- 1 analogue input process actual value (for optional version with process controller)

#### Interface:

- Cable gland with connection terminal (only AG2)
- M12 circular plug-in connectors (optional)



Control data		
Analogue setpoint input	Galvanically isolated from supply voltage and analogue output 0/420 mA (input resistance < 70 $\Omega$ ) 05/10 V (input resistance 22 k $\Omega$ )	
Analogue output	Max. current 10 mA (for voltage output 05/10 V) Burden (load) 0800 $\Omega$ (for current output 0/420 mA)	
Digital input	05 V = log "0", 1030 V = log "1" inverted input reversed accordingly	
Digital output	PNP, Current limitation 100 mA	
Analogue actual value signal input (o	ptional)	
420 mA	Input resistance: <70 $\Omega$ Resolution: 12 Bit	
Frequency	Measuring range: up to 1000 Hz Input resistance: $>$ 30 k $\Omega$ Resolution: 0.1 % of measured value Input signal: $>$ 300 mVss Signal shape: sine, rectangle, triangle	
Pt 100	Measuring range: -20 °C+220 °C Resolution: 0.01 °C Measuring current: 1 mA	
Communication		
Communication interface (büS)	Connection to PC via USB büS interface set	
Communication software (büS)	Bürkert Communicator, see Type 8920 ▶	

Visit product website ▶ 19 | 26



## 6. Product design and assembly

#### 6.1. Product features

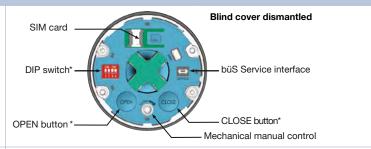
#### Note

More detailed information can be found in the **operating instructions \rightarrow**.

#### User interface

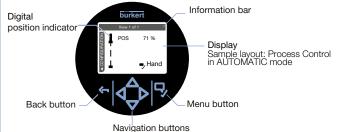
Device without display module:

In the version without operating display, the basic functions are operated via 4 DIP switches and 2 push buttons. These are located under the blind cover, which can be removed by turning it manually. The device can also be configured in detail with the Bürkert Communicator software via the büS service interface. The buttons and switches are inactive for version with optional display module



#### Rugged Touch Display (optional):

The robust display module offers convenient operation, configuration and display of all necessary functions. Besides the start screen, various views can be freely configured. The büS service interface is also available here under the display module. The display cannot be retrofitted in the field..



#### Actuation

Mechanical manual control:

The manual override for mechanical movement of the valve is located for AG2 under the blind cover or display module and for AG3 under the pressure compensation element. It ensures that the actuator can be operated even if the power supply fails.

Electrical control via operating elements:

The electrical manual override for operation can be carried out directly on the touch display or, in the version without display, via two buttons under the blind cover.

# Display elements

#### Display

360° LED light ring:

A clearly visible 360° LED ring is attached to the blind cover or display module to indicate the device status, the valve end position and the operating status. The LED light ring lights up, blinks or flashes into one or changing colours, depending on the LED mode set

Mechanical position indicator:

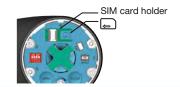
The mechanical position indicator shows the current valve position even if the supply voltage fails.

# LED light ring Mechanical position indicator Valve open Valve closed

#### Data transmission (optional)

SIM card (optional):

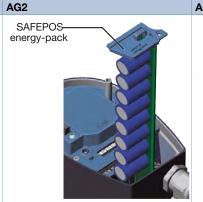
With the optionally available SIM card, device-specific values and user settings can be stored and quickly transferred to another device.



20 | 26

#### Safety position via energy storage (optional)

The safety starting positions in case of power interruption is realized with the optional energy storage SAFEPOS energy-pack. The desired position is set via the menu. In addition to the end positions (open/ closed), any desired intermediate position can be defined here. The energy storage has a lifespan of up to 10 years, depending on the operating conditions. The power of the energy storage is monitored and a warning is displayed to indicate its life is coming to an end. The storage device is designed as a plug-in module to facilitate replacement. Without energy storage, the valve remains in the last position it was in. The energy storage device is fully charged and ready for operation after a maximum of 120 seconds (depending on the operating conditions). The energy storage device cannot be retrofitted in the field.





#### Fieldbus: EtherNet/IP, PROFINET, Modbus TCP (optional)

The fieldbus gateway for EtherNet/IP, PROFINET and Modbus TCP is integrated in an additional module. It has 2 fieldbus connections with 4-pin M12 circular sockets. The interfaces for the fieldbus connection and the status LEDs are located under the gateway housing cover. If there is a need for it to be include in a network then the configuration of the Ethernet can be performed via the web server. The gateway cannot be retrofitted in the field.





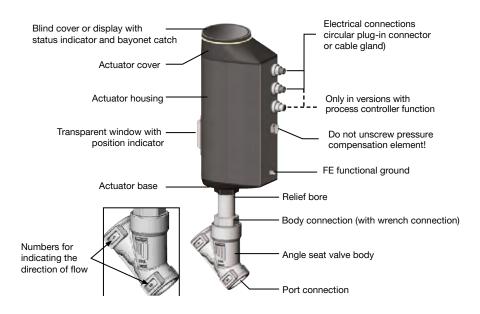
#### 6.2. Product assembly

The electromotive linear drive consists of a brushless DC motor, a gear and a spindle system that transfers the force to the control cone. The integrated control electronics are controlled either via standard signals (analogue) or via a field bus (digital). A positioner and a process controller are available as controller versions. The electromotive linear actuator is designed to provide optimum efficiency. At the same time, it keeps the valve tight and in position even at the maximum specified medium pressure in a powerless standstill. An optional energy storage device (SAFEPOS energy-pack) is available for the device. If the supply voltage fails, it supplies the actuator with the energy required to move the valve into the desired position, which can be set in the menu.

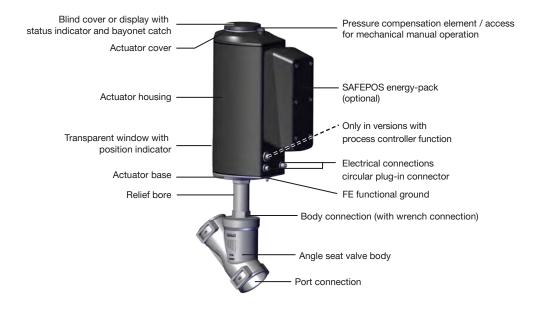
The valve position can be changed manually in 2 ways. Either via the electrical manual control or via a mechanical manual control if no supply voltage is available. The device can be set and operated either via 2 capacitive keys and 4 DIP switches or optionally on a display with touch screen. In addition there is always the possibility to operate the device via the büS service interface and using the "Bürkert Communicator" software.

The intelligent process valve Type 3360 offers the operator options for process monitoring, valve diagnosis and preventive maintenance. Internal measurements of the operating status are evaluated and, if necessary, issued as a warning or error message. These signal, for example, impermissible ambient and process conditions, functional deviations of components or the status of the energy storage device

#### AG2

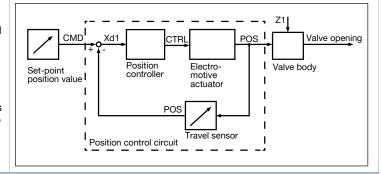


#### AG3



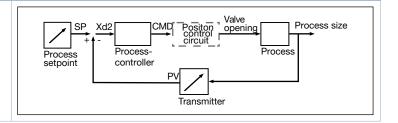
#### Integrated position controller

The position of the actuator (stroke) is controlled according to the position setpoint. The position setpoint is either given by an external standard signal (analogue) or via a fieldbus (digital). The displacement transducer records the actual position (POS) of the electric linear actuator. This actual position value is compared by the positioner with the position setpoint (CMD) specified as standard signal. If there is a system deviation (Xd1), the electric motor drive is controlled via the manipulated variable CTRL and the actual position value is changed accordingly.



# Integrated process controller (optional)

The additionally implemented PID controller allows process control. The setpoint position of the valve is calculated from the external signal (e.g. level, pressure, flow rate, temperature) for the process setpoint and the actual process value via the control parameters (PID controller).





# 7. Ordering information

#### 7.1. Bürkert eShop



#### Bürkert eShop - Easy ordering and quick 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 accessories

#### Standard accessories

Description	Article no.
SIM card for data transmission between devices	291773 ≒
Holding device for port connection DN 1520	693770 ≒
Holding device for port connection DN 2550	693771 ≒
Plastic blind cover	277881 ∖≕
Energy storage SAFEPOS energy-pack (AG2)	285834 ≒
Energy storage SAFEPOS energy-pack (AG3)	20046438 😾

#### Accessories cable

#### Note:

For connection to a büS/CANopen network see cabling guide  $\blacktriangleright$ .

Description	Article no.
Connection cable with M12 socket, 4-pin, (length 5 m) for operating voltage (without communication)	918038 ≒
Connection cable with M12 socket, 5-pin, L coded (length 5 m) for operating voltage AG3 (without communication)	20010840 🖫
Connection cable with M12 socket, 8-pin, (length 2 m) for input and output signals	919061 ≒
Connection cable with M12 plug, 5-pin, (length 2 m) for input of process actual value signals (only for version with process controller)	559177 ≒

Visit product website ▶ 24 | 26



#### **Bürkert accessories**

#### Note:

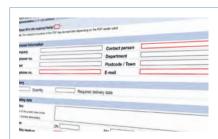
- For connection to a büS/CANopen network see cabling guide ▶.
- Detailed accessory tables can be found in the cabling guide

Description	Article no.
Software Bürkert Communicator, Type 8920	LINK▶
büS stick set 1 (including power supply unit, bus-stick, terminating resistor, Y-distributor, 0.7 m cable with M12 connector)	772426 ≒
büS stick set 2 (including bus-stick, terminating resistor, Y-distributor, 0.7 m cable with M12 connector)	772551 ≒
büS adapter for büS interface set (M12 on büS service interface Micro-USB)	773254 ≒

#### 7.4. Bürkert Product Enquiry Form

#### Note:

Please see our Product Enquiry Form for a full explanation of our specification key.



## Bürkert Product Enquiry Form - Your enquiry quickly and compactly

Would you like to make a specific product enquiry based on your technical requirements? Use our Product Enquiry Form for this purpose. There you will find all the relevant information for your Bürkert contact. This will enable us to provide you with the best possible advice.

Fill out the form now

# Bürkert - Close to You

