

## 2-way Diaphragm Control Valve, stainless steel body, pneumatically operated, DN 15-50



- Hermetical separation of fluids from the operating mechanism by diaphragm
- Integrated cascade process controller with PID algorithm
- Automatic self-adjustment of basic parameters means autotune for the valve and for PID
- Zero dead volume

Type 2731 GP can be combined with...



**Type 8692/8693**  
Positioner / Process Controller TopControl



**Type 8694**  
Positioner TopControl Basic



**Type 8630**  
Positioner TopControl



**Type 8635**  
Positioner SideControl



**Type 8792/93**  
SideControl Remote versions



**Type 8030**  
Flow sensor

The diaphragm control valve Type 2731 GP consists of a pneumatically operated piston actuator, a diaphragm and a valve body from cold-formed stainless steel pipe. The actuator has been designed so that the stroke can be continuously changed. This makes a favourable characteristic possible for the continuous change of the flow.

The Type 2731 GP can be actuated by the 8635 SideControl, SideControls 8792/93 Remote versions or the positioners 8692/8693/8694/8630 TopControl Continuous forming a mechanical and functional unit and thus offering a complete control valve system. Using this control valve, continuous regulation tasks for fluids can be solved.

Technical data		
<b>Materials</b>	Body Actuator	Stainless steel 1.4404, 316L PA polyamide (actuators Ø80-125 mm: PPS on request)
<b>Sealing materials</b>		EPDM, PTFE/EPDM (advanced PTFE/EPDM, FKM on request)
<b>Process media</b>		For neutral gases and liquids, high purity, sterile, aggressive or abrasive fluids
<b>Viscosity</b>		Up to viscous
<b>Surface finish</b>	(average surface finish) glass-beaded	Ra ≤ 1.6 µm
<b>Medium temperatures</b>	EPDM, PTFE/EPDM, advanced PTFE/EPDM <sup>1)</sup> (on request) FKM on request	-10 to +130°C (briefly up to +150°C for steam sterilisation) -10 to +130°C
<b>Ambient temperature</b>		-10 to +60°C (Actuators ≥ 175 mm -10 to +50°C)
<b>Control medium</b>	(for coupling with a positioner)	Instrumental air class 3 acc. DIN ISO 8573-1
<b>Pilot pressure</b>		5.5 to 7 bar Actuators Ø80 to 125 mm
<b>Threads for pilot air</b>		G 1/4 stainless steel (St.st.)
<b>Flow characteristic</b>		see chart p. 2
<b>Port connections</b>	Weld end	▪ EN ISO 1127/ISO 4200 ▪ DIN 11850 Series 2
<b>Installation</b>		As required, preferably with actuator in upright position

<sup>1)</sup> Advanced PTFE/EPDM is recommended for sterilization cycle

### Content



#### Valve specifications

##### Type 2731 GP

Technical data & ordering info.

p. 1-5



#### System Continuous Classic

##### Type 8802-DD

Ordering info. & technical data

p. 6-11

#### Request for quotation

##### Type 8802-DD

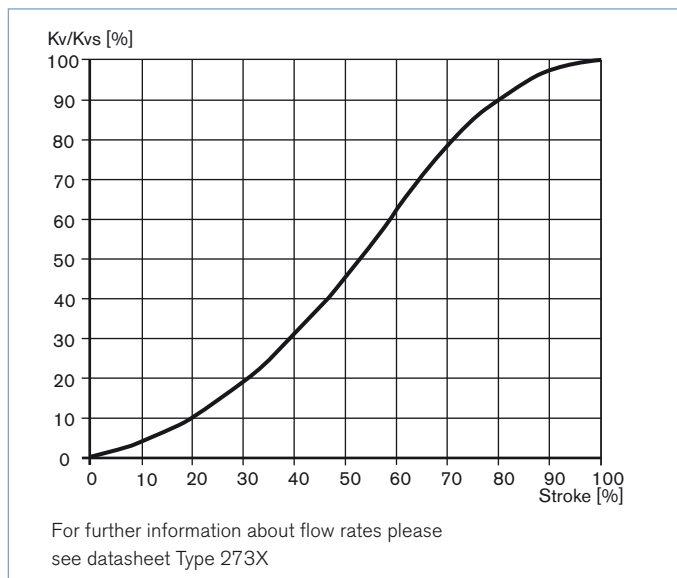
p. 12

## Technical data, continued

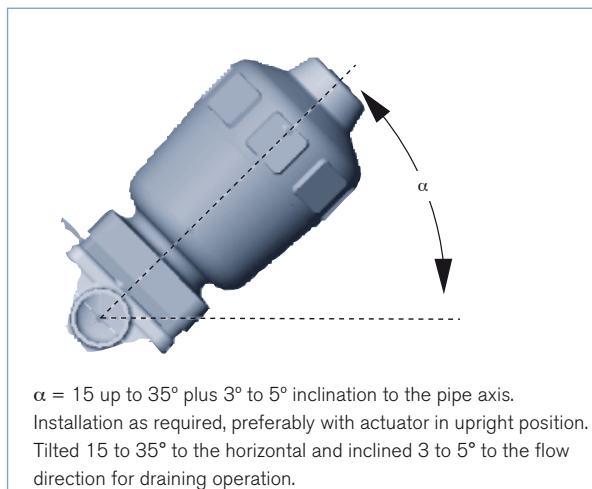
### Kvs values and weights

Orifice [mm]	Actuator size Ø EN ISO 1127/ ISO 4200 [mm]	Kvs value EN ISO 1127/ ISO 4200 [m <sup>3</sup> /h]	Actuator size Ø DIN 11850 Series 2 [mm]	Kvs value DIN 11850 Series 2 [m <sup>3</sup> /h]	Weight without positioner [kg]
15	80	5.0	80	4.5	1.4
20	80	13.0	80	4.5	1.5
25	80	21.0	80	13.5	2.0
32	100	33.0	80	18.0	3.6
40	100	45.0	100	24.5	3.9
	125	46.0	125	24.5	3.9
50	125	70.0	125	37.0	6.9

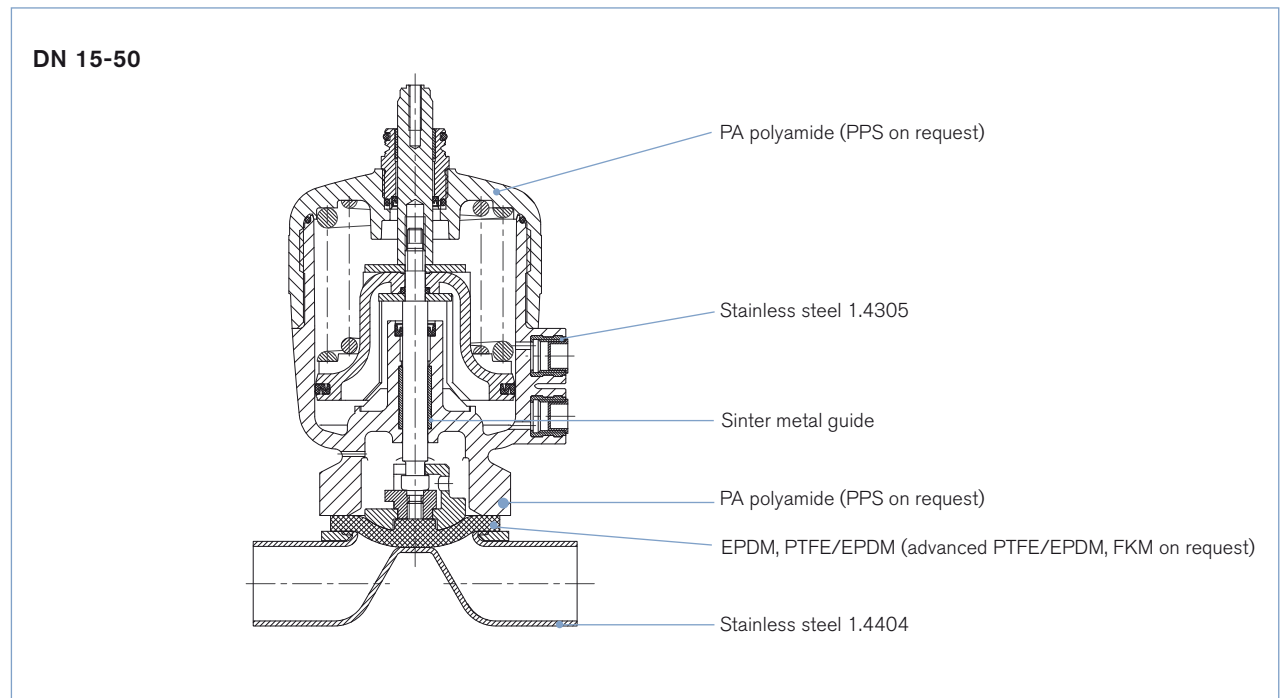
### Flow characteristic



### Recommendation for draining operation




## Materials



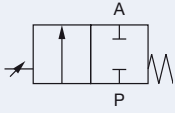
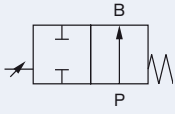
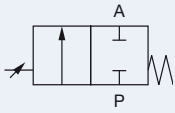
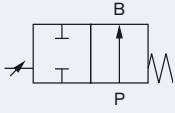
## Approvals

### Suitable for foodstuffs / sterile applications

-  The composition of the EPDM, PTFE/EPDM and advanced PTFE/EPDM diaphragms corresponds to the *Code of Federal Regulations*, published by the *FDA* (Food and Drug Administration, USA).

## Ordering chart valve (other versions on request)

Weld ends, PA actuator, permissible media temperature -10 to +130°C

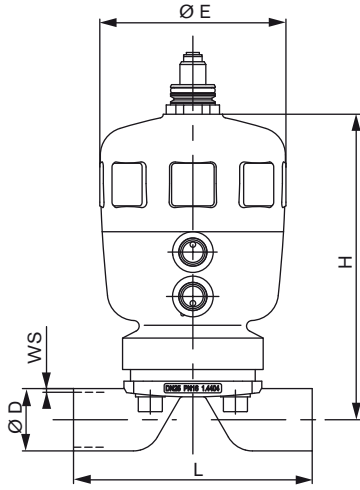
Control function	Port connection [mm]	Actuator size Ø [mm]	Kvs value [m <sup>3</sup> /h]	Operating pressure max. <sup>1)</sup> [bar]	Item no. weld end EN ISO 1127/ ISO 4200	Item no. weld end DIN 11850 Series 2
<b>EPDM diaphragm material</b>						
<b>A</b>  NC by spring return	15	80	5	10	148 313	148 318
	20	80	4.5	10	-	148 319
		80	13	10	148 314	-
	25	80	13.5	10	-	148 320
		80	21	10	148 315	-
	32	80	18	10	-	148 321
		100	33	10	148 316	-
	40	100	24.5	10	-	148 322
		125	46	10	148 317	-
		50	125	37	10	-
		125	70	8	147 526	-
<b>B</b>  NO by spring return	15	80	5	10	148 324	148 330
	20	80	4.5	10	-	148 332
		80	13	10	148 325	-
	25	80	13.5	10	-	148 333
		80	21	10	148 326	-
	32	80	18	10	-	148 334
		100	33	10	148 327	-
	40	100	24.5	10	-	148 335
		125	46	10	148 328	-
		50	125	37	10	-
		125	70	7	148 329	-
<b>PTFE/EPDM diaphragm</b>						
<b>A</b>  NC by spring return	15	80	5	10	148 337	148 343
	20	80	4.5	10	-	148 344
		80	13	10	148 338	-
	25	80	13.5	10	-	148 345
		80	21	7.5	148 339	-
	32	80	18	7.5	-	148 346
		100	33	8	148 340	-
	40	100	24.5	8	-	148 347
		125	46	10	148 341	-
		50	125	37	10	-
		125	70	7	148 342	-
<b>B</b>  NO by spring return	15	80	5	9	148 348	148 355
	20	80	4.5	8.5	-	148 356
		80	13	8.5	148 349	-
	25	80	13.5	8	-	148 357
		80	21	8	148 350	-
	32	80	18	8	-	148 358
		100	33	10	148 352	-
	40	100	24.5	10	-	148 359
		125	46	10	148 353	-
		50	125	37	10	-
		125	70	4	148 354	-

1) with a pilot pressure of 5.5 bar

 Further versions on request
**Material**
 Actuator: PPS (actuator size 80-125 mm)  
 Sealing: Advanced PTFE/EPDM, FKM

## Dimensions [mm]

DN 15-50



Port connection [mm]	Actuator size $\varnothing$	L	EN ISO 1127/ISO 4200				DIN 11850 Series 2			
			$\varnothing E$	H	$\varnothing D$	WS	$\varnothing E$	H	$\varnothing D$	WS
15	80	110	101	127	21.3	1.6	101	127	19	1.5
20	80	119	101	162	26.9	1.6	101	154	23	1.5
25	80	129	101	165	33.7	2.0	101	158	29	1.5
32	80	148	–	–	–	–	101	161	35	1.5
	100	148	127	215	42.4	2.0	–	–	–	–
40	100	161	127	219	48.3	2.0	127	211	41	1.5
	125	161	153	259	48.3	2.0	–	–	–	–
50	125	192	153	263	60.3	2.0	153	259	53	1.5

## Ordering information for valve system Continuous Classic Type 8802-DD

A valve system Continuous Classic Type 8802-DD consists of an diaphragm control valve Type 2731 and a digital electropneumatic Positioner Type 8692, a digital electropneumatic Process Controller Type 8693, a digital electropneumatic Positioner Basic Type 8694 (below) or a valve actuation system TopControl Type 8630, SideControl Type 8635 or an electropneumatic positioner Type 8792/8793 (next page) (see separate datasheets). For the configuration of further valve systems please use the "Request for quotation" on p.11 [go to page](#)

You order two components and receive a complete assembled and certified valve.

### Ordering the valve system Continuous Classic Type 8802-DD

#### Diaphragm control valve Type 2731



#### Positioner



Positioner  
Type 8692



Process Controller  
Type 8693



Positioner Basic  
Type 8694

#### Diaphragm control valve with desired positioner



Valve system  
Continuous  
Classic  
Type 8802-DD-I  
2731 + 8692



Valve system  
Continuous  
Classic  
Type 8802-DD-J  
2731 + 8693



Valve system  
Continuous  
Classic  
Type 8802-DD-L  
2731 + 8694

When you click on the orange box "More info." below, you will come to our website for the resp. product where you can download the datasheet.

#### Positioner TopControl Type 8692

More  
info.



#### Process Controller TopControl Type 8693

More  
info.



The new generation of integrated positioners/process controllers for combination with actuators from the process valve series Type 23xx/2103 is specially designed for the requirements of hygienic process environments. The easy handling and the selection of additional software functions are done either on a big graphic display with backlight and keypad or via a PC interface. A contact-free analogue position sensor registers the valve position without deterioration. Single-acting or double-acting actuators are controlled via the integral positioner system. With Type 8693, the process controller function is superimposed on the position control loop. Profibus DPV1 and DeviceNet communication interfaces are available as options. Main customer benefits:

- Compact design of the valve system with integrated positioner/process controller meets the demands for plant washdown environments through the selection of materials, external seals and integrated control air supply to the actuator
- Extremely simple commissioning and operation thanks to the backlighting of the graphics display and proven multilingual software structure
- Automatic parameterisation of the positioner and process controller using the TUNE functions
- Field bus communication via Profibus DPV1 or DeviceNet
- Air intake filter enhances the process valve system availability
- Simple and reliable actuator adaption
- Explosion-proof models for zone 2/22

#### Positioner TopControl Basic Type 8694

More  
info.



The new generation of integrated positioners for combination with actuators from the process valve series Type 23xx/2103 is specially designed for the requirements of hygienic process environments. The operation and selection of the software functions close tight function, inversion of the operating direction of the setpoint signal, characteristic curves selection and switching manual/automatic operation are effected via push-buttons and DIP switches or via the PC interface. The position setpoint is set using the standard signal 4 - 20 mA. In addition, the enable can be controlled via the binary input and an optional position feedback can be integrated. The positioner, Type 8694, registers the valve position without deterioration through a contact-free analogue position sensor. Single-acting or double-acting actuators are controlled via the integral positioner system. An AS-Interface communication interface is available as an option. Main customer benefits:

- Compact design of the valve system with integrated positioner meets the demands for plant washdown environments through the selection of materials, external seals and integrated control air supply to the actuator
- Automatic parameterisation of the process controller using the Process TUNE function
- Field bus communication via optional AS-Interface
- Air intake filter enhances the process valve system availability
- Simple and reliable actuator adaption allowing additional actuators of the process valve series, Type 20xx or actuators from other manufacturers to be used
- Explosion-proof models for zone 2/22

Ordering information for valve system Continuous Classic Type 8802-DD, continued

A valve system Continuous Classic Type 8802-DD consists of an diaphragm control valve Type 2731 and a digital electropneumatic Positioner Type 8692, a digital electropneumatic Process Controller Type 8693, a digital electropneumatic Positioner Basic Type 8694 (previous page) or a valve actuation system TopControl Type 8630, SideControl Type 8635 or an electropneumatic positioner Type 8792/8793 (below) (see separate datasheets). For the configuration of further valve systems please use the "Request for quotation" on p.11 [go to page](#)

You order two components and receive a complete assembled and certified valve.

Ordering the valve system Continuous Classic Type 8802-DD

Diaphragm control valve  
Type 2731

Positioner



Positioner/  
Process Controller  
Type 8630



Positioner/  
Process Controller  
Type 8635



Positioner  
Type 8792/  
Process  
Controller  
Type 8793

Diaphragm control valve  
with desired positioner



Valve system  
Continuous Classic  
Type 8802-DD-A  
2731 + 8630



Valve system  
Continuous Classic  
Type 8802-DD-B  
2731 + 8635



Valve system  
Continuous Classic  
Type 8802-DD-P  
2731 + 8792 /  
Type 8802-DD-Q  
2731 + 8793

When you click on the orange box "More info." below, you will come to our website for the resp. product where you can download the datasheet.

TopControl Type 8630

More info.



0/4-20 mA  
0-5/10 V

PROFIBUS  
DeviceNet™



The Type 8630 is an electro-pneumatic positioner for usage with pneumatically operated process valves. The compact design with integrated position encoder and LCD display was developed for demanding applications of the process industry.

Main customer benefits are:

- Time saving algorithms for temperature, flow and pressure PID parameters through ProcessTUNE function.
- Quick and simple menu driven parameterization through keyboard
- Field bus communication via Profibus DPV1 or DeviceNet
- Fits seamlessly to Bürkert's process valve systems
- Break resistant housing
- Suitable for hazardous locations per zone 2 and 22

SideControl Type 8635, 2-wire,  
intrinsically safe

More info.



4-20 mA

PROFIBUS  
Ex



Type 8635 is a digital electro-pneumatic positioner with an optional, integrated process controller for precise control requirements. The compact design with integrated position encoder and LCD display was developed for demanding applications of the process industry.

Main customer benefits are:

- Time saving algorithms for temperature, flow and pressure PID parameters through ProcessTUNE function.
- Quick and simple menu driven parameterization through keyboard or Profibus PA
- Remote setpoint adjustment via a 4-20 mA signal
- Adaptation according to IEC534-6 for lift and swivel drives
- Rugged anodised aluminium housing
- Suitable for hazardous locations per zone 1, zone 21 or zone 2 and 22

Positioner SideControl Type 8792

More info.

Process Controller SideControl Type 8793

More info.



PROFIBUS  
Ex



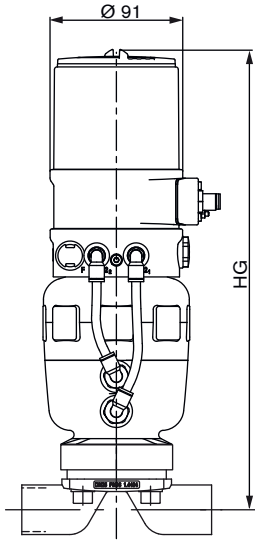
Type 8792/8793 is a digital electro-pneumatic positioner with an optional, integrated process controller (8793) for precise control requirements. The compact design with integrated position encoder and LCD display was developed for demanding applications of the process industry. A Profibus DPV1 communication interface is available as an option. Main customer benefits are:

- Time saving algorithms for temperature, flow and pressure PID parameters through ProcessTUNE function.
- Quick and simple menu driven parameterization through keyboard or Profibus DPV1 PA
- Adaption acc. to IEC534-6 and VDI/VDE 3845 for lift and swivel drives or as a Remote version together with Bürkert process valves
- Rugged anodised aluminium housing
- Suitable for hazardous locations per zone 2/22

**Dimensions for valve system Continuous Classic Type 8802-DD [mm]**

Dimensions valve system Continuous Classic Type 8802-DD-I with positioner TopControl Type 8692 and 8802-DD-J with process controller TopControl Type 8693 [mm]

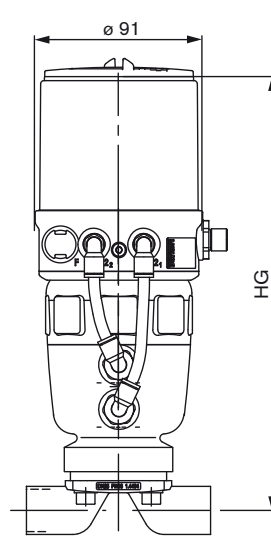
**DN 15-50**



Port connection [mm]	Actuator size $\varnothing$ [mm]	HG [mm]
15	80	300
20	80	313
25	80	316
40	125	408
50	125	414

Further dimensions see p. 5

**Dimensions valve system Continuous Classic Type 8802-DD-L with positioner TopControl Basic Type 8694 [mm]**

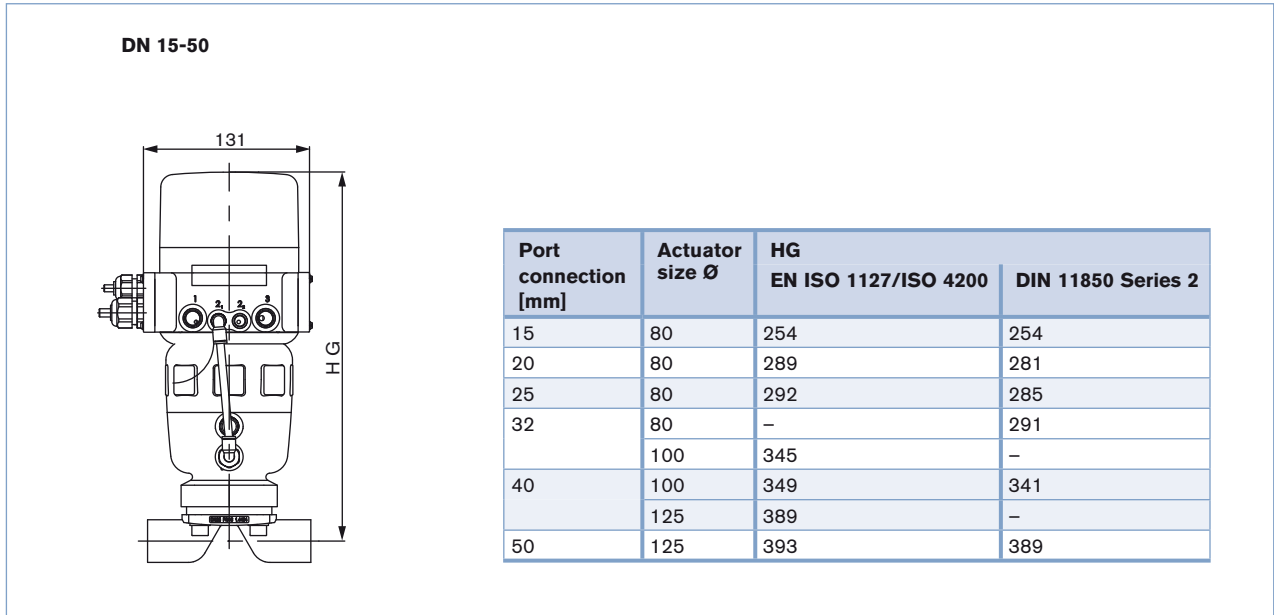


Port connection [mm]	Actuator size $\varnothing$ [mm]	HG [mm]
15	80	260
20	80	270
25	80	273
32	100	324
40	100	327
	125	366
50	125	372

Further dimensions see p. 5

Dimensions for valve system Continuous Classic Type 8802-DD [mm], continued

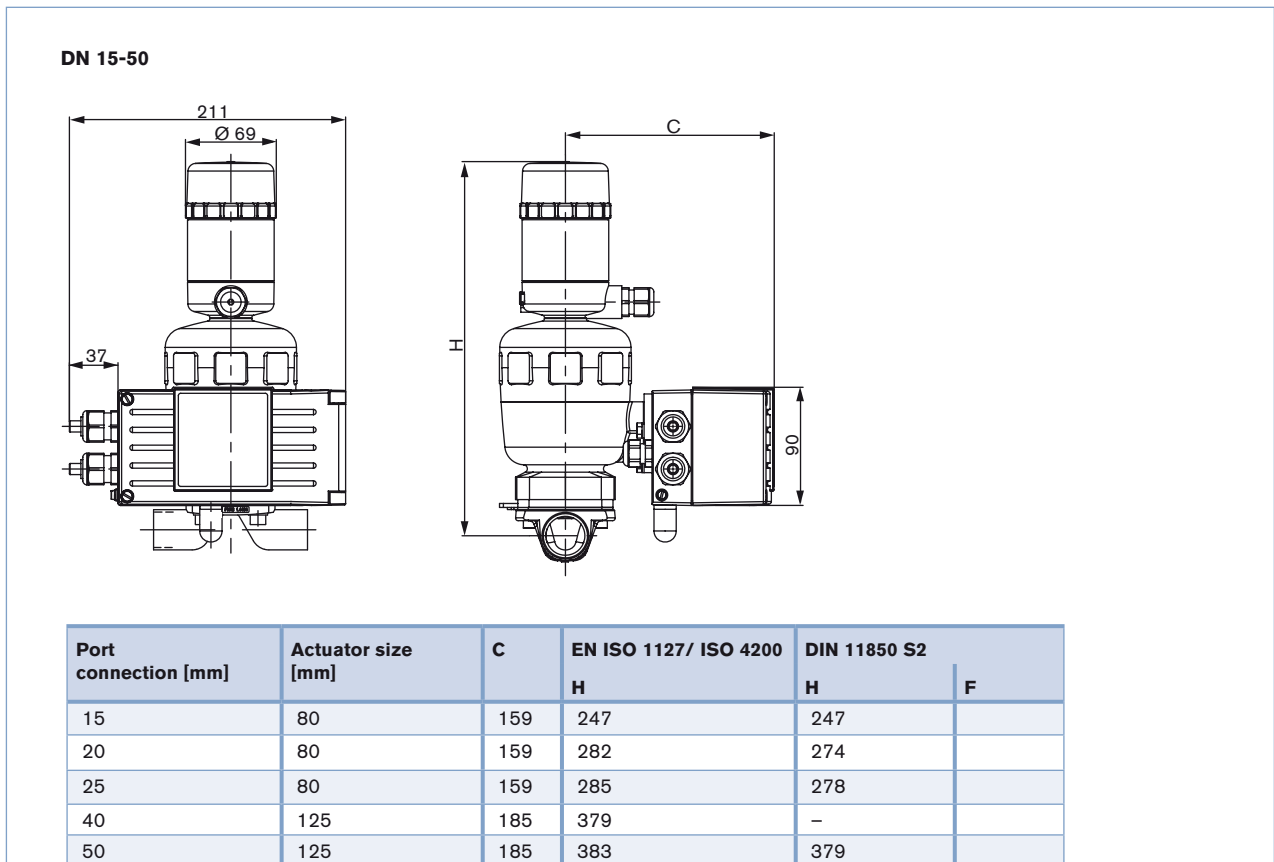
Dimensions valve system Continuous Classic Type 8802-DD-A with positioner TopControl Type 8630 [mm]



Further dimensions see p. 5

Dimensions for valve system Continuous Classic Type 8802-DD [mm], continued

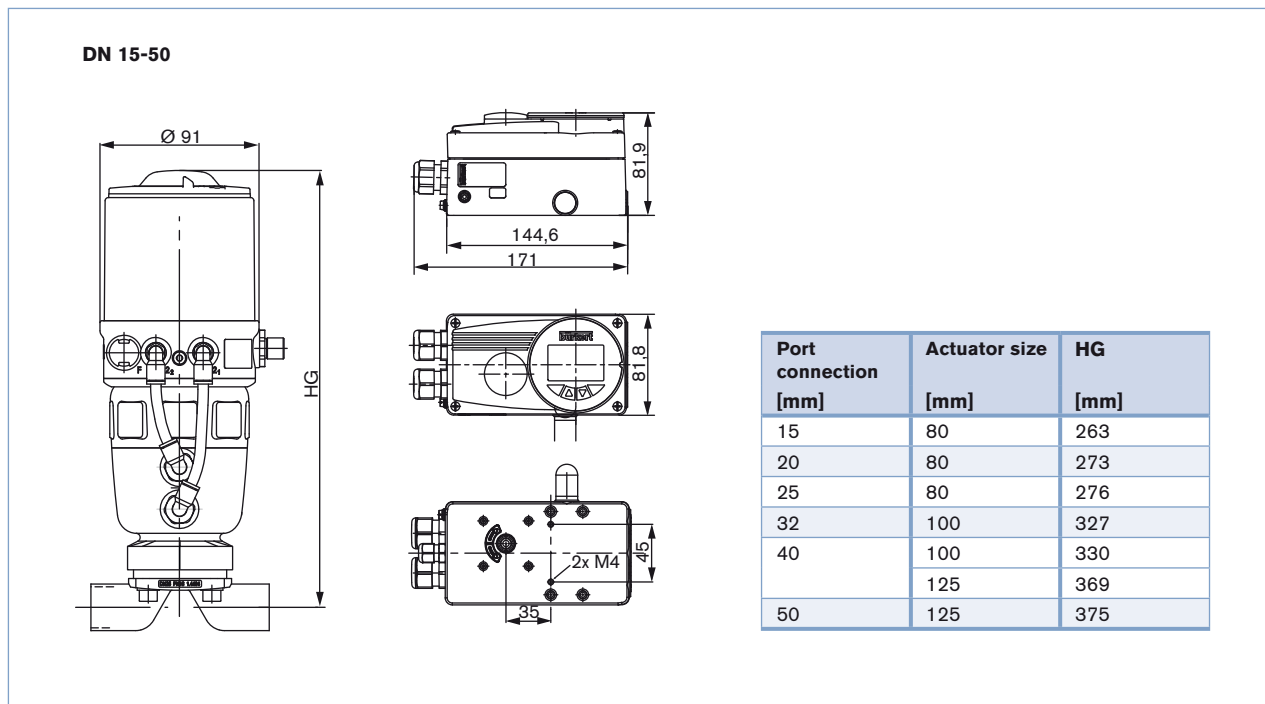
Dimensions valve system Continuous Classic 8802-DD-B with positioner SideControl Type 8635 [mm]



Further dimensions see p. 5

Dimensions for valve system Continuous Classic Type 8802-DD [mm], continued

Dimensions valve system Continuous Classic 8802-DD-P with Positioner SideControl Remote Type 8792 and Type 8802-DD-Q with Process Controller SideControl Remote Type 8793 [mm]



Further dimensions see p. 5

**Note**

You can fill out the fields directly in the PDF file before printing out the form.

**Valve system Continuous Classic Type 8802-DD - Request for quotation**

▶ Please fill out and send to your nearest Bürkert facility\* with your inquiry or order

Company	Contact person
Customer no.	Department
Address	Tel./Fax
Postcode/town	E-Mail

= mandatory fields to fill out

Quantity

Required delivery date

**Operating data**

Pipeline	DN	<input type="text"/>	PN	<input type="text"/>
Pipe material	<input type="text"/>			
<input checked="" type="checkbox"/> Process medium	<input type="text"/>			
<input checked="" type="checkbox"/> Type of media	<input type="checkbox"/> Liquid	<input type="checkbox"/> Steam	<input type="checkbox"/> Gas	
<input checked="" type="checkbox"/> Flow rate (Q, Q <sub>N</sub> , W) <sup>1)</sup>	min	standard	max	unit
<input checked="" type="checkbox"/> Temperature at valve inlet	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input checked="" type="checkbox"/> Absolute pressure at valve inlet	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

<sup>1)</sup> standard unit: Liquid Q = m<sup>3</sup>/h; Steam W = kg/h; Gas Q<sub>N</sub> = Nm<sup>3</sup>/h

**Valve features**

**Specification key**

automatically transferred from last page [go to page](#)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Surface finish (if not standard)

internal  μm external  μm

Pilot pressure








min.  max.

continued next page

\* To find your nearest Bürkert facility, click on the orange box →

[www.burkert.com](http://www.burkert.com)

Valve system Continuous Classic Type 8802-DD - Request for quotation, continued

Control unit features		
<input type="checkbox"/> Positioner TopControl Type 8692  <input type="checkbox"/> Process Controller TopControl Type 8693  <input type="checkbox"/> Positioner TopControl Basic Type 8694 		
<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p><b>Pneumatic function</b></p> <input type="checkbox"/> Single-acting    <input type="checkbox"/> Double-acting <p><b>Communication</b></p> <input type="checkbox"/> Profibus    <input type="checkbox"/> DeviceNet <p><b>Electrical connection</b></p> <input type="checkbox"/> Cable gland    <input type="checkbox"/> Multipol connection <p><b>Feedback</b></p> <input type="checkbox"/> 4-20 mA    <input type="checkbox"/> 4-20 mA + 2 binary outputs <p><b>Initiator</b></p> <input type="checkbox"/> Initiator <p><b>Please specify item no. if known:</b></p> <input style="width: 100%;" type="text"/> </div> <div style="width: 48%;"> <p><b>Pneumatic function</b></p> <input type="checkbox"/> Single-acting <p><b>Pilot air ports</b></p> <input type="checkbox"/> Push-in connector external ø 6 mm or 1/4" <input type="checkbox"/> Thread G 1/8" <p><b>Electrical connection</b></p> <input type="checkbox"/> Cable gland    <input type="checkbox"/> Multipol connection <p><b>Feedback</b></p> <input type="checkbox"/> 4-20 mA <p><b>Please specify item no. if known:</b></p> <input style="width: 100%;" type="text"/> </div> </div>		
<input type="checkbox"/> Positioner TopControl Type 8630 - 3-wire 	<input type="checkbox"/> Positioner SideControl Type 8635 - 2-wire 	<input type="checkbox"/> Positioner SideControl Remote Type 8792  <input type="checkbox"/> Process Controller SideControl Remote Type 8793 
<p><b>Power supply</b> 24 VDC</p> <p><b>Communication</b></p> <p>Setpoint / feedback analogue signal or via BUS</p> <input type="checkbox"/> Profibus DP <input type="checkbox"/> DeviceNet <p><input type="checkbox"/> <b>Positioner version</b></p> <p>Input 0/4 - 20 mA / 0-5/10 V</p> <p>Feedback</p> <input type="checkbox"/> 4 - 20 mA <i>or/and</i> <input type="checkbox"/> Binary <p><input type="checkbox"/> <b>PID Controller version</b><sup>3)</sup></p> <p>Input measuring signal 4 - 20 mA / Pt100 / Frequency</p> <p><b>Inductive proximity switch</b></p> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <p><b>Please specify item no. if known:</b></p> <input style="width: 100%;" type="text"/>	<p><input type="checkbox"/> <b>Standard</b></p> <p><input type="checkbox"/> ATEX/FM Zone 1</p> <p><input type="checkbox"/> <b>Zone 2/22</b></p> <p><b>Power supply</b> 24 VDC via setpoint or BUS</p> <p><b>Communication</b></p> <p>Setpoint / feedback analogue signal or via BUS    <input type="checkbox"/> Profibus PA</p> <p><input type="checkbox"/> <b>Positioner version</b></p> <p>Input 4 - 20 mA</p> <p>Feedback</p> <input type="checkbox"/> 4 - 20 mA <i>or/and</i> <input type="checkbox"/> Binary <p><input type="checkbox"/> <b>PID Controller version</b><sup>3)</sup></p> <p>Input measuring signal 4 - 20 mA</p> <p><b>Inductive proximity switch</b></p> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <p><b>Please specify item no. if known:</b></p> <input style="width: 100%;" type="text"/>	<p><b>Power supply</b> 24 VDC</p> <p><b>Communication</b></p> <input type="checkbox"/> Without <input type="checkbox"/> Profibus DPV1 <p><b>Feedback</b></p> <input type="checkbox"/> Analogue feedback + 2 binary outputs <input type="checkbox"/> 2 binary outputs <p><b>Electrical connection</b></p> <input type="checkbox"/> Cable gland <input type="checkbox"/> Multipol connection <p><b>Please specify item no. if known:</b></p> <input style="width: 100%;" type="text"/>

<sup>3)</sup> same setpoint for input and feedback signal as for Positioner version

**Certifications**

- Attestation of compliance with the order EN-ISO 10204 2.1 (Item-No. 440 788)
- Test report EN-ISO 10204 2.2 (Item-No. 803 722)
- EN161 (European Gas Device guideline)
- FDA - USP certificate

DTS 1000018379 EN Version: L Status: RL (released | freigegeben | validé) printed: 18.08.2011

Valve features, specification key

Example

A 15 AB VA SA42 C F NO05

Specification key

Please make a choice

CONTROL FUNCTION

A	normally closed by spring action
B	normally open by spring action
I	double acting

SIZE [mm]

15
20
25
32
40
50

SEAL MATERIAL

AB	EPDM in food quality
EA	PTFE/EPDM
FF	FKM
EU	advanced PTFE/EPDM in two pieces
ET	advanced PTFE (bonded on EPDM)

BODY MATERIAL

VA	Stainless steel 1.4404/316L
----	-----------------------------

VARIABLE CODES

Surface finish, internal	
NO05	Int. glass-beaded Ra=1.6 µm

ACTUATOR SIZE <sup>1)</sup>

F	ø 80 mm
G	ø 100 mm
H	ø 125 mm

<sup>1)</sup> see technical data on p. 2

ACTUATOR MATERIAL

C	PA	Standard
D	PPS	



PORT CONNECTION

Port connection weld end

Port conn. [mm]	EN ISO 1127/ISO 4200	DIN 11850 Series 2
15	SA42=21.3x1.6	SD42=19x1.5
20	SA43=26.9x1.6	SD43=23x1.5
25	SA44=33.7x2.0	SD44=29x1.5
32	SA45=42.4x2.0	SD45=35x1.5
40	SA46=48.3x2.0	SD46=41x1.5
50	SA47=60.3x2.0	SD47=53x1.5