



2-way Diaphragm Control Valve, stainless steel body, pneumatically operated, port connection DN15-50

- The perfect control valve for highest demands
- Hermetical separation of fluids from operator mechanism by diaphragm
- Self draining and zero dead volume
- Suitable for hygienic applications, conform to FDA/USP

Type 2731 GP can be combined with...



Type 8692/8693
Positioner / Process Controller TopControl



Type 8694
Positioner TopControl Basic



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 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		
Materials	Body Actuator	Stainless steel 1.4404, 316L PA polyamide (actuators Ø80-125 mm: PPS on request)
Diaphragm materials		EPDM (AB), PTFE/EPDM (EA) EPDM (AD), advanced PTFE/EPDM (EU) and FKM (FF) on request
Process media		For neutral gases and liquids, high purity, sterile, aggressive or abrasive fluids
Viscosity		Up to viscous
Surface finish (average surface finish) glass-beaded		Ra ≤ 1.6 µm
Medium temperature	EPDM (AB), PTFE/EPDM (EA) EPDM (AD), advanced PTFE/EPDM (EU) FKM (FF)	- 10 to + 130 °C (steam sterilisation + 140 °C for 60min) - 5 to + 143 °C (steam sterilisation + 150 °C for 60min) 0 to + 130 °C (not recommended for steam)
Ambient temperature		- 10 to + 60 °C (Actuators ≥ 175 mm - 10 to + 50 °C)
Control medium (for coupling with a positioner)		Instrumental air class 3 acc. DIN ISO 8573-1
Pilot pressure		5.5 to 7 bar Actuators Ø80 to 125 mm
Threads for pilot air		G ¼ stainless steel (St.st.)
Flow characteristic		see chart p. 2
Port connections	Weld end	▪ EN ISO 1127/ISO 4200 ▪ DIN 11850 Series 2
Installation		As required, preferably with actuator in upright position

Content



Valve specifications
Type 2731 GP

Technical data & ordering info.

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System Continuous CLASSIC
Type 8802-DD

Ordering info. & technical data

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Request for quotation
Type 8802-DD

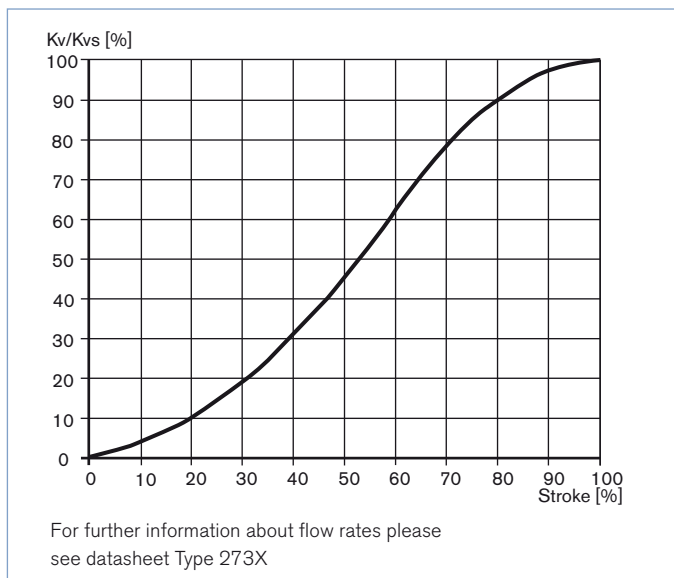
p.10-12

Technical data, *continued*

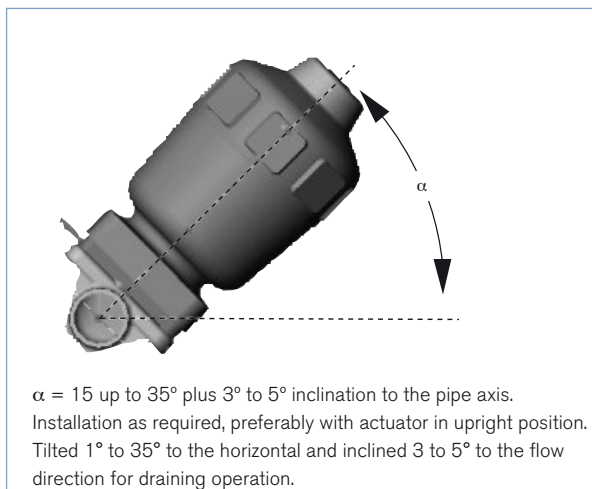
K_{vs} values and weights

Port connection DN [mm]	Actuator size Ø EN ISO 1127/ ISO 4200 [mm]	K_{vs} value EN ISO 1127/ ISO 4200 [m ³ /h]	Actuator size Ø DIN 11850 Series 2 [mm]	K_{vs} value DIN 11850 Series 2 [m ³ /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

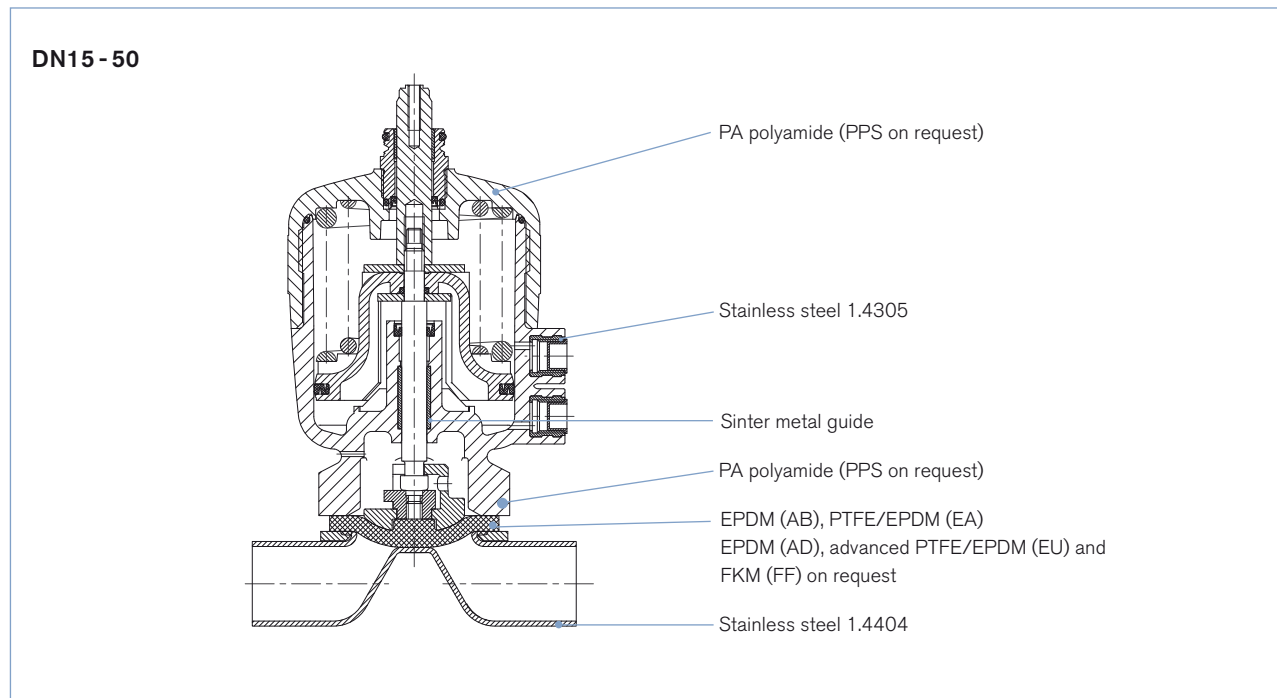
Flow characteristic



Recommendation for draining operation



Materials



Approvals/certifications

Suitability for foodstuffs / sterile applications



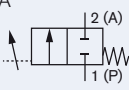












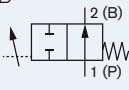












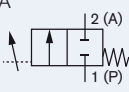












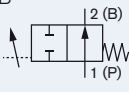












- The composition of the EPDM (AB), EPDM (AD), PTFE/EPDM (EA) and advanced PTFE (EU) diaphragms corresponds to the Code of Federal Regulations, published by the FDA (Food and Drug Administration, USA).



- The composition of the EPDM (AB), EPDM (AD), PTFE/EPDM (EA) and advanced PTFE (EU) diaphragms is suitable for the application with food and beverage (acc. to EC-Regulation 1935/2004/EC)
- The composition of the EPDM (AB), EPDM (AD), PTFE/EPDM (EA) und advanced PTFE (EU) diaphragms are approved acc. USP Class VI
- Approval according to TA-air (Port size DN4 - 50)

Ordering chart valve (other versions on request)

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

Control function	Port connection DN [mm]	Orrifice (Diaphragm size) [mm]	Actuator size Ø [mm]	K_{vs} value [m ³ /h]	Operating pressure max. ¹⁾ [bar]	Article no. weld end EN ISO 1127/ISO 4200	Article no. weld end DIN 11850 Series 2
EPDM diaphragm material (AB)							
A  Pneumatically operated control valve, normally closed by spring force, flow direction above seat	15	15	80	5	10	148313 	148318 
	20	15	80	4.5	10	-	148319 
		20	80	13	10	148314 	-
	25	20	80	13.5	10	-	148320 
		25	80	21	10	148315 	-
	32	25	80	18	10	-	148321 
		32	100	33	10	148316 	-
	40	32	100	24.5	10	-	148322 
		40	125	46	10	148317 	-
	50	40	125	37	10	-	148323 
50		125	70	8	147526 	-	
B  Pneumatically operated control valve, normally open by spring force, flow direction above seat	15	15	80	5	10	148324 	148330 
	20	15	80	4.5	10	-	148332 
		20	80	13	10	148325 	-
	25	20	80	13.5	10	-	148333 
		25	80	21	10	148326 	-
	32	25	80	18	10	-	148334 
		32	100	33	10	148327 	-
	40	32	100	24.5	10	-	148335 
		40	125	46	10	148328 	-
	50	40	125	37	10	-	148336 
50		125	70	7	148329 	-	
PTFE/EPDM diaphragm (EA)							
A  Pneumatically operated control valve, normally closed by spring force, flow direction above seat	15	15	80	5	10	148337 	149274 
	20	15	80	4.5	10	-	148344 
		20	80	13	10	148338 	-
	25	20	80	13.5	10	-	148345 
		25	80	21	7.5	148339 	-
	32	25	80	18	7.5	-	148346 
		32	100	33	8	148340 	-
	40	32	100	24.5	8	-	148347 
		40	125	46	10	148341 	-
	50	40	125	37	10	-	147708 
50		125	70	7	148342 	-	
B  Pneumatically operated control valve, normally open by spring force, flow direction above seat	15	15	80	5	9	148348 	148355 
	20	15	80	4.5	8.5	-	148356 
		20	80	13	8.5	148349 	-
	25	20	80	13.5	8	-	148357 
		25	80	21	8	148350 	-
	32	25	80	18	8	-	148358 
		32	100	33	10	148352 	-
	40	32	100	24.5	10	-	148359 
		40	125	46	10	148353 	-
	50	40	125	37	10	-	148360 
50		125	70	4	148354 	-	

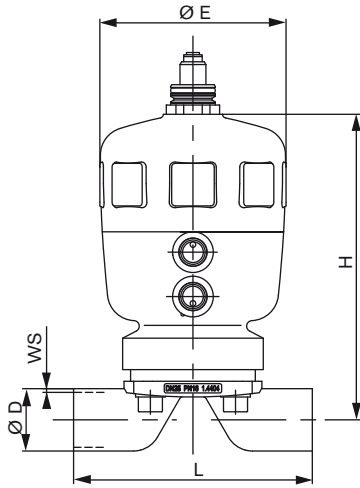
¹⁾ with a pilot pressure of 5.5 bar**i Further versions on request****Material**

Actuator: PPS (actuator size 80-125 mm)

Diaphragms EPDM (AD) and advanced PTFE/EPDM (EU) for steam sterilisation, FKM (FF)

Dimensions [mm]

DN15 - 50



Port connection DN [mm]	Actuator size Ø	L	EN ISO 1127/ISO 4200				DIN 11850 Series 2			
			Ø E	H	Ø D	WS	Ø E	H	Ø 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 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. 10

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

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

Click on the orange box "More info"... you will come to our website for the resp. product where you can download the data sheet.

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 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. 10

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 8635



Positioner Type 8792
 Process Controller Type 8793

Diaphragm control valve
with desired positioner



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

SideControl Type 8635, 2-wire, intrinsically safe

More info.



4 - 20 mA



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.



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.

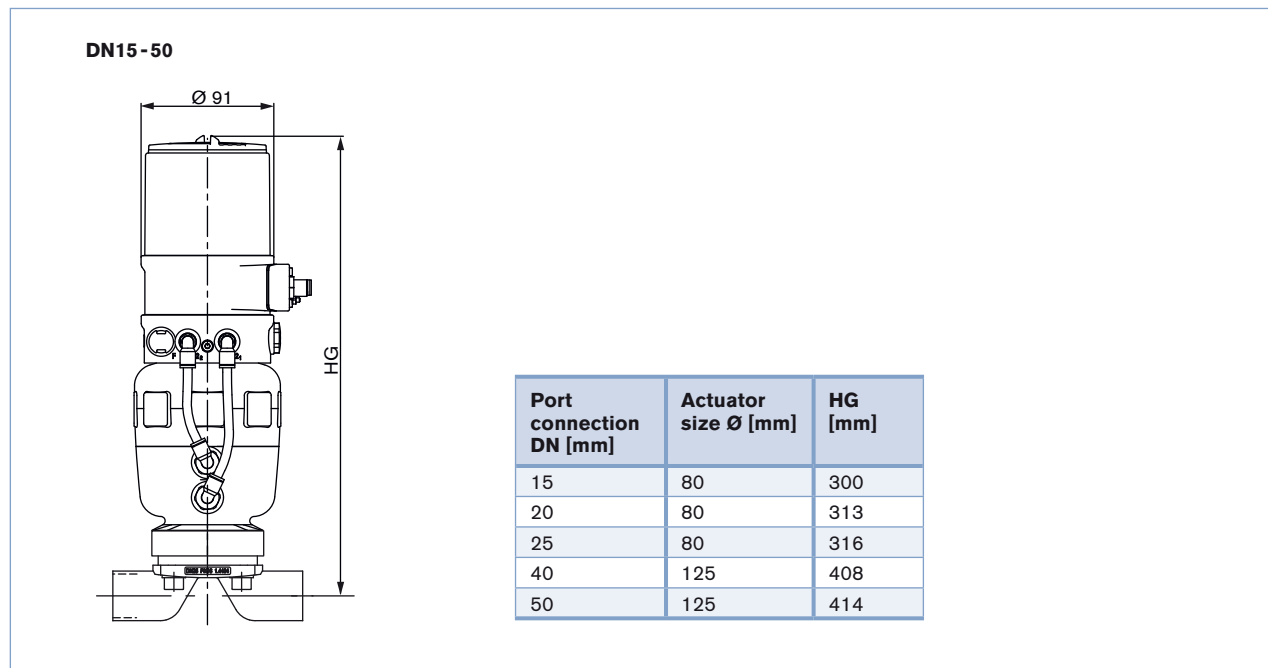
Main customer benefits are:

- 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

Click on the orange box "More info"... you will come to our website for the resp. product where you can download the data sheet.

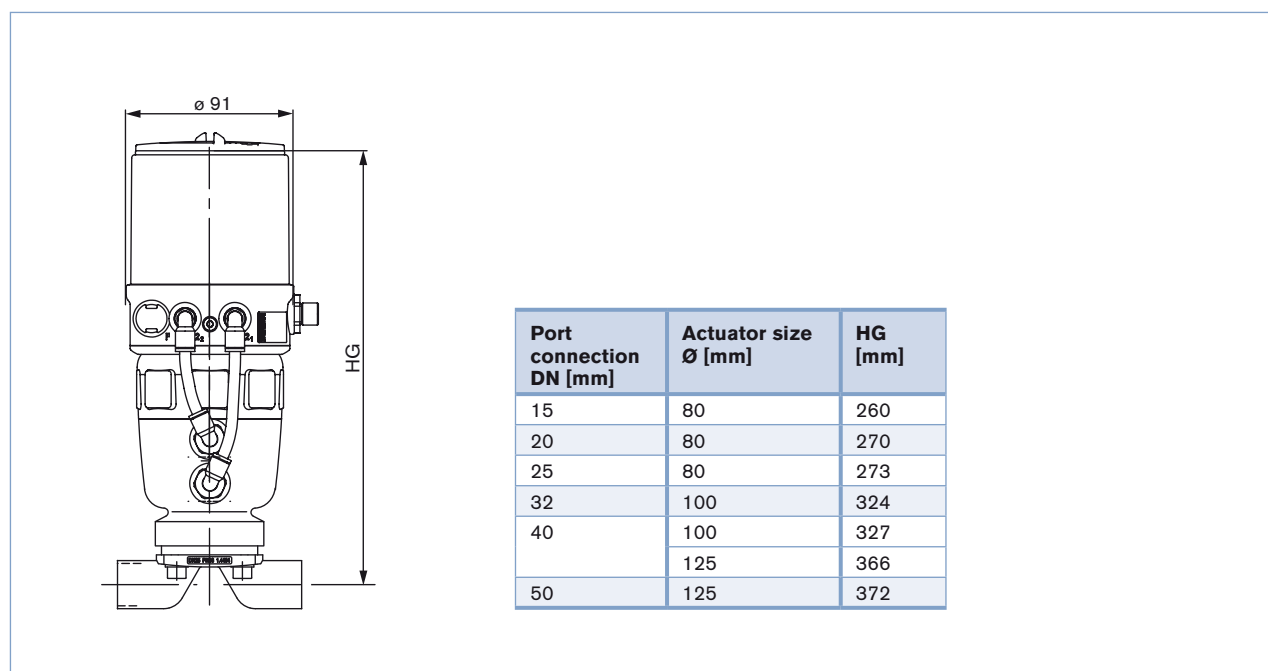
Dimensions for valve system Continuous CLASSIC Type 8802-DD [mm]

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]



Further dimensions see p. 5

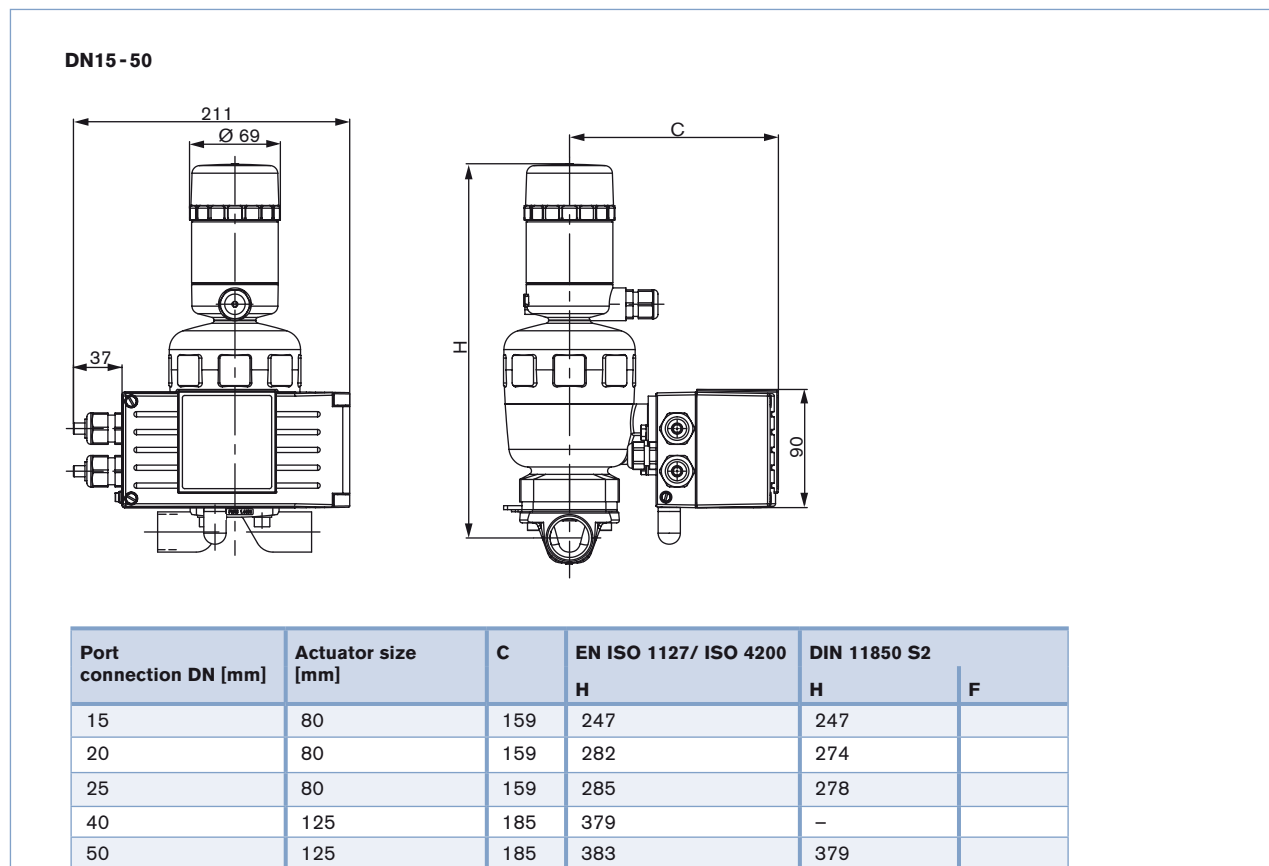
Dimensions valve system Continuous CLASSIC Type 8802-DD-L with positioner TopControl Basic Type 8694 [mm]



Further dimensions see p. 5

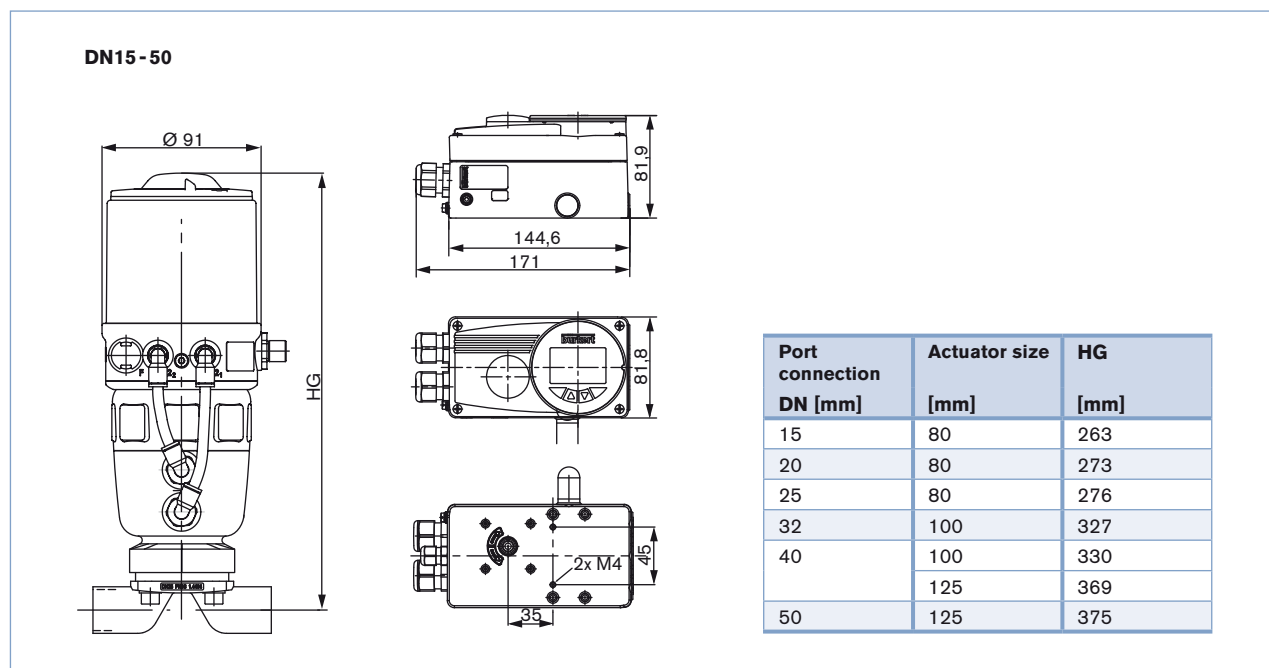
Dimensions for valve system Continuous CLASSIC Type 8802-DD [mm], *continued*

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



Further dimensions see p. 5

Dimensions 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 PN

Pipe material

Process medium

Type of media Liquid Steam Gas

Flow rate (Q, Q_N, W) ¹⁾ min standard max unit

Temperature at valve inlet

Absolute pressure at valve inlet

¹⁾ standard unit: Liquid Q = m³/h; Steam W = kg/h; Gas Q_N = Nm³/h

Valve features

Specification key

automatically transferred from last page

Surface finish (if not standard)




internal μm external μm




Pilot pressure

min. max.

Continued on next page →

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 	
<p>Pneumatic function</p> <input type="checkbox"/> Single-acting <input type="checkbox"/> Double-acting	<p>Pneumatic function</p> <input type="checkbox"/> Single-acting
<p>Communication</p> <input type="checkbox"/> Profibus <input type="checkbox"/> DeviceNet	<p>Pilot air ports:</p> <input type="checkbox"/> Push-in connector external Ø 6 mm or ¼" <input type="checkbox"/> Thread G ½"
<p>Electrical connection</p> <input type="checkbox"/> Cable gland <input type="checkbox"/> Multipol connection	<p>Electrical connection</p> <input type="checkbox"/> Cable gland <input type="checkbox"/> Multipol connection
<p>Feedback</p> <input type="checkbox"/> 4-20 mA <input type="checkbox"/> 4-20 mA + 2 binary outputs	<p>Feedback</p> <input type="checkbox"/> 4-20 mA
<p>Initiator</p> <input type="checkbox"/> Initiator	
<p>Please specify article no. if known:</p> <input type="text"/>	<p>Please specify article no. if known:</p> <input type="text"/>

<input type="checkbox"/> Positioner SideControl Remote Type 8792 	<input type="checkbox"/> Process Controller Side-Control Remote Type 8793 	<input type="checkbox"/> Positioner SideControl Type 8635 – 2-wire 
<p>Power supply 24 V DC</p> <p>Communication</p> <input type="checkbox"/> without <input type="checkbox"/> Profibus DPV1	<p>Power supply 24 V DC</p> <input type="checkbox"/> Standard <input type="checkbox"/> ATEX/FM Zone 1 <input type="checkbox"/> Zone 2/22	<p>Power supply 24 V DC</p> via Setpoint or BUS
<p>Feedback</p> <input type="checkbox"/> Analogue feedback + 2 binary outputs <input type="checkbox"/> 2 binary outputs	<p>Communication</p> Setpoint / feedback analogue signal or via BUS <input type="checkbox"/> Profibus PA	<p>Positioner version</p> Input 4-20 mA Feedback <input type="checkbox"/> 4-20 mA <i>or/and</i> <input type="checkbox"/> Binary
<p>Electrical connection</p> <input type="checkbox"/> Cable gland <input type="checkbox"/> Multipol connection	<p>PID Controller version³⁾</p> Input measuring signal 4-20 mA	<p>Inductive proximity switch</p> <input type="checkbox"/> 1 <input type="checkbox"/> 2
<p>Please specify article no. if known:</p> <input type="text"/>	<p>Please specify article no. if known:</p> <input type="text"/>	

³⁾ same setpoint for input and feedback signal as for Positioner version

Certifications
<input type="checkbox"/> Attestation of compliance with the order EN-ISO 10204 2.1 (Article no. 440788)
<input type="checkbox"/> Test report EN-ISO 10204 2.2 (Article no. 803722)
<input type="checkbox"/> EN161 (European Gas Device guideline)
<input type="checkbox"/> FDA - USP certificate

Comments

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

ORRIFICE (Diaphragm size) [mm]

15
20
25
32
40
50

SEAL MATERIAL

AB	EPDM in food quality
AD	EPDM
EA	PTFE/EPDM
FF	FKM
EU	advanced PTFE/EPDM in two pieces

BODY MATERIAL

VA	Stainless steel 1.4404/316L
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VARIABLE CODES

Surface finish, internal

NO05	Int. glass-beaded Ra=1.6 µm
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ACTUATOR SIZE¹⁾

F	Ø 80 mm
G	Ø 100 mm
H	Ø 125 mm

¹⁾ 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=21.3 × 1.6	SD42=19 × 1.5
20	SA43=26.9 × 1.6	SD43=23 × 1.5
25	SA44=33.7 × 2.0	SD44=29 × 1.5
32	SA45=42.4 × 2.0	SD45=35 × 1.5
40	SA46=48.3 × 2.0	SD46=41 × 1.5
50	SA47=60.3 × 2.0	SD47=53 × 1.5