



## 2/2-way Angle-Seat Valve with NPT ends for media up to 356 °F (180 °C) 1/2" – 2 1/2"

- High flow rates
- Very high cycle life
- Long life alternative to ball valves
- Threaded end body
- Suitable for 150 PSI steam
- Deliverable with flow direction below or above seat
- Normally closed, normally open; or double-acting

Type 2000 Angle-Seat can be combined with...



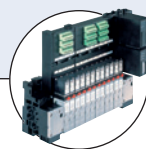
**Type 8691**  
Control head



**Type 8690**  
Pneum. control unit with feedback



**Type 1062**  
Electrical position feedback



**Type 8640/8644**  
Valve block

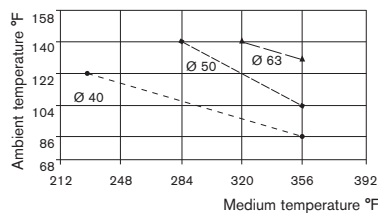


**Type 6012/6014 P**  
Pilot valve

The externally piloted angle-seat valve is operated with a single or double-acting piston actuator. The actuator is available in two different materials, PA and PPS depending on the ambient temperature. The reliable self-adjusting packing gland provides high sealing integrity. High flow rates are attained with the gunmetal or cast stainless steel 2-way body. These maintenance-free and robust valves can be retrofitted with a comprehensive range of accessories for position indication, stroke limitation or manual override.

For valves with port connection clamp and weld end please see separate datasheets.

<sup>1)</sup> **Note:** For PA actuators in the sizes 40, 50 and 63, the combination of max. medium temperature and max. ambient temperature is as shown in the following chart



Technical data	
<b>Orifice</b>	1/2" to 2 1/2" (DN 13 to 65)
<b>Body materials</b>	Gunmetal, cast stainless steel 316L
<b>Actuator material</b>	PA or PPS
<b>Seal material</b>	PTFE (NBR, FKM and EPDM on request)
<b>Medium</b>	Water, alcohol, oils, fuel, hydraulic fluids, salt solution, alkali solutions, organic solvents, steam
<b>Viscosity</b>	max. 600 mm <sup>2</sup> /s
<b>Packing gland</b> (with silicone grease)	PTFE V-rings with spring compensation
<b>Medium temperature<sup>1)</sup></b>	14 °F to 356 °F (-10 °C to +180 °C) with PTFE seal
<b>Ambient temperature</b>	
PA actuator <sup>1)</sup>	14 °F to 140 °F (-10 °C to +60 °C)
PPS actuator <sup>1)</sup> Ø 40-80	41 °F to 284 °F (+5 °C to +140 °C)
PPS actuator <sup>1)</sup> Ø 100-125	41 °F to 194 °F (+5 °C to +90 °C), briefly up to 284 °F (+140 °C)
<b>Installation</b>	As required, preferably with actuator in upright position
<b>Control medium</b>	Neutral gases, air
<b>Max. pilot pressure</b>	
Actuator size Ø 40 - 80	PA and PPS 145 PSI
Actuator size Ø 100	PA 145 PSI
Actuator size Ø 100	PPS 100 PSI
Actuator size Ø 125	PA and PPS 100 PSI
<b>Port connection</b>	G 3/8 to G 2 1/2 (NPT on request)

### Content



#### Valve specifications

Type 2000 threaded port



#### System spec. On/Off Classic

Type 8801-YA/  
8803-YA

#### Request for quotation

Type 8801-YA/  
8803-YA

Technical data & ordering info.

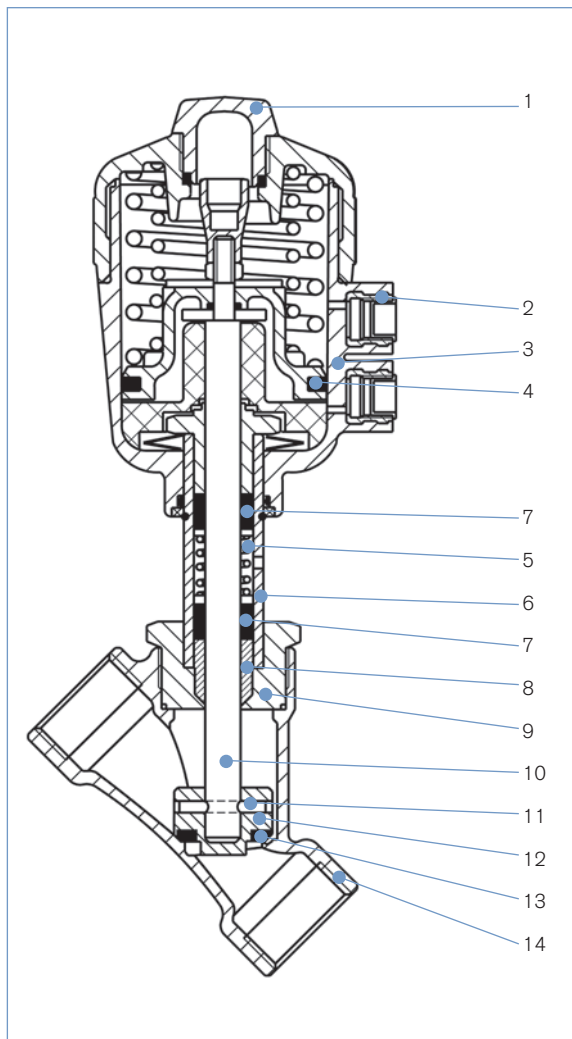
p. 1-8

Ordering info. & technical data

p. 9-12

p. 13

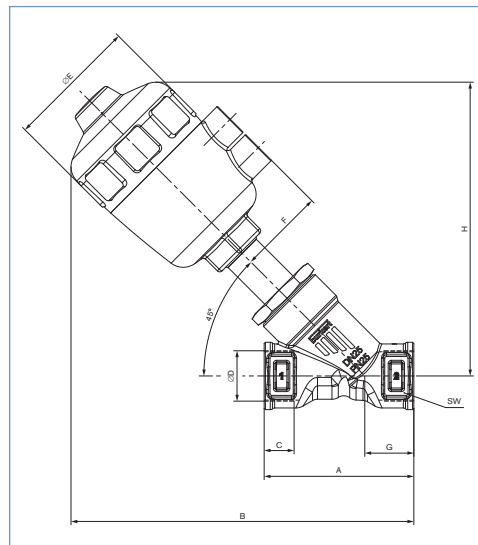
Materials Type 2000 threaded port



	<b>Gunmetal body</b>	<b>Cast stainless steel body</b>
<b>1</b> Transparent cap	PC (with PPS actuator; PSU)	PC (with PPS actuator; PSU)
<b>2</b> Pilot air ports	Brass	Stainless steel 1.4305
<b>3</b> Actuator	PA, PPS	PA, PPS
<b>4</b> Piston seal	NBR (with PPS actuator; FKM)	NBR (with PPS actuator; FKM)
<b>5</b> Spring	Stainless steel 1.4310	Stainless steel 1.4310
<b>6</b> Tube	Brass CuZn39Pb3	Stainless steel 1.4401
<b>7</b> V-Seals	PTFE (FKM on request)	PTFE (FKM on request)
<b>8</b> Wiper	PTFE	PTFE
<b>9</b> Nipple	Brass CuZn	Stainless steel 1.4401
<b>10</b> Spindle	Stainless steel 1.4021	Stainless steel 1.4401
<b>11</b> Pin	Stainless steel 1.4401	Stainless steel 1.4401
<b>12</b> Swivel plate	Brass CuZn36Pb1.5	Stainless steel 1.4401
<b>13</b> Seal	PTFE (NBR, FKM, EPDM on request)	PTFE (NBR, FKM, EPDM on request)
<b>14</b> Valve body	Gunmetal GCuSn5ZnPb2%Ni	Stainless steel 316L

Dimensions [mm]

DN Orifice	Threaded Port Body				All bodies			
	Ø D	A	B	C	Actuator size Ø	H	E Ø	P
13/15	NPT 1/2	65	163	10.3	50	140	64	G 1/4
20	NPT 3/4	75	171	14	50	144	64	G 1/4
			198	14	63	171	80	
25	NPT 1	90	181	16.8	50	152	64	G 1/4
			206	16.8	63	177	80	
			228	16.8	80	198	101	
32	NPT 1 1/4	110	219	17.3	63	183	80	G 1/4
			240	17.3	80	205	101	
			292	17.3	100	255	127	
40	NPT 1 1/2	120	222	17.3	63	188	80	G 1/4
			244	17.3	80	209	101	
			295	17.3	100	260	127	
			324	17.3	125	289	153	
50	NPT 2	150	250	20	63	205	80	G 1/4
			270	20	80	225	101	
			316	20	100	271	127	
			346	20	125	301	153	
65	NPT 2 1/2	185	296	22	80	239	101	G 1/4
			344	22	100	287	127	
			372	22	125	315	153	



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Ordering chart for valves with FLOW DIRECTION BELOW SEAT  
Actuator material PA (polyamide) with threaded port

Control function	Orifice	Port Connection Threaded port NPT	Actuator size Ø [mm]	C <sub>v</sub> value	Operating pressure up to 365 °F [PSI]	Minimum pilot pressure [PSI]	Item no. Bronze body	Item no. St. st. body
<p><b>A</b> 2/2-way, NC by spring action</p> <p>Normally closed</p>	1/2" (13)	1/2	50	4.9	232	56.5	463 571	463 613
	3/4" (20)	3/4	50	9.9	160	56.5	463 572	463 614
			63	10.4	232	65.3	463 573	463 615
	1" (25)	1	63	20.9	160	65.3	463 574	463 616
			80	20.9	232	72.5	463 575	463 617
			63	29.0	87	65.3	464 576	464 577
	1 1/4" (32)	1 1/4	80	31.3	203	72.5	463 576	463 618
			80	44.1	130	72.5	463 577	463 619
			100	46.4	181	63.8	464 014	464 015
			125	46.4	232	46.4	463 578	463 620
	2" (50)	2	100	63.8	104	63.8	454 610	454 624
			125	63.8	145	46.4	454 785	454 789
			100	104.4	75	46.4	454 611	454 625
2 1/2" (65)	2 1/2	125	104.4	150	72.5	462 656	462 657	

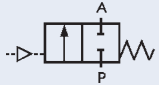
B 2/2-way valve, open by spring force, available on request  
Other pressure ranges, circuit functions, flow from above, PPS actuators and accessories available on request

## Technical data

Flow direction above seat (only for gases and steam)	
<b>Media</b>	Gaseous media and steam
<b>Other technical data</b>	Please see information for flow direction below seat
<b>Attention!</b>	Valves with flow direction above seat are only conditionally usable for liquid media. There is a danger of waterhammer!

## Ordering chart for valves WITH FLOW DIRECTION ABOVE THE SEAT

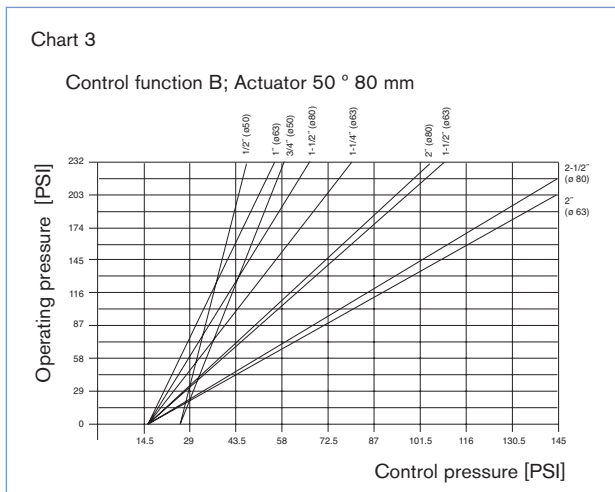
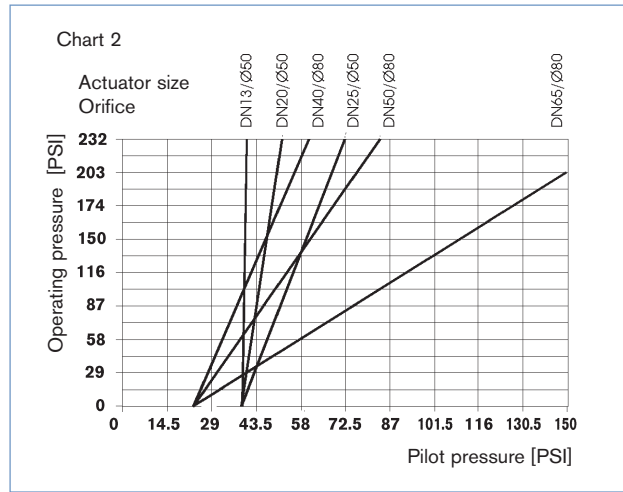
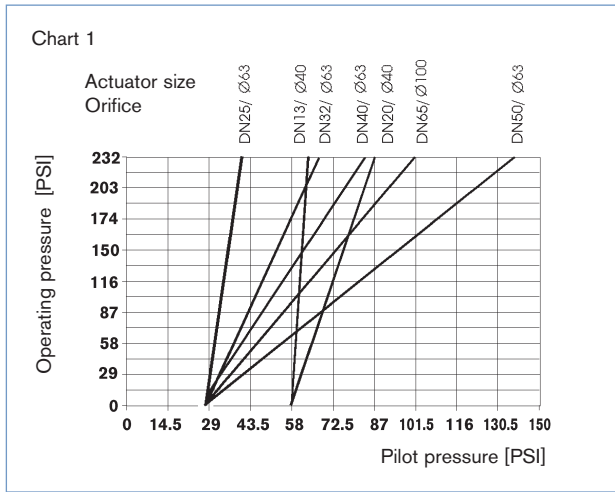
Actuator material PA (polyamide) with pilot pressure depending on operating pressure according to Charts 1 and 2

Control function	Orifice	Port Connection Threaded port NPT	Actuator size Ø [mm]	C <sub>v</sub> value	Operating pressure up to 365 °F [PSI]	Item no. bronze body media inserts	Item no. St. st. body
<b>A</b> 2/2-way, NC by spring action  Normally closed	1/2" (13)	1/2	50	4.9	232	463 585	463 627
	3/4" (20)	3/4	50	9.9	232	463 587	463 629
	1" (25)	1	63	20.9	232	463 589	463 631
	1 1/4" (32)	1 1/4	63	29	232	463 590	463 632
	1 1/2" (40)	1 1/2	63	40.6	232 <sup>1)</sup>	463 591	463 633
			80	44.1	232	464 578	464 579
	2" (50)	2	63	56.8	232 <sup>1)</sup>	454 632	454 641
			80	60.3	232 <sup>1)</sup>	454 633	454 642
2 1/2" (65)	2 1/2	80	89.3	203 <sup>1)</sup>	454 634	454 643	

<sup>1)</sup> Pilot pressure >80 PSI at maximum system pressure.

Other pressure ranges, circuit functions, PPS actuators and accessories on request

Pressure charts 1 and 2 with circuit function A and flow direction above the seat (air pressure required to lift off the seat)



Pilot valve according to actuator size	Voltage	Item no.
<b>3/2-way pilot valves Type 6012 P/6014 P with banjo mounting; 1/4" NPT customer air connection</b>		
Type 6012 P for actuator Ø 50 and 63 mm	024 V/DC	428 565
$C_v = .05$	120 VAC/60 Hz	428 567
Type 6014 P for actuator Ø 50 to 125 mm	024 V/DC	429 134
$C_v = .13$	120 VAC/60 Hz	429 136

Fitting type	Shape	Material	Item no.
Male G 1/4 x 1/4 NPT female	Straight	Nickel plated brass	98162754
Male G 1/4 x 1/4" tube push connection	Swivel elbow	Nickel plated brass	98163251

Options and accessories (on request)

- Circuit function I (double-acting actuator) and B (spring-return normally-open)
- PPS actuator
- Electrical position feedback, Type 1060 and 1062
- Magnetic-inductive proximity sensors, Type 1071
- Stroke limitation max. and min./max.
- Manual actuator
- NAMUR adapter for pilot valves

**Note:** Please request the Accessories data sheet 2000 (Accessories for valve series 2000 – 2031).

## Technical data

## Ordering chart for valves WITH FLOW DIRECTION BELOW THE SEAT, NORMALLY OPEN

Actuator material PA (polyamide) with pilot pressure depending on operating pressure according to Chart 3

Control function	Orifice	Port Connection Threaded port NPT	Actuator size Ø [mm]	C <sub>v</sub> value	Operating pressure up to 365°F [PSI]	Item no. bronze body	Item no. St. st. body
B 2/2-way, NO by spring action	1/2" (13)	1/2	50	4.9	232	463 580	463 622
	3/4" (20)	3/4	50	9.9	232	463 581	463 623
Normally open	1" (25)	1	63	20.9	232	464 494	464 506
	1 1/4" (32)	1 1/4	63	29.0	232	463 583	463 625
	1 1/2" (40)	1 1/2	63	40.6	232 <sup>1)</sup>	463 584	463 626
			80	44.1	232	464 016	464 017
	2" (50)	2	63	56.8	188 <sup>1)</sup>	454 617	454 602
			80	60.3	232 <sup>1)</sup>	454 787	454 791
2 1/2" (65)	2 1/2	80	89.3	217 <sup>1)</sup>	454 618	454 603	

<sup>1)</sup> Pilot pressure >80 PSI at maximum system pressure.

Other pressure ranges, circuit functions, PPS actuators and accessories on request

Connections NPT	Orifice [inch]	C <sub>v</sub>	Max. Operating Pressure <sup>2)</sup> } → Differential Pressure <sup>1)</sup>		Required Control Pressure CFA [PSI]	Weight [lbs.]	Actuator Size [mm] ø DIA
			CFA [PSI]	CFB [PSI]			
1/2	1/2"	4.9	232		56	1.8	50
				232			50
3/4	3/4"	9.9	160		56	2.2	50
				232			50
1	1"	20.9	160		65	4.0	63
				232			63
1 1/4	1 1/4"	31.3	203		73	6.8	80
		29.0		232			63
1 1/2	1 1/2"	44.1	130		73	7.7	80
		40.6		232			63
		46.4	181		64	12.4	100
		44.1		232			80
2	2"	63.8	104		64	15.4	100
		56.8		188			63
		63.8	145		47	20.7	125
		60.3		232			80
2 1/2	2 1/2"	104.4	150		73	24.3	125
		89.3		217			80

<sup>1)</sup> Higher differential pressures by other combinations of actuators on request.<sup>2)</sup> Max. operating pressure with steam -> 150 PSI (365°F).

## Ordering chart for valves

Ordering chart for valves WITH FLOW DIRECTION ABOVE THE SEAT, High temperature version, steam @ 150 PSI  
Actuator material PPS (polyphenylsulfide) with pilot pressure depending on operating pressure according to Charts 1 and 2

Control function	Orifice	Port Connection Threaded port NPT	Actuator size Ø [mm]	C <sub>v</sub> value	Pilot air pressure @ 150 PSIG line pressure	Item no. bronze body	Item no. St. st. body
A 2/2-way, NC by spring action	1/2" (13)	1/2	50	4.9	<60	463 606	463 648
	3/4" (20)	3/4	50	9.9	<60	463 607	463 649
	1" (25)	1	63	20.9	<60	463 609	463 651
	1 1/4" (32)	1 1/4	63	29.0	<60	463 610	463 652
	1 1/2" (40)	1 1/2	63	40.6	66	463 611	463 653
	2" (50)	2	80	60.3	66	457 368	460 434
	2 1/2" (65)	2 1/2	100	104.4	78	462 743	462 742

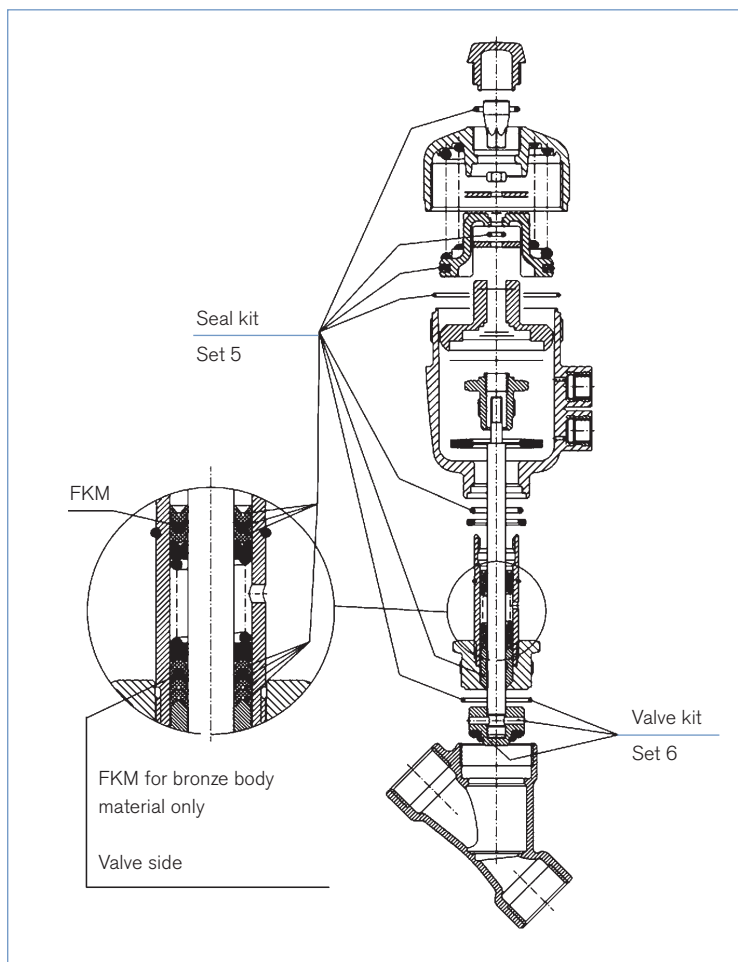
**Angle seat valve spare part sets** (kits contain a valve seat or sealing seat set; see drawing)

**SET 6 valve seat kit, 2/2-way valve with bronze body**

DN	Item no. PTFE seal	Item no. FKM seal
1/2" (13)	010 984	011 065
3/4" (20)	010 986	011 070
1" (25)*	010 988	011 085
1" (25)**	159 635	-
1 1/4" (32)	011 044	011 088
1 1/2" (40)	011 046	011 107
2" (50)	011 390	011 109
2 1/2" (65)	011 064	011 120

**SET 6 valve seat kit, 2/2-way valve with stainless steel body**

DN	Item no. PTFE seal	Item no. FKM seal
1/2" (13)	011 134	011 234
3/4" (20)	011 171	011 253
1" (25)*	011 202	011 259
1" (25)**	160 737	-
1 1/4" (32)	011 208	011 262
1 1/2" (40)	011 209	011 267
2" (50)	011 214	011 269
2 1/2" (65)	011 216	011 307



\* Actuator size 50, Letter code D.

\*\* Actuator size 63/80, Letter code E/F.

**SET 5 Sealing set for PA-actuator**

Actuator size Ø	For Valve sizes	Item no. bronze body	Item no. stain-less steel body
C 1 1/2" (40)	DN 13/20	643 438	643 438
D 2" (50)	DN 13/20/25	011 308	011 369
E 2 1/2" (63)	DN 25 - 50	011 334	011 372
F 3" (80)	DN 25 - 65	011 366	001 902
G 4" (100)	DN 32 - 65	007 763	011 386
H 5" (125)	DN 40 - 65	011 368	011 387

**Set 5 sealing set for PPS-actuator**

Actuator sizes Ø	For Valve sizes	Item no. bronze body	Item no. stain-less steel body
C 1 1/2" (40)	DN 13/20	643 536	643 536
D 2" (50)	DN 13/20/25	011 373	011 388
E 2 1/2" (63)	DN 25 - 50	007 765	007 766
F 3" (80)	DN 25 - 65	011 375	007 767
G 4" (100)	DN 32 - 65	011 374	011 389
H 5" (125)	DN 40 - 65	007 764	007 768



## Ordering information for valve system On/Off Classic Type 8801-YA/8803-YA

A valve system On/Off Classic Type 8801-YA/8803-YA consists of an angle-seat valve Type 2000 and a valve actuation system control head Type 8691, a pneumatic control unit Type 8690 or an electrical position feedback Type 1062 (see separate datasheets).

For the configuration of further valve systems please use the "Request for quotation" on page 13

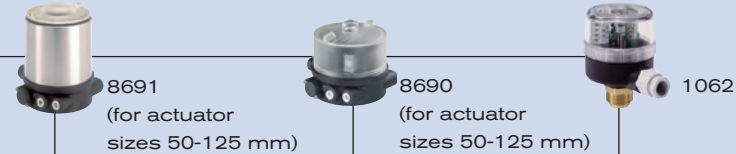
You order two components and receive a complete assembled and certified valve.

### Ordering the valve system On/Off Classic Type 8801-YA/8803-YA

#### Angle-seat valve Type 2000 threaded port



#### Control units



#### Angle-seat valve with desired control unit

For port connections weld end and clamp, see separate datasheets



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.

#### Control head Type 8691



The new generation of integrated control heads for combination with actuators from the process valve series Type 20xx/21xx is specially designed for the requirements of hygienic process environments. The intelligent control head, Type 8691, detects the valve position by means of a contact-free analog position sensor circumventing excessive wear of mechanical parts. Single or double-acting actuators are controlled via the integral pilot valve. Communication interfaces AS-Interface and DeviceNet are available as options.

##### Main customer benefits:

- Automatic setting of the control head at the push of a button
- Even under dirty or dark environments, a clearly visible status display due to powerful LEDs
- Monitoring and diagnosis: Process valve systems with field bus interface used in modern plant processes
- Integrated pilot valve with manual actuation
- Air intake filter enhances the process valve system availability
- Simple and reliable actuator adaptations allowing additional actuators of the process valve series, Type 20xx or actuators from other manufacturers to be used

#### Pneumatic control unit Type 8690



The new generation of integrated controllers for combination with actuators from the process valve series Type 20xx/21xx is specially designed for the requirements of hygienic process environments.

The pneumatic control unit Type 8690 combines electrical position feedback and pneumatic control for single or double-acting actuators, and is also optionally available as an intrinsically safe model to ATEX.

##### Main customer benefits:

- Integrated pilot valve with manual actuation
- Air intake filter enhances the process valve system availability
- Simple and reliable actuator adaptations allowing additional actuators of the process valve series, Type 20xx or actuators from other manufacturers to be used

#### Electrical Position Feedback Type 1062



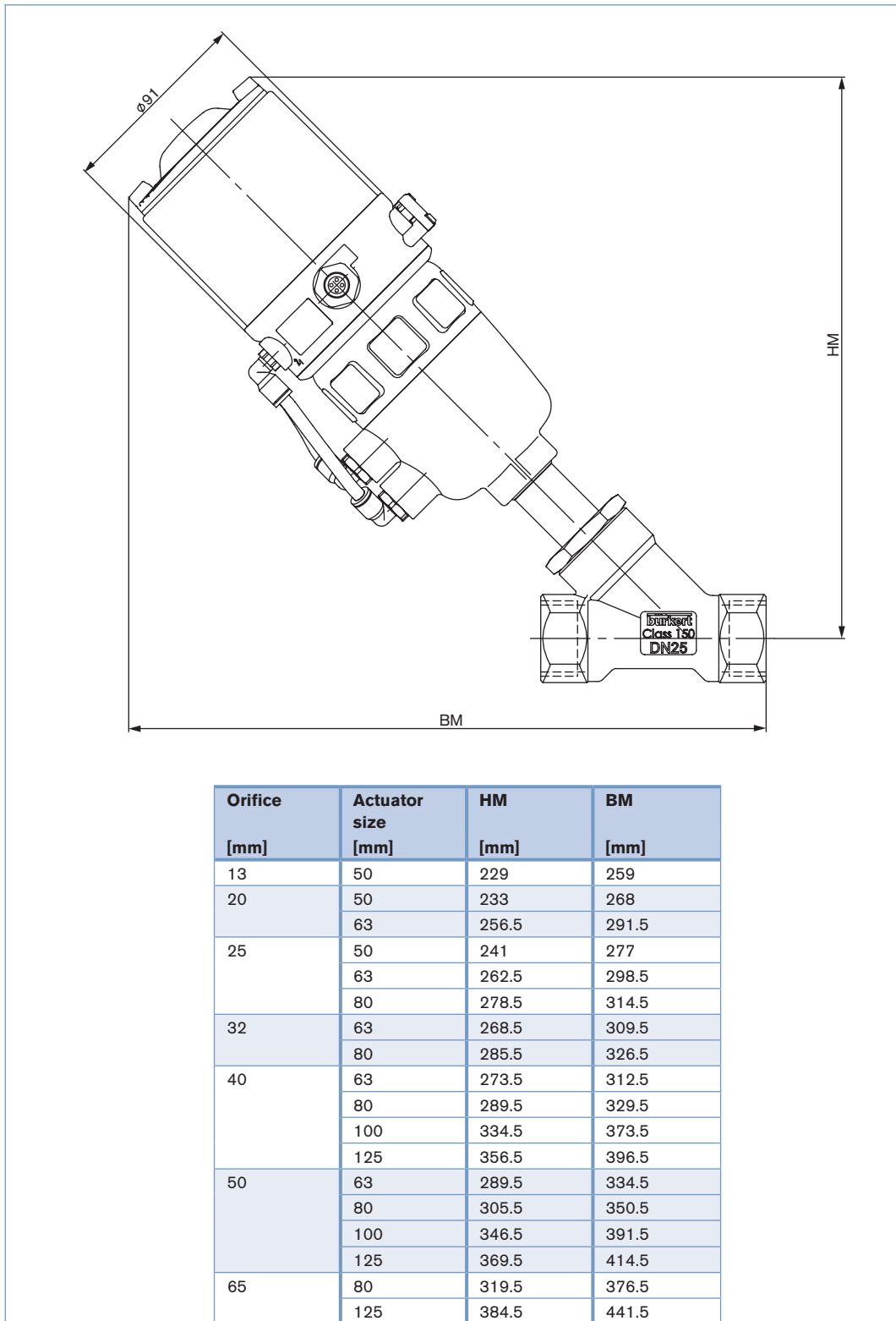
Positions are electrically signaled according to switch type:

- open,
- closed or
- open and closed.

LEDs provide optical position indication (except for Namur Ex-version). Mechanical or inductive switches are housed in a compact splash-proof enclosure. The position indicator can be rotated 360° and is easily fitted to the valve. Trip cams do not require adjustment. The unit only needs to be screwed on and connected to be ready for operation.

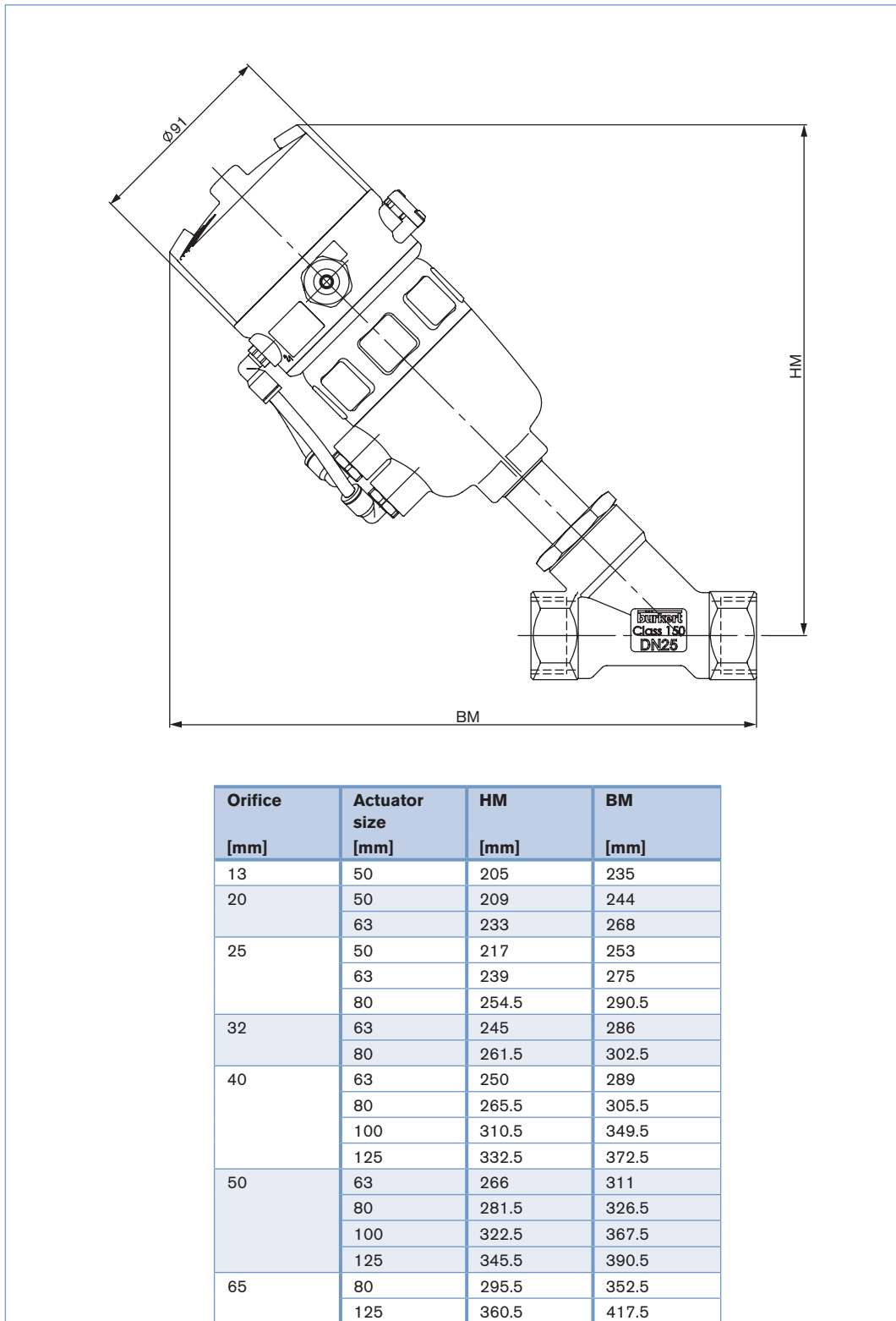
**Dimensions for valve system On/Off Classic Type 8801-YE-H [mm]**

**Dimensions valve system On/Off Classic Type 8801-YA-H with TopControl Type 8691 [mm]**



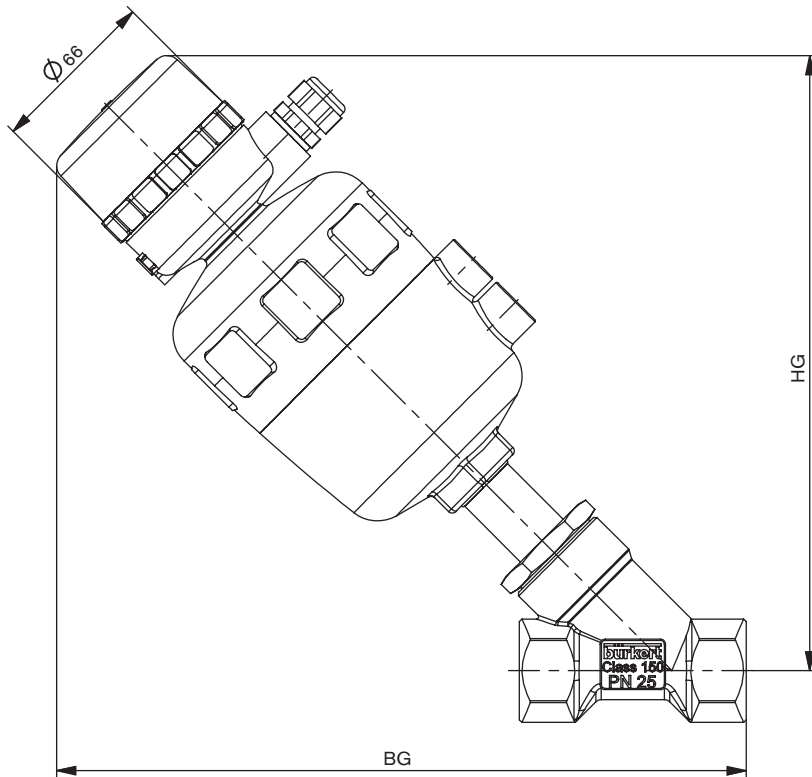
**Dimensions for valve system On/Off Classic Type 8801-YE-K [mm]**

**Dimensions valve system On/Off Classic Type 8801-YA-K with TopControl Type 8690 [mm]**



**Dimensions for valve system On/Off Classic Type 8803-YA [mm]**

**Dimensions valve system On/Off Classic Type 8803-YA with electrical position feedback Type 1062 [mm]**



Orifice [mm]	Actuator size ø [mm]	HG [mm]	BG [mm]
13	40	179	203
	50	191	218
20	40	184	210
	50	199	222
	63	221	247
25	50	200	230
	63	222	251
	80	238	267
32	63	238	278
	80	256	301
40	63	241	281
	80	259	295
	100	302	342
	125	323	363
50	63	256	301
	80	271	316
	100	314	359
	125	337	382
65	63	270	327
	80	285	342
	100	329	386
	125	352	409

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

**Valve system On/Off Classic Type 8801-YA/8803-YA – request for quotation**

▶ Please fill out and send to your nearest Burkert 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"/>	
Process medium	<input type="text"/>	
Type of medium	<input type="checkbox"/> Liquid	<input type="checkbox"/> Steam <input type="checkbox"/> Gas
	standard	unit
Flow rate (Q, Q <sub>N</sub> , W) <sup>1)</sup>	<input type="text"/>	<input type="text"/>
Temperature at valve inlet	<input type="text"/>	<input type="text"/>
Absolute pressure at valve inlet	<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**

Actuator material	<input type="checkbox"/> PA	<input type="checkbox"/> PPS
Body material	<input type="checkbox"/> Stainless steel	<input type="checkbox"/> Gunmetal
Seat sealing material	<input type="checkbox"/> PTFE <input type="checkbox"/> NBR	<input type="checkbox"/> Other <input type="text"/>
Nominal pressure	PN <input type="text"/>	
Nominal size	DN <input type="text"/>	
Type of connection	<input type="checkbox"/> Welded <input type="checkbox"/> Internal thread <input type="checkbox"/> Clamp	
Standard connection	<input type="checkbox"/> ISO <input type="checkbox"/> DIN <input type="checkbox"/> ANSI <input type="checkbox"/> JIS <input type="checkbox"/> Other <input type="text"/>	
Function	<input type="checkbox"/> NC <sup>2)</sup> <input type="checkbox"/> NO <sup>2)</sup> <input type="checkbox"/> Double-acting	
Pilot pressure	<input type="text"/> min.	<input type="text"/> max.

<sup>2)</sup> NC: normally closed by spring action; NO: normally open by spring action

**Control unit features**

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

Pneumatic Control Unit	Control Head	Electrical position feedback
<input type="checkbox"/> Type 8691	<input type="checkbox"/> Type 8690	<input type="checkbox"/> Type 1062
<b>Pneumatic function</b> <input type="checkbox"/> Single-acting <input type="checkbox"/> Double-acting  <b>Pilot air ports</b> <input type="checkbox"/> Push-in connector external ø 6 mm or 1/4" <input type="checkbox"/> Thread G 1/8"  <b>Communication</b> <input type="checkbox"/> ASI <input type="checkbox"/> Multipol M12 <input type="checkbox"/> Flat cable clip, 1 m cable <input type="checkbox"/> DeviceNet  <b>Please specify item no. if known:</b> <input type="text"/>	<b>Pneumatic function</b> <input type="checkbox"/> Single-acting <input type="checkbox"/> Double-acting <input type="checkbox"/> Without pilot valve  <b>Position feedback</b> <input type="checkbox"/> 1x inductive <input type="checkbox"/> 2x inductive <input type="checkbox"/> 1x inductive (NAMUR) <input type="checkbox"/> 2x inductive (NAMUR) <input type="checkbox"/> 1x mechanical <input type="checkbox"/> 2x mechanical  <b>Supply voltage</b> <input type="checkbox"/> 24 V / DC (ATEX Zone 2/22) <input type="checkbox"/> Ex ia IIC T6 (ATEX Zone 1)  <b>Pilot air ports</b> <input type="checkbox"/> Push-in connector <input type="checkbox"/> Thread G 1/8" external ø 6 mm or 1/4"  <b>Please specify item no. if known:</b> <input type="text"/>	<b>Limit switches</b> <input type="checkbox"/> mechanical <input type="checkbox"/> Voltage 12-48 V <input type="checkbox"/> Voltage 110-250 V  <input type="checkbox"/> inductive <input type="checkbox"/> NAMUR EExi  <b>Status</b> <input type="checkbox"/> closed <input type="checkbox"/> open <input type="checkbox"/> open/closed  <b>Please specify item no. if known:</b> <input type="text"/>

continued on next page →

Valve system On/Off Classic Type 8801-YA/8803-YA – request for quotation, *continued*

Control unit features	
<b>Pilot valve</b>	<b>Stroke limitation</b>
<input type="checkbox"/> Pilot valve	<input type="checkbox"/> Stroke limitation
Power supply <input type="text"/>	<input type="checkbox"/> <b>Min./max. stroke limitation</b> , with visual position indicator
	<input type="checkbox"/> <b>Max. stroke limitation</b> , without visual position indicator
Please specify item no. if known: <input type="text"/>	Please specify item no. if known: <input type="text"/>

Certifications
<input type="checkbox"/> Attestation of compliance with the order EN-ISO 10204 2.1
<input type="checkbox"/> Test report EN-ISO 10204 2.2
<input type="checkbox"/> Certification of Conformity for Raw Material EN-ISO 10204 3.1
<input type="checkbox"/> EN161 (European Gas Device guideline)

Comment / sketch

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