



Modular process valve cluster distribution and collecting

- · Valve cluster ready for installation
- · Compact design without any potential leakage
- · No assembly effort
- No piping between the valves needed •
- · Trusted actuators for simple automation



Plunger valve

AirLINE SP

Type 8840 comes with ready to install modules of tried and tested Bürkert process valves. The valve cluster, based on a modular valve body, allows different configurations. The individual parts are joined hermetically tight and in a very compact way. No installation effort for pipework, fittings or sealings is needed.

For the sizes DN20 (34") and DN25 (1") orbital welding is used. The smaller variants in DN10 are threaded together using trusted graphite seals. To avoid dangerous water hammer, all valves have the flow direction below the seat. This is made possible by the two variants for the fluidic main function distribution and collecting, mixing or feed.

Depending on the requirement and preferred type of automation, it is possible to choose from different actuator variants. The robust CLASSIC actuators (in stainless steel or plastic) are controlled by a central valve island or by a pilot valve. The proven ELE-MENT actuators allow a simple decentralized automation by using intelligent control heads Furthermore it is possible to expand the system by using continuous control valves, sensors, customer specific pipework or further accessories.

Type 8697 Pneumatic control unit



Type 8691 Control head



Type 8695 Control head

Type 2000 Angle seat valve

Technical data	
Orifice	DN10 - threaded DN20, DN25 - welded
Line connections	
Thread	G % to G 1, NPT % to NPT 1
Weld ends	ISO 4200 (on request)
Body material	Stainless steel precision cover 316L (CE3M)
Nominal pressure	PN25 (bousing)
Actuator material	
INOX DN10	Stainless steel (on request)
CLASSIC DN20, DN25	PA (PPS on request)
ELEMENT DN20, DN25	Actuator PPS, stainless steel cover 1.4561 (316Ti)
Seal material	PTFE
Medium	Water, alcohols, oils, fuels, hydraulic fluid, saline solutions, alkalis, organic solvents, vapour
Viscosity	Max. 600 mm²/s
Spindle packing	PTFE seal with spring compensation
Medium temperature	- 10 to + 180 °C
Ambient temperature	
INOX DN10	0 to + 60 °C
CLASSIC DN20, DN25	-10 to $+60$ °C (PA actuator)
ELEMENT DN20, DN25	$0 \text{ to } + 60 ^{\circ}\text{C}$
Control media	Neutral gases, air
Max. pilot pressure	10 bar
Pilot air port	
INOX DN10	Female elbow fitting (hose Ø4)
CLASSIC DN20, DN25	G 1/4
ELEMENT DN20, DN25	Push-in 6/4
Control function	CFA (closed by spring force)
	CFB (opened by spring force) on request



Technical data, continued

Number of valves DN10 (threaded) DN20, DN25 (welded)	29 (clusters with larger number of valves on request)25 (clusters with larger number of valves on request)
Approvals, conformities on request	ATEX FDA EC Regulation 1935/2004 SIL

Further technical data

Function	Description of application	DN10 representation	DN15, DN20, DN25 representation
Distributor	Distributing: Originating from an inlet, the valve block distributes the medium to several consumers.	· źźź.	
Collector	Collecting: Originating from several consumers, the medium can be collected.		
	Mixing: Various medium, e.g. hot and cold water or a range of chemi- cals, can be mixed.		
	Feeding: Various medium, e.g. a range of cleaning media, can be supplied to a consumer alternately.		

Attention!

For liquid medium, the valve flow direction should always be below seat, otherwise there is a risk of waterhammer!

Actuator	Orifice	Actuator size	K _v value water	Minimum pilot pressure	Max. operating pressure up to 180 °C		
version	[mm]	[mm]	[m ³ /h] ¹⁾	CFA [bar]	CFA [bar]	CFB [bar]	
	10	32	2.1	5.5	16	16	
	20	50	6.8	3.9	11	16	
	25	63	11.5	4.2	11	16	
-	20	50	6.8	5.2	16	16	
	25	70	12.1	5.0	16	16	

 $^{1)}$ Max. K_v value of a valve slot. The value may drop when several valve slots are actuated simultaneously.

Flow: K_v^{v} value water (m³/h): Measurement at +20 °C, 1 bar at the valve inlet and free outlet

Pressure data (bar): Overpressure with respect to atmospheric pressure



Material data

INOX actuator DN10



1	Actuator	Stainless steel 1.4404
2	Piston seal	FPM
3	Pipe	Stainless steel 1.4404
4	Spring	1.4310
5	Spindle seal	PTFE
6	Wiper	PTFE
7	Seal	Graphite
8	Spindle	Stainless steel 1.4404
9	Seal retainer	Stainless steel 1.4404
10	Seal	PTFE
11	Centre alignment	Stainless steel 1.4404



1	Transparent cap	PC (PSU for PPS actuator)
2	Pilot air ports	Stainless steel 1.4305
3	Actuator	PA (PPS on request)
4	Piston seal	NBR (FKM for PPS actuator)
5	Spindle seal	PTFE (FKM on request)
6	Pipe ¹⁾	Stainless steel 1.4401 / Stainless steel 316L ²⁾
7	Spring	Stainless steel 1.4310
8	Wiper	PTFE
9	Nipple ²⁾	Stainless steel 1.4401 / Stainless steel 316L ²⁾
10	Spindle	Stainless steel 1.4401
11	Pin	Stainless steel 1.4401
12	Swivel plate	Stainless steel 1.4401
13	Seal	PTFE (NBR, FKM, EPDM on request)

 $^{\rm 1)}$ One-piece for actuator size 63 mm to 125 mm $^{\rm 2)}$ For actuator size 63 mm

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Material data, continued



1	Ground terminal	Stainless steel 1.4301/1.4305 only for ATEX version
2	Optical position indicator	Transparent cap polysulphone PSU
3	Pilot air ports	Plug-in hose connector PP (standard)
		On request: Thread G 1/2 stainless steel 1.4305
4	Actuator	PPS
5	Cover	Stainless steel 1.4561 (316Ti)
6	Piston seal	FKM
7	Spring	Stainless steel 1.4310
8	Pipe	Stainless steel 1.4401 (316)/1.4404 (316L)
9	Spindle seal	PTFE
10	Spindle	Stainless steel 1.4401 (316)/1.4404 (316L)
11	Spindle guide	PEEK
12	Swivel plate	Stainless steel 1.4401 (316)/1.4404 (316L)
13	Seal	PTFE



Ordering chart (further versions on request)

Modular process valve cluster distributor - G threaded connection

Actuator version	Orifice [mm]	Actuator size [mm]	Threaded connection	Minimum pilot pressure [bar]	Operating pressure up to 180 °C [bar]	Number of valves	Item no.
	20	50	G 3⁄4	3.9	11	2	283 906
<u>a</u> ät						3	283 908
						4	283 909
						5	283 910
and the second second	25	63	G 1	4.2	11	2	283 941
						3	283 942
						4	283 943
						5	283 944
	20	50	G ¾	5.2	16	2	283 911
						3	283 912
						4	283 913
						5	283 914
	25	70	G 1	5.0	16	2	283 945
						3	283 946
						4	283 947
						5	283 948

Modular process valve cluster distributor - NPT threaded connection

Actuator version	Orifice [mm]	Actuator size [mm]	Threaded connection	Minimum pilot pressure [bar]	Operating pressure up to 180 °C [bar]	Number of valves	Item no.
	20	50	NPT 34	3.9	11	2	283 915
a at						3	283 916
						4	283 917
						5	283 918
	25	63	NPT 1	4.2	11	2	283 949
						3	283 950
						4	283 951
						5	283 952
	20	50	NPT 34	5.2	16	2	283 919
						3	283 920
						4	283 922
						5	283 923
	25	70	NPT 1	5.0	16	2	283 953
						3	283 954
						4	283 955
						5	283 956



Orifice

DN10 threaded, DN15 welded

Material

Seal between body and actuator PTFE (FDA compliant version)

Line connection

Weld end acc. to ISO 4200, clamp acc. to DIN 32676/Series B



Ordering chart (further versions on request)

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Actuator version	Orifice [mm]	Actuator size [mm]	Threaded connection	Minimum pilot pressure [bar]	Operating pressure up to 180 °C [bar]	Number of valves	Item no.
	20	50	G ¾	3.9	11	2	283 924
<u>a</u> as						3	283 925
						4	283 926
						5	283 927
910 910 910 -	25	63	G 1	4.2	11	2	283 958
						3	283 960
						4	283 961
						5	283 962
	20	50	G ¾	5.2	16	2	283 928
115						3	283 929
						4	283 930
						5	283 931
	25	70	G 1	5.0	16	2	283 963
						3	283 964
						4	283 965
						5	283 966

Modular process valve cluster distributor - NPT threaded connection

Actuator version	Orifice [mm]	Actuator size [mm]	Threaded connection	Minimum pilot pressure [bar]	Operating pressure up to 180 °C [bar]	Number of valves	Item no.
	20	50	NPT 34	3.9	11	2	283 932
798 199						3	283 933
						4	283 934
						5	283 935
	25	63	NPT 1	4.2	11	2	283 968
						3	283 969
						4	283 971
						5	283 972
	20	50	NPT 34	5.2	16	2	283 936
						3	283 937
						4	283 938
						5	283 939
	25	70	NPT 1	5.0	16	2	283 973
						3	283 974
						4	283 975
						5	283 976



Orifice

DN10 threaded, DN15 welded

Material

.

Seal between body and actuator PTFE (FDA compliant version)

Line connection

Weld end acc. to ISO 4200, clamp acc. to DIN 32676/Series B

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Dimensions [mm]







Type 8840 INOX DN10

Collector (mm)







DN [mm]	Actuator size [mm]	Thread G	Thread BG ¹⁾	Number of valves	L [mm]
10	32	G ¾ or NPT ¾	G % or NPT %	2	90
10	32	G ¾ or NPT ¾	G % or NPT %	3	135
10	32	G ¾ or NPT ¾	G % or NPT %	4	180
10	32	G ¾ or NPT ¾	G ¾ or NPT ¾	5	225
10	32	G ¾ or NPT ¾	G % or NPT %	6	270
10	32	G ¾ or NPT ¾	G % or NPT %	7	315
10	32	G ¾ or NPT ¾	G % or NPT %	8	360
10	32	G % or NPT %	G ¾ or NPT ¾	9	405

 $^{\mbox{\tiny 1)}}\mbox{Threads}$ can only be used to attach the valve block, e.g. to a mounting plate or a frame.







Distributor (mm)





DN [mm]	Actuator size [mm]	Thread G	Thread BG ¹⁾	Number of valves	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	D1
20	50 G ¾ or NPT ¾ M12 / 8 dep	M12 / 8 depth	2	190	86.5	43.3	86.5	12	205	67	30	25	104	63	
		3	277	173											
			4	4	363	259.5									
				5	450	346									
25	63	G 1 or NPT 1	M16 / 13 depth	2	228	104	52	104	14	253	83	41	32	124	80
				3	332	208									
				4	436	312									
				5	540	416									

¹⁾Threads can only be used to attach the valve block, e.g. to a mounting plate or a frame.





Type 8840 CLASSIC DN20, DN25

Collector (mm)





DN [mm]	Actuator size [mm]	Thread G	Thread BG ¹⁾	Number of valves	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	D1
20	50	G 34 or NPT 34	M12 / 8 depth	2	190	86.5	43.3	86.5	12	175	37	30	55	104	63
				3	277	173									
		4	363	259.5											
				5	450	346									
25	63	G 1 or NPT 1	M16 / 13 depth	2	228	104	52	104	14	212	42	41	73	124	80
				3	332	208								124 00	
				4	436	312									
				5	540	416]								

¹⁾Threads can only be used to attach the valve block, e.g. to a mounting plate or a frame.







DN [mm]	Actuator size [mm]	Thread G	Thread BG ¹⁾	Number of valves	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	D1
20	50	G 34 or NPT 34	M12 / 8 depth	2	190	86.5	43.3	86.5	12	233	67	30	25	255	104	65
			3	277	173											
				4	363	259.5										
				5	450	346										
25	63	G 1 or NPT 1	M16 / 13 depth	2	228	104	52	104	14	261	83	41	32	281	124	91
				3	332	208										
				4	436	312										
				5	540	416										

¹⁾Threads can only be used to attach the valve block, e.g. to a mounting plate or a frame.









DN [mm]	Actuator size [mm]	Thread G	Thread BG ¹⁾	Number of valves	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	D1
20	20 50 G ¾ or NPT ¾ M12 / 8 dep	M12 / 8 depth	2	190	86.5	43.3	43.3 86.5	12	203	37	30	55	225	104	65	
			3	277	173											
			4 363 259.5													
				5	450	346										
25	63	G 1 or NPT 1	M16 / 13 depth	2	228	104	52	104	14	220	42	41	73	240	124	91
				3	332	208										
				4	436	312										
			5	540	416											

¹⁾ Threads can only be used to attach the valve block, e.g. to a mounting plate or a frame.



Specification key



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Vore info.



burkert

Modular platform for process control and regulation

Combination options based on Type 8840 (individual customer solutions available on request)

Type 8840 enables Bürkert to provide quickly and efficiently all common valve assemblies pre-configured for distributing and collecting functions (for other possible variations, see illustrations on pages 7 - 11).

Furthermore, individual customer solutions are available on request.

Thanks to the modular platform for process control and regulation, various application-specific requirements can be met. The modular platform for process control and regulations also enables every combination option when selecting the actuator, control and measuring principle and the fluid functions:

Actuator variations:Electromotive, pneumatic, manualControl, regulation principle:On/Off, continuousSensor variations:Temperature, pressure, flow

Irrespective of whether the system is to be actuated by an electric motor, pneumatically or manually, Bürkert offers the ideal actuator and control/regulation principle for every requirement. Moreover, the ideal measuring principle can be selected from the extensive sensor range for measuring temperature, pressure and flow rate. They guarantee reliable measurement values and can be easily integrated into the system.

Besides the standard distributing and collecting functions, specified fluid combinations can be achieved.





Modular platform for process control and regulation

(individual customer solutions available on request)

ACTUATOR VARIATIONS



Manual

Pneumatic INOX

HOUSING



SENSOR VARIATIONS





Flow (paddle wheel)



A.

Flow (ultrasound)



Temperature

Temperature



Modular platform for process control and regulation – examples

Valve system	Description of application
	Distributing gas in the pharmaceutical and food industry Controlling and regulating process gas (e.g. CO ₂ and N ₂) for: • Pneumatic conveying • Inertisation • Preservation • Flushing •
	Cleaning processes in the pharmaceutical and food industry Distributing cleaning media and water for: • Keg cleaning • Filling and packaging machines • Grinding and crushing systems • Container cleaning •
	Controlling the temperature of industrial processes Controlling and regulating temperature control processes for: • Injection moulding machines • Pressure die casting machines • Temperature control devices • Tools for carbon fibre reinforced components



Customised configuration - request for quotation

Please complete and return with your request or order to your nearest Bürkert facility						
Company	Contact					
Customer no.	Department					
Street	Tel./Fax					
Postcode, town/city	Email					

Commercial data

Commercial data	
Project name	
Quantity	One-off request
	Multiple request



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