

VATTERFLY VALVE, SERIES 20.3/20.4

Compact isolation valve for contaminating and aggressive processes.



Low particle butterfly valve

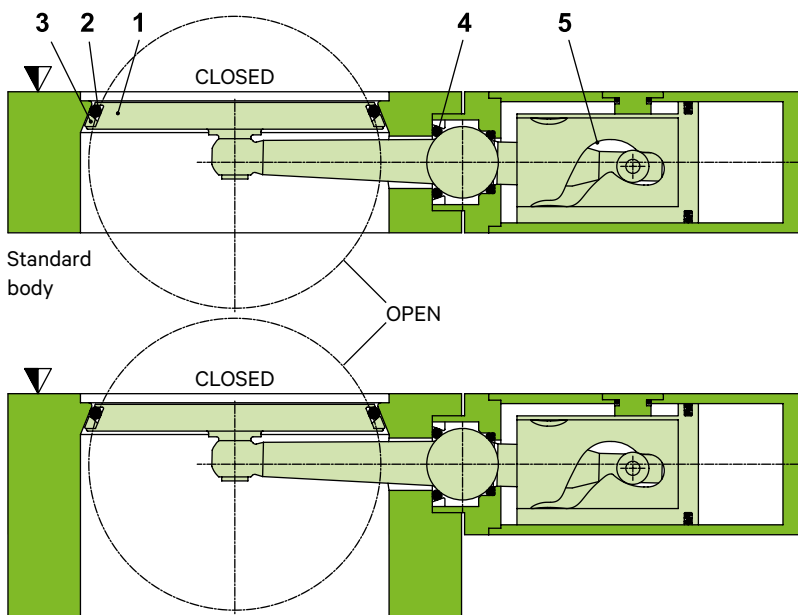
No moving parts in vacuum

Mechanically locked in open and closed position

MAIN FEATURES

Sizes	DN 63 – 200 mm (2½" – 8")
Actuator	pneumatic: double acting
Body material	aluminum or stainless steel
Feedthrough	rotary feedthrough
Standard flanges	ISO-F, CF-F

FUNCTIONAL PRINCIPLE



- 1 Plate
- 2 Plate seal
- 3 Support ring
- 4 Bonnet seal / feedthrough seal
- 5 Spiral mechanism
- ▼ Valve seat side

Extended body: plate remains inside body

TECHNICAL DATA

Leak rate	Valve body, valve seat	$<1 \cdot 10^{-9}$ mbar ls ⁻¹
Pressure range		$1 \cdot 10^{-8}$ mbar to 2 bar (abs)
Differential pressure on the plate	In opening direction In closing direction	≤ 1.2 bar ≤ 1.6 bar
Differential pressure at opening		≤ 500 mbar
Cycles until first service		100 000
Temperature ¹⁾	Valve body Actuator Solenoid valve Position indicator	≤ 120 °C (150 °C optional) ≤ 120 °C ≤ 50 °C ≤ 80 °C
Material	Aluminum valve body / plate Stainless steel valve body / plate Mechanism Support ring: standard Support ring: 150 °C option	EN AW-6060 (3.3206), EN AW-6061 (3.3211), EN AW-6063 (3.3206), EN AW-6082 (3.2315) AISI 304 (1.4301) AISI 316L (1.4435), AISI 304 (1.4301) POM PEEK
Seal	Bonnet, plate, feedthrough	FKM (Viton®)
Feedthrough		rotary feedthrough
Mounting position		any
Solenoid valve		24 V DC, 7.6 W (others on request)
Position indicator: contact rating	Voltage Current Power	≤ 50 V AC / DC ≤ 0.5 A max. 10 W

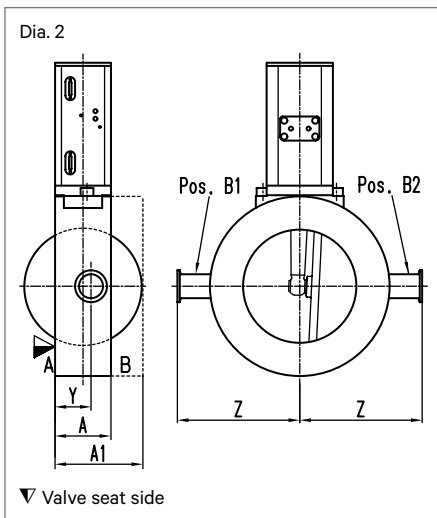
	DN (nominal I.D.)		Conductance (molecular flow)	Compressed air min. – max. overpressure		Volume of pneumatic actuator		Closing or opening time ²⁾	Weight: valve with aluminum body		Weight: valve with stainless steel body	
	mm	inch		bar	psi	l	ft ³		kg	lbs	kg	lbs
20.3 standard body	63	2½	550	4–7	58–102	0.04	0.0014	0.40	2.30	5.10	4.60	10.10
	100	4	1400	4–7	58–102	0.08	0.0028	0.80	4.00	8.80	8.00	17.60
	160	6	4 000	4–7	58–102	0.13	0.0046	1.40	7.40	16.30	15.60	34.40
	200	8	7500	4–7	58–102	0.30	0.0106	1.80	16.10	35.50	34.20	75.40
20.4 extended body	63	2½	450	4–7	58–102	0.04	0.0014	0.40	2.50	5.50	5.30	11.70
	100	4	1050	4–7	58–102	0.08	0.0030	0.80	4.70	10.40	10.10	22.30
	160	6	2550	4–7	58–102	0.13	0.0046	1.40	9.70	21.40	22.30	49.20
	200	8	4 700	4–7	58–102	0.30	0.0106	1.80	21.30	47.00	20.80	45.90

¹⁾ Maximum values: depending on operating conditions and sealing materials.

²⁾ Depending on pneumatic installation.

OPTIONS, CUSTOMIZED SOLUTIONS

Pic. 1



ACTUATOR

- Other solenoid valve voltage (standard 24VDC)

VALVE

- Customer specified flanges
- CF-F flanges with UNF threads
- Soft-pump function (Pic. 1)
- Ports for roughing (by-pass), venting or for gauges (Dia. 2): possible positions B1 and B2
 - aluminum valve body: screwed port
 - stainless steel valve body: welded port

DN valve	mm inch	63 2 ½	100 4	160 6	200 8
Recommended port aluminum valve body: ISO-KF		16 %	25 1	25 1	40 1 ½
Recommended port stainless steel valve body: CF-F		16 %	16 %	40 1 ½	40 1 ½
Y	mm inch	30 1.18	35 1.38	35 1.38	45 1.77
Z ISO-KF	mm inch	92 3.62	122 4.80	152 5.98	185 7.28
Z CF-F	mm inch	90 3.54	110 4.33	145 5.71	180 7.09
Other ports on request					

SPARE PARTS

We can offer a wide variety of spare parts. Please contact us for details and an offer.

Thank you for specifying the fabrication number of the valve indicated on the identification tag when asking for spare parts.

ACCESSORIES

Flange connections for installation of the valve: see series 32 and 33

ORDERING INFORMATION FOR STANDARD VALVES

Valve with pneumatic actuator
double acting
without solenoid valve
without position indicator

	DN		Ordering numbers		
	mm	inch	ISO-F aluminum	ISO-F stainless steel	CF-F, metric threads stainless steel
20.3 standard body	63	2 ½	20336-PA14	20336-PE14	20336-CE14
	100	4	20340-PA14	20340-PE14	20340-CE14
	160	6	20344-PA14	20344-PE14	20344-CE14
	200	8	20346-PA14	20346-PE14	20346-CE14
20.4 extended body	63	2 ½	20436-PA14	20436-PE14	20436-CE14
	100	4	20440-PA14	20440-PE14	20440-CE14
	160	6	20444-PA14	20444-PE14	20444-CE14
	200	8	20446-PA14	20446-PE14	20446-CE14

without solenoid valve, with position indicator: 20 ... - . . 24

with solenoid valve, without position indicator: 20 ... - . . 34 (specify control voltage)

with solenoid valve, with position indicator: 20 ... - . . 44 (specify control voltage)

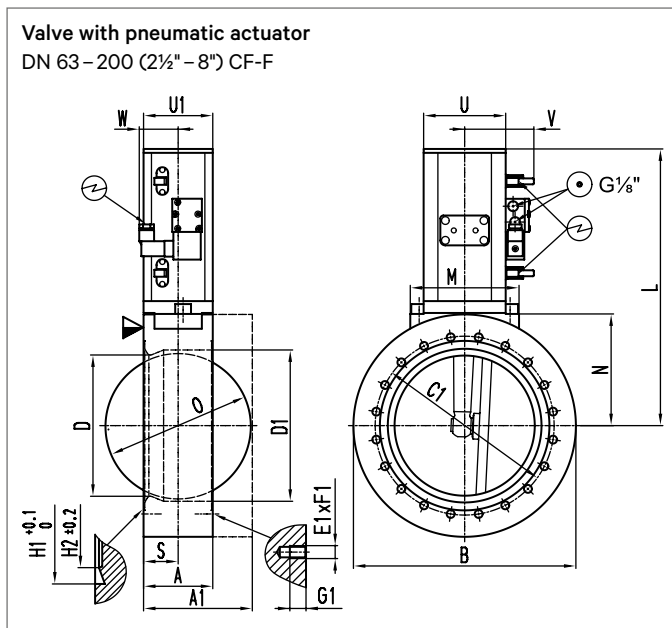
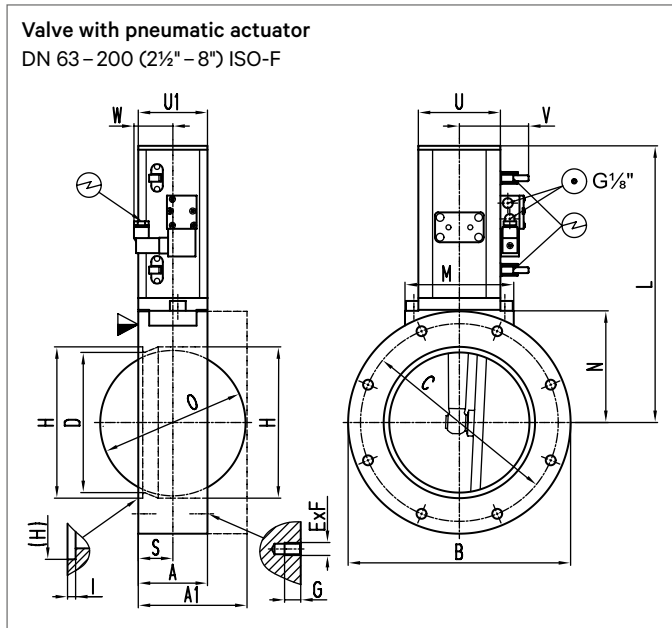
ORDERING INFORMATION
FOR VALVES WITH OPTIONS

Basic ordering number plus «-X»: -X to be specified

Example: 20340-PA44-X, X = port ISO-KF 25 in position B1

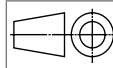
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DIMENSIONS



- ▼ Valve seat side
- ⊙ Compressed air connection
- ⊕ Electrical connection

Projection E



DN	mm inch	63 2½	100 4	160 6	200 8
A ¹⁾	mm inch	50 1.97	60 2.36	70 2.76	90 3.54
A1 ²⁾	mm inch	60 2.36	80 3.15	110 4.33	145 5.71
B	mm inch	130 5.12	165 6.50	225 8.86	300 11.81
C	mm inch	110 4.33	145 5.71	200 7.87	260 10.24
C1	mm inch	92.10 3.63	130.20 5.13	181 7.13	231.80 9.13
D	mm inch	63 2.48	95 3.74	142 5.59	192 7.56
D1	mm inch	70 2.76	102 4.02	153 6.02	210 8.27
E × F		4 × M8	8 × M8	8 × M10	12 × M10
E1 × F1		8 × M8	16 × M8	20 × M8	24 × M8
G	mm inch	12 0.47	12 0.47	15 0.59	15 0.59
G1	mm inch	12 0.47	12 0.47	12 0.47	12 0.47
H	mm inch	70 2.76	102 4.02	153 6.02	213 8.39
H1	mm inch	82.50 3.25	120.65 4.75	171.45 6.75	222.30 8.75
H2	mm inch	77.40 3.05	115.50 4.55	166 6.54	217 8.54
I	mm inch	2.50 0.10	2.50 0.10	4.50 0.18	4.50 0.18
L	mm inch	181 7.13	228 8.98	285 11.22	371 14.61
M	mm inch	76 2.99	86 3.39	110 4.33	140 5.51
N	mm inch	65 2.56	82.50 3.25	113 4.45	147.50 5.81
O	mm inch	66 2.60	100 3.94	147 5.79	200 7.87
S	mm inch	25 0.98	30 1.18	35 1.38	45 1.77
U	mm inch	60 2.36	70 2.76	83 3.27	103 4.06
U1	mm inch	50 1.97	60 2.36	70 2.76	90 3.54
V	mm inch	60 2.36	65 2.56	70 2.76	80 3.15
W	mm inch	44 1.73	40 1.57	40 1.57	30 1.18

¹⁾ Standard body, series 20.3

²⁾ Extended body, series 20.4