

Main applications

For pumping and venting of HV systems when few turbulences, particles, substrate movements and condensation are important



Ordering information

Valve with pneumatic actuator
single acting with closing spring (NC)
without solenoid valve
without position indicator

	DN		Ordering numbers			
	mm	inch	Angle valve		Inline valve	
			aluminum	stainless steel	aluminum	stainless steel
ISO-KF	25	1	29028-KA11	29028-KE11	29128-KA11	29128-KE11
	40	1½	29032-KA11	29032-KE11	29132-KA11	29132-KE11
	50	2	29034-KA11	29034-KE11	29134-KA11	29134-KE11
ISO-K	63	2½	29036-QA11	29036-QE11	–	–
	80	3	29038-QA11	–	–	–
	100	4	29240-QA11	on request	–	–
	160	6	29244-QA11	on request	–	–

without solenoid valve, with position indicator: 29 **21**

with solenoid valve, without position indicator: 29 **31** (specify control voltage)

with solenoid valve, with position indicator: 29 **41** (specify control voltage)

Valve with pneumatic actuator
Main valve: double acting
Soft-pump valve: single acting (NC)
without solenoid valve
without position indicator

	DN		Ordering numbers	
	mm	inch	Angle valve	
			aluminum	stainless steel
ISO-K	100	4	29240-QA14	29240-QE14
	160	6	29244-QA14	29244-QE14

without solenoid valve, with position indicator: 292 . . -Q . **24**

with solenoid valve, without position indicator: 292 . . -Q . **34** (specify control voltage)

with solenoid valve, with position indicator: 292 . . -Q . **44** (specify control voltage)

Features

Body material:
aluminum or stainless steel

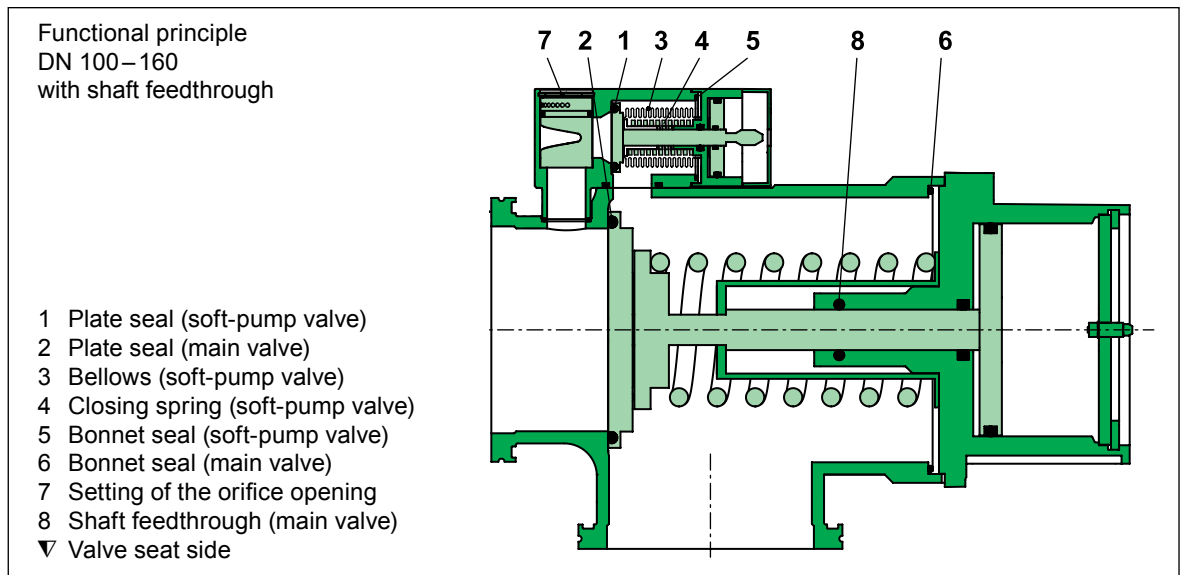
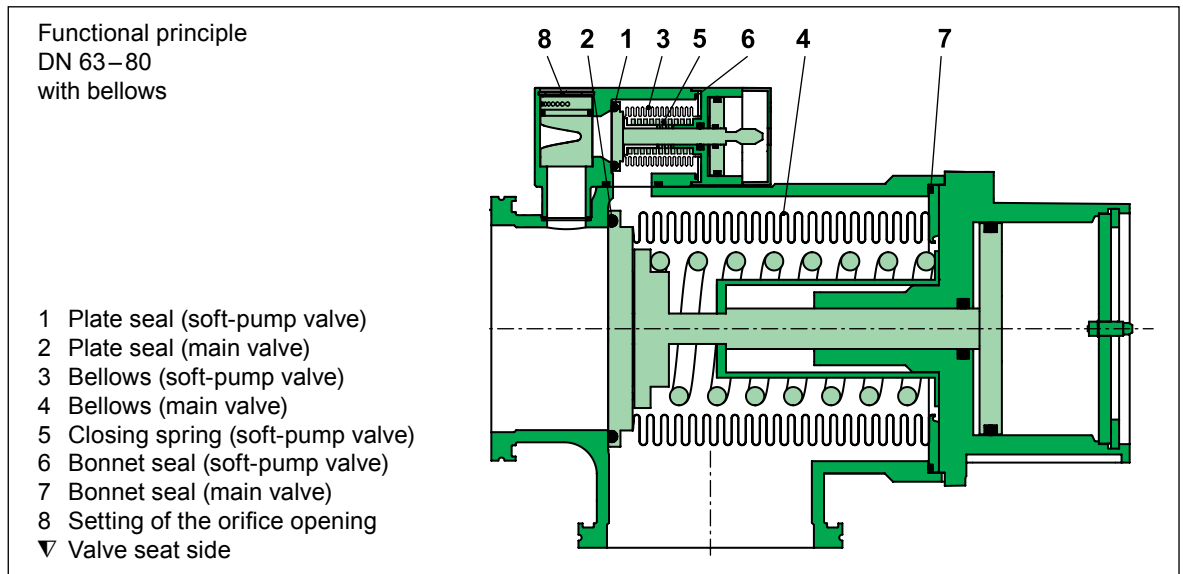
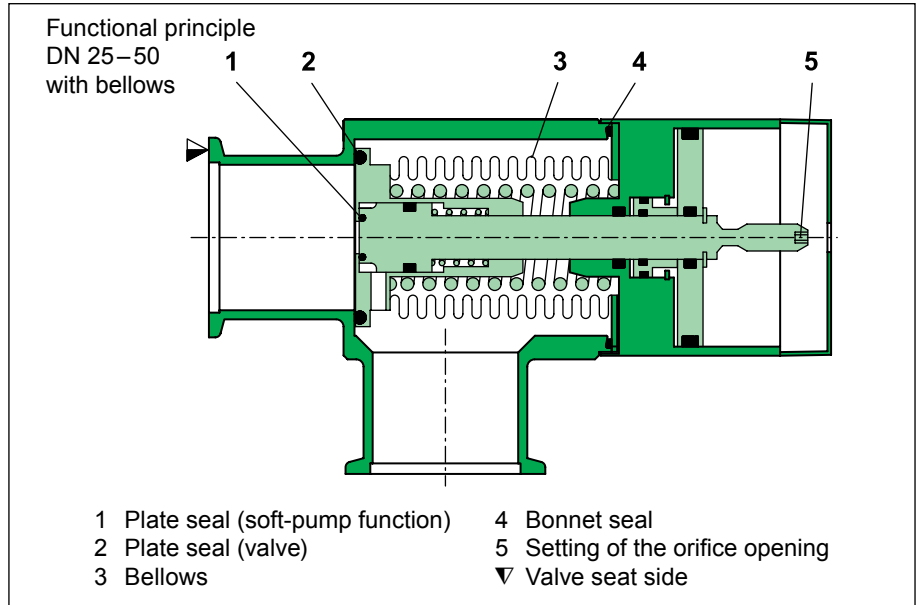
Angle and inline version

Setting of the orifice opening by means
of a scale

Main valve

- DN 25– 80 with bellows
- DN 100–160 with shaft feedthrough

Resistant against differential pressure



Technical data

Leak rate: valve body, valve seat	< 1 · 10 ⁻⁹ mbar ls ⁻¹
Pressure range	
– DN 25– 50	1 · 10 ⁻⁸ mbar to 1.2 bar (abs)
– DN 63– 80	1 · 10 ⁻⁸ mbar to 4 bar (abs)
– DN 100– 160	1 · 10 ⁻⁸ mbar to 2 bar (abs)
Differential pressure on the plate	
– In opening direction	≤ 1.2 bar
– In closing direction	
– DN 25– 50	≤ 1.2 bar
– DN 63– 80	≤ 4.0 bar
– DN 100– 160	≤ 2.0 bar
Differential pressure at opening	≤ 1 bar
Cycles until first service	
– DN 25– 50	2 million
– DN 63– 80	3 million
– DN 100– 160	1 million
Temperature ¹⁾	
– Valve body	≤ 150 °C
– Actuator	
– DN 25– 50	≤ 120 °C
– DN 63– 160	≤ 80 °C
– Solenoid valve, position indicator	≤ 80 °C
Material	
– Valve body: main valve	
– aluminum DN 25– 63	EN AW-6060 (3.3206), -6061 (3.3211), -6063 (3.3206), -6082 (3.2315)
– stainless steel DN 80– 160	EN AC-42000
– stainless steel DN 25– 160	AISI 304 (1.4301), AISI 316L (1.4404)
– Valve body: soft-pump valve	EN AW-6060 (3.3206), -6061 (3.3211), -6063 (3.3206), -6082 (3.2315)
– Plate	AISI 316L (1.4404, 1.4435) or AISI 304L (1.4306)
– Bellows	AISI 316L (1.4404, 1.4435), AISI 316 Ti (1.4571)
Seal: bonnet, plate	FKM (Viton®)
Feedthrough (main valve)	
– DN 25– 80	bellows
– DN 100– 160	shaft feedthrough
Mounting position	any
Solenoid valve	
– DN 25– 50	24 VDC, 2.5 W
– DN 63– 160	24 VDC, 9.0 W (others on request)
Position indicator: contact rating	
– Voltage	5– 50 VAC / DC
– Current	5– 100 mA
Valve position indication	visual (mechanical)

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

Angle valves

DN (nominal I.D.)		Conductance (molecular flow)	Opening range of orifice of the soft-pump valve	Compressed air min. – max. overpressure		Volume of pneumatic actuator		Closing time	Weight			
				bar	psi	l	ft ³		Aluminum body		Stainless steel body	
mm	inch	ls ⁻¹	mm ²	bar	psi	l	ft ³	s	kg	lbs	kg	lbs
25	1	14	1.7–20	4.5–7	65–102	0.011	0.0004	0.20	0.60	1.32	0.70	1.54
40	1½	45	1.2–40	4–8	58–116	0.035	0.0012	0.55	1.20	2.65	1.40	3.09
50	2	80	1.5–50	4–8	58–116	0.047	0.0017	0.65	1.90	4.19	2.10	4.63
63	2½	160	9–270	4–8	58–116	0.112	0.0040	0.70	4.20	9.26	2.60	5.73
80	3	200	9–270	4–8	58–116	0.112	0.0040	0.70	3.90	8.60	–	–
100	4	440	9–270	4.5–7	65–102	0.330	0.0117	1	9	19.84	10.22	22.53
160	6	1000	9–270	4.5–7	65–102	1.050	0.0371	2.50	15.10	33.29	13.04	28.75

Valve with pneumatic actuator, double acting												
mm	inch	ls ⁻¹	mm ²	bar	psi	l	ft ³	s	kg	lbs	kg	lbs
100	4	440	9–270	4.5–7	65–102	0.330	0.0117	1	–	–	14.70	32.41
160	6	1000	9–270	4.5–7	65–102	1.050	0.0371	2	–	–	14.70	32.41

Inline valves

DN (nominal I.D.)		Conductance (molecular flow)	Opening range of orifice of the soft-pump valve	Compressed air min. – max. overpressure		Volume of pneumatic actuator		Closing time	Weight			
				bar	psi	l	ft ³		Aluminum body		Stainless steel body	
mm	inch	ls ⁻¹	mm ²	bar	psi	l	ft ³	s	kg	lbs	kg	lbs
25	1	14	1.7–20	4.5–7	65–102	0.011	0.0004	0.20	0.76	1.68	0.45	0.99
40	1½	45	1.2–40	4–8	58–116	0.035	0.0012	0.55	1.60	3.53	1.45	3.20
50	2	80	1.5–50	4–8	58–116	0.047	0.0017	0.65	2.78	6.13	2.30	5.07

Options

Actuator

- Other solenoid valve voltage (standard: 24 VDC)
- Position indicator bakeable to 120 °C

Valve

- CF flanges
- Other sealing materials
- Customer specified bodies

Ordering information for options:

Ordering No. of valve-X (e. g. 29028-KA41-X, X = pos. indicator bakeable to 120 °C)

Spare parts

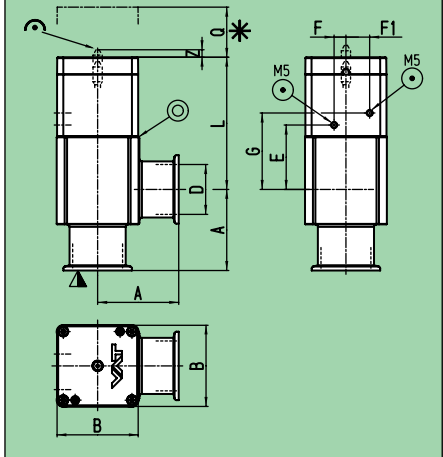
- **Seals**
on request (specify fabrication number of valve)

Accessories

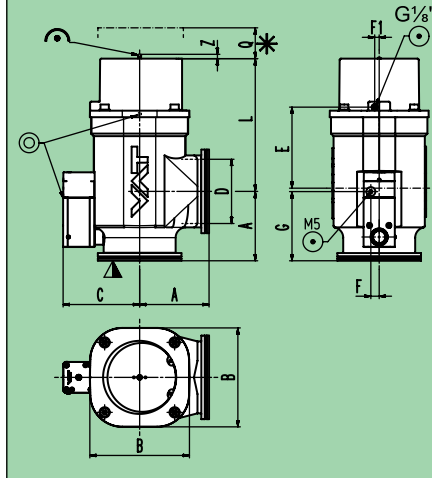
- **Flange connections**
for installation of the valve: see series 31

Dimensions

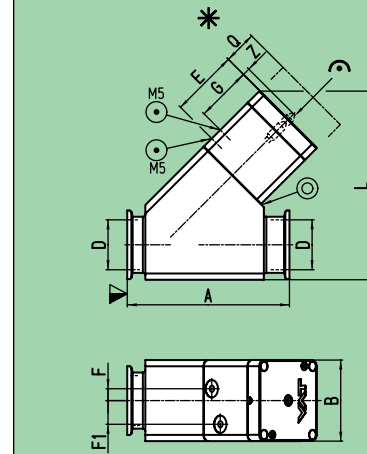
Aluminum angle valve with pneumatic actuator, single acting with closing spring DN 25–50 (1"–2") ISO-KF



Aluminum angle valve with pneumatic actuator, single acting with closing spring DN 63–160 (2½–6") ISO-K



Aluminum inline valve with pneumatic actuator, single acting with closing spring DN 25–50 (1"–2") ISO-K



- ▽ Valve seat side
- * Required for dismantling
- ⊙ Compressed air connection
- ↻ Mechanical position indication
- ⊗ Leak detection hole

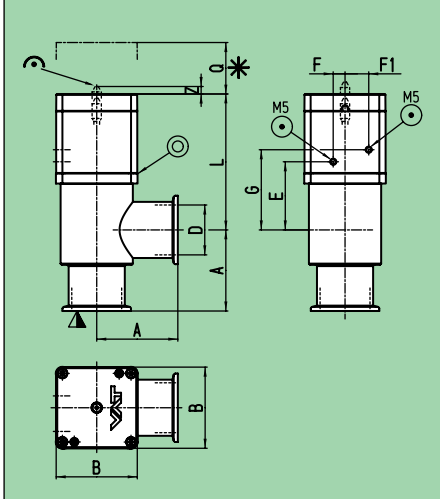
DN	mm	25	40	50
inch		1	1½	2
A	mm	50	65	70
inch		1.97	2.56	2.76
B	mm	48	65	77
inch		1.89	2.56	3.03
D	mm	25	40	50
inch		0.98	1.57	1.97
E	mm	40	51	59
inch		1.57	2	2.32
F	mm	9.50	12.50	13.60
inch		0.37	0.49	0.54
F1	mm	13	15	15
inch		0.51	0.59	0.59
G	mm	49	59	66
inch		1.93	2.32	2.60
L	mm	89.50	106	115.70
inch		3.52	4.17	4.56
Q	mm	46	77	85
inch		1.81	3.03	3.35
Z	mm	5.60	11	12.50
inch		0.22	0.43	0.49

DN	mm	63	80	100	160
inch		2½	3	4	6
A	mm	88	90	108	138
inch		3.46	3.54	4.25	5.43
B	mm	123	126.60	154	216
inch		4.84	4.98	6.06	8.50
C	mm	98.80	107.30	119	144
inch		3.89	4.22	4.69	5.67
D	mm	63	80	102	153
inch		2.48	3.15	4.02	6.02
E	mm	71.40	71.40	131	117
inch		2.81	2.81	5.15	4.61
F	mm	13	13	13	13
inch		0.51	0.51	0.51	0.51
F1	mm	–	–	7	–
inch				0.28	
G	mm	98	100	107.70	97.70
inch		3.86	3.94	4.24	3.85
L	mm	109	109	206.50	202
inch		4.29	4.29	8.13	7.95
Q	mm	115	115	170	195
inch		4.53	4.53	6.69	7.68
Z	mm	31.40	31.40	6	6
inch		1.24	1.24	0.24	0.24

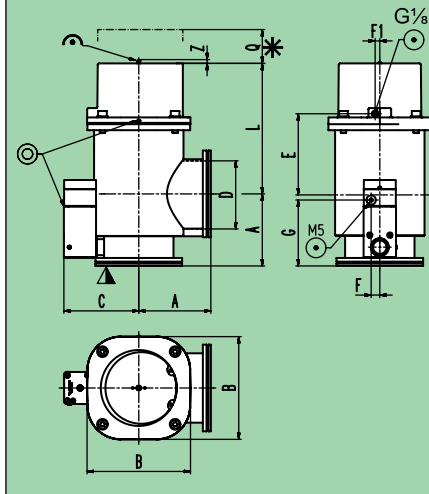
DN	mm	25	40	50
inch		1	1½	2
A	mm	100	130	178
inch		3.94	5.12	7.01
B	mm	48	65	77
inch		1.89	2.56	3.03
D	mm	25	40	50
inch		0.98	1.57	1.97
E	mm	49.50	55	57
inch		1.95	2.17	2.24
F	mm	9.50	14	13.60
inch		0.37	0.55	0.54
F1	mm	13	15	15
inch		0.51	0.59	0.59
G	mm	40.50	47	50
inch		1.59	1.85	1.97
L	mm	121	154	184
inch		4.76	6.06	7.24
Q	mm	46	77	85
inch		1.81	3.03	3.35
Z	mm	5.60	11	12.50
inch		0.22	0.43	0.49

Dimensions

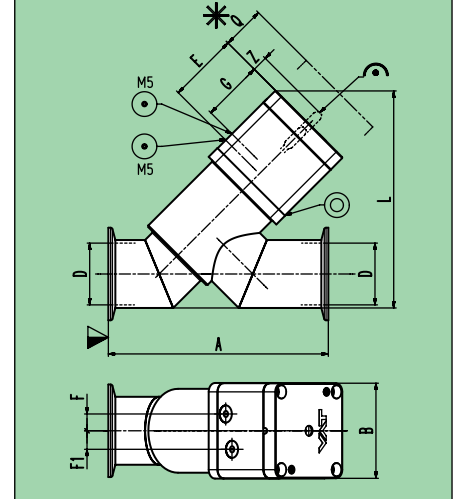
Stainless steel angle valve with pneumatic actuator, single acting with closing spring
DN 25–50 (1"–2") ISO-KF



Stainless steel angle valve with pneumatic actuator, single acting with closing spring or double acting
DN 63–160 (2½–6") ISO-K
or double acting
DN 100–160 (4"–6") ISO-K



Stainless steel inline valve with pneumatic actuator, single acting with closing spring
DN 25–50 (1"–2") ISO-K



- ▽ Valve seat side
- * Required for dismantling
- ⊙ Compressed air connection
- ↻ Mechanical position indication
- ⊙ Leak detection hole

E

DN	mm inch	single acting with closing spring					double acting		
		25 1	40 1½	50 2	63 2½	100 4	160 6	100 4	160 6
A	mm inch	50 1.97	65 2.56	70 2.76	88 3.46	108 4.25	138 5.43	108 4.25	138 5.43
B	mm inch	48 1.89	65 2.56	77 3.03	123 4.84	154 6.06	216 8.50	154 6.06	216 8.50
C	mm inch	–	–	–	98.30 3.87	116 4.57	138 5.43	119 4.69	144 5.67
D	mm inch	25 0.98	40 1.57	50 1.97	63 2.48	102 4.02	153 6.02	102 4.02	153 6.02
E	mm inch	43 1.69	54 2.13	52 2.05	71 2.80	122 4.80	121 4.76	131 5.16	117 4.61
F	mm inch	9.50 0.37	12.50 0.49	13.60 0.54	13 0.51	13 0.51	13 0.51	13 0.51	13 0.51
F1	mm inch	13 0.51	15 0.59	15 0.59	–	7 0.28	–	7 0.28	–
G	mm inch	52 2.05	62 2.44	69 2.72	98 3.86	104 4.09	106 4.17	107.7 4.24	97.7 3.85
L	mm inch	92.80 3.65	109 4.29	118.70 4.67	109 4.29	197 7.75	207 8.15	206.5 8.13	202 7.95
Q	mm inch	46 1.81	77 3.03	85 3.35	115 4.53	170 6.69	195 7.68	170 6.69	195 7.68
Z	mm inch	5.60 0.22	11 0.43	12.50 0.49	31.40 1.24	6 0.24	6 0.24	6 0.24	6 0.24

DN	mm inch	25	40	50
		1	1½	2
A	mm inch	100 3.94	130 5.12	178 7.01
B	mm inch	48 1.89	65 2.56	77 3.03
C	mm inch	–	–	–
D	mm inch	25 0.98	40 1.57	50 1.97
E	mm inch	49.50 1.95	55 2.17	57 2.24
F	mm inch	9.50 0.37	14 0.55	13.60 0.54
F1	mm inch	13 0.51	15 0.59	15 0.59
G	mm inch	40.50 1.59	47 1.85	50 1.97
L	mm inch	131 5.16	163 6.42	176 6.93
Q	mm inch	46 1.81	77 3.03	85 3.35
Z	mm inch	5.60 0.22	11 0.43	12.50 0.49