

Main applications

Valve for demanding pump isolation applications

Especially suited to applications with high levels of process byproduct in the gas stream



Ordering information

Valve with manual actuator
crank handle

DN		Ordering numbers				
mm	inch	ISO-KF ¹⁾ ISO-F ²⁾	CF-F metric threads	CF-F UNF threads	ASA-LP	JIS
50	2	09134-KE01 ¹⁾	09134-CE01	09134-UE01	–	–
63	2½	09136-PE01 ²⁾	09136-CE01	09136-UE01	09136-TE01	09136-JE01
80	3	09138-PE01 ²⁾	09138-CE01	09138-UE01	09138-TE01	09138-JE01
100	4	09140-PE01 ²⁾	09140-CE01	09140-UE01	09140-TE01	09140-JE01
160	6	09144-PE01 ²⁾	09144-CE01	09144-UE01	09144-TE01	09144-JE01
200	8	09146-PE01 ²⁾	09146-CE01	09146-UE01	09146-TE01	09146-JE01
250	10	09148-PE01 ²⁾	09148-CE01	09148-UE01	09148-TE01	09148-JE01

with position indicator: 091 . . . E08

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

DN		Ordering numbers				
mm	inch	ISO-KF ¹⁾ ISO-F ²⁾	CF-F metric threads	CF-F UNF threads	ASA-LP	JIS
50	2	09134-KE14 ¹⁾	09134-CE14	09134-UE14	–	–
63	2½	09136-PE14 ²⁾	09136-CE14	09136-UE14	09136-TE14	09136-JE14
80	3	09138-PE14 ²⁾	09138-CE14	09138-UE14	09138-TE14	09138-JE14
100	4	09140-PE14 ²⁾	09140-CE14	09140-UE14	09140-TE14	09140-JE14
160	6	09144-PE14 ²⁾	09144-CE14	09144-UE14	09144-TE14	09144-JE14
200	8	09146-PE14 ²⁾	09146-CE14	09146-UE14	09146-TE14	09146-JE14
250	10	09148-PE14 ²⁾	09148-CE14	09148-UE14	09148-TE14	09148-JE14

without solenoid valve, with position indicator: 091 . . . E24

with solenoid valve, with position indicator: 091 . . . E44 (specify control voltage)

Features

Body material: stainless steel

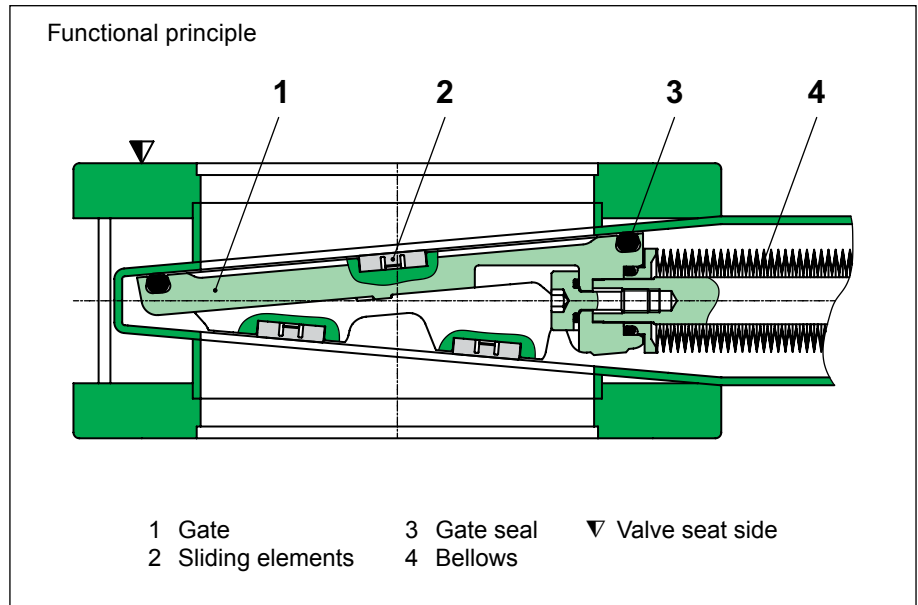
With bellows

For very contaminating processes

No grease and no moving parts in the vacuum

Opening at 1 bar differential pressure possible

Very easy maintenance thanks to simple wedge design



Technical data

Leak rate	
– Valve body	$< 1 \cdot 10^{-9}$ mbar ls ⁻¹
– Valve seat	$< 1 \cdot 10^{-7}$ mbar ls ⁻¹
Pressure range	$1 \cdot 10^{-8}$ mbar to 1.2 bar (abs)
Differential pressure on the gate	≤ 1.2 bar
Differential pressure at opening	≤ 1 bar
Cycles until first service ¹⁾	5000
Bellows cycles ¹⁾	100000
Temperature ²⁾	
– Valve body	≤ 150 °C
– Manual and pneumatic actuator	≤ 100 °C
– Solenoid valve	≤ 50 °C
– Position indicator	≤ 60 °C
Material	
– Valve body	AISI 304 (1.4301)
– Gate	AISI 304 (1.4301)
– Bellows	AISI 633 (AM350)
Seal: bonnet, gate	FKM (Viton®)
Feedthrough	bellows
Mounting position	any
Solenoid valve	24 VDC, 2.5 W (others on request)
Position indicator: contact rating	
– Voltage	10–30 VDC
– Current	≤ 0.5 A
– Power	max. 10 W

¹⁾ Depending on the process conditions shorter service intervals may be required

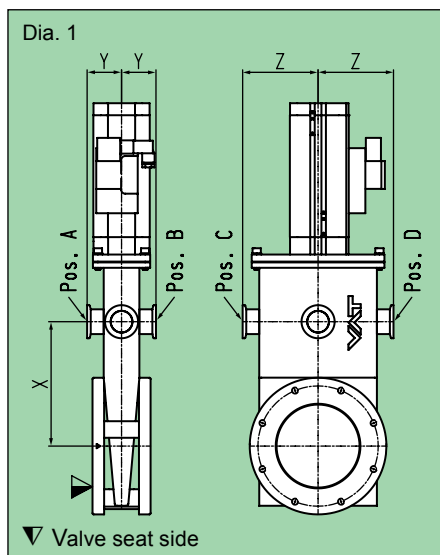
²⁾ Maximum values: depending on operating conditions and sealing materials

Further technical data on next page →

Continued Technical data

DN (nominal I. D.)		Standard flanges	Conductance (molecular flow) (depending on A-dimension and flange type)	Valve with manual actuator				Valve with pneumatic actuator					
				Turns per stroke	Weight		Compressed air min. – max. overpressure		Volume of pneumatic actuator		Closing or opening time	Weight	
mm	inch		ls ⁻¹	n	kg	lbs	bar	psi	l	ft ³	s	kg	lbs
50	2	See pages 34–35	250	22	3.4	6.8	4–7	58–102	0.08	0.003	<1.5	3.4	6.8
63	2½		600	27	5.6	12.4	4–7	58–102	0.16	0.005	<2	5.6	12.4
80	3		800	33	7	14	4–7	58–102	0.21	0.007	<2	7	14
100	4		1700	39	8.1	17.9	4–7	58–102	0.25	0.008	<2	7.8	17.2
160	6		5000	41	15.1	33.3	4–7	58–102	0.53	0.017	<3	15.1	33.3
200	8		on request										
250	10	on request											

Options



Actuator

- Solenoid valve for impulse actuation:
last valve position is maintained at power failure
- Solenoid valve separate, for external mounting
- Other solenoid valve voltage (standard: 24 VDC)

Valve

- Bake-out jacket
- Shaft feedthrough
- PTFE bellows for shaft feedthrough
- Ports for roughing (by-pass), venting or for gauges (Dia. 1), possible in positions A, B, C and D

DN valve	mm inch	50 2	63 2½	80 3	100 4	160 6	200 8	250 10
Recommended port ISO-KF		25	25	25	25	25	on request	on request
X	mm inch	90 3.54	110 4.33	130 5.12	150 5.91	215 8.46		
Y	mm inch	41.5 1.63	41.5 1.63	41.5 1.63	41.5 1.63	52 2.05		
Z	mm inch	65 2.56	72.5 2.85	91 3.58	91 3.58	116 4.57		
Other ports on request								

Ordering information for options:

Ordering No. of valve-X (e. g. 09140-PE14-X, X = port ISO-KF 25 in position A)

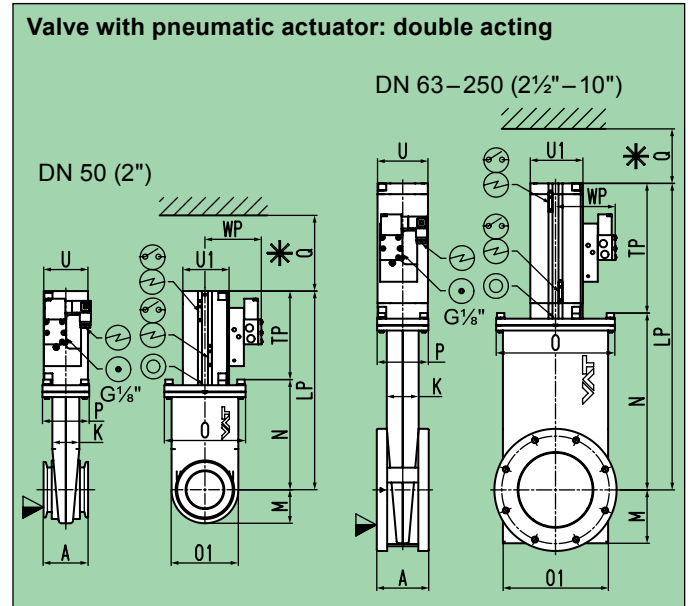
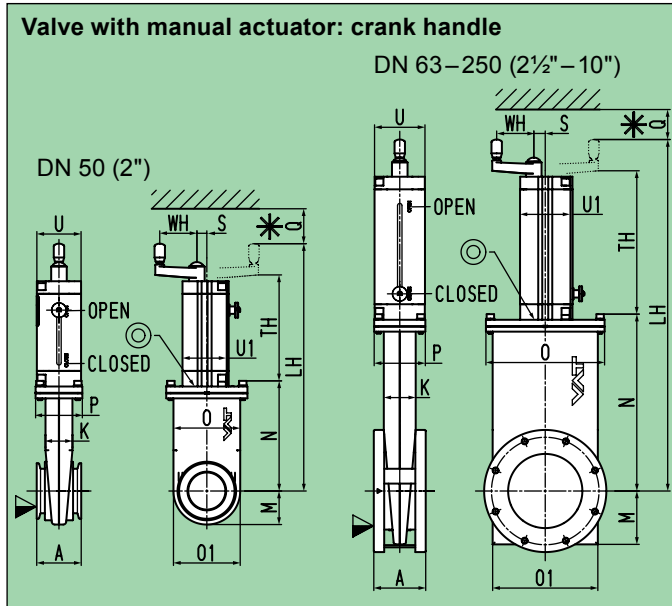
Spare parts

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

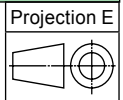
Accessories

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

Main dimensions



- ▽ Valve seat side
- ⊙ Compressed air connection
- ⊕ Position indicator
- * Required for dismantling
- ⊖ Electrical connection
- ⊗ Leak detection hole

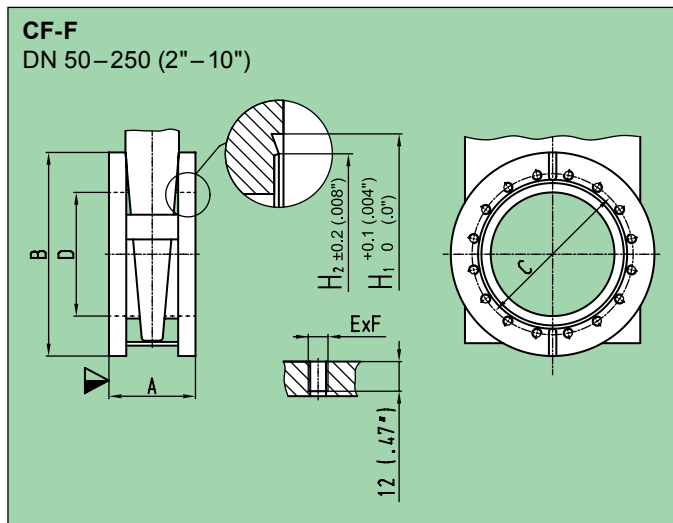
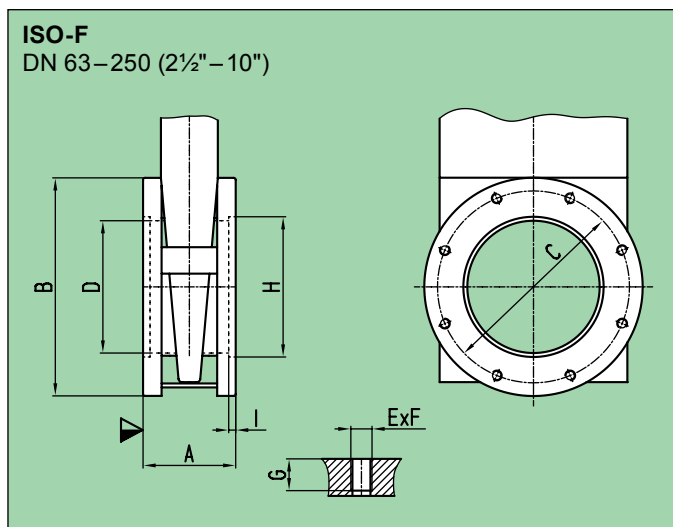
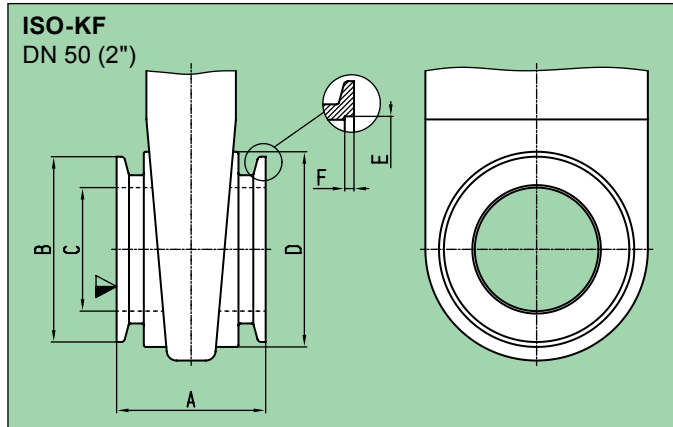


Flange dimensions: see pages 34–35
 DN 200–250 (8"–10") on request

DN	mm	50	63	80	100	160
	inch	2	2½	3	4	6
A	mm	60	70	70	70	90
	inch	2.36	2.75	2.75	2.75	3.54
K	mm	36	43	43	43	52.50
	inch	1.42	1.69	1.69	1.69	2.06
LH	mm	320	375	424	474	651
	inch	12.60	14.76	16.69	18.66	25.62
M	mm	45	53.50	72.50	72	97
	inch	1.77	2.10	2.85	2.83	3.83
N	mm	149	176	209	239	337
	inch	5.87	6.92	8.29	9.40	13.27
O	mm	109.50	123	142	160	210
	inch	4.31	4.84	5.59	6.30	8.26
O1	mm	90	105	124	142	192
	inch	3.54	4.13	4.88	5.59	7.55
P	mm	63	69	69	69	87
	inch	2.48	2.71	2.71	2.71	3.42
Q	mm	120	160	200	200	260
	inch	4.72	6.30	7.87	7.87	10.23
S	mm	13	15.50	15.50	15.50	20.50
	inch	0.51	0.61	0.61	0.61	0.80
TH	mm	131	149	165	185	264
	inch	5.16	5.86	6.50	7.28	10.39
U	mm	60	68	68	68	87
	inch	2.36	2.67	2.67	2.67	3.42
U1	mm	62.50	71	71	71	91
	inch	2.46	2.79	2.79	2.79	3.58
WH	mm	21	57	57	57	73
	inch	0.83	2.24	2.24	2.24	2.87

DN	mm	50	63	80	100	160
	inch	2	2½	3	4	6
A	mm	60	70	70	70	90
	inch	2.36	2.75	2.75	2.75	3.54
K	mm	36	43	43	43	52.50
	inch	1.42	1.69	1.69	1.69	2.06
LP	mm	268	314	384	413.50	578
	inch	10.55	12.36	15.12	16.27	22.75
M	mm	45	53.50	72.50	72	97
	inch	1.77	2.10	2.85	2.83	3.83
N	mm	149	176	209	239	337
	inch	5.87	6.92	8.29	9.40	13.27
O	mm	109.50	123	142	160	210
	inch	4.31	4.84	5.59	6.30	8.26
O1	mm	90	105	124	142	192
	inch	3.54	4.13	4.88	5.59	7.55
P	mm	63	69	69	69	87
	inch	2.48	2.71	2.71	2.71	3.42
Q	mm	120	160	200	200	260
	inch	4.72	6.30	7.87	7.87	10.23
TP	mm	119	138	175	174.50	241
	inch	4.69	5.43	6.89	6.87	9.48
U	mm	60	68	68	68	87
	inch	2.36	2.67	2.67	2.67	3.42
U1	mm	62.5	71	71	71	91
	inch	2.46	2.79	2.79	2.79	3.58
WP	mm	77	82	82	82	92
	inch	3.03	3.22	3.22	3.22	3.62

Flange dimensions



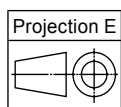
- 1) Metric threads
- 2) UNF threads

	ISO-KF	ISO-F				
DN	mm inch	50 2	63 2½	80 3	100 4	160 6
A	mm inch	60 2.36	70 2.76	70 2.76	70 2.76	90 3.54
B	mm inch	75 2.95	136 5.35	145 5.70	165 6.50	225 8.86
C	mm inch	50 1.97	110 4.33	125 4.92	145 5.71	200 7.87
D	mm inch	79 3.11	63 2.48	80 3.15	100 3.94	150 5.91
E	mm inch	52.20 2.06	–	–	–	–
F	mm inch	3 0.19	–	–	–	–
E × F		–	4 × M8	8 × M8	8 × M8	8 × M10
G	mm inch	–	12 0.47	12 0.47	12 0.47	15 0.59
H	mm inch	–	70 2.76	83 3.27	102 4.02	153 6.02
I	mm inch	–	3 0.12	3 0.12	3 0.12	5 0.20

DN 200–250 (8"–10") on request

DN	mm inch	50 2	63 2½	80 3	100 4	160 6
O.D.	inch	3	4½	4⅝	6	8
A	mm inch	60 2.36	70 2.76	70 2.76	70 2.76	90 3.54
B	mm inch	85.80 3.38	135.80 5.35	145 5.71	164.80 6.49	224.80 8.85
C	mm inch	72.40 2.85	92.10 3.63	102.4 4.08	130.30 5.13	181 7.13
D	mm inch	50 1.97	63 2.48	80 3.15	100 3.94	150 5.91
E × F ¹⁾		8 × M8	8 × M8	10 × M8	16 × M8	20 × M8
E × F ²⁾		8 × 5/16" 24 UNF	8 × 5/16" 24 UNF	10 × 5/16" 24 UNF	16 × 5/16" 24 UNF	20 × 5/16" 24 UNF
H1	mm inch	61.80 2.43	82.50 3.25	91.50 3.60	120.65 4.75	171.45 6.75
H2	mm inch	56.40 2.22	77.40 3.05	86.30 3.40	115.50 4.55	166 6.54

DN 200–250 (8"–10") on request



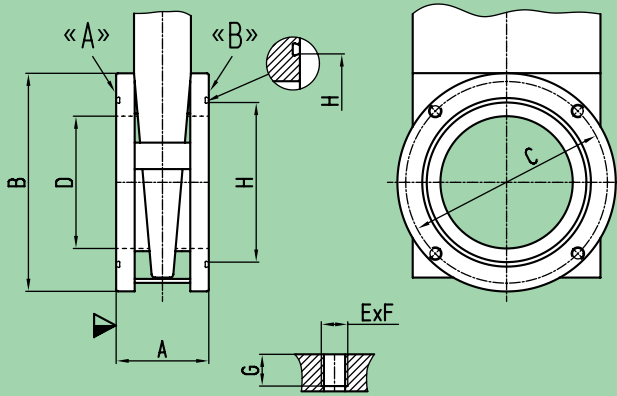
▼ Valve seat side

Flange dimensions

ASA-LP

DN 63–250 (2½"–10")
with or without O-ring groove

For orders with O-ring groove specify:
«A», «B» or «A+B»

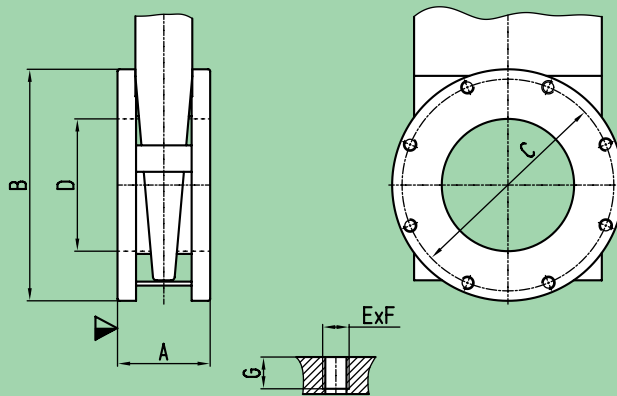


DN	mm inch	63 2½	80 3	100 4	160 6
ASA-LP		2	–	3	4
A	mm inch	70 2.76	70 2.76	70 2.76	90 3.54
B	mm inch	152.40 6	177.80 7	190.50 7.50	225 8.86
C	mm inch	120.70 4.75	139.70 5.50	152.40 6	190.50 7.50
D	mm inch	70 2.76	76 3	100 3.94	150 5.91
E × F		4 × 3/8" 16 UNC	4 × 3/8" 16 UNC	4 × 3/8" 16 UNC	8 × 3/8" 16 UNC
G	mm inch	15 0.59	15 0.59	15 0.59	15 0.59
H	mm inch	88.90 3.50	88.90 3.50	120.65 4.75	158.75 6.25
O-ring I.D. × d		88.49 × 3.53 3.48 × 0.139	88.49 × 3.54 3.48 × 0.140	120.24 × 3.53 4.73 × 0.139	158.34 × 3.53 6.23 × 0.139

DN 200–250 (8"–10") on request

JIS B 2290: 1998 / ISO 1609

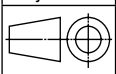
DN 65–250 (2½"–10")



DN	mm inch	65 2½	80 3	100 4	150 6
A	mm inch	70 2.76	70 2.76	70 2.76	90 3.54
B	mm inch	136 5.35	165 6.50	175 6.89	225 8.86
C	mm inch	120 4.72	135 5.31	160 6.31	210 8.27
D	mm inch	63 2.48	80 3.15	100 3.94	150 5.91
E × F		4 × M10	8 × M10	8 × M10	8 × M10
G	mm inch	12 0.47	12 0.47	12 0.47	15 0.59

DN 200–250 (8"–10") on request

Projection E



▼ Valve seat side