

## Series 14.1

### Main applications

General purpose valve for isolation in high or rough vacuum applications  
Especially suited to industrial processes



### Ordering information

**Valve with manual actuator**  
crank handle

DN		Ordering numbers				
mm	inch	ISO-F	CF-F metric threads	CF-F UNF threads	ASA-LP	JIS
63	2 ½	14136-PE01	14136-CE01	14136-UE01	14136-TE01	14136-JE01
80	3	14138-PE01	14138-CE01	14138-UE01	14138-TE01	14138-JE01
100	4	14140-PE01	14140-CE01	14140-UE01	14140-TE01	14140-JE01
160	6	14144-PE01	14144-CE01	14144-UE01	14144-TE01	14144-JE01
200	8	14146-PE01	14146-CE01	14146-UE01	14146-TE01	14146-JE01
250	10	14148-PE01	14148-CE01	14148-UE01	14148-TE01	14148-JE01
320	12	14150-PE01	on request	on request	14150-TE01	14150-JE01

with position indicator: 141 . . . E08

with lever (instead of crank handle): 141 . . . E06

**Valve with pneumatic actuator**  
double acting  
with solenoid valve  
with position indicator

DN		Ordering numbers (specify control voltage)				
mm	inch	ISO-F	CF-F metric threads	CF-F UNF threads	ASA-LP	JIS
63	2 ½	14136-PE44	14136-CE44	14136-UE44	14136-TE44	14136-JE44
80	3	14138-PE44	14138-CE44	14138-UE44	14138-TE44	14138-JE44
100	4	14140-PE44	14140-CE44	14140-UE44	14140-TE44	14140-JE44
160	6	14144-PE44	14144-CE44	14144-UE44	14144-TE44	14144-JE44
200	8	14146-PE44	14146-CE44	14146-UE44	14146-TE44	14146-JE44
250	10	14148-PE44	14148-CE44	14148-UE44	14148-TE44	14148-JE44
320	12	14150-PE44	on request	on request	14150-TE44	14150-JE44

without solenoid valve, without position indicator: 141 . . . E14

without solenoid valve, with position indicator: 141 . . . E24

with solenoid valve, without position indicator: 141 . . . E34 (specify control voltage)

————— Further ordering information on next page —————>

Valve DN 400: see series 14.0, pages 66–71

## Features

Body material: stainless steel

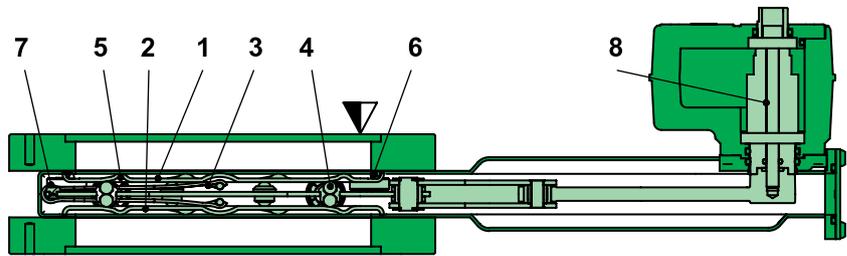
Very compact design

Manual and pneumatic actuator mountable in 6 positions

Rotary feedthrough for a high number of cycles

DN 63–200 with vulcanized seal (no dead volumes at the gate seal): see glossary

Functional principle



- |                 |                |                   |
|-----------------|----------------|-------------------|
| 1 Gate          | 4 Ball pairs   | 7 Spring stop     |
| 2 Counter-plate | 5 Ball detents | 8 Actuator        |
| 3 Leaf springs  | 6 Gate seal    | ▽ Valve seat side |

## Technical data

Leak rate: valve body, valve seat	$< 1 \cdot 10^{-9}$ mbar ls <sup>-1</sup>
Pressure range	
– DN 63–200	$1 \cdot 10^{-8}$ mbar to 1.6 bar (abs)
– DN 250–320	$1 \cdot 10^{-8}$ mbar to 1.2 bar (abs)
Differential pressure on the gate	
– DN 63–200	$\leq 1.6$ bar
– DN 250–320	$\leq 1.2$ bar
Differential pressure at opening	$\leq 30$ mbar
Cycles until first service	200 000
Temperature <sup>1)</sup>	
– Valve body	$\leq 150$ °C
– Manual and pneumatic actuator	$\leq 80$ °C
– Solenoid valve	$\leq 50$ °C
– Position indicator	$\leq 80$ °C

<sup>1)</sup> Maximum values: depending on operating conditions and sealing materials

Further technical data on next page →

### Continued Ordering information

**Valve with 3-position pneumatic actuator**  
double acting  
with solenoid valve  
with position indicator

DN		Ordering numbers (specify control voltage)				
mm	inch	ISO-F	CF-F metric threads	CF-F UNF threads	ASA-LP	JIS
63	2 ½	14136-PE48	14136-CE48	14136-UE48	14136-TE48	14136-JE48
80	3	14138-PE48	14138-CE48	14138-UE48	14138-TE48	14138-JE48
100	4	14140-PE48	14140-CE48	14140-UE48	14140-TE48	14140-JE48
160	6	14144-PE48	14144-CE48	14144-UE48	14144-TE48	14144-JE48
200	8	14146-PE48	14146-CE48	14146-UE48	14146-TE48	14146-JE48
250	10	14148-PE48	14148-CE48	14148-UE48	14148-TE48	14148-JE48
320	12	14150-PE48	on request	on request	14150-TE48	14150-JE48

without solenoid valve, with position indicator: 141 . . . . E28

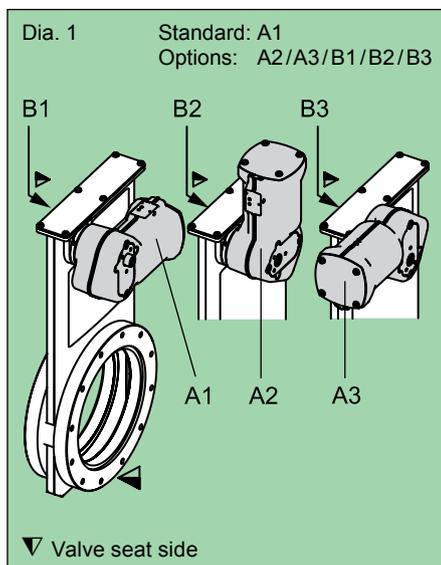
Valve DN 400: see series 64.0, pages 66–71

Continued Technical data

Heating and cooling rate	≤ 50 °C h <sup>-1</sup>
Material	
– Valve body	AISI 304 (1.4301)
– Mechanism DN 63–200	AISI 316L (1.4404)
DN 250–320	AISI 304 (1.4301)
Seal: bonnet, gate	FKM (Viton®)
Feedthrough	rotary feedthrough
Mounting position	any
Solenoid valve	24VDC, 5.4 W (others on request)
Position indicator: contact rating	
– Voltage	≤ 50VAC/DC
– Current	≤ 1.2A
Valve position indication	visual (mechanical)

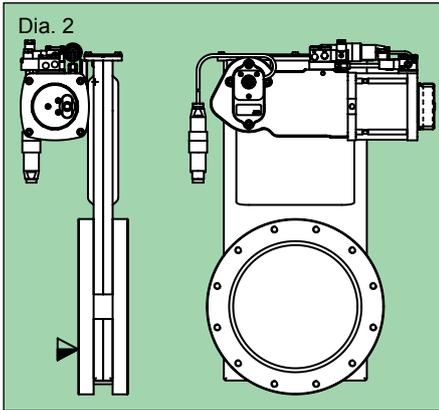
DN (nominal I. D.)		Standard flanges	Conductance (molecular flow) (depending on A-dimension and flange type)	Valve with manual actuator				Valve with pneumatic actuator								
				with crank handle		with lever				Volume of pneumatic actuator		Closing or opening time		Weight		
mm	inch		l s <sup>-1</sup>	Turns per stroke	Weight	Angle of rotation per stroke	Weight	Compressed air min. – max. overpressure								
				n	kg	lbs	°	kg	lbs	bar	psi	l	ft <sup>3</sup>	s	kg	lbs
63	2 ½	Sse pages 64–65	600	14	6	13.2	83.5	6	13.2	4–7	58–102	0.25	0.0088	1.5	7.5	16.5
80	3		765	14	6	13.2	83.5	6	13.2	4–7	58–102	0.25	0.0088	1.5	7.5	16.5
100	4		1740	14	8	17.6	83.5	8	17.6	4–7	58–102	0.25	0.0088	1.5	10	22.1
160	6		5880	15	13	28.7	83.5	13	28.7	4–7	58–102	0.53	0.0187	2.5	16	35.3
200	8		12200	15	21	46.3	83.5	21	46.3	4–7	58–102	0.53	0.0187	2.5	24.5	54
250	10		21690	16	40	88.2	83.5	40	88.2	4–7	58–102	0.88	0.0311	4.5	46.5	102.5
320	12		29130	16	73	160.9	83.5	73	160.9	4–7	58–102	0.88	0.0311	4.5	77.5	170.9

## Options



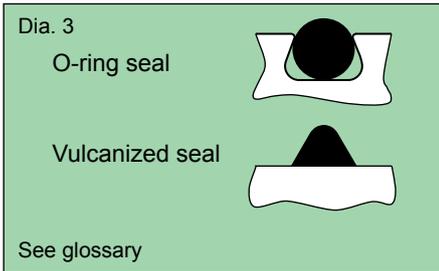
### Actuator

- 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)
- Manual emergency operation on solenoid valve lockable
- Standard pneumatic actuator mountable in 6 positions (Dia. 1):
  - position A1, A2, A3 on A-side (valve seat side): to be specified with order
  - position B1, B2, B3 on B-side (rear side): to be specified with order
- 3-position pneumatic actuator for throttling (Dia. 2), mountable in 6 positions (Dia. 1):
  - position A1, A2, A3 on A-side (valve seat side): to be specified with order
  - position B1, B2, B3 on B-side (rear side): to be specified with order
 ordering information on page 59, technical data on request
- Double position indicator (2 switches each for the positions «open» and «closed»)



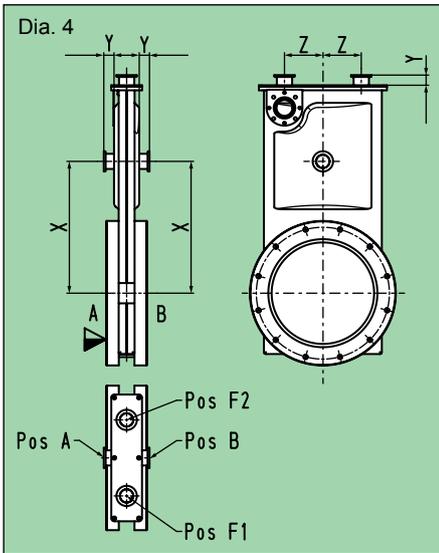
**Valve**

- Customer specified flanges with/without watercooling
- Other sealing materials
- O-ring seal in gate (Dia. 3) with DN 63, 100, 160, 200 (standard: vulcanized seal)
- Intermediate pumping of the rotary feedthrough
- Ports for roughing (by-pass), venting or for gauges (Dia. 4)
  - possible in positions B, F1 and F2 with DN 63–250
  - possible in positions A, B, F1 and F2 with DN 320



DN valve	mm inch	63 2 ½	80 3	100 4	160 6	200 8	250 10	320 12
Recommended port Pos. A+B: ISO-KF		40	40	40	40	40	40	40
Recommended port Pos. F1+F2: ISO-KF		16	16	16	16	16	25	25
X	mm inch	110 4.33	110 4.33	150 5.91	205 8.07	260 10.24	335 13.19	415 16.34
Y	mm inch	20 0.79	20 0.79	20 0.79	20 0.79	20 0.79	20 0.79	20 0.79
Z	mm inch	30 1.18	30 1.18	47.50 1.87	59 2.32	85 3.35	100 3.94	135 5.31

Other ports on request



▽ Valve seat side

**Ordering information for options:**

Ordering No. of valve-X (e. g. 14146-CE01-X,

X = actuator A2, port ISO-KF 40 in position F2)

**Spare parts**

**- Seals**

on request (specify fabrication number of valve)

**Accessories**

**- Heater**

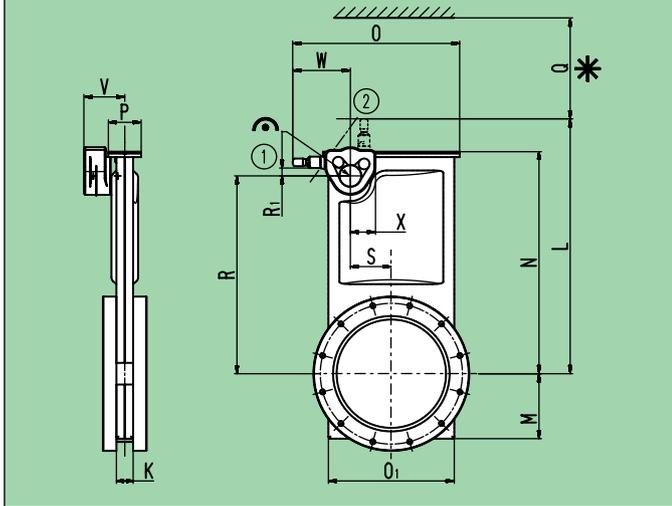
on request (specify fabrication number of valve)

**- Flange connections**

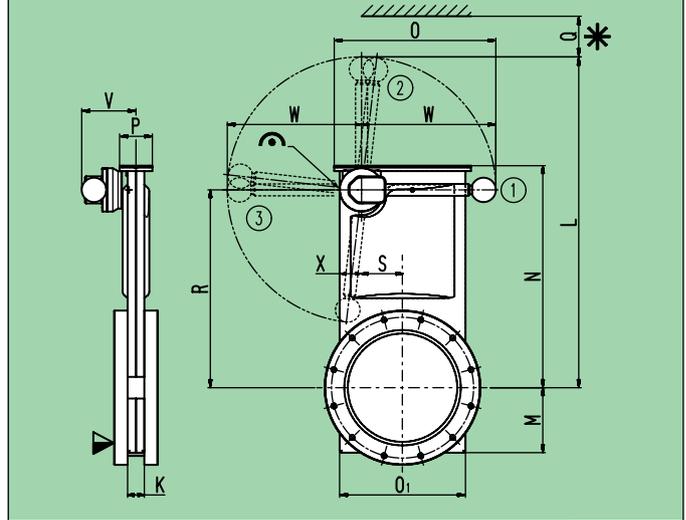
for installation of the valve: see series 32 and 33

## Main dimensions

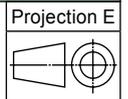
**Valve with manual actuator: crank handle**  
DN 63–320 (2½"–12")



**Valve with manual actuator: lever**  
DN 63–320 (2½"–12")



- ▽ Valve seat side
- \* Required for dismantling
- ↻ Mechanical position indication
- ① Standard actuator position
- ②③ Optional actuator positions



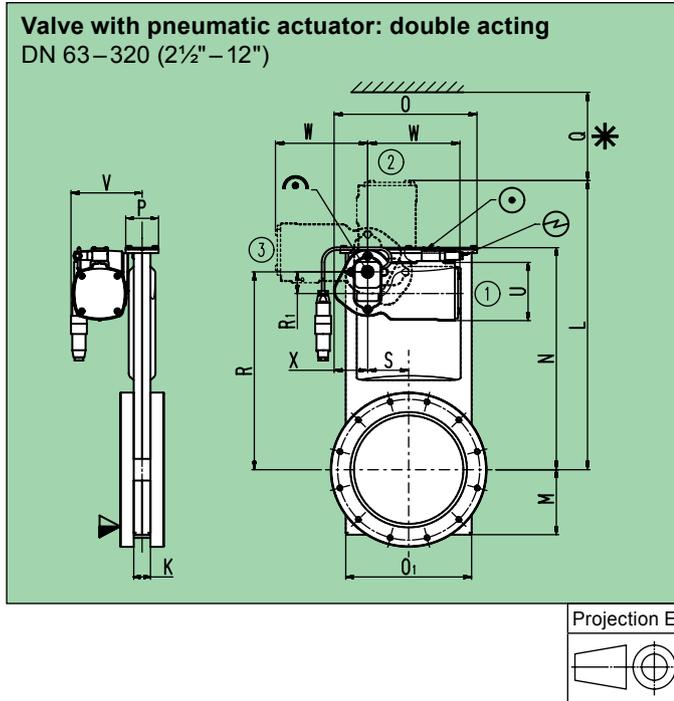
Flange dimensions: see pages 64–65

DN	mm	63	80	100	160	200	250	320
inch		2½	3	4	6	8	10	12
K	mm	26	26	26	25	31	41	54.40
	inch	1.02	1.02	1.02	0.98	1.22	1.61	2.14
L	mm	266	266	306	388	462	606	768.50
	inch	10.47	10.47	12.05	15.28	18.19	23.86	30.26
M	mm	53	53	69	94.50	120	160.50	198
	inch	2.09	2.09	2.72	3.72	4.72	6.32	7.80
N	mm	196	196	236	327	410	536	700
	inch	7.72	7.72	9.29	12.87	16.14	21.10	27.56
O	mm	193.50	193.50	219.50	264.50	305.50	424	481
	inch	7.62	7.62	8.64	10.41	12.03	16.69	18.94
O1	mm	105	105	135	185	230	321	396
	inch	4.13	4.13	5.31	7.28	9.06	12.64	15.59
P	mm	50	50	60	60	60	75	90
	inch	1.97	1.97	2.36	2.36	2.36	2.95	3.54
Q	mm	140	140	180	250	300	400	500
	inch	5.51	5.51	7.09	9.84	11.81	15.75	19.69
R	mm	162	162	202	282.50	365.50	465	627.50
	inch	6.38	6.38	7.95	11.12	14.39	18.31	24.70
R1	mm	23	23	23	25	25	35	35
	inch	0.91	0.91	0.91	0.98	0.98	1.38	1.38
S	mm	27	27	38	56.50	75	113	130
	inch	1.06	1.06	1.50	2.22	2.95	4.45	5.12
V	mm	71	71	71	72	75	99	105.50
	inch	2.80	2.80	2.80	2.83	2.95	3.90	4.15
W	mm	104	104	104	105.50	105.50	141	141
	inch	4.09	4.09	4.09	4.15	4.15	5.55	5.55
X	mm	44	44	44	46	46	59	59
	inch	1.73	1.73	1.73	1.81	1.81	2.32	2.32

DN	mm	63	80	100	160	200	250	320
inch		2½	3	4	6	8	10	12
K	mm	26	26	26	26	31	41	54.40
	inch	1.02	1.02	1.02	1.02	1.22	1.61	2.14
L	mm	343	343	383	527	609	835	998
	inch	13.50	13.50	15.08	20.75	23.98	32.87	39.29
M	mm	53	53	69	94.50	120	160.50	198
	inch	2.09	2.09	2.72	3.72	4.72	6.32	7.80
N	mm	196	196	236	327	410	536	700
	inch	7.72	7.72	9.29	12.87	16.14	21.10	27.56
O	mm	218	218	222	292	295	430	453
	inch	8.58	8.58	8.74	11.50	11.61	16.93	17.83
O1	mm	105	105	135	185	230	321	396
	inch	4.13	4.13	5.31	7.28	9.06	12.64	15.59
P	mm	50	50	60	60	60	75	90
	inch	1.97	1.97	2.36	2.36	2.36	2.95	3.54
Q	mm	140	140	180	250	300	400	500
	inch	5.51	5.51	7.09	9.84	11.81	15.75	19.69
R	mm	162	162	202	282.50	365.50	465	627.50
	inch	6.38	6.38	7.95	11.12	14.39	18.31	24.70
S	mm	27	27	38	56.50	75	113	130
	inch	1.06	1.06	1.50	2.22	2.95	4.45	5.12
V	mm	97	97	97	97	99	107	113.50
	inch	3.82	3.82	3.82	3.82	3.90	4.21	4.47
W	mm	182	182	182	246	246	373	373
	inch	7.17	7.17	7.17	9.69	9.69	14.69	14.69
X	mm	25	25	29	36	40	47.50	68
	inch	0.98	0.98	1.14	1.42	1.57	1.87	2.68

## Main dimensions

Valve with pneumatic actuator: double acting  
DN 63–320 (2½"–12")

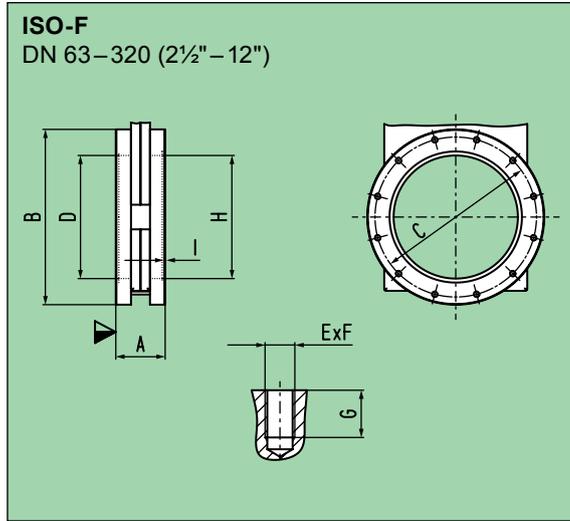


- ▼ Valve seat side
- \* Required for dismantling
- ⊙ Compressed air connection
- ⊕ Electrical connection
- ⊖ Mechanical position indication
- ① Standard actuator position
- ②③ Optional actuator positions

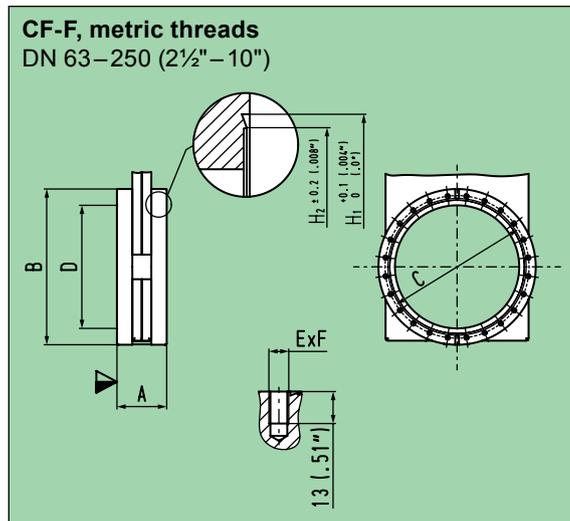
Flange dimensions: see pages 64–65

DN	mm inch	63 2½	80 3	100 4	160 6	200 8	250 10	320 12
K	mm inch	26 1.02	26 1.02	26 1.02	26 1.02	31 1.22	41 1.61	54.40 2.14
L	mm inch	294 11.57	294 11.57	334 13.15	448 17.64	531 20.91	661 26.02	823.50 32.42
M	mm inch	53 2.09	53 2.09	69 2.72	94.50 3.72	120 4.72	160.50 6.32	198 7.80
N	mm inch	196 7.72	196 7.72	236 9.29	327 12.87	410 16.14	536 21.10	700 27.56
O	mm inch	140 5.51	140 5.51	166 6.54	220.50 8.68	261.50 10.30	352 13.86	409.50 16.12
O1	mm inch	105 4.13	105 4.13	135 5.31	185 7.28	230 9.06	321 12.64	396 15.59
P	mm inch	50 1.97	50 1.97	60 2.36	60 2.36	60 2.36	75 2.95	90 3.54
Q	mm inch	140 5.51	140 5.51	180 7.09	250 9.84	300 11.81	400 15.75	500 19.69
R	mm inch	162 6.38	162 6.38	202 7.95	282.50 11.12	365.50 14.39	465 18.31	627.50 24.70
R1	mm inch	30 1.18	30 1.18	30 1.18	40 1.57	40 1.57	48 1.89	48 1.89
S	mm inch	27 1.06	27 1.06	38 1.50	56.50 2.22	75 2.95	113 4.45	130 5.12
U	mm inch	86.50 3.41	86.50 3.41	86.50 3.41	110 4.33	110 4.33	130 5.12	130 5.12
V	mm inch	114 4.49	114 4.49	114 4.49	125 4.92	127.50 5.02	157 6.18	163.50 6.44
W	mm inch	132 5.20	132 5.20	132 5.20	165.50 6.52	165.50 6.52	196 7.72	196 7.72
X	mm inch	50.50 1.99	50.50 1.99	50.50 1.99	61.50 2.42	61.50 2.42	69 2.72	69 2.72

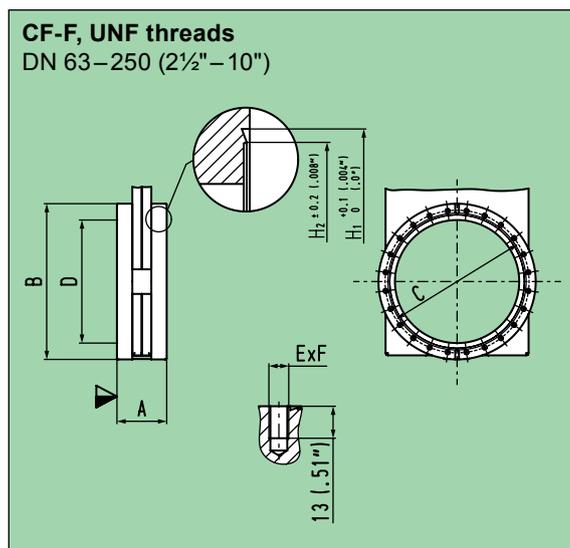
## Flange dimensions



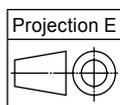
DN	mm inch	63 2½	80 3	100 4	160 6	200 8	250 10	320 12
A	mm inch	70 2.76	70 2.76	70 2.76	70 2.76	80 3.15	100 3.94	120 4.72
B	mm inch	130 5.12	145 5.71	165 6.50	225 8.86	285 11.22	350 13.78	425 16.73
C	mm inch	110 4.33	125 4.92	145 5.71	200 7.87	260 10.24	310 12.20	395 15.55
D	mm inch	70 2.76	76 2.99	100 3.94	150 5.91	200 7.87	261 10.28	306 12.05
E × F		4 × M8	8 × M8	8 × M8	8 × M10	12 × M10	12 × M10	12 × M12
G	mm inch	13 0.51	13 0.51	13 0.51	15 0.59	15 0.59	15 0.59	18 0.71
H	mm inch	–	83 3.27	102 4.02	153 6.02	213 8.39	–	318 12.52
I	mm inch	–	3 0.12	3 0.12	5 0.20	5 0.20	–	5 0.20



DN	mm inch	63 2½	80 3	100 4	160 6	200 8	250 10	
O. D.	inch	4½	4⅝	6	8	10	12	
A	mm inch	70 2.76	70 2.76	70 2.76	70 2.76	80 3.15	100 3.94	
B	mm inch	113.50 4.47	117.50 4.63	151.60 5.97	202.40 7.97	253.20 9.97	350 13.78	
C	mm inch	92.10 3.63	102.40 4.03	130.20 5.13	181 7.13	231.80 9.13	284 11.18	
D	mm inch	70 2.76	76 2.99	100 3.94	150 5.91	200 7.87	254 10	
E × F		8 × M8	10 × M8	16 × M8	20 × M8	24 × M8	32 × M8	
H1	mm inch	82.50 3.25	91.65 3.61	120.70 4.75	171.45 6.75	222.40 8.76	273.15 10.75	
H2	mm inch	77.40 3.05	86.30 3.40	115.50 4.55	166 6.54	217 8.54	267 10.51	



DN	mm inch	63 2½	80 3	100 4	160 6	200 8	250 <sup>1)</sup> 10	250 <sup>1)</sup> 10
O. D.	inch	4½	4⅝	6	8	10	12	13¼
A	mm inch	70 2.76	70 2.76	70 2.76	70 2.76	80 3.15	100 3.94	100 3.94
B	mm inch	113.50 4.47	117.50 4.63	151.60 5.97	202.40 7.97	253.20 9.97	350 13.78	350 13.78
C	mm inch	92.10 3.63	102.40 4.03	130.20 5.13	181 7.13	231.80 9.13	284 11.18	306.30 12.06
D	mm inch	70 2.76	76 2.99	100 3.94	150 5.91	200 7.87	254 10	254 10
E × F		8 × 5/16" 24 UNF	10 × 5/16" 24 UNF	16 × 5/16" 24 UNF	20 × 5/16" 24 UNF	24 × 5/16" 24 UNF	32 × 5/16" 24 UNF	30 × 3/8" 24 UNF
H1	mm inch	82.50 3.25	91.65 3.61	120.70 4.75	171.45 6.75	222.40 8.76	273.15 10.75	294.64 11.60
H2	mm inch	77.40 3.05	86.30 3.40	115.50 4.55	166 6.54	217 8.54	267 10.51	288.30 11.35



▼ Valve seat side

<sup>1)</sup> O. D. 12" VAT standard, O. D. 13¼" option

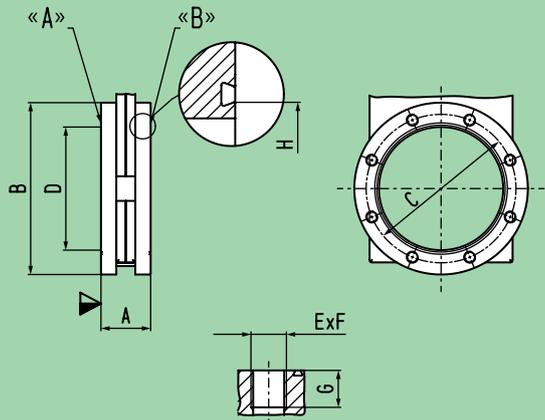
**Ordering information for option: O. D. 13¼"**  
Ordering No. of valve-X (e. g. 14148-UE44-X, X = O. D. 13¼")

## Flange dimensions

### ASA-LP

DN 63–320 (2½"–12")  
with or without O-ring groove

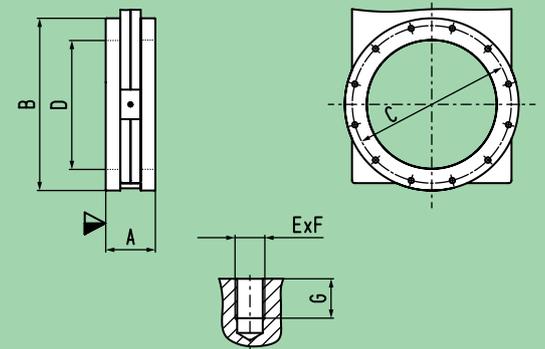
For orders with O-ring groove specify:  
«A», «B» or «A+B»



DN	mm	63	80	100	160	200	250	320
	inch	2½	3	4	6	8	10	12
ASA-LP		2	–	3	4	6	8	10
A	mm	70	70	70	70	80	100	120
	inch	2.76	2.76	2.76	2.76	3.15	3.94	4.72
B	mm	152.40	177.80	190.50	225	279.40	350	425
	inch	6.00	7.00	7.50	8.86	11.00	13.78	16.73
C	mm	120.70	139.70	152.40	190.50	241.30	298.50	362
	inch	4.75	5.50	6.00	7.50	9.50	11.75	14.25
D	mm	70	76	100	150	200	254	300
	inch	2.76	2.99	3.94	5.91	7.87	10.00	11.81
E x F		4 x 3/8"	4 x 3/8"	4 x 3/8"	8 x 3/8"	8 x 3/4"	8 x 3/4"	12 x 3/4"
		16 UNC	16 UNC	16 UNC	16 UNC	10 UNC	10 UNC	10 UNC
G	mm	15	15	15	15	19	19	19
	inch	0.59	0.59	0.59	0.59	0.75	0.75	0.75
H	mm	88.90	88.90	120.65	158.75	206.40	266.70	317.50
	inch	3.50	3.50	4.75	6.25	8.13	10.50	12.50
O-ring	mm	88.49 x 3.53	88.49 x 3.53	120.24 x 3.53	158.34 x 3.53	202.79 x 3.53	266.29 x 3.53	316.87 x 7.00
I.D. x d	inch	3.48 x .139	3.48 x .139	4.73 x .139	6.23 x .139	7.98 x .139	10.48 x .139	12.47 x .275

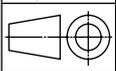
### JIS B 2290: 1998 / ISO 1609

DN 65–300 (2½"–12")



DN	mm	65	80	100	150	200	250	300
	inch	2½	3	4	6	8	10	12
A	mm	70	70	70	70	80	100	120
	inch	2.76	2.76	2.76	2.76	3.15	3.94	4.72
B	mm	136	165	185	235	300	350	425
	inch	5.35	6.50	7.28	9.25	11.81	13.78	16.73
C	mm	120	135	160	210	270	320	370
	inch	4.72	5.31	6.30	8.27	10.63	12.60	14.57
D	mm	70	76	100	150	200	261	306
	inch	2.76	2.99	3.94	5.91	7.87	10.28	12.05
E x F		4 x M10	8 x M10	8 x M10	8 x M10	8 x M12	12 x M12	12 x M12
G	mm	12	12	12	12	15	15	16
	inch	0.47	0.47	0.47	0.47	0.59	0.59	0.63

Projection E



▼ Valve seat side

## Series 14.0, 64.0

### Main applications

General purpose valve for isolation in high or rough vacuum applications  
Especially suited to industrial processes



### Ordering information

**Series 14.0**  
**Valve with manual actuator**  
handwheel

DN		Ordering numbers				
mm	inch	ISO-F	CF-F metric threads	CF-F UNF threads	ASA	JIS
400	16	14052-PE01	on request	on request	14052-AE01	14052-JE01

**Series 14.0**  
**Valve with pneumatic actuator**  
double acting  
with solenoid valve  
with position indicator

DN		Ordering numbers (specify control voltage)				
mm	inch	ISO-F	CF-F metric threads	CF-F UNF threads	ASA	JIS
400	16	14052-PE44	on request	on request	14052-AE44	14052-JE44

without solenoid valve, without position indicator: 140 . . . E14  
without solenoid valve, with position indicator: 140 . . . E24  
with solenoid valve, without position indicator: 140 . . . E34 (specify control voltage)

**Series 64.0**  
**Valve with 3-position**  
**pneumatic actuator**  
double acting  
with solenoid valve  
with position indicator

DN		Ordering numbers (specify control voltage)				
mm	inch	ISO-F	CF-F metric threads	CF-F UNF threads	ASA	JIS
400	16	64052-PE48	on request	on request	64052-AE48	64052-JE48

without solenoid valve, with position indicator: 640 . . . E28

Valves DN 63–320: see series 14.1, pages 58–65

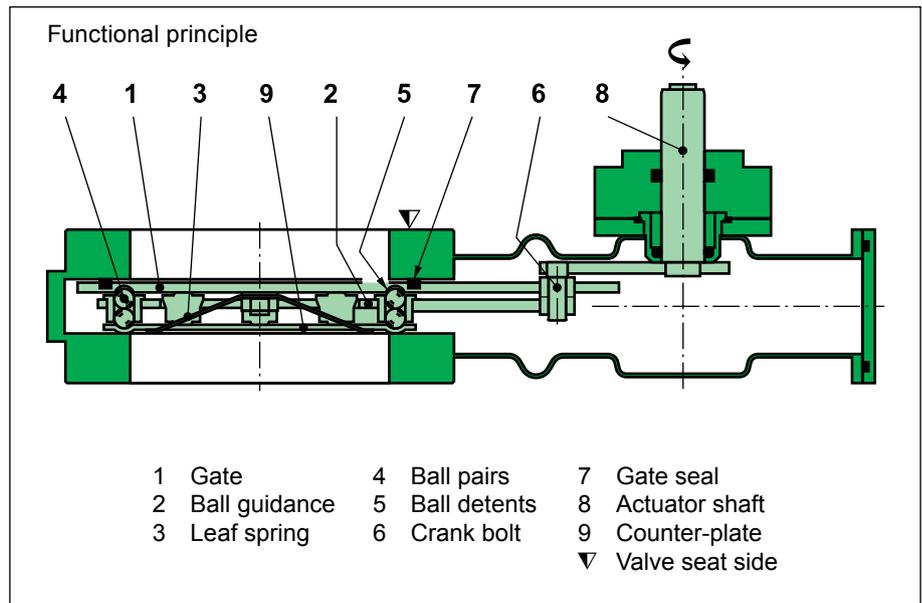
## Features

Body material: stainless steel

Very compact design

Manual and pneumatic actuator mountable in 6 positions

Rotary feedthrough for a high number of cycles



## Technical data

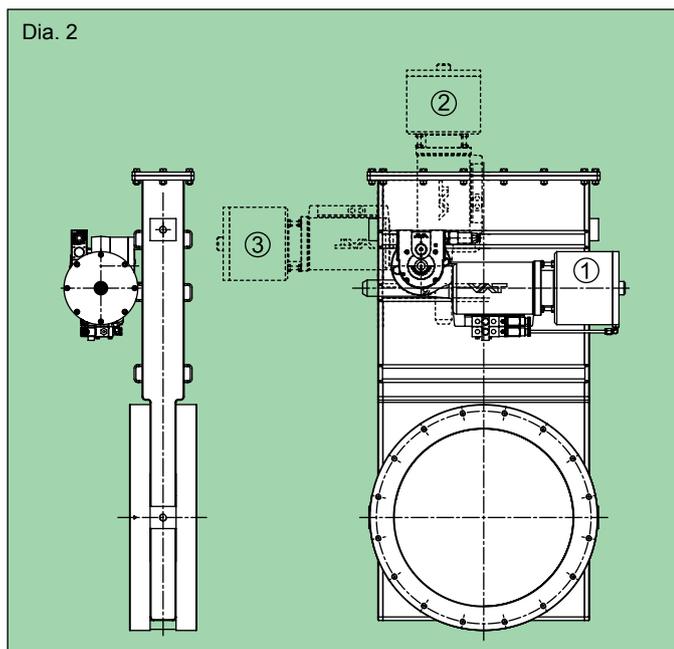
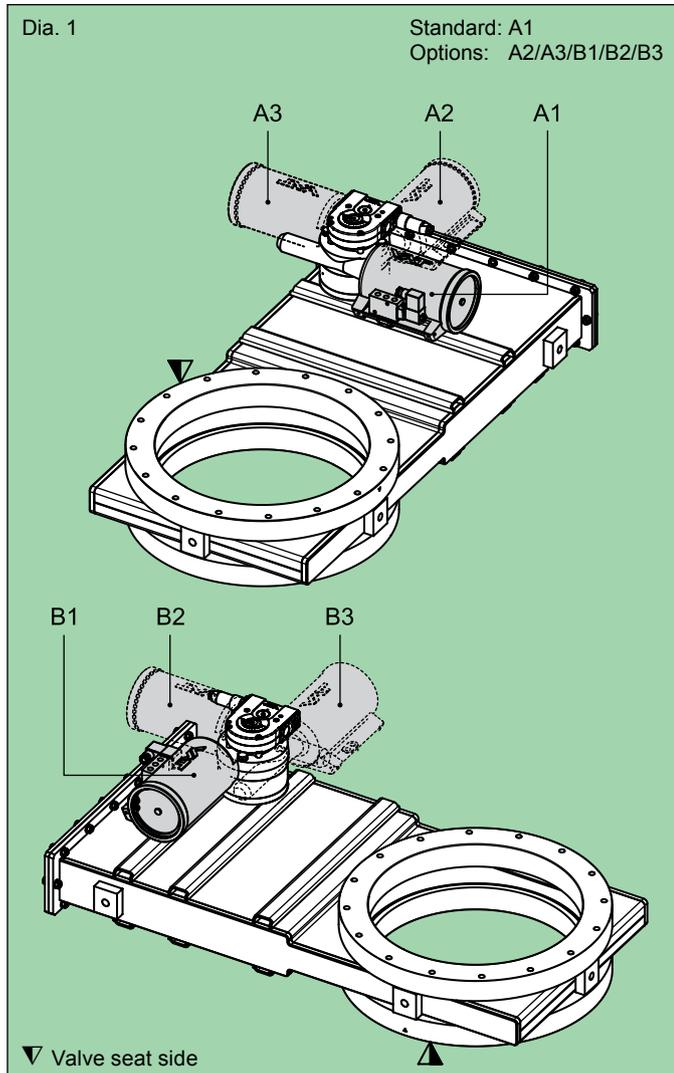
Leak rate: valve body, valve seat	$< 1 \cdot 10^{-9}$ mbar ls <sup>-1</sup>
Pressure range	$1 \cdot 10^{-8}$ mbar to 1.2 bar (abs)
Differential pressure on the gate	$\leq 1.2$ bar
Differential pressure at opening	$\leq 30$ mbar
Cycles until first service	200000 in horizontal position
Temperature <sup>1)</sup>	
– Valve body	$\leq 150$ °C
– Manual actuator	$\leq 80$ °C
– Pneumatic actuator	$\leq 50$ °C
– Solenoid valve	$\leq 50$ °C
– Position indicator	$\leq 80$ °C
Heating and cooling rate	$\leq 50$ °C h <sup>-1</sup>
Material: valve body, mechanism	AISI 304 (1.4301)
Seal: bonnet, gate	FKM (Viton®)
Feedthrough	rotary feedthrough
Mounting position <sup>2)</sup>	horizontal, seat side towards chamber
Solenoid valve	24 VDC, 2.5 W (others on request)
Position indicator: contact rating	
– Voltage	$\leq 250$ VAC $\leq 50$ VDC
– Current	$\leq 5$ A $\leq 3$ A
Valve position indication	visual (mechanical)
Conductance (molecular flow) <sup>3)</sup>	52000 ls <sup>-1</sup>
Pneumatic actuator	
– Compressed air, min.–max. overpressure	4–7 bar (58–102 psi)
– Volume of pneumatic actuator	0.75 l (0.025 ft <sup>3</sup> )
– Closing or opening time	5.5 s
Weight	155 kg (340 lbs)

<sup>1)</sup> Maximum values: depending on operating conditions and sealing materials

<sup>2)</sup> For other mounting positions please contact VAT

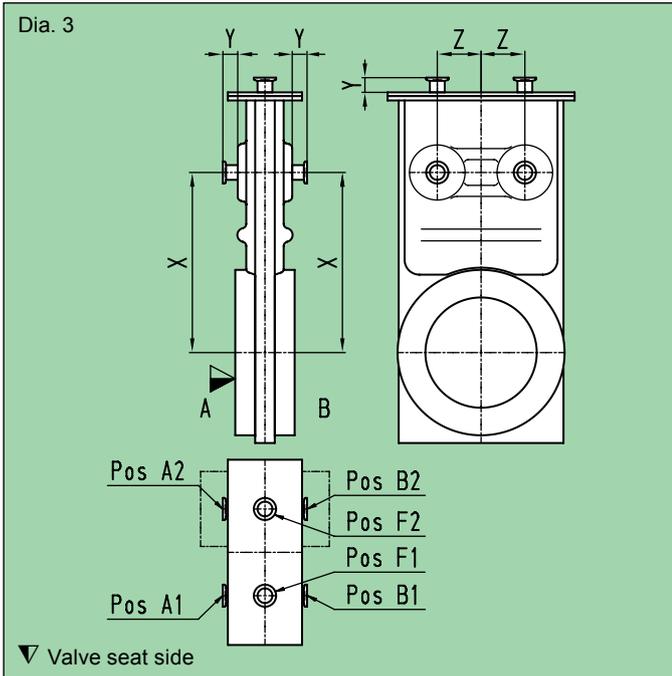
<sup>3)</sup> Depending on A-dimension and flange type

## 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)
- Manual emergency operation on solenoid valve lockable
- Standard pneumatic actuator mountable in 6 positions (Dia. 1):
  - position A1, A2, A3 on A-side (valve seat side):  
to be specified with order
  - position B1, B2, B3 on B-side (rear side):  
to be specified with order
- 3-position pneumatic actuator for throttling (Dia. 2), mountable in 6 positions (Dia. 1):
  - position A1, A2, A3 on A-side (valve seat side):  
to be specified with order
  - position B1, B2, B3 on B-side (rear side):  
to be specified with order
 ordering information on page 66, technical data on request
- Double position indicator  
(2 switches each for the positions «open» and «closed»)



**Valve**

- Customer specified flanges with/without watercooling
- Other sealing materials
- Intermediate pumping of the rotary feedthrough
- Ports for roughing (by-pass), venting or for gauges (Dia. 3), possible in positions A1, A2, B1, B2, F1 and F2

DN valve		Recommen- ded port	X		Y		Z	
mm	inch		mm	inch	mm	inch	mm	inch
400	16	ISO-KF 40	415	16.34	20	0.79	140	5.51
Other ports on request								

**Ordering information for options:**

Ordering No. of valve-X (e. g. 14052-PE44-X, X = actuator A2, port ISO-KF 40 in position F1)

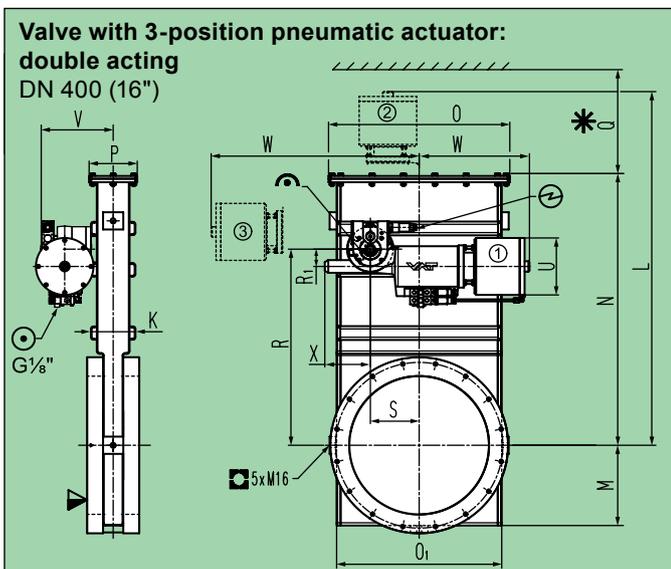
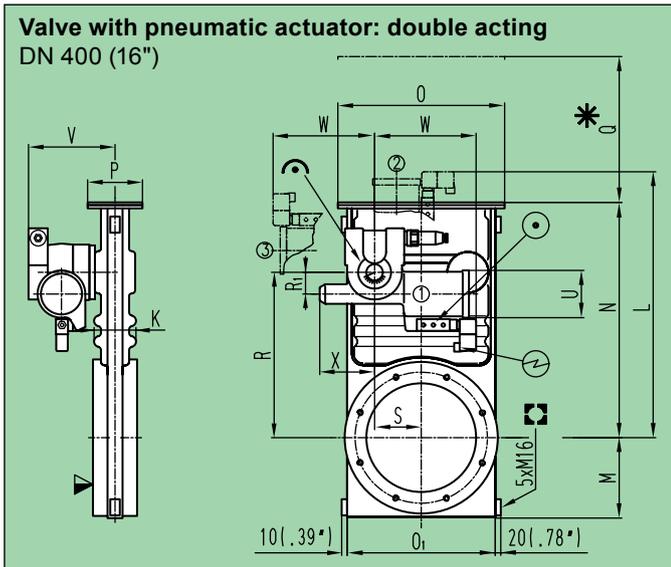
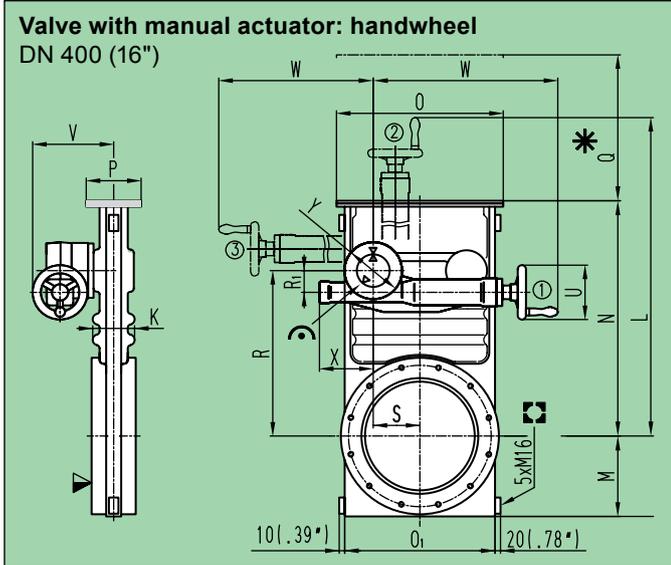
**Spare parts**

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

**Accessories**

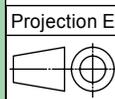
- **Heater**  
on request (specify fabrication number of valve)
- **Flange connections**  
for installation of the valve: see series 32 and 33

## Main dimensions

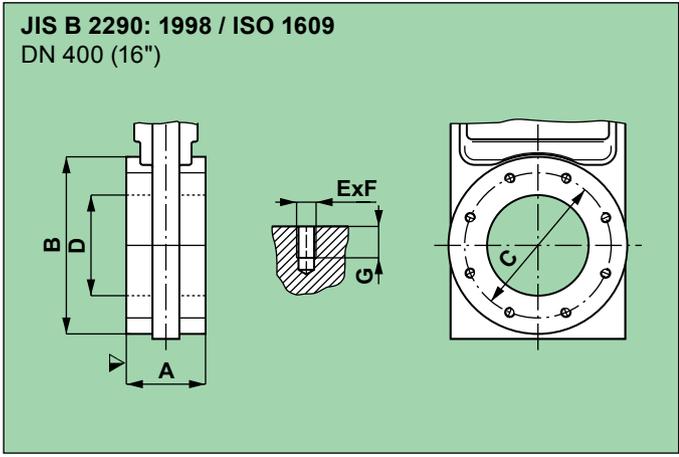
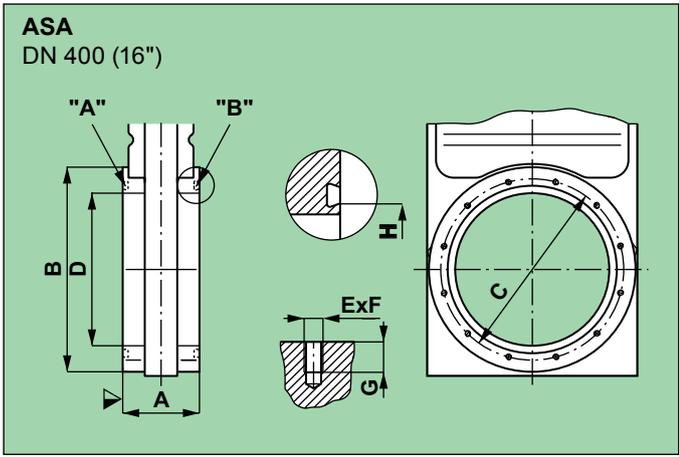
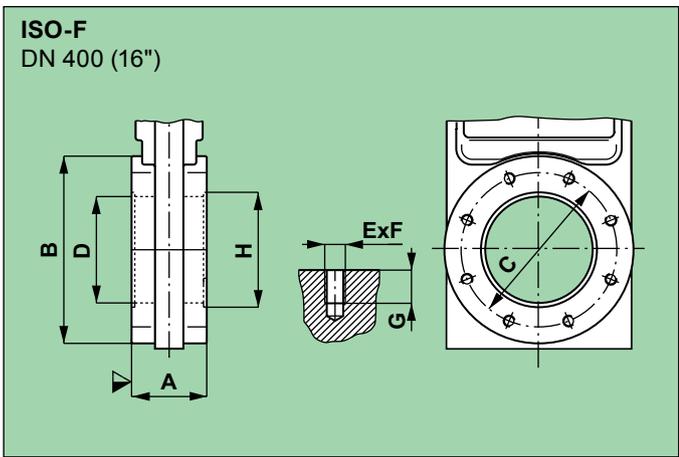


		Valve with manual actuator	Valve with pneumatic actuator	Valve with 3-position pneumatic actuator
K	mm inch	133 5.23	130 5.12	130 5.12
L	mm inch	935 36.81	836 32.91	1024 40.31
M	mm inch	232 9.13	232 9.13	232 9.13
N	mm inch	789 31.06	789 31.06	789 31.06
O	mm inch	520 20.47	520 20.47	520 20.47
O1	mm inch	474 18.66	474 18.66	474 18.66
P	mm inch	138 5.43	138 5.43	138 5.43
Q	mm inch	600 23.62	600 23.62	600 23.62
R	mm inch	568 22.36	568 22.36	568 22.36
R1	mm inch	50 1.97	50 1.97	50 1.97
S	mm inch	140 5.51	140 5.51	140 5.51
U	mm inch	125 4.92	122.50 4.82	165 6.50
V	mm inch	202 7.95	206 8.11	221 8.72
W	mm inch	367 14.45	268 10.55	456 17.95
X	mm inch	130 5.12	131 5.16	131 5.16
Y	mm inch	130 5.12	-	-

- ▼ Valve seat side
- \* Required for dismantling
- ⊙ Compressed air connection
- ⊕ Electrical connection
- ↻ Mechanical position indication
- For attachment
- ① Standard actuator position
- ②③ Optional actuator positions



### Flange dimensions



		ISO-F	ASA	JIS
DN	mm inch	400 16	400 16	400 16
A	mm inch	150 5.90	150 5.90	150 5.90
B	mm inch	510 20.08	596.90 23.50	510 20.08
C	mm inch	480 18.90	539.80 21.25	480 18.90
D	mm inch	400 15.75	400 15.75	400 15.75
E x F		16 x M12	16 x 1" 8 UNF	12 x M16
G	mm inch	20 0.79	25.40 1.00	25 0.98
H	mm inch	-	419.10 16.50	-
O-ring I.D. x d	mm inch	-	417.96 x 7.00 16.46 x .275	-

▽ Valve seat side

