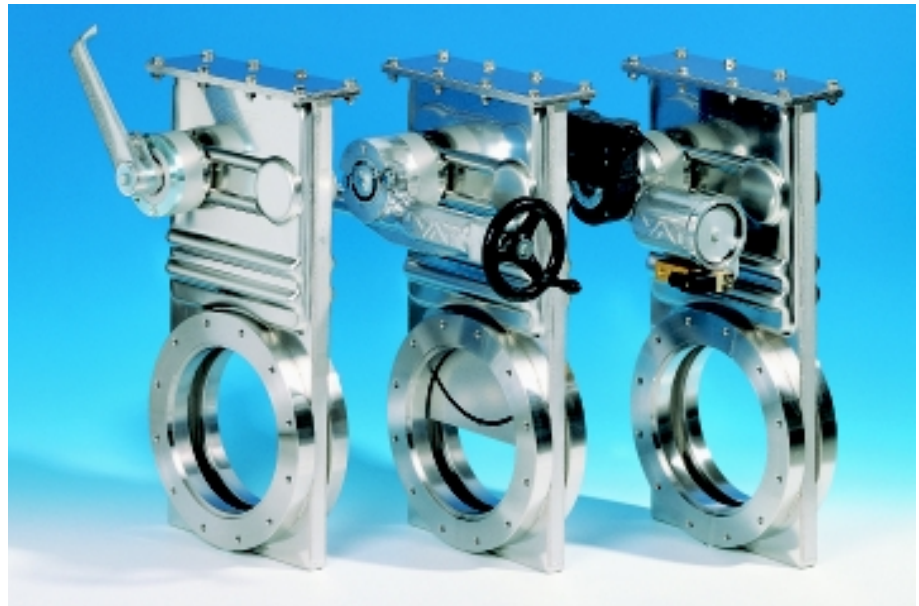


For production systems
 Compact
 Long cycle life: 200,000 cycles



Body material

stainless steel

Manual actuator

lever DN 63 - 320

DN		Ordering numbers				
mm	inch	ISO-F	CF-F metric threads	CF-F UNF threads	ASA-LP (T) ASA (A)	JIS
63	2 1/2	14036-PE06	14036-CE06	14036-UE06	14036-TE06	14036-JE06
100	4	14040-PE06	14040-CE06	14040-UE06	14040-TE06	14040-JE06
160	6	14044-PE06	14044-CE06	14044-UE06	14044-TE06	14044-JE06
200	8	14046-PE06	14046-CE06	14046-UE06	14046-TE06	14046-JE06
250	10	14048-PE06	14048-CE06	14048-UE06	14048-TE06	14048-JE06
320	12	14050-PE06	on request	on request	14050-TE06	14050-JE06
400 *)	16	14052-PE01	on request	on request	14052-AE01	14052-JE01

with hand wheel: 140 . . . E01

with hand wheel, with position indicator: 140 . . . E08

*) DN 400 (16") with hand wheel (with lever not possible)

Pneumatic actuator

double acting
 with position indicator
 with solenoid

DN		Ordering numbers (specify control voltage)				
mm	inch	ISO-F	CF-F metric threads	CF-F UNF threads	ASA-LP (T) ASA (A)	JIS
63	2 1/2	14036-PE44	14036-CE44	14036-UE44	14036-TE44	14036-JE44
100	4	14040-PE44	14040-CE44	14040-UE44	14040-TE44	14040-JE44
160	6	14044-PE44	14044-CE44	14044-UE44	14044-TE44	14044-JE44
200	8	14046-PE44	14046-CE44	14046-UE44	14046-TE44	14046-JE44
250	10	14048-PE44	14048-CE44	14048-UE44	14048-TE44	14048-JE44
320	12	14050-PE44	on request	on request	14050-TE44	14050-JE44
400	16	14052-PE44	on request	on request	14052-AE44	14052-JE44

without position indicator, without solenoid: 140 . . . E14

with position indicator, without solenoid: 140 . . . E24

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

3-position pneumatic actuator

See series 64: 3-position pneumatic actuator with intermediate throttling position

Stepper motor

See series 64: for conductance and pressure control

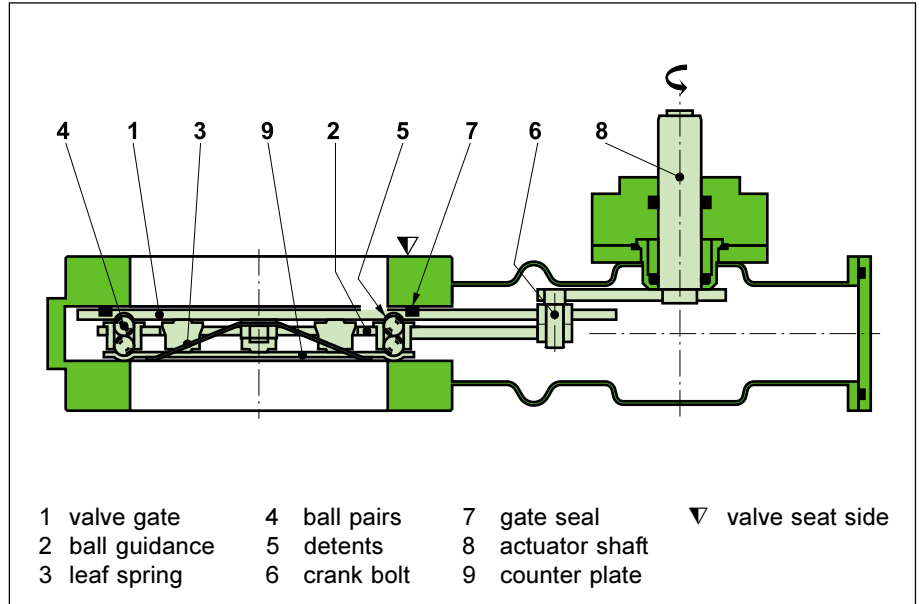
Sealing materials

Gate: VITON

Bonnet: VITON

Feedthrough

VITON / rotary feedthrough



Features

Six actuator possibilities (three positions on either side)

Rotary feedthrough for high cycle life, low particle count

Optimized VATLOCK configuration (see glossary)

Technical data

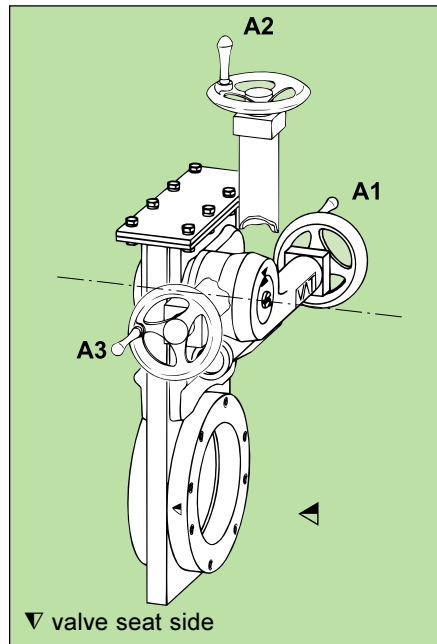
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Leak rate: body, valve seat	$1 \cdot 10^{-9}$ mbar ls ⁻¹
Pressure range	
- DN 63 - 200	$1 \cdot 10^{-8}$ mbar to 2 bar (abs)
- DN 250 - 400	$1 \cdot 10^{-8}$ mbar to 1.2 bar (abs)
Differential pressure on the gate	
- DN 63 - 200	≤ 2 bar in either direction
- DN 250 - 400	≤ 1.2 bar in either direction
Differential pressure at opening	
- in closing and opening direction	≤ 30 mbar
Cycles until first service	
- DN 63 - 400	200,000
- DN 400 vertical mounting pos. (standing/suspending)	on request
Temperature	
- Valve body	≤ 150 °C
- Manual actuator	≤ 80 °C
- Pneumatic actuator, motor	≤ 50 °C
- Position indicator	≤ 80 °C
- Solenoid	≤ 50 °C
Material	
- Valve body, valve gate	AISI 304 (1.4301)
- Mechanism	AISI 300 and 400 series (1.4301, 1.4310, 1.4034, 1.4016, 1.4037)
Seal: bonnet, gate	VITON
Mounting position DN 63 - 320 / 400	any / horizontal
Solenoid	24 V DC, 2.5 W (others see «options»)
Position indicator: contact rating	5 A/250 V AC, 3 A/50 V DC
Valve position	visual (mechanical)

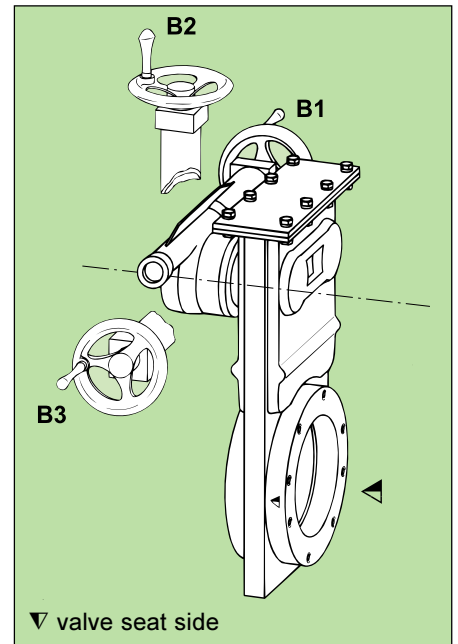
Actuator positions

For optimum system design the actuator can be mounted:

- on the A-side (valve seat side): standard
- on the B-side: option (please indicate in your order)
- in position 1 (standard for A- and B-side)
- in position 2 (can be mounted by customer: for DN 63 restricted)
- in position 3 (can be mounted by customer: for DN 63 restricted)



standard: A1
options: A2, A3



options: B1, B2, B3

Technical data

DN (nom. I. D.)		standard flanges					molecular flow conductance	manual				pneumatic						motor						
								lever		hand wheel		compressed air pressure min. - max. overpressure		volume of air cylinder		closing or opening time		weight		power required	closing or opening time		weight	
mm	inch	O.D.	CF-F	ISO-F	ASA-LP	JIS	Is ⁻¹	angle of rotation per stroke	weight		turns per stroke	weight		bar	psi	l	ft ³	s	kg	lbs	W	s	kg	lbs
63	2 1/2	4 1/2	63	2	65	65	440	130	8	17	41	10	22	4 - 7	55 - 100	0.13	.005	1.5	10	23	21	4	12	26
100	4	6	100	3	100	100	1 700	130	13	28	41	15	33	4 - 7	55 - 100	0.13	.005	1.5	15	34	21	4	17	37
160	6	8	160	4	150	150	5 000	130	24	52	37	26	57	4 - 7	55 - 100	0.28	.01	2.5	27	58	85	5	29	63
200	8	10	200	6	200	200	12 000	130	30	66	37	32	70	4 - 7	55 - 100	0.28	.01	2.5	33	72	85	5	35	77
250	10	12	250	8	250	250	22 000	130	58	127	48	60	132	4 - 7	55 - 100	0.75	.025	4	62	137	160	6	68	149
320	12		320	10	300	300	30 000	130	108	237	48	110	242	4 - 7	55 - 100	0.75	.025	4	112	246	160	6	118	259
400	16		400	14	400	400	50 000				48	153	336	4 - 7	55 - 100	0.75	.025	5	155	340				

Options

Diagram 1

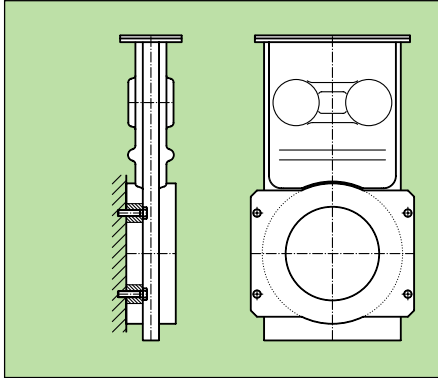
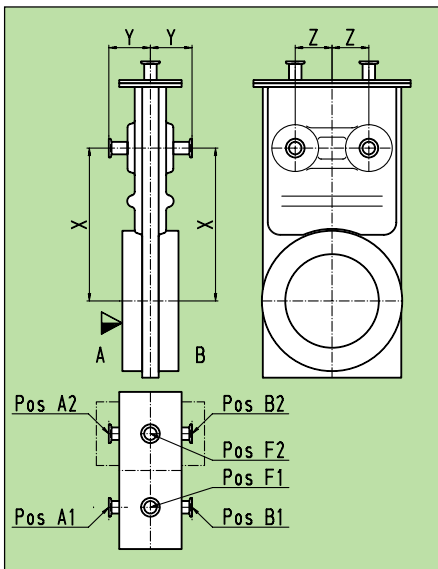


Diagram 2



▽ valve seat side

Actuator:

- Solenoid for impulse actuation:
last valve position is maintained at power failure
- Solenoid separate, for external mounting
- Solenoid for 12, 48 V DC
24, 48, 100, 115, 200, 220 V / 50 Hz
24, 100, 115, 200, 220 V / 60 Hz
- Double position indicator
(2 switches each for the positions «open» and «closed»)
- Actuator in position 2 or 3 (position 1 is standard)
- Actuator on B-side (A-side is standard)
- Motor (AC motor, 1-phase) for 240V 50Hz or 115V 60Hz

Valve:

- Customer specified flanges
- For direct mounting to flat chamber (diagram 1):
Special flange for mounting to chamber wall, standard flange on opposite side
- Other sealing materials
- Watercooled or waterheated flanges
- Rotary feedthrough with pump port
- Ports (diagram 2)
for roughing (by-pass), venting or for gauges
- Special ports on request resp. according to customer's specification

DN valve	mm inch	63 2 1/2	100 4	160 6	200 8	250 10	320 12	400 16
recommended port	CF-F ISO-KF	16	40	40	40	40	40	40
X	mm inch	146 5.75	185 7.28	245 9.65	304.4 11.98	387.3 15.25	482 18.98	415 16.34
Y	mm inch	56 2.2	56 2.2	67 2.64	67 2.64	89 3.5	75 2.95	77 3.03
Z	mm inch	30 1.18	47.5 1.87	59 2.32	85 3.35	100 3.94	135 5.31	140 5.51

Ordering information for options:

Ordering No. of valve-X (e. g. 14046-CE01-X,
X = actuator A2, port ISO-KF40 in position F2)

Heater

Temperature control with thermostat: 80°C, 100°C, 120°C
Supply voltage: 100 – 120 V resp. 200 – 240 V AC

Accessories

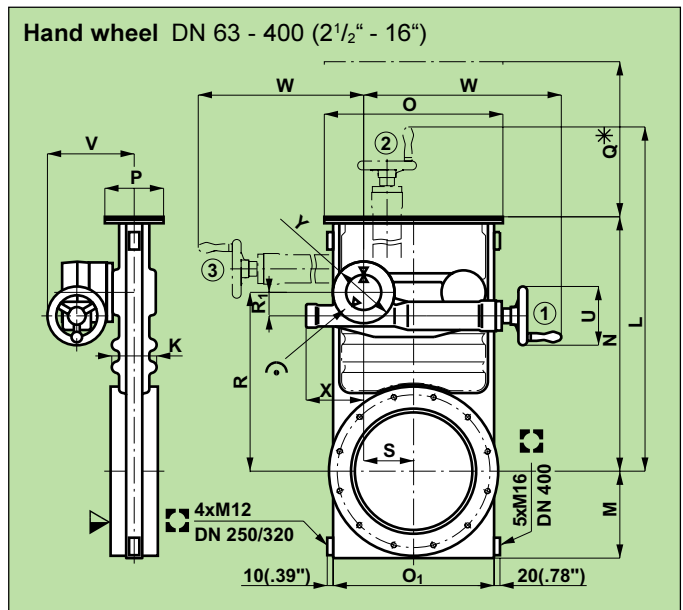
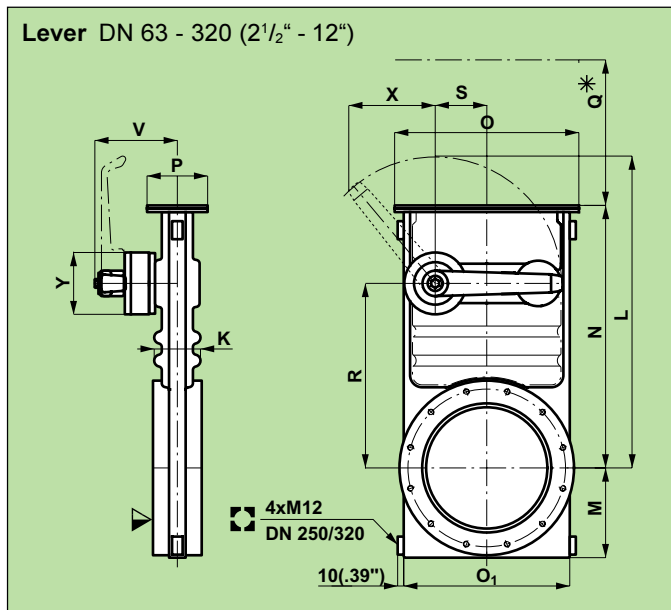
Fittings for installation of the valve: series 32 and 33

Seal kit

Consisting of seals for gate, bonnet and rotary feedthrough
Ordering No.: see operating manual or price list

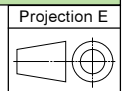
Special sealing materials on request (standard VITON)
Specify fabrication number of valve: e. g. 14044-PE24-AGV1/0014

Manual actuator



- ▽ valve seat side
- ⊕ mechanical position indication
- * required for dismantling
- ◻ for attachment

- ① standard actuator position (A1)
- ② ③ optional actuator positions

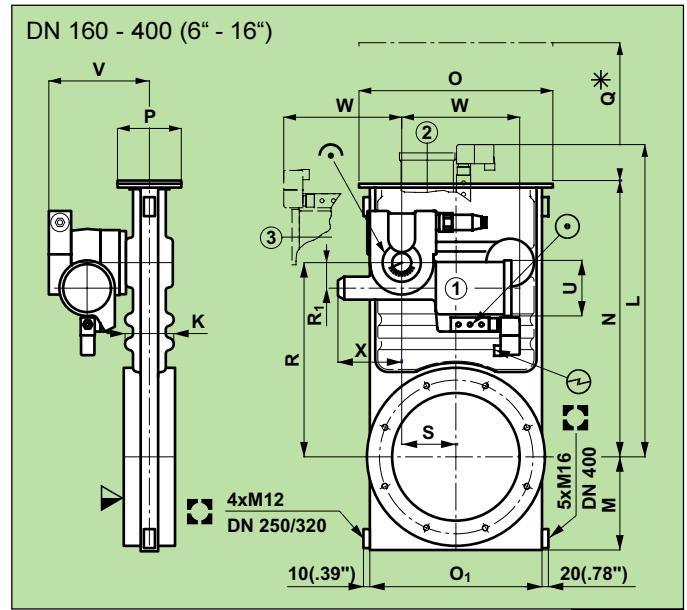
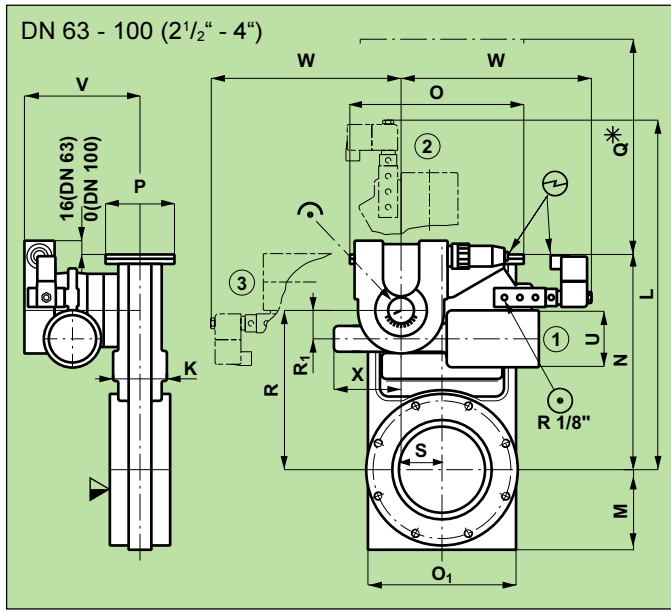


Flange dimensions see pages 42 and 43

DN	63	100	160	200	250	320
mm	63	100	160	200	250	320
inch	2 1/2	4	6	8	10	12
K	51	63	75	77	117	130
mm	51	63	75	77	117	130
inch	2.01	2.48	2.95	3.03	4.6	5.12
L	276	315	455	515	917	1012
mm	276	315	455	515	917	1012
inch	10.87	12.4	17.91	20.27	36.1	39.84
M	73	93	123	148	182	219
mm	73	93	123	148	182	219
inch	2.87	3.66	4.84	5.83	7.17	8.62
N	211	270	362	442	570	691
mm	211	270	362	442	570	691
inch	8.31	10.63	14.25	17.4	22.44	27.2
O	152	190	252	304	400	475
mm	152	190	252	304	400	475
inch	5.98	7.48	9.92	11.97	15.75	18.7
O1	134	172	222	274	356	421
mm	134	172	222	274	356	421
inch	5.28	6.77	8.74	10.79	14.02	16.57
P	80	80	100	100	138	138
mm	80	80	100	100	138	138
inch	3.15	3.15	3.94	3.94	5.43	5.43
Q	180	220	300	350	450	550
mm	180	220	300	350	450	550
inch	7.09	8.66	11.81	13.78	17.72	21.65
R	146	185	245	305	387	482
mm	146	185	245	305	387	482
inch	5.75	7.28	9.65	12.01	15.24	18.98
S	30	47.5	59	85	100	135
mm	30	47.5	59	85	100	135
inch	1.18	1.87	2.32	3.35	3.94	5.31
V	129	129	147	147	199	199
mm	129	129	147	147	199	199
inch	5.08	5.08	5.78	5.78	7.83	7.83
X	96	96	150	150	228	360
mm	96	96	150	150	228	360
inch	3.78	3.78	5.91	5.91	8.98	14.17
Y	85	85	102	102	130	130
mm	85	85	102	102	130	130
inch	3.35	3.35	4.02	4.02	5.12	5.12

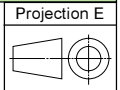
DN	63	100	160	200	250	320	400
mm	63	100	160	200	250	320	400
inch	2 1/2	4	6	8	10	12	16
K	51	63	75	77	117	130	133
mm	51	63	75	77	117	130	133
inch	2.01	2.48	2.95	3.03	4.6	5.12	5.23
L	461	500	595	655	754	849	935
mm	461	500	595	655	754	849	935
inch	18.15	19.69	23.43	25.79	29.68	33.42	36.81
M	73	93	123	148	182	219	232
mm	73	93	123	148	182	219	232
inch	2.87	3.66	4.84	5.83	7.17	8.62	9.13
N	211	270	362	442	570	691	789
mm	211	270	362	442	570	691	789
inch	8.31	10.63	14.25	17.4	22.44	27.2	31.06
O	152	190	252	304	400	475	520
mm	152	190	252	304	400	475	520
inch	5.98	7.48	9.92	11.97	15.75	18.7	20.47
O1	134	172	222	274	356	421	474
mm	134	172	222	274	356	421	474
inch	5.28	6.77	8.74	10.79	14.02	16.57	18.66
P	80	80	100	100	138	138	138
mm	80	80	100	100	138	138	138
inch	3.15	3.15	3.94	3.94	5.43	5.43	5.43
Q	180	220	300	350	450	550	600
mm	180	220	300	350	450	550	600
inch	7.09	8.66	11.81	13.78	17.72	21.65	23.62
R	146	185	245	305	387	482	568
mm	146	185	245	305	387	482	568
inch	5.75	7.28	9.65	12.01	15.24	18.98	22.36
R1	33	33	40	40	50	50	50
mm	33	33	40	40	50	50	50
inch	1.3	1.3	1.57	1.57	1.97	1.97	1.97
S	30	47.5	59	85	100	135	140
mm	30	47.5	59	85	100	135	140
inch	1.18	1.87	2.32	3.35	3.94	5.31	5.51
U	100	100	125	125	125	125	125
mm	100	100	125	125	125	125	125
inch	3.94	3.94	4.92	4.92	4.92	4.92	4.92
V	130	130	161	161	198	198	202
mm	130	130	161	161	198	198	202
inch	5.12	5.12	6.34	6.34	7.8	7.8	7.95
W	315	315	350	350	367	367	367
mm	315	315	350	350	367	367	367
inch	12.4	12.4	13.78	13.78	14.45	14.45	14.45
X	80	80	100	100	130	130	130
mm	80	80	100	100	130	130	130
inch	3.15	3.15	3.94	3.94	5.12	5.12	5.12
Y	85	85	102	102	130	130	130
mm	85	85	102	102	130	130	130
inch	3.35	3.35	4.02	4.02	5.12	5.12	5.12

Pneumatic actuator



- ▽ valve seat side
- * required for dismantling
- ⊙ compressed air connection
- ⊕ mechanical position indication
- ⊞ for attachment
- ⊕ electrical connection

- ① standard actuator position (A1)
- ② ③ optional actuator positions

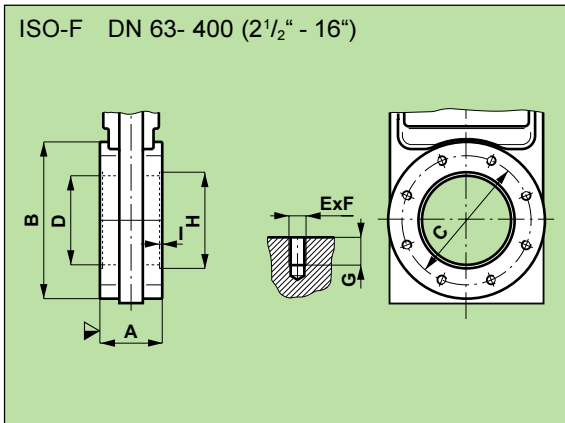


Flange dimensions see pages 42 and 43

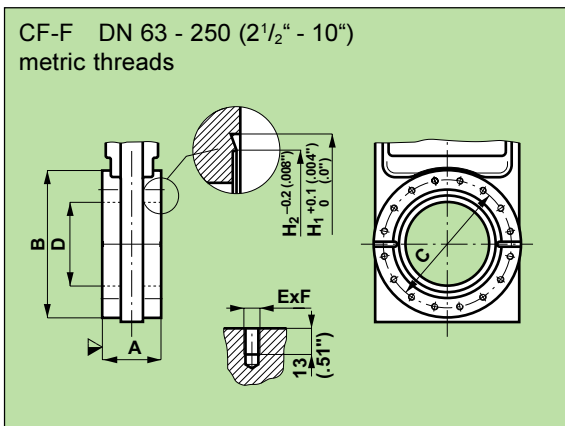
DN	mm	63	100		
	inch	2 1/2	4		
K	mm	51	63		
	inch	2.01	2.48		
L	mm	366	405		
	inch	14.41	15.94		
M	mm	73	93		
	inch	2.87	3.66		
N	mm	211	270		
	inch	8.31	10.63		
O	mm	152	190		
	inch	5.98	7.48		
O1	mm	134	172		
	inch	5.28	6.77		
P	mm	80	80		
	inch	3.15	3.15		
Q	mm	180	220		
	inch	7.09	8.66		
R	mm	146	185		
	inch	5.75	7.28		
R1	mm	33	33		
	inch	1.3	1.3		
S	mm	30	47.5		
	inch	1.18	1.87		
U	mm	68	68		
	inch	2.68	2.68		
V	mm	135	135		
	inch	5.32	5.32		
W	mm	220	220		
	inch	8.66	8.66		
X	mm	78	78		
	inch	3.07	3.07		

DN	mm	160	200	250	320	400
	inch	6	8	10	12	16
K	mm	75	77	117	130	133
	inch	2.95	3.03	4.6	5.12	5.23
L	mm	435	495	654	748	834
	inch	17.13	19.49	25.75	29.45	32.83
M	mm	123	148	182	219	232
	inch	4.84	5.83	7.17	8.62	9.13
N	mm	362	442	570	691	789
	inch	14.25	17.4	22.44	27.2	31.06
O	mm	252	304	400	475	520
	inch	9.92	11.97	15.75	18.7	20.47
O1	mm	222	274	356	421	474
	inch	8.74	10.79	14.02	16.57	18.66
P	mm	100	100	138	138	138
	inch	3.94	3.94	5.43	5.43	5.43
Q	mm	300	350	450	550	600
	inch	11.81	13.78	17.72	21.65	23.62
R	mm	245	305	387	482	568
	inch	9.65	12.01	15.24	18.98	22.36
R1	mm	40	40	50	50	50
	inch	1.57	1.57	1.97	1.97	1.97
S	mm	59	85	100	135	140
	inch	2.32	3.35	3.94	5.31	5.51
U	mm	87	87	122	122	122
	inch	3.43	3.43	4.8	4.8	4.8
V	mm	158	158	201	201	210
	inch	6.22	6.22	7.91	7.91	8.27
W	mm	190	190	266	266	266
	inch	7.48	7.48	10.47	10.47	10.47
X	mm	100	100	130	130	130
	inch	3.94	3.94	5.12	5.12	5.12

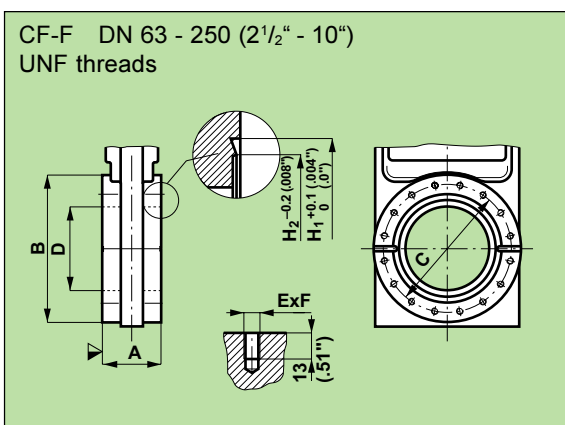
Flange dimensions



DN	mm inch	63 2 1/2	100 4	160 6	200 8	250 10	320 12	400 16
A	mm inch	70 2.76	70 2.76	80 3.15	80 3.15	100 3.94	120 4.72	150 5.9
B	mm inch	136 5.35	176 6.93	225 8.86	288 11.34	350 13.78	425 16.73	510 20.08
C	mm inch	110 4.33	145 5.71	200 7.87	260 10.24	310 12.2	395 15.55	480 18.9
D	mm inch	63 2.48	100 3.94	150 5.91	200 7.87	261 10.27	318 12.52	400 15.75
E x F		4 x M8	8 x M8	8 x M10	12 x M10	12 x M10	12 x M12	16 x M12
G	mm inch	13 .51	13 .51	14 .55	16 .63	16 .63	16 .63	20 .79
H	mm inch	70 2.76	102 4.02	153 6.02	213 8.39	-	-	-
I	mm inch	3 .12	3 .12	5 .2	5 .2	-	-	-



DN	mm inch	63 2 1/2	100 4	160 6	200 8	250 10		
O.D.	inch	4 1/2	6	8	10	12		
A	mm inch	70 2.76	70 2.76	80 3.15	80 3.15	100 3.94		
B1	mm inch	136 5.35	176 6.93	225 8.86	288 11.34	350 13.78		
C	mm inch	92.1 3.63	130.2 5.13	181 7.13	231.8 9.13	284 11.18		
D	mm inch	63 2.48	100 3.94	150 5.91	200 7.87	254 10		
E x F		8 x M8	16 x M8	20 x M8	24 x M8	32 x M8		
H1	mm inch	82.5 3.25	120.65 4.75	171.45 6.75	222.3 8.75	273.15 10.75		
H2	mm inch	77.4 3.05	115.5 4.55	166 6.54	217 8.54	267 10.51		

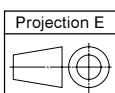


DN	mm inch	63 2 1/2	100 4	160 6	200 8	250 *) 10	250 *) 10	
O.D.	inch	4 1/2	6	8	10	12	13 1/4	
A	mm inch	70 2.76	70 2.76	80 3.15	80 3.15	100 3.94	100 3.94	
B	mm inch	136 5.35	176 6.93	225 8.86	288 11.34	350 13.78	350 13.78	
C	mm inch	92.1 3.63	130.2 5.13	181 7.13	231.8 9.13	284 11.18	306.3 12.06	
D	mm inch	63 2.48	100 3.94	150 5.91	200 7.87	254 10	254 10	
E x F		8 x 5/16" 24 UNF	16 x 5/16" 24 UNF	20 x 5/16" 24 UNF	24 x 5/16" 24 UNF	32 x 5/16" 24 UNF	30 x 3/8" 24 UNF	
H1	mm inch	82.5 3.25	120.65 4.75	171.45 6.75	222.3 8.75	273.15 10.75	294.64 11.6	
H2	mm inch	77.4 3.05	115.5 4.55	166 6.54	217 8.54	267 10.51	288.3 11.35	

*) O.D. 12" VAT standard, O.D. 13 1/4" option

Ordering information for option: O.D. 13 1/4"

Ordering No. of valve-X (e. g. 14048-UE44-X, X = O.D. 13 1/4")

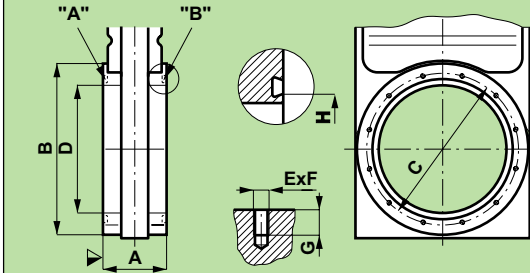


▼ valve seat side

Flange dimensions

ASA-LP DN 63 - 400 (2 1/2" - 16")
with or without O-ring groove

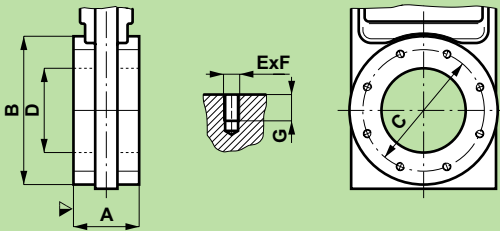
For orders with O-ring groove specify:
«A», «B» or «A + B»



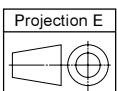
DN	mm inch	63 2 1/2	100 4	160 6	200 8	250 10	320 12	400 16
ASA-LP		2	3	4	6	8	10	16*)
A	mm inch	70 2.76	70 2.76	80 3.15	80 3.15	100 3.94	120 4.72	150 5.9
B	mm inch	136 5.35	176 6.93	225 8.86	288 11.34	350 13.78	425 16.73	596.9 23.5
C	mm inch	120.7 4.75	152.4 6	190.5 7.5	241.3 9.5	298.5 11.75	362 14.25	539.8 21.25
D	mm inch	63 2.48	100 3.94	150 5.91	200 7.87	254 10	300 11.81	400 15.75
E x F		4 x 3/8" 16 UNC	4 x 3/8" 16 UNC	8 x 3/8" 16 UNC	8 x 3/4" 10 UNC	8 x 3/4" 10 UNC	12 x 3/4" 10 UNC	16 x 1" 8 UNC
G	mm inch	15 .59	15 .59	15 .59	20 .79	20 .79	28 1.1	25.4 1
H	mm inch	88.9 3.5	120.65 4.75	158.75 6.25	206.4 8.13	266.7 10.5	317.5 12.5	419.1 16.5
O-ring I.D. x d		88.49 x 3.53 3.48 x .139	120.24 x 3.53 4.73 x .139	158.34 x 3.53 6.23 x .139	202.79 x 3.53 7.98 x .139	266.29 x 3.53 10.48 x .139	316.87 x 7.00 12.47 x .275	417.96 x 7.00 16.46 x .275

*) ASA

JIS DN 65 - 400 (2 1/2" - 16")



DN	mm inch	65 2 1/2	100 4	150 6	200 8	250 10	300 12	400 16
A	mm inch	70 2.76	70 2.76	80 3.15	80 3.15	100 3.94	120 4.72	150 5.9
B	mm inch	136 5.35	176 6.93	225 8.86	288 11.34	350 13.78	425 16.73	510 20.07
C	mm inch	120 4.72	160 6.3	210 8.27	270 10.63	320 12.6	370 14.57	480 18.9
D	mm inch	63 2.48	100 3.94	150 5.91	200 7.87	261 10.28	318 12.52	400 15.75
E x F		4 x M10	8 x M10	8 x M10	8 x M12	12 x M12	12 x M12	12 x M16
G	mm inch	12 .47	12 .47	14 .55	16 .63	16 .63	16 .63	25 .98



▼ valve seat side