

Main applications

Isolation valve for extremely particle and shock sensitive vacuum systems



Ordering information

Series 15.0
Vacuum valve with pneumatic actuator
 double acting
 with solenoid valve
 with position indicator

DN		Ordering numbers (specify control voltage)		
mm	inch	ISO-F	ASA-LP	JIS
63	2½	15036-PA44	15036-TA44	15036-JA44
100	4	15040-PA44	15040-TA44	15040-JA44
160	6	15044-PA44	15044-TA44	15044-JA44

without solenoid valve, without position indicator: 150 . . . A14
 without solenoid valve, with position indicator: 150 . . . A24
 with solenoid valve, without position indicator: 150 . . . A34 (specify control voltage)

Series 15.1
HV valve with pneumatic actuator
 double acting
 with solenoid valve
 with position indicator

DN		Ordering numbers (specify control voltage)		
mm	inch	ISO-F	ASA-LP	JIS
63	2½	15136-PA44	15136-TA44	15136-JA44
100	4	15140-PA44	15140-TA44	15140-JA44
160	6	15144-PA44	15144-TA44	15144-JA44

without solenoid valve, without position indicator: 151 . . . A14
 without solenoid valve, with position indicator: 151 . . . A24
 with solenoid valve, without position indicator: 151 . . . A34 (specify control voltage)

Series 15.2
UHV 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	2½	15236-PE44	15236-CE44	15236-UE44	15236-TE44	15236-JE44
100	4	15240-PE44	15240-CE44	15240-UE44	15240-TE44	15240-JE44
160	6	15244-PE44	15244-CE44	15244-UE44	15244-TE44	15244-JE44
200	8	15246-PE44	15246-CE44	15246-UE44	15246-TE44	15246-JE44
250	10	15248-PE44	15248-CE44	15248-UE44	15248-TE44	15248-JE44

without solenoid valve, without position indicator: 152 . . . E14
 without solenoid valve, with position indicator: 152 . . . E24
 with solenoid valve, without position indicator: 152 . . . E34 (specify control voltage)

Features

Body material:

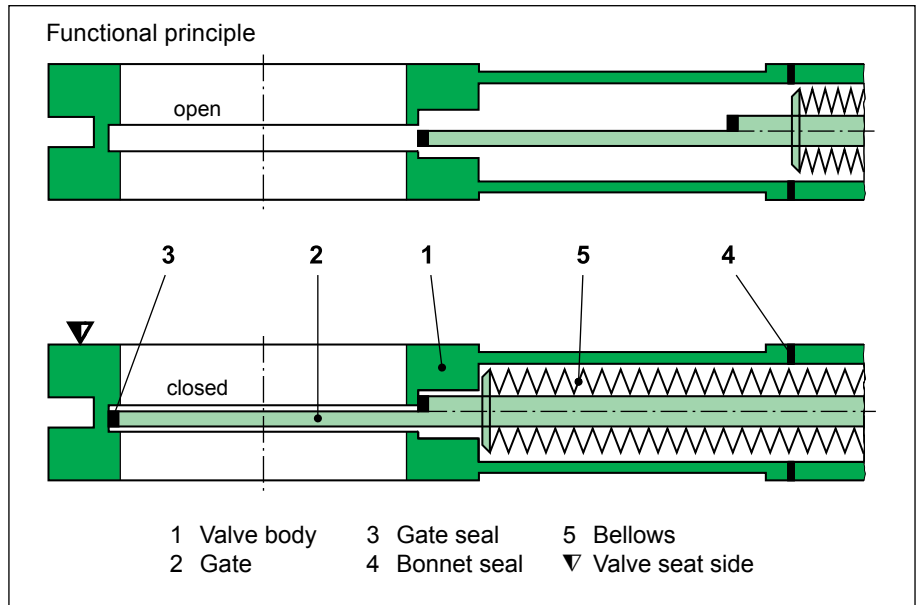
Series 15.0, 15.1: aluminum

Series 15.2: stainless steel

Long lifetime

Very small installation dimension

Vulcanized seal (no dead volumes at the gate seal): see glossary



Technical data

Leak rate

- Valve body	
- Series 15.0, 15.1	$< 1 \cdot 10^{-9}$ mbar ls ⁻¹
- Series 15.2	$< 5 \cdot 10^{-10}$ mbar ls ⁻¹
- Valve seat	$< 1 \cdot 10^{-9}$ mbar ls ⁻¹

Pressure range

- Series 15.0	$1 \cdot 10^{-7}$ mbar to 1 bar (abs)
- Series 15.1	$1 \cdot 10^{-8}$ mbar to 1 bar (abs)
- Series 15.2	$1 \cdot 10^{-10}$ mbar to 1 bar (abs)

Differential pressure on the gate ≤ 1.2 bar

Differential pressure at opening ≤ 30 mbar

Cycles until first service ¹⁾ 500 000

Temperature ²⁾

- Valve body	
- Series 15.0, 15.1	≤ 120 °C ³⁾
- Series 15.2 DN 63–200	≤ 250 °C open / ≤ 200 °C closed
- Series 15.2 DN 250	≤ 120 °C ³⁾
- Actuator	
- Series 15.0, 15.1	≤ 100 °C
- Series 15.2 DN 63–160	≤ 200 °C
- Series 15.2 DN 200–250	≤ 100 °C ³⁾
- Solenoid valve	≤ 50 °C
- Position indicator	≤ 80 °C

¹⁾ Higher number of cycles on request

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

³⁾ Higher temperatures on request

Heating and cooling rate

- Series 15.0, 15.1	≤ 30 °C h ⁻¹
- Series 15.2	≤ 50 °C h ⁻¹

Further technical data on next page →

Continued Technical data

Material

- Valve body
 - Series 15.0, 15.1 EN AW-6082 (3.2315)
 - Series 15.2 AISI 304 (1.4301)
- Gate
 - Series 15.0, 15.1 EN AW-6082 (3.2315)
 - Series 15.2 DN 63–200 AISI 304 (1.4301)
 - Series 15.2 DN 250 EN AW-6082 (3.2315)
- Bellows AISI 633 (AM350)

Seal

- Bonnet
 - Series 15.0, 15.1 FKM (Viton®)
 - Series 15.2 metal
- Gate FKM (Viton®)

Feedthrough

- Series 15.0 shaft feedthrough
- Series 15.1, 15.2 bellows

Mounting position

any

Solenoid valve

24VDC, 5.4 W (others on request)

Position indicator: contact rating

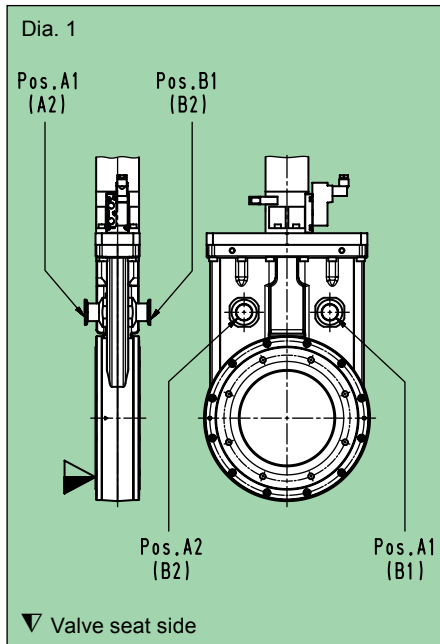
- Voltage ≤ 250 VAC ≤ 50 VDC
- Current ≤ 2 A ≤ 1.2 A

Valve position indication

visual (mechanical)

DN (nominal I.D.)		Standard flanges		Conductance (molecular flow) (depending on A-dimension and flange type)		Compressed air min. – max. overpressure		Volume of pneumatic actuator		Closing or opening time		Weight			
mm	inch	15.0 15.1	15.2	bar	psi	l	ft ³	15.0 15.1	15.2	15.0		15.1		15.2	
mm	inch	ls ⁻¹	ls ⁻¹	bar	psi	l	ft ³	s	s	kg	lbs	kg	lbs	kg	lbs
63	2 ½	480	480	4–7	58–102	0.22	0.008	1.5	1.5	6.9	15.1	7.7	16.9	7.8	17.2
100	4	1700	1700	4–7	58–102	0.32	0.011	2.8	2.8	8.6	19	10.2	22.5	11.6	25.6
160	6	6000	6000	4–7	58–102	0.46	0.016	3.1	3.1	11.8	26	14	30.9	17	37.5
200	8	–	12000	4–7	58–102	1.08	0.038	–	6	–	–	–	–	34.2	75.4
250	10	–	19400	5–7	73–102	2.10	0.074	–	7	–	–	–	–	60	132.3

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)
- Double position indicator
(2 switches each for the positions «open» and «closed»)
- Bakeable position indicator: bakeable to max. 140 °C

Valve

- Customer specified flanges
- Other sealing materials
- Ports for roughing (by-pass), venting or for gauges (Dia. 1), possible in positions A1, A2, B1 and B2
- Special gate for the installation of various windows and foils

Ordering information for options:

Ordering No. of valve-X (e. g. 15246-CE44-X, X = port CF-F 40 in position A1)

Spare parts

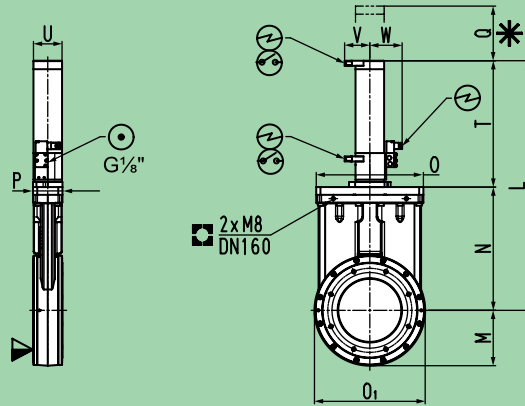
- **Seals**
on request (specify fabrication number of valve)

Accessories

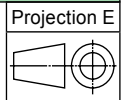
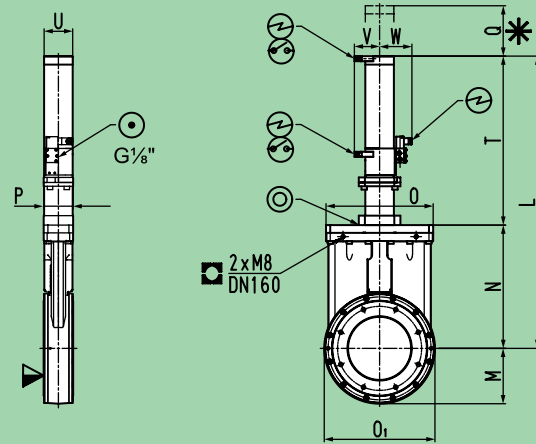
- **Flange connections**
for installation of the valve: see series 32 and 33

Main dimensions

Series 15.0
Vacuum valve with pneumatic actuator: double acting
 DN 63–160 (2½"–6")



Series 15.1
HV valve with pneumatic actuator: double acting
 DN 63–160 (2½"–6")



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

Flange dimensions: see pages 78–79

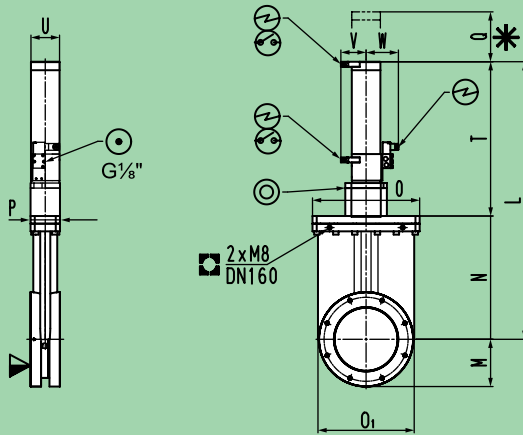
DN	mm inch	63 2½	100 4	160 6
L	mm inch	385 15.16	472 18.58	595 23.43
M	mm inch	87 3.43	107 4.21	132 5.20
N	mm inch	169 6.65	221 8.70	294 11.57
O	mm inch	155 6.10	195 7.68	255 10.04
O1	mm inch	174 6.85	214 8.43	264 10.39
P	mm inch	70 2.76	70 2.76	70 2.76
Q	mm inch	110 4.33	145 5.71	195 7.68
T	mm inch	216 8.50	251 9.88	301 11.85
U	mm inch	68 2.68	68 2.68	68 2.68
V	mm inch	60 2.36	60 2.36	60 2.36
W	mm inch	75 2.95	75 2.95	75 2.95

DN	mm inch	63 2½	100 4	160 6
L	mm inch	443 17.44	553 21.77	700 27.56
M	mm inch	87 3.43	107 4.21	132 5.20
N	mm inch	169 6.65	221 8.70	294 11.57
O	mm inch	155 6.10	195 7.68	255 10.04
O1	mm inch	174 6.85	214 8.43	264 10.39
P	mm inch	70 2.76	70 2.76	70 2.76
Q	mm inch	110 4.33	145 5.71	195 7.68
T	mm inch	274 10.79	332 13.07	406 15.98
U	mm inch	68 2.68	68 2.68	68 2.68
V	mm inch	60 2.36	60 2.36	60 2.36
W	mm inch	75 2.95	75 2.95	75 2.95

Main dimensions

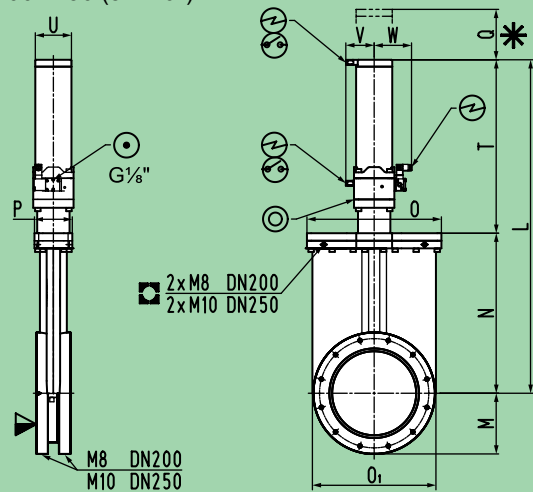
Series 15.2

UHV valve with pneumatic actuator: double acting
DN 63–160 (2½"–6")

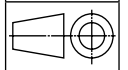


Series 15.2

UHV valve with pneumatic actuator: double acting
DN 200–250 (8"–10")



Projection E



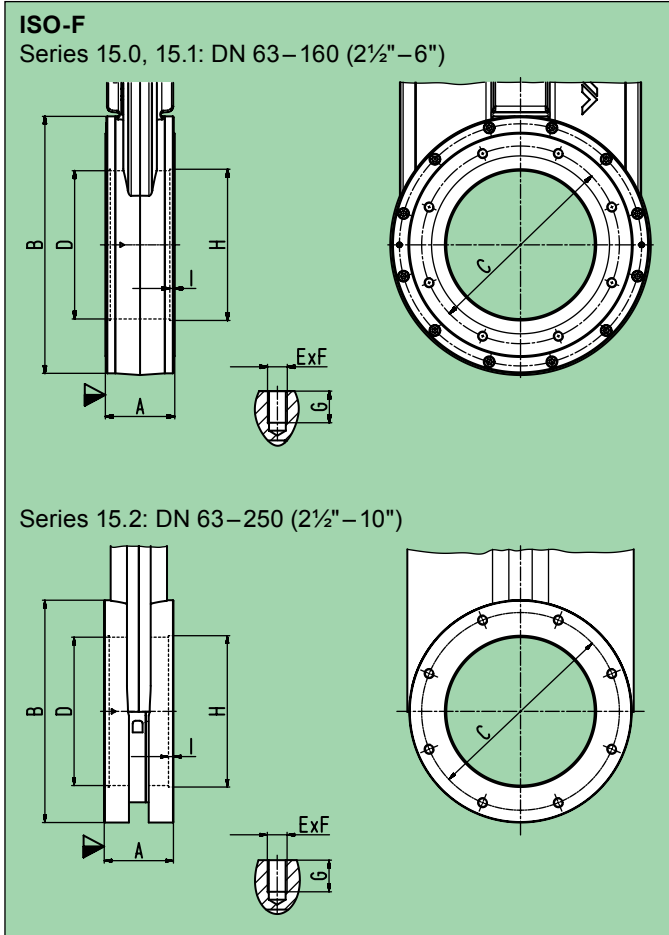
- ▽ Valve seat side
- * Required for dismantling
- ⊙ Compressed air connection
- ⊕ Electrical connection
- ⊗ Position indicator
- ⊙ Leak detection hole
- For attachment

Flange dimensions: see pages 78–79

DN	mm	63	100	160
	inch	2½	4	6
L	mm	415	517	661
	inch	16.34	20.35	26.02
M	mm	67.50	87.50	112.50
	inch	2.66	3.44	4.43
N	mm	169	221	294
	inch	6.65	8.70	11.57
O	mm	155	195	255
	inch	6.10	7.68	10.04
O1	mm	139	179	229
	inch	5.47	7.05	9.02
P	mm	70	70	70
	inch	2.76	2.76	2.76
Q	mm	110	145	195
	inch	4.33	5.71	7.68
T	mm	246	296	367
	inch	9.69	11.65	14.45
U	mm	68	68	68
	inch	2.68	2.68	2.68
V	mm	60	60	60
	inch	2.36	2.36	2.36
W	mm	75	75	75
	inch	2.95	2.95	2.95

DN	mm	200	250	
	inch	8	10	
L	mm	795	943	
	inch	31.30	37.13	
M	mm	144.50	176.50	
	inch	5.69	6.95	
N	mm	382	482	
	inch	15.04	18.98	
O	mm	320	391	
	inch	12.60	15.39	
O1	mm	294	360	
	inch	11.57	14.17	
P	mm	96	99	
	inch	3.78	3.90	
Q	mm	255	330	
	inch	10.04	12.99	
T	mm	413	461	
	inch	16.26	18.15	
U	mm	86	106	
	inch	3.39	4.17	
V	mm	67	75	
	inch	2.64	2.95	
W	mm	90	93.50	
	inch	3.54	3.68	

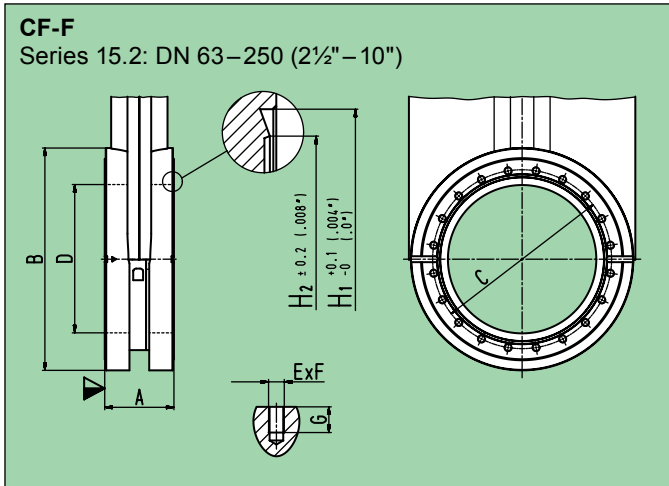
Flange dimensions



DN	mm inch	63 2 ½	100 4	160 6	200 8	250 10
A	mm inch	70 2.76	70 2.76	70 2.76	80 3.15	100 3.94
B ¹⁾	mm inch	170 6.69	210 8.27	260 10.24	–	–
B ²⁾	mm inch	135 5.31	175 6.89	225 8.86	290 11.42	354 13.94
C	mm inch	110 4.33	145 5.71	200 7.87	260 10.24	310 12.20
D	mm inch	65 2.56	100 3.94	150 5.91	200 7.87	250 9.84
E × F		4 × M8	8 × M8	8 × M10	12 × M10	12 × M10
G	mm inch	12 0.47	12 0.47	15 0.59	15 0.59	15 0.59
H	mm inch	70 2.76	102 4.02	153 6.02	213 8.39	261 10.28
I	mm inch	5 0.20	5 0.20	5 0.20	5 0.20	5 0.20

¹⁾ Series 15.0, 15.1

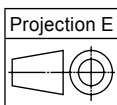
²⁾ Series 15.2



DN	mm inch	63 2 ½	100 4	160 6	200 8	250 10
O.D.	inch	4 ½	6	8	10	12
A	mm inch	70 2.76	70 2.76	70 2.76	80 3.15	100 3.94
B	mm inch	135 5.31	175 6.89	225 8.86	290 11.42	354 13.94
C	mm inch	92.10 3.63	130.30 5.13	181 7.13	231.80 9.13	284 11.18
D	mm inch	65 2.56	100 3.94	150 5.91	200 7.87	250 9.84
E × F ¹⁾		8 × M8	16 × M8	20 × M8	24 × M8	32 × M8
E × F ²⁾		8 × 5/16" 24 UNF	16 × 5/16" 24 UNF	20 × 5/16" 24 UNF	24 × 5/16" 24 UNF	32 × 5/16" 24 UNF
G	mm inch	12 0.47	12 0.47	12 0.47	12 0.47	12 0.47
H1	mm inch	82.50 3.25	120.65 4.75	171.45 6.75	222.30 8.75	273.15 10.75
H2	mm inch	77.40 3.05	115.50 4.55	166 6.54	217 8.54	267 10.51

¹⁾ Metric threads

²⁾ UNF threads

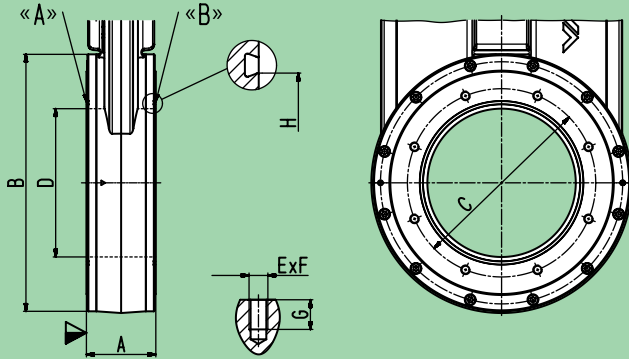


▼ Valve seat side

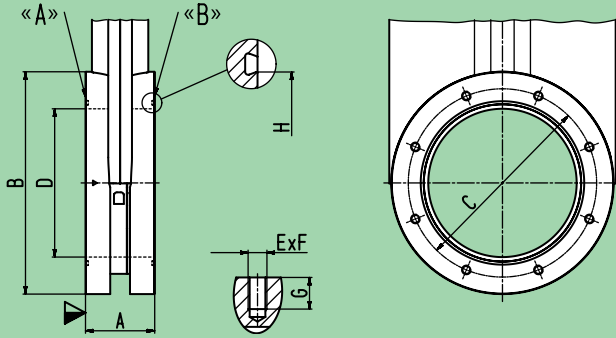
Flange dimensions

ASA-LP¹⁾

Series 15.0, 15.1: DN 63–160 (2½"–6")



Series 15.2: DN 63–250 (2½"–10")



¹⁾ ASA-LP

with or without O-ring groove

For orders with O-ring groove specify:

«A», «B» or «A+B»

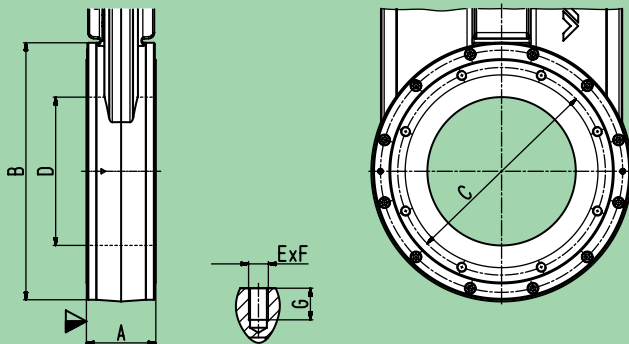
DN	mm inch	63 2½	100 4	160 6	200 8	250 10
ASA-LP		2	3	4	6	8
A	mm inch	70 2.76	70 2.76	70 2.76	80 3.15	100 3.94
B ¹⁾	mm inch	170 6.69	210 8.27	260 10.24	–	–
B ²⁾	mm inch	135 5.31	175 6.89	225 8.86	290 11.41	354 13.94
C	mm inch	120.70 4.75	152.40 6.00	190.50 7.50	241.30 9.50	298.50 11.75
D	mm inch	65 2.56	100 3.94	150 5.91	200 7.87	250 9.84
E × F		4 × ⅜" 16 UNC	4 × ⅜" 16 UNC	8 × ⅜" 16 UNC	8 × ¼" 10 UNC	8 × ¼" 10 UNC
G	mm inch	15 0.59	15 0.59	15 0.59	19 0.75	19 0.75
H	mm inch	88.90 3.50	120.65 4.75	158.75 6.25	206.40 8.13	266.70 10.50
O-ring I. D. × d	mm inch	88.49 × 3.53 3.48 × 0.139	120.24 × 3.53 4.73 × 0.139	158.34 × 3.53 6.23 × 0.139	202.79 × 3.53 7.98 × .139	266.29 × 3.53 10.48 × .139

¹⁾ Series 15.0, 15.1

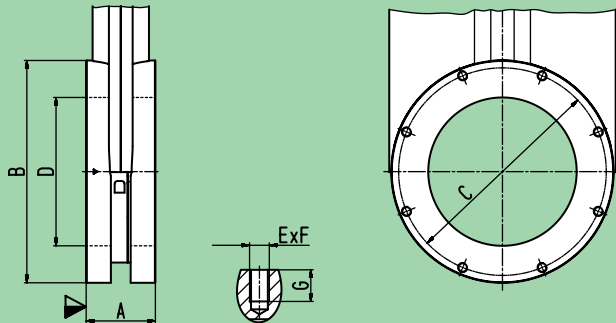
²⁾ Series 15.2

JIS B 2290: 1998 / ISO 1609

Series 15.0, 15.1: DN 65–150 (2½"–6")



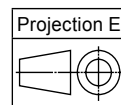
Series 15.2: DN 65–250 (2½"–10")



DN	mm inch	65 2½	100 4	150 6	200 8	250 10
A	mm inch	70 2.76	70 2.76	70 2.76	80 3.15	100 3.94
B ¹⁾	mm inch	170 6.69	210 8.27	260 10.24	–	–
B ²⁾	mm inch	135 5.31	175 6.89	225 8.86	290 11.42	354 13.94
C	mm inch	120 4.72	160 6.30	210 8.27	270 10.63	320 12.60
D	mm inch	65 2.56	100 3.94	150 5.91	200 7.87	250 9.84
E × F		4 × M10	8 × M10	8 × M10	8 × M12	12 × M12
G ¹⁾	mm inch	12 0.47	12 0.47	15 0.59	–	–
G ²⁾	mm inch	15 0.59	15 0.59	15 0.59	16 0.63	16 0.63

¹⁾ Series 15.0, 15.1

²⁾ Series 15.2



▽ Valve seat side