

HV GATE VALVE WITH PROTECTIVE RING, SERIES 17.2

Isolation valve for contaminating processes.



Protected valve mechanism

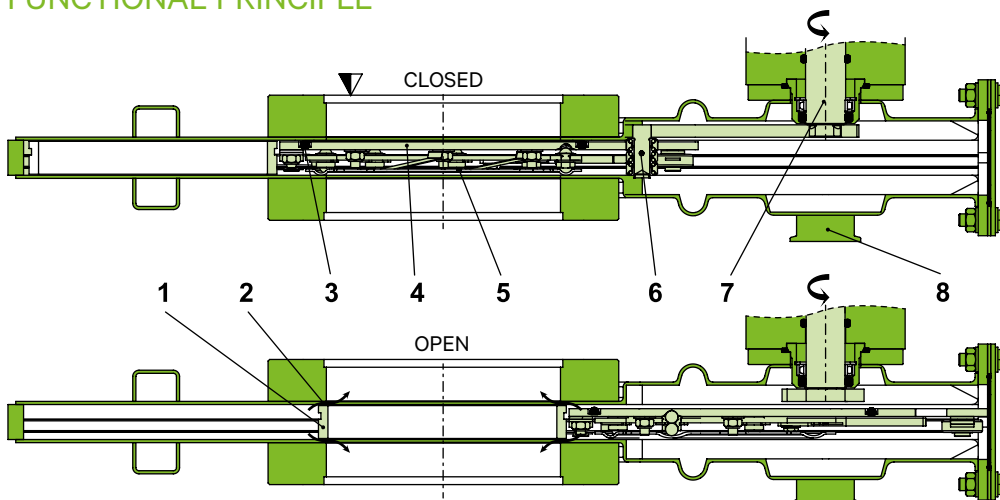
Long lifetime even under contaminating conditions

Easy maintenance

MAIN FEATURES

Sizes	DN 63 – 320 mm (2½" – 12")
Actuators	manual with handwheel or lever pneumatic: double acting
Body material	stainless steel
Feedthrough	rotary feedthrough with intermediate pumping
Standard flanges	ISO-F, CF-F, ASA-LP, JIS
Sealing technology	VATLOCK (see glossary)

FUNCTIONAL PRINCIPLE



- 1 Protective ring
 - 2 Gas purge
 - 3 Gate seal
 - 4 Gate
 - 5 Counter-plate
 - 6 Crank bolt
 - 7 Actuator shaft
 - 8 Port for gas purge or pumping (option)
- ▽ Valve seat side

TECHNICAL DATA

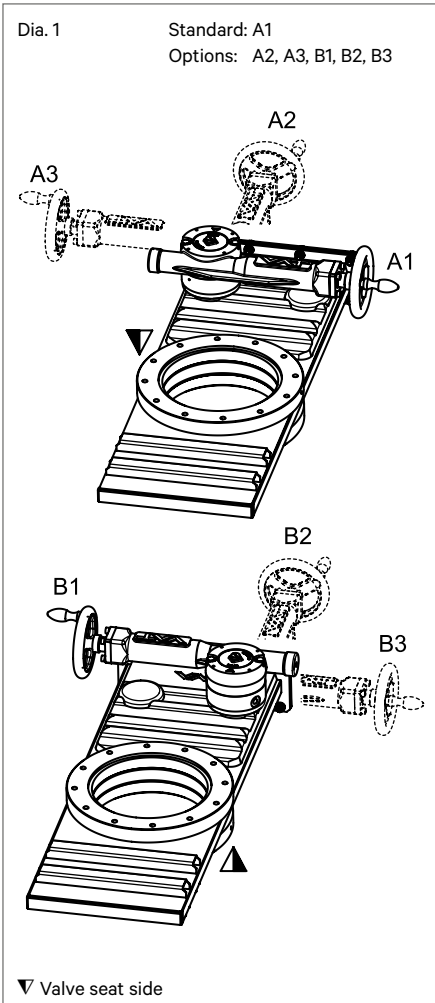
Leak rate	Valve body, valve seat	$< 1 \cdot 10^{-9}$ mbar ls ⁻¹
Pressure range		$1 \cdot 10^{-8}$ mbar to 2 bar (abs)
Differential pressure on the gate		≤ 2 bar
Differential pressure at opening		≤ 30 mbar
Cycles until first service		100 000
Temperature ¹⁾	Valve body	≤ 150 °C
	Manual actuator	≤ 80 °C
	Pneumatic actuator	≤ 50 °C
	Solenoid valve	≤ 50 °C
	Position indicator	≤ 80 °C
Heating and cooling rate		≤ 50 °C h ⁻¹
Material	Valve body, flange	AISI 304 (1.4301)
	Mechanism (main components)	AISI 301 (1.4310), AISI 304 (1.4301), AISI 316L (1.4404), AISI 420 (1.4034)
Seal	Bonnet, gate	FKM (Viton®)
Feedthrough	Bonnet	rotary feedthrough with intermediate pumping
Mounting position		any
Solenoid valve		24 V DC, 2.5 W (others on request)
Position indicator: contact rating	Voltage	≤ 250 V AC ≤ 50 V DC
	Current	≤ 5 A ≤ 3 A
Valve position indication		visual (mechanical)

DN (nominal I.D.)		Conductance (molecular flow) (depending on A-dimension and flange type)	Valve with manual actuator				Valve with pneumatic actuator						
			Weight: valve with handwheel		Weight: valve with lever		Compressed air min. – max. overpressure		Volume of pneumatic actuator		Closing or opening time	Weight	
mm	inch	ls ⁻¹	kg	lbs	kg	lbs	bar	psi	l	ft ³		s	kg
63	2½	440	11	24	9	20	4 – 7	58 – 102	0.13	0.005	1.5	11	24
100	4	1740	17	38	15	33	4 – 7	58 – 102	0.13	0.005	1.5	17	38
160	6	5 150	30	66	28	62	4 – 7	58 – 102	0.28	0.010	2.5	31	68
200	8	12 200	39	86	37	82	4 – 7	58 – 102	0.28	0.010	2.5	39	86

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



OPTIONS, CUSTOMIZED SOLUTIONS



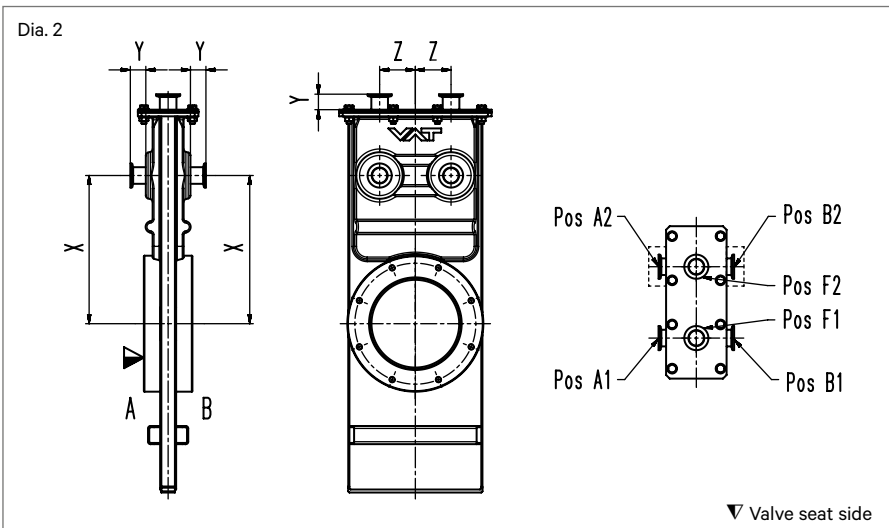
ACTUATOR

- Solenoid valve for impulse actuation:
last valve position is maintained at power failure
- Solenoid valve separate, for external mounting
- Other solenoid valve voltage (standard 24VDC)
- Double position indicator (2 switches each for the positions «open» and «closed»)
- Actuator mountable in 6 positions (Dia. 1):
A1, A2, A3 (valve seat side) or B1, B2, B3 (rear side) – desired position to be specified with order.
Without specification, the actuator is mounted in the standard position A1.

VALVE

- Customer specified flanges with/without watercooling
- Other sealing materials
- Intermediate pumping of the rotary feedthrough
- For direct mounting to flat chamber:
special flange for mounting to chamber wall, standard flange on opposite side
- Heat-resistant mechanism
- Ports for roughing (by-pass), venting or for gauges (Dia. 2):
possible positions A1, A2, B1, B2, F1 and F2

DN valve	mm inch	63 2½	100 4	160 6	200 8
Recommended port ISO-KF or CF-F		16 ¾	40 1½	40 1½	40 1½
X	mm inch	146 5.75	185 7.28	245 9.65	304.40 11.98
Y	mm inch	20 0.79	20 0.79	20 0.79	20 0.79
Z	mm inch	30 1.18	47.50 1.87	59 2.32	85 3.35
Other ports on request					



SPARE PARTS

We can offer a wide variety of spare parts. Please contact us for details and an offer.

Thank you for specifying the fabrication number of the valve indicated on the identification tag when asking for spare parts.

ACCESSORIES

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

ORDERING INFORMATION FOR STANDARD VALVES

Valve with manual actuator handwheel

DN		Ordering numbers				
mm	inch	ISO-F	CF-F metric threads	CF-F UNF threads	ASA-LP	JIS
63	2 ½	17236-PE01	17236-CE01	17236-UE01	17236-TE01	17236-JE01
100	4	17240-PE01	17240-CE01	17240-UE01	17240-TE01	17240-JE01
160	6	17244-PE01	17244-CE01	17244-UE01	17244-TE01	17244-JE01
200	8	17246-PE01	17246-CE01	17246-UE01	17246-TE01	17246-JE01
250	10	on request	on request	on request	on request	on request
320	12	on request	on request	on request	on request	on request

with position indicator: 172 . . . E08

Valve with manual actuator lever

DN		Ordering numbers				
mm	inch	ISO-F	CF-F metric threads	CF-F UNF threads	ASA-LP	JIS
63	2 ½	17236-PE06	17236-CE06	17236-UE06	17236-TE06	17236-JE06
100	4	17240-PE06	17240-CE06	17240-UE06	17240-TE06	17240-JE06
160	6	17244-PE06	17244-CE06	17244-UE06	17244-TE06	17244-JE06
200	8	17246-PE06	17246-CE06	17246-UE06	17246-TE06	17246-JE06
250	10	on request	on request	on request	on request	on request
320	12	on request	on request	on request	on request	on request

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	17236-PE44	17236-CE44	17236-UE44	17236-TE44	17236-JE44
100	4	17240-PE44	17240-CE44	17240-UE44	17240-TE44	17240-JE44
160	6	17244-PE44	17244-CE44	17244-UE44	17244-TE44	17244-JE44
200	8	17246-PE44	17246-CE44	17246-UE44	17246-TE44	17246-JE44
250	10	on request	on request	on request	on request	on request
320	12	on request	on request	on request	on request	on request

without solenoid valve, without position indicator: 172 . . . E14

without solenoid valve, with position indicator: 172 . . . E24

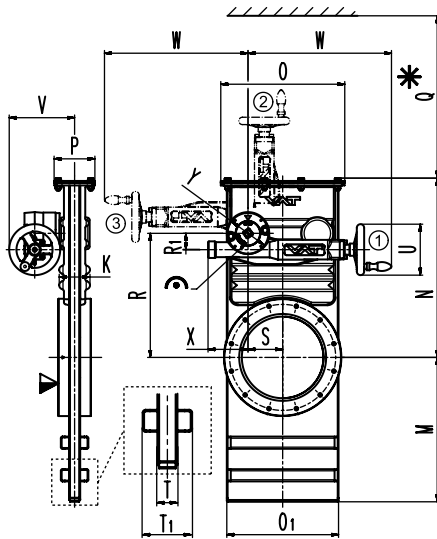
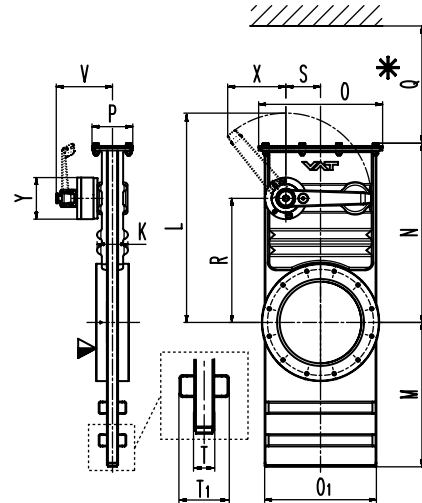
with solenoid valve, without position indicator: 172 . . . E34 (specify control voltage)

ORDERING INFORMATION FOR VALVES WITH OPTIONS

Basic ordering number plus «-X»: -X to be specified

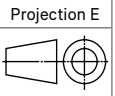
Example: 17246-PE44-X, X = port ISO-KF 40 in position F2

MAIN DIMENSIONS

Valve with manual actuator: handwheel
 DN 63 – 200 (2½" – 8")

Valve with manual actuator: lever
 DN 63 – 200 (2½" – 8")


DN	mm inch	63 2½	100 4	160 6	200 8
K	mm inch	51 2.01	63 2.48	74 2.91	77 3.03
M	mm inch	151 5.94	200 7.87	279 10.98	354 13.94
N	mm inch	211 8.31	270 10.63	361 14.21	441 17.36
O	mm inch	152 5.98	190 7.48	252 9.92	304 11.97
O1	mm inch	134 5.28	172 6.77	222 8.74	274 10.79
P	mm inch	80 3.15	80 3.15	100 3.94	100 3.94
Q	mm inch	180 7.09	220 8.66	300 11.81	350 13.78
R	mm inch	146 5.75	185 7.28	245 9.65	305 12.01
R1	mm inch	33 1.30	33 1.30	40 1.57	40 1.57
S	mm inch	30 1.18	47.50 1.87	59 2.32	85 3.35
T	mm inch	26.50 1.04	26.50 1.04	26.50 1.04	26.50 1.04
T1	mm inch	-	-	66 2.60	67.50 2.66
U	mm inch	100 3.94	100 3.94	125 4.92	125 4.92
V	mm inch	129 5.08	129 5.08	160.50 6.32	160.50 6.32
W	mm inch	312 12.28	312 12.28	350 13.78	352 13.86
X	mm inch	78 3.07	78 3.07	98 3.86	98 3.86
Y	mm inch	85 3.35	85 3.35	104 4.09	104 4.09

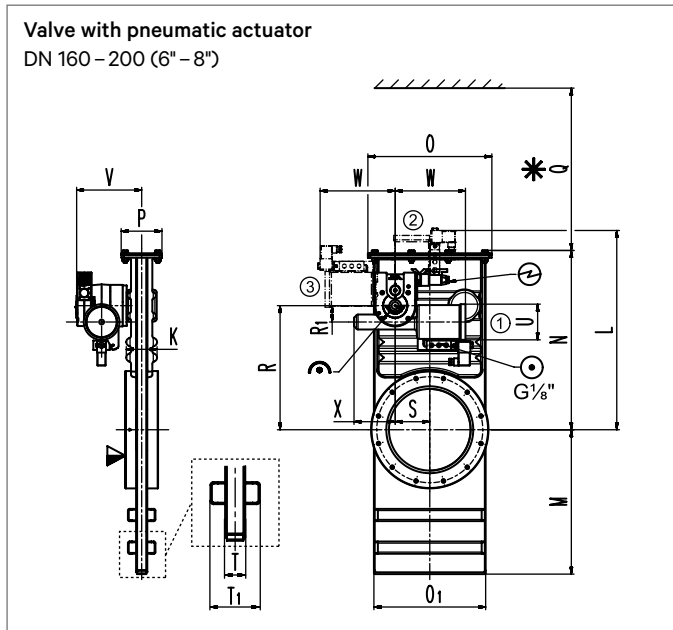
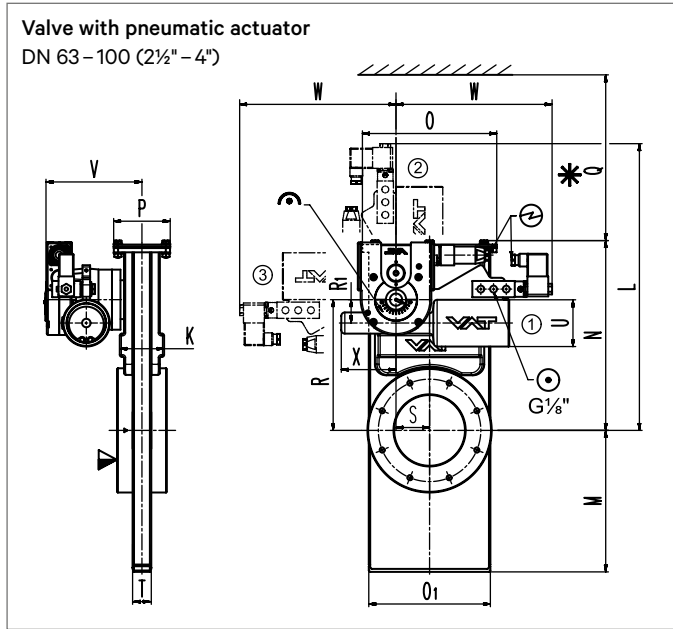
- ▽ Valve seat side
- * Required for dismantling
- ⌒ Mechanical position indication
- ① Standard actuator position
- ②③ Optional actuator positions



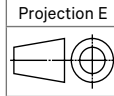
Flange dimensions: see pages 98 – 99

DN	mm inch	63 2½	100 4	160 6	200 8
K	mm inch	51 2.01	63 2.48	74 2.91	77 3.03
L	mm inch	276 10.87	315 12.40	455 17.91	515 20.28
M	mm inch	151 5.94	200 7.87	279 10.98	354 13.94
N	mm inch	211 8.31	270 10.63	361 14.21	441 17.36
O	mm inch	152 5.98	190 7.48	252 9.92	304 11.97
O1	mm inch	134 5.28	172 6.77	222 8.74	274 10.79
P	mm inch	80 3.15	80 3.15	100 3.94	100 3.94
Q	mm inch	180 7.09	220 8.66	300 11.81	350 13.78
R	mm inch	146 5.75	185 7.28	245 9.65	305 12.01
S	mm inch	30 1.18	47.50 1.87	59 2.32	85 3.35
T	mm inch	26.50 1.04	26.50 1.04	26.50 1.04	26.50 1.04
T1	mm inch	-	-	67.50 2.66	67.50 2.66
V	mm inch	120 4.72	120 4.72	138 5.43	138 5.43
X	mm inch	96 3.78	96 3.78	143 5.63	143 5.63
Y	mm inch	85 3.35	85 3.35	104 4.09	104 4.09

MAIN DIMENSIONS



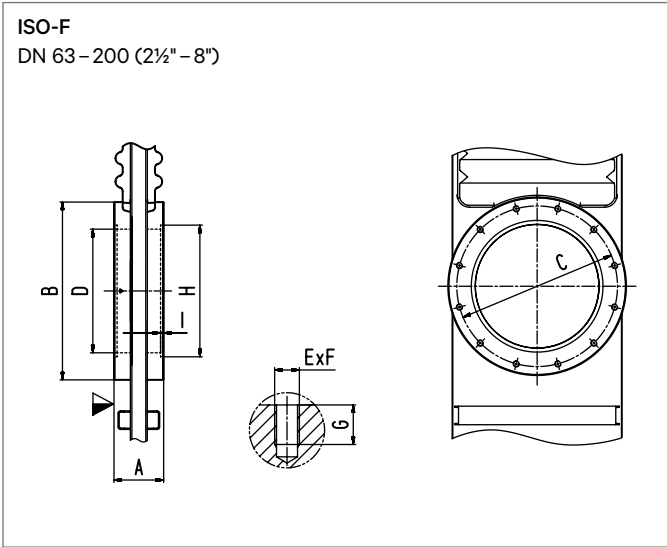
- ▼ Valve seat side
- * Required for dismantling
- ⊕ Compressed air connection
- ⊖ Electrical connection
- ↻ Mechanical position indication
- ⊖ Emergency operation
- ① Standard actuator position
- ②③ Optional actuator positions



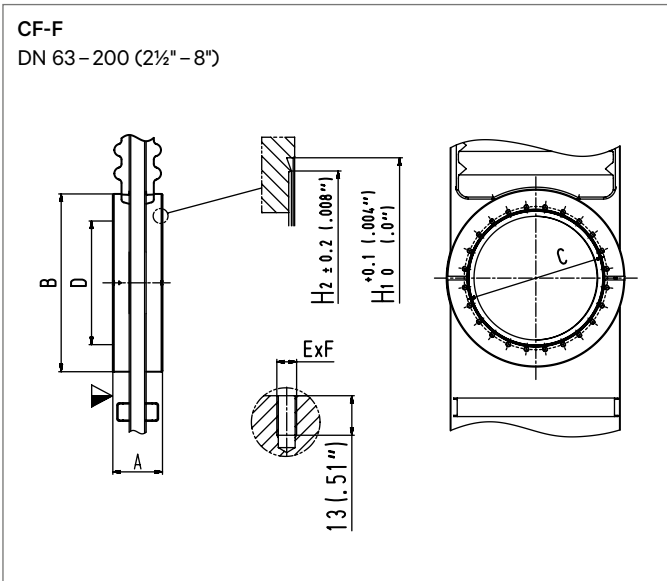
DN	mm inch	63 2 ½	100 4	160 6	200 8
K	mm inch	51 2.01	63 2.48	74 2.91	77 3.03
L	mm inch	367 14.45	406 15.98	435 17.13	495 19.49
M	mm inch	151 5.94	200 7.87	279 10.98	354 13.94
N	mm inch	211 8.31	270 10.63	361 14.21	441 17.36
O	mm inch	152 5.98	190 7.48	252 9.92	304 11.97
O1	mm inch	134 5.28	172 6.77	222 8.74	274 10.79
P	mm inch	80 3.15	80 3.15	100 3.94	100 3.94
Q	mm inch	180 7.09	220 8.66	300 11.81	350 13.78
R	mm inch	146 5.75	185 7.28	245 9.65	305 12.01
R1	mm inch	33 1.30	33 1.30	40 1.57	40 1.57
S	mm inch	30 1.18	47.50 1.87	59 2.32	85 3.35
T	mm inch	26.50 1.04	26.50 1.04	26.50 1.04	26.50 1.04
T1	mm inch	-	-	66 2.60	67.50 2.66
U	mm inch	66 2.60	66 2.60	88 3.46	87 3.43
V	mm inch	135 5.31	135.20 5.32	159 6.26	159 6.26
W	mm inch	221 8.70	221 8.70	190 7.48	190 7.48
X	mm inch	78 3.07	78 3.07	100 3.94	100 3.94

Flange dimensions: see pages 98 – 99

FLANGE DIMENSIONS



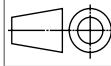
DN	mm inch	63 2½	100 4	160 6	200 8
A	mm inch	70 2.76	70 2.76	80 3.15	80 3.15
B	mm inch	136 5.35	176 6.93	225 8.86	288 11.34
C	mm inch	110 4.33	145 5.71	200 7.87	260 10.24
D	mm inch	63 2.48	100 3.94	150 5.91	200 7.87
E × F		4 × M8	8 × M8	8 × M10	12 × M10
G	mm inch	13 0.51	13 0.51	14 0.55	16 0.63
H	mm inch	70 2.76	102 4.02	153 6.02	213 8.39
I	mm inch	3 0.12	3 0.12	5 0.20	5 0.20



DN	mm inch	63 2½	100 4	160 6	200 8
O.D.	inch	4½	6	8	10
A	mm inch	70 2.76	70 2.76	70 2.76	80 3.15
B	mm inch	136 5.35	176 6.93	225 8.86	288 11.34
C	mm inch	92.10 3.63	130.20 5.13	181 7.13	231.80 9.13
D	mm inch	63 2.48	100 3.94	150 5.91	200 7.87
E × F ¹⁾		8 × M8	16 × M8	20 × M8	24 × M8
E × F ²⁾		8 × 5/16" 24 UNF	16 × 5/16" 24 UNF	20 × 5/16" 24 UNF	24 × 5/16" 24 UNF
H1	mm inch	82.50 3.25	120.70 4.75	171.45 6.75	222.40 8.76
H2	mm inch	77.40 3.05	115.50 4.55	166 6.54	217 8.54

▼ Valve seat side

Projection E


¹⁾ Metric threads

²⁾ UNF threads

FLANGE DIMENSIONS

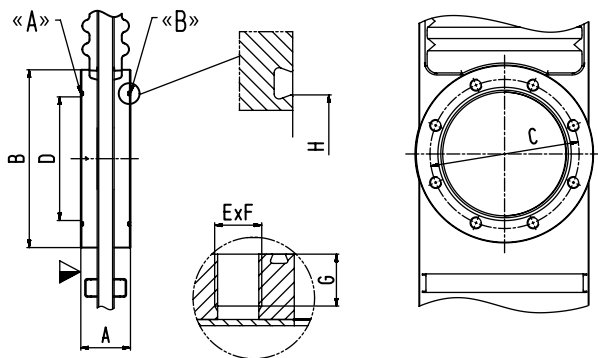
A

ASA-LP

DN 63 – 200 (2½" – 8")

with or without O-ring groove

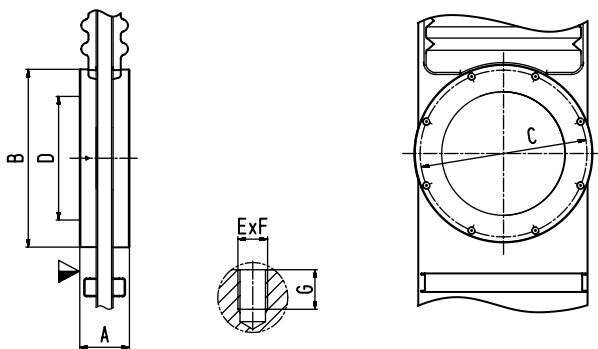
For orders with O-ring groove specify: «A», «B» or «A + B».



DN	mm inch	63 2½	100 4	160 6	200 8
ASA-LP		2	3	4	6
A	mm inch	70 2.76	70 2.76	80 3.15	80 3.15
B	mm inch	136 5.35	176 6.93	225 8.86	288 11.34
C	mm inch	120.70 4.75	152.40 6	190.50 7.50	241.30 9.50
D	mm inch	63 2.48	100 3.94	150 5.91	200 7.87
E × F		4 × ⅜" 16 UNC	4 × ⅜" 16 UNC	8 × ⅜" 16 UNC	8 × ⅜" 10 UNC
G	mm inch	15 0.59	15 0.59	15 0.59	19 0.75
H	mm inch	88.90 3.50	120.65 4.75	158.75 6.25	206.40 8.13
O-ring I.D. × D	mm inch	88.49 × 3.53 3.48 × .139	120.24 × 3.53 4.73 × .139	158.34 × 3.53 6.23 × .139	202.79 × 3.53 7.98 × .139

JIS B 2290: 1998 / ISO 1609

DN 65 – 200 (2½" – 8")



DN	mm inch	65 2½	100 4	150 6	200 8
A	mm inch	70 2.76	70 2.76	80 3.15	80 3.15
B	mm inch	136 5.35	176 6.93	225 8.86	300 11.81
C	mm inch	120 4.72	160 6.30	210 8.27	270 10.63
D	mm inch	63 2.48	100 3.94	150 5.91	200 7.87
E × F		4 × M10	8 × M10	8 × M10	8 × M12
G	mm inch	12 0.47	12 0.47	12 0.47	15 0.59

▼ Valve seat side

Projection E

