

# Agilent

## Aluminum Gate Valves - Series 12

### ISO 63 - ISO 250 F Flange

#### Data sheet



Agilent Valves by **VAT**

Thank you for choosing Agilent Valves by VAT. With the combination of these two well-known names in the Vacuum industry, we are confident that Agilent Valves by VAT will meet your most demanding vacuum control needs. The valves are available in **manual**, push-rod operation and double acting pneumatic operation. The pneumatic valves are available with solenoid (pilot) valves at 115 VAC, 220 VAC and 24 VDC, and a position indicator. See operator's manual for more information.

<b>Leak rate: valve body, valve seat</b>	$< 1 \cdot 10^{-9}$ mbar ls <sup>-1</sup>	
<b>Pressure range</b>		
– ISO 63–160	1 · 10 <sup>-7</sup> mbar to 1.6 bar (abs)	
– ISO 250	1 · 10 <sup>-7</sup> mbar to 1.2 bar (abs)	
<b>Differential pressure on the gate</b>		
– ISO 63–160	≤ 1.6 bar	
– ISO 250	≤ 1.2 bar	
<b>Differential pressure at opening</b>	≤ 30 mbar	
<b>Cycles until first service</b>		
– ISO 63–160	200 000	
– ISO 250	100 000	
<b>Temperature <sup>1)</sup></b>		
– Valve body	≤ 120 °C	
– Manual and pneumatic actuator	≤ 80 °C	
– Solenoid valve	≤ 50 °C	
– Position indicator	≤ 80 °C	
<b>Heating and cooling rate</b>	≤ 30 °C h <sup>-1</sup>	
<b>Material</b>		
– Valve body	ISO 63–160	EN AW-5083 (3.3547), -6061 (3.3211)
	ISO 250	EN AC-42100 (3.2371)
– Mechanism	ISO 63–160	AISI 304 (1.4301)
	ISO 250	EN AW-6082 (3.2315)
<b>Seal: bonnet, gate</b>	FKM (Viton)	
<b>Feedthrough</b>	shaft feedthrough	
<b>Mounting orientation</b>	any	
<b>Solenoid valve</b>	24 VDC, 115 V, 220 V, 5.4 W	
<b>Position indicator: contact rating</b>		
– Voltage	≤ 250 VAC	≤ 50 VDC
– Current	≤ 2 A	≤ 1.2 A
<b>Valve position indication</b>	visual (mechanical)	

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



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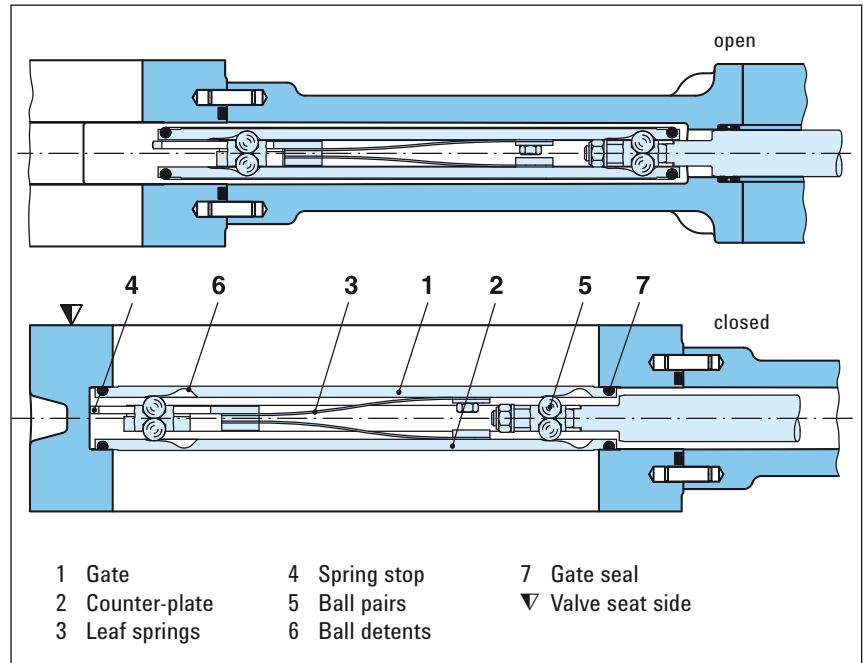
## ISO 63 - ISO 250 F Flange

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#### ISO 63-250 Features

- Body material: aluminum
- Low cost gate valve
- Split body for easy cleaning
- VATLOCK configuration

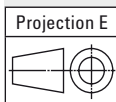
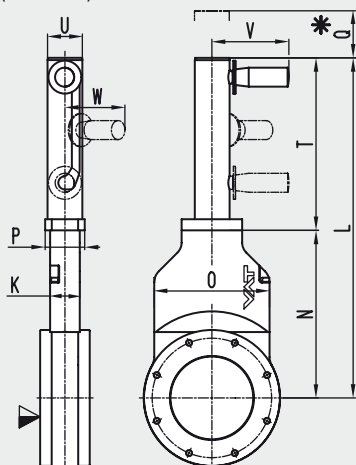
Body style ISO 63-250 - Gate mechanism ISO 160-250



			Valve with manual actuator		Valve with pneumatic actuator							
DN (nominal I. D.)		Standard flanges	Conductance (molecular flow) (depending on A-dimension and flange type)	Weight		Compressed air min. - max. overpressure		Volume of pneumatic actuator		Closing or opening time	Weight	
mm	inch			kg	lbs	bar	psi	l	ft <sup>3</sup>		kg	lbs
63	2 ½	See page 5	550	3.00	7.00	4-7	58-102	0.16	0.006	1.5	3.00	7.00
100	4		2000	4.50	10.00	4-7	58-102	0.22	0.008	2	4.50	10.00
160	6		6000	9.00	20.00	4-7	58-102	0.50	0.018	2	9.00	20.00
250	10		22000	N/A	N/A	4-7	58-102	1.50	0.053	5	25.00	55.00

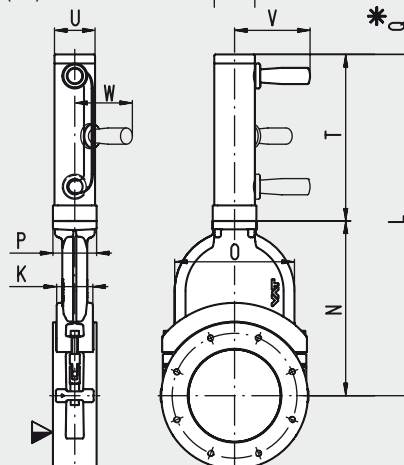
## Main dimensions

Valve with manual actuator: push rod  
DN 63–100 (2½"–4")



- ▼ Valve seat side
- \* Required for dismantling

Valve with manual actuator: push rod  
DN 160 (6")



DN	mm	63	100	160
	inch	2½	4	6
K	mm	36	36	58
	inch	1.42	1.42	2.28
L	mm	329.50	413	547
	inch	12.97	16.26	21.54
N	mm	155.50	203.50	280
	inch	6.12	8.01	11.02
O	mm	100	140	192
	inch	3.94	5.51	7.56
P	mm	48	48	70
	inch	1.89	1.89	2.76
Q	mm	25	25	60
	inch	0.98	0.98	2.36
T	mm	174	209.50	267
	inch	6.85	8.25	10.51
U	mm	43	43	65
	inch	1.69	1.69	2.56
V	mm	94	94	122
	inch	3.70	3.70	4.80
W	mm	75	75	95
	inch	2.95	2.95	3.74

Flange dimensions: see page 5

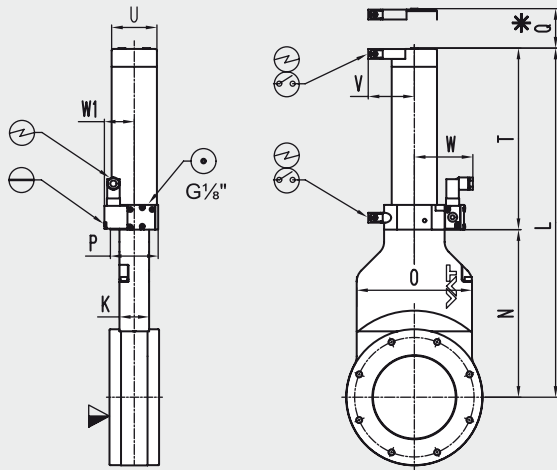
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## ISO 63 - ISO 250 F Flange

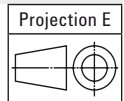
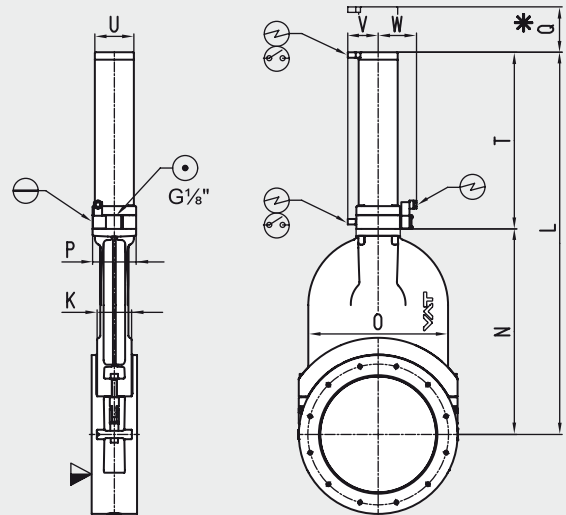
### Data sheet

#### Main dimensions

**Valve with pneumatic actuator: double acting**  
ISO 63–100 (2½"–4")



**Valve with pneumatic actuator: double acting**  
ISO 160 (6")–250 (10")



ISO	mm inch	63 2½	100 4	160 6	250 10
K	mm inch	36 1.42	36 1.42	58 2.28	76 2.99
L	mm inch	341.50 13.45	425 16.69	547 21.54	843 33.19
N	mm inch	155.50 6.12	203.50 6.83	280 11.02	453 17.83
O	mm inch	100 3.94	140 5.51	192 7.56	308 12.13
P	mm inch	58 2.28	58 2.28	70 2.76	96 3.78
Q	mm inch	25 0.98	25 0.98	60 2.36	100 3.94
T	mm inch	186 7.32	221.50 8.72	267 10.51	390 15.35
U	mm inch	55 2.17	55 2.17	65 2.56	86 3.39
V	mm inch	56 2.20	56 2.20	57 2.24	67 2.64
W	mm inch	72 2.83	72 2.83	71.50 2.82	84.50 3.33
W1	mm inch	36.50 1.44	36.50 1.44		

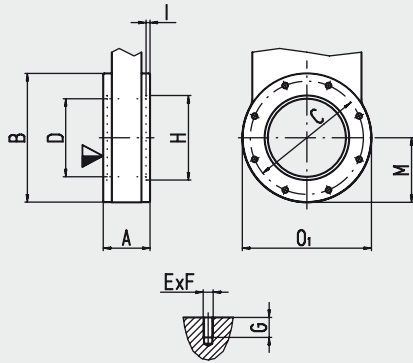
Flange dimensions: see page 5

- ▽ Valve seat side
- \* Required for dismantling
- ⊙ Compressed air connection
- ⊕ Electrical connection
- ⊖ Position indicator
- ⊖ Emergency operation

## Flange dimensions

### ISO-F

ISO 63–250 (2½"–10")



ISO	mm inch	63 2½	100 4	160 6	250 10
A	mm inch	60 2.6	60 2.36	70 2.76	100 3.94
B	mm inch	130 5.12	165 6.50	235 9.25	350 13.78
C	mm inch	110 4.33	145 5.71	200 7.87	310 12.20
D	mm inch	65 2.56	100 3.94	150 5.91	261 10.27
Ex F		4 x M8	8 x M8	8 x M10	12 x M10
G	mm inch	12 0.47	12 0.47	16 0.63	16 0.63
H	mm inch	70 2.76	102 4.02	153 6.02	–
I	mm inch	3 0.12	3 0.12	5 0.20	–
M	mm inch	65.50 2.58	83 3.27	117.50 4.63	175 6.89
O1	mm inch	131 5.16	166 6.54	237 9.33	352 13.86

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#### Ordering information

Description Aluminum Gate Valves - Series 12	Part Number
Valve, Gate, Aluminum, 63 ISO, Air-operated, Position Indicator, 115VAC	X3202-60000
Valve, Gate, Aluminum, 63 ISO, Air-operated, Position Indicator, 220VAC	X3202-60001
Valve, Gate, Aluminum, 63 ISO, Air-operated, Position Indicator, 24VDC	X3202-60002
Valve, Gate, Aluminum, 63 ISO, Air-operated, Position Indicator, without Solenoid	X3202-60003
Valve, Gate, Aluminum, 63 ISO, Hand-operated	X3202-60004
Valve, Gate, Aluminum, 100 ISO, Air-operated, Position Indicator, 115VAC	X3202-60010
Valve, Gate, Aluminum, 100 ISO, Air-operated, 220VAC, Position Indicator	X3202-60011
Valve, Gate, Aluminum, 100 ISO, Air-operated, 24VDC, Position Indicator	X3202-60012
Valve, Gate, Aluminum, 100 ISO, Air-operated, Position Indicator, without Solenoid	X3202-60013
Valve, Gate, Aluminum, 100 ISO, Hand-operated	X3202-60014
Valve, Gate, Aluminum, 160 ISO, Air-operated, Position Indicator, 115VAC	X3202-60020
Valve, Gate, Aluminum, 160 ISO, Air-operated, Position Indicator, 220VAC	X3202-60021
Valve, Gate, Aluminum, 160 ISO, Air-operated, Position Indicator, 24VDC	X3202-60022
Valve, Gate, Aluminum, 160 ISO, Air-operated, Position Indicator, without Solenoid	X3202-60025
Valve, Gate, Aluminum, 160 ISO, Hand-operated	X3202-60026
Valve, Gate, Aluminum, 250 ISO, Air-operated, Position Indicator, 115VAC	X3202-60027
Valve, Gate, Aluminum, 250 ISO, Air-operated, Position Indicator, 220VAC	X3202-60028
Valve, Gate, Aluminum, 250 ISO, Air-operated, Position Indicator, 24VDC	X3202-60029
Valve, Gate, Aluminum, 250 ISO, Air-operated, Position Indicator, without Solenoid	X3202-60030

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