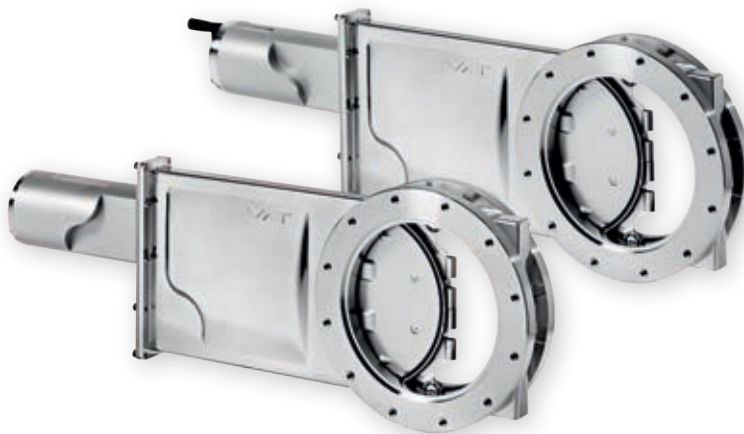


AGILENT HIGH PERFORMANCE VALVES

► Agilent Stainless Steel Gate Valves - Series 11



Thank you for choosing Agilent Valves. These valves are designed with the highest international vacuum standards and manufactured with uncompromising quality. We are confident that Agilent Valves 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 24 VDC, and a position indicator. See operator's manual for more information.

Technical Specifications

Leak rate: valve body, valve seat		$< 1 \cdot 10^{-9}$ mbar ls ⁻¹
Pressure range		
ISO 100–160		$1 \cdot 10^{-8}$ mbar to 1.6 bar (abs)
Differential pressure on the gate		
ISO 100–160		≤ 1.6 bar
Differential pressure at opening		≤ 30 mbar
Cycles until first service		
ISO 100–160		200 000
Temperature*		
Valve body		< 150 °C
Manual and pneumatic actuator		≤ 80 °C
Solenoid valve		≤ 50 °C
Position indicator		≤ 50 °C
Heating and cooling rate		≤ 50 °C h ⁻¹
Material		
Valve body	ISO 100–160	AISI 304 (1.4301)
Mechanism	ISO 100–160	AISI 316L (1.4404)
Seal: bonnet, gate		FKM (Viton)
Feedthrough		bellows
Mounting orientation		any
Solenoid valve		24 VDC, 5.4 W
Position indicator: contact rating		
Voltage		10–30 VDC
Current		max 200 mA
Valve position indication		LED

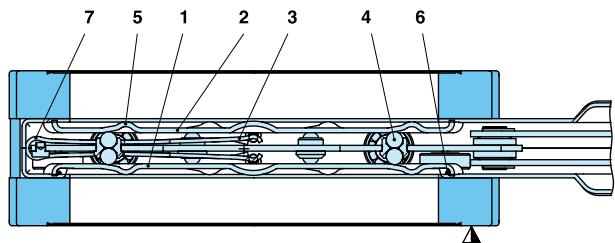
* Maximum values: depending on operating conditions and sealing materials

VACUUM VALVES

Features

- Body material: stainless steel
- Low cost bellows-sealed valve
- DN100-160 with vulcanized seal

Stainless Steel Gate Valves Functional Principle



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

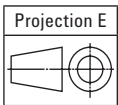
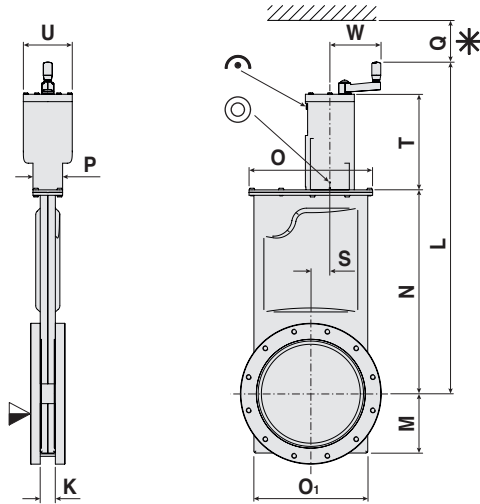
DN (nominal I.D.) mm (in.)	Standard flanges	Conductance (molecular flow) (depending on A-dimension and flange type) ls ⁻¹	Valve with manual actuator		Valve with pneumatic actuator				
			Turns per stroke n	Weight kg (lbs)	Compressed air min. – max. overpressure bar (psi)	Volume of pneumatic actuator l ft ³		Closing or opening time s	Weight kg (lbs)
100 (4)	See page 386	1740	14	10.00 (22.00)	4 – 7 (58 – 102)	0.127	0.0045	1.5	10.50 (23.00)
160 (6)		1880	17	12.00 (27.00)	4 – 7 (58 – 102)	0.150	0.0053	2.5	13.00 (30.00)

AGILENT HIGH PERFORMANCE VALVES

Main Dimensions

Valve with manual actuator: crank handle

DN 100–160 (4"–6")



Models	DN 100	DN 160
	(4)	(6)
K	25.55 (1.01)	25.55 (1.01)
L	472.60 (18.61)	601.40 (23.68)
M	69 (2.72)	94.50 (3.72)
N	238 (9.37)	328.40 (12.93)
O	155 (6.10)	205 (8.07)
O1	134.60 (5.30)	184.80 (7.28)
P	60 (2.36)	60 (2.36)
Q	190 (7.48)	270 (10.63)
S	9 (0.35)	25 (0.98)
T	179.20 (7.06)	203.20 (8.00)
U	89 (3.50)	89 (3.50)
W	76.50 (3.01)	92.50 (3.64)

Flange dimensions: see page 386

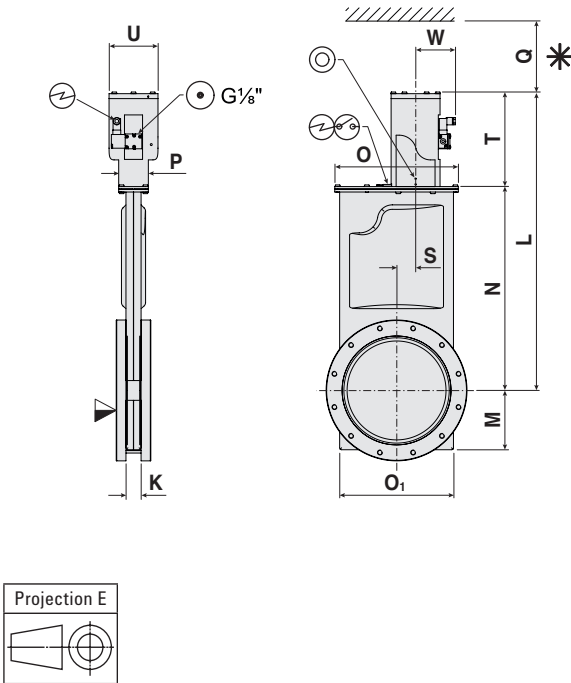
- ▼ Valve seat side
- * Required for dismantling
- ↻ Mechanical position indication
- ◎ Leak detection hole

Dimensions: millimeters (inches)

VACUUM VALVES

Main Dimensions

Valve with pneumatic actuator: double acting
 DN 100–160 (4"–6")



Models	DN 100	DN 160
	(4)	(6)
K	25.55 (1.01)	25.55 (1.01)
L	409 (16.10)	523 (20.59)
M	69 (2.72)	94.50 (3.72)
N	238.3 (9.38)	328.40 (12.93)
O	155 (6.10)	205 (8.07)
O1	134.60 (5.30)	184.80 (7.28)
P	60 (2.36)	60 (2.36)
Q	190 (7.48)	270 (10.63)
S	9 (0.35)	25 (0.98)
T	170.80 (6.72)	194.30 (7.65)
U	89 (3.50)	89 (3.50)
W	78.90 (3.11)	78.90 (3.11)

Flange dimensions: see page 386

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

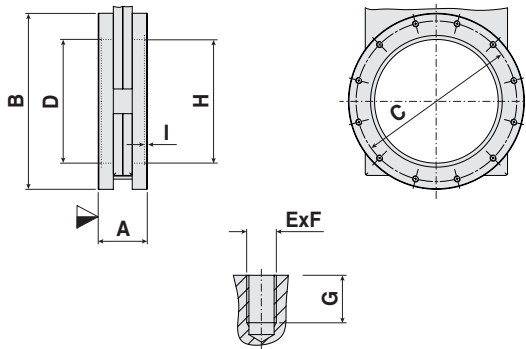
Dimensions: millimeters (inches)

AGILENT HIGH PERFORMANCE VALVES

Flange Dimensions

ISO-F

DN 100–160 (4"–6")

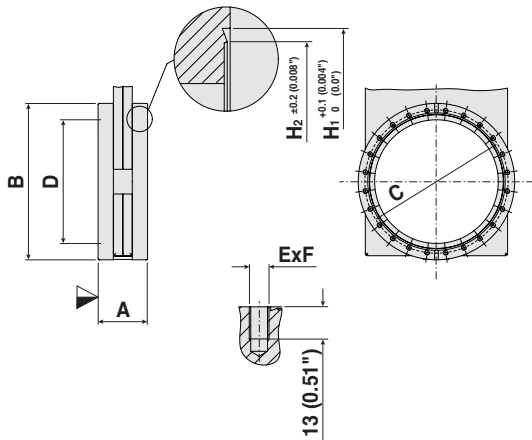


Models	DN 100	DN 160
	(4)	(6)
A	70	70
	(2.76)	(2.76)
B	165	225
	(6.50)	(8.86)
C	145	200
	(5.71)	(7.87)
D	100	150
	(3.94)	(5.91)
E x F	8 x M8	8 x M10
G	13	13
	(0.51)	(0.51)
H	102	153
	(4.02)	(6.02)
I	3	5
	(0.12)	(0.20)

Dimensions: millimeters (inches)

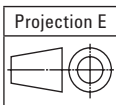
CF-F, metric threads

DN 100–160 (4"–6")



Models	DN 100	DN 160
	(4)	(6)
O.D.	(6)	(8)
A	70	70
	(2.76)	(2.76)
B	151.60	202.40
	(5.97)	(7.97)
C	130.20	181
	(5.13)	(7.13)
D	100	150
	(3.94)	(5.91)
E x F	16 x M8	20 x M8
H1	120.70	171.45
	(4.75)	(6.75)
H2	115.50	166
	(4.55)	(6.54)

Dimensions: millimeters (inches)



▽ Valve seat side

VACUUM VALVES

Ordering Information

Description	Stainless Steel Gate Valves - Series 11	Part Number
HV Gate valve SS 6 inch CFF Hand Operated		X3204-60005
HV Gate valve SS 6 inch CFF air operated with Position Indicator		X3204-60006
HV Gate valve SS 6 inch CFF air operated with Position Indicator & 115V solenoid valve		X3204-60007
HV Gate valve SS 6 inch CFF air operated with Position Indicator & 24VDC solenoid valve		X3204-60008
HV Gate valve SS 6 inch CFF air operated with Position Indicator & 220V solenoid valve		X3204-60009
HV Gate valve SS ISO100F Hand Operated		X3204-60035
HV Gate valve SS ISO100F air operated with Position Indicator		X3204-60036
HV Gate valve SS ISO100F air operated with Position Indicator & 115V solenoid valve		X3204-60037
HV Gate valve SS ISO100F air operated with Position Indicator & 24VDC solenoid valve		X3204-60038
HV Gate valve SS ISO100F air operated with Position Indicator & 220V solenoid valve		X3204-60039
HV Gate valve SS 8 inch CFF Hand Operated		X3204-60010
HV Gate valve SS 8 inch CFF air operated with Position Indicator		X3204-60011
HV Gate valve SS 8 inch CFF air operated with Position Indicator & 115V solenoid valve		X3204-60012
HV Gate valve SS 8 inch CFF air operated with Position Indicator & 24VDC solenoid valve		X3204-60013
HV Gate valve SS 8 inch CFF air operated with Position Indicator & 220V solenoid valve		X3204-60014
HV Gate valve SS ISO160F Hand Operated		X3204-60044
HV Gate valve SS ISO160F air operated with Position Indicator		X3204-60043
HV Gate valve SS ISO160F air operated with Position Indicator & 115V solenoid valve		X3204-60040
HV Gate valve SS ISO160F air operated with Position Indicator & 24VDC solenoid valve		X3204-60041
HV Gate valve SS ISO160F air operated with Position Indicator & 220V solenoid valve		X3204-60042