

# BGV Manual Gate Valves



The BGV basement gate valves are a range of stainless steel, bellows-sealed basement isolation valves. They have been designed, in conjunction with VAT, to enable pumps to be kept running during foreline maintenance in order to maximise the reliability and up-time of pumps operating on harsh processes. The BGV valves are designed for an operating pressure range of  $1 \times 10^{-9}$  mbar to 1.2 bar absolute ( $1 \times 10^{-7}$  to  $1.2 \times 10^5$  Pa). The valves withstand 1.2 bar absolute in either direction and can tolerate against a 1 bar differential pressure across the valve seal.

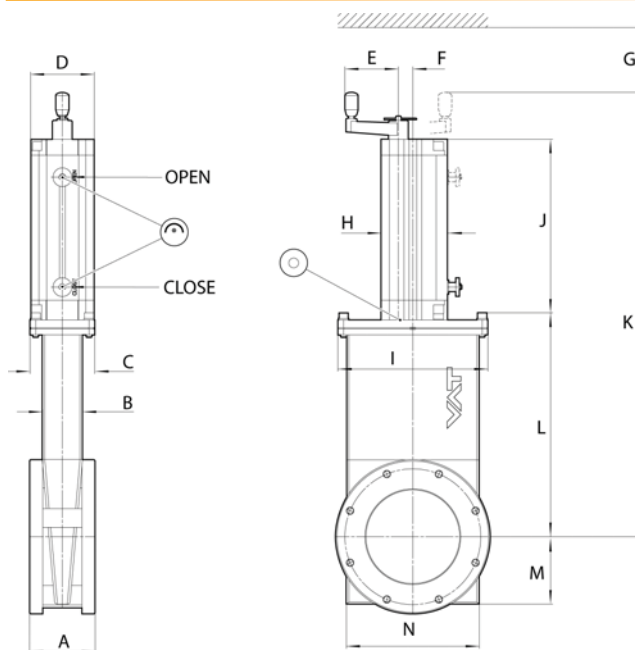
Although principally designed for isolation of pumps in a semiconductor fab basement, the BGV valves are ideal for other applications where a 1 bar differential at opening is desirable and 20000 cycles is acceptable.



## Features & Benefits

- Jointly developed with VAT, a world leader in sealing technology.
- Stainless steel construction and robust patented design for a long service life
- Simple grease-free mechanism minimizes damage due to particulates in dusty processes
- Can be operated with 1 bar pressure differential so pressure equalization is not required
- Easy servicing with only inexpensive consumables for low cost of ownership

## Dimensions



		NW50	ISO63	ISO80	ISO100	ISO160
A	mm/inch	60/2.36	70/2.75	70/2.75	70/2.75	90/3.54
B	mm/inch	36/1.41	43/1.69	43/1.69	43/1.69	64/2.52
C	mm/inch	63/2.48	69/2.71	69/2.71	69/2.71	87/3.42
D	mm/inch	62/2.44	62/2.44	62/2.44	62/2.44	62/2.44
E	mm/inch	60/2.36	68/2.67	68/2.67	68/2.67	87/3.42
F	mm/inch	120/4.72	160/6.3	200/7.87	200/7.87	260/10.23
G	mm/inch	62.5/2.46	71/2.79	71/2.79	71/2.79	91/3.58
H	mm/inch	70.5/2.77	75/2.95	75/2.95	75/2.95	85/3.34
I	mm/inch	119/4.68	138/5.43	155/6.09	174.5/6.86	241/9.47
J	mm/inch	110/4.32	123/4.83	142/5.58	160/6.29	210/8.25
K	mm/inch	268/10.53	314/12.34	364/14.31	413.5/16.25	578/22.72
L	mm/inch	149/5.86	176/6.92	209/8.21	239/9.39	337/13.24
M	mm/inch	45/1.77	53.5/2.1	72/2.83	72/2.83	97/3.81
N	mm/inch	90/3.54	105/4.13	124/4.87	142/5.58	192/7.55

## Technical Data

Leak rate	
Body	$< 1 \times 10^{-9}$ mbar ls <sup>-1</sup>
Valve seat	$< 1 \times 10^{-7}$ mbar ls <sup>-1</sup>
Pressure range	$1 \times 10^{-9}$ mbar to 1.2 bara
Differential pressure on the gate	1.2 bar in either direction
Differential pressure at opening	1 bar
Cycles until first service	20, 0000
Maximum operating temps	
Valve body	120 °C
Manual actuator	80 °C
Pneumatic actuator	80 °C
Position indicator	60 °C
Solenoid	50 °C
Molecular flow conductance	
NW50	300 ls <sup>-1</sup>
ISO63	400 ls <sup>-1</sup>
ISO80	1100 ls <sup>-1</sup>
ISO100	1700 ls <sup>-1</sup>
ISO160	4600 ls <sup>-1</sup>
Weight	
NW50	3.3 kg (7.3 lbs)
ISO63	6.6 kg (14.6 lbs)
ISO80	7.0 kg (15.4 lbs)
ISO100	8.5 kg (18.7 lbs)
ISO160	17.7 kg (39.0 lbs)
Materials of construction:	
Body	AISI 304 stainless steel
Bonnet	Black anodized aluminium
Gate	AISI 304 stainless steel
Gliders	PEEK
Bellows	AISI 633 stainless steel
Seals	Fluoroelastomer
Gate fixation screw	A2 stainless steel Ni-TEFLON coated
Handle	Reinforced polyamide
annual alves	
Turns of the handle to open/close	
NW50	22
ISO63	27
ISO80	33
ISO100	39
ISO160	41

## Ordering Information

Product Description	Order No.
BGV manual gate valve NW50	B90000195
BGV manual gate valve ISO63	B90000200
BGV manual gate valve ISO80	B90000215
BGV manual gate valve ISO100	B90000220
BGV manual gate valve ISO160	B90000230
Accessories & Spares	Order No.
Vacuum seals kit NW50	B90000595
Vacuum seals kit ISO63	B90000600
Vacuum seals kit ISO80	B90000605
Vacuum seals kit ISO100	B90000610
Vacuum seals kit ISO160	B90000620
Bellows feed-through NW50	B90000625
Bellows feed-through ISO63	B90000630
Bellows feed-through ISO80	B90000635
Bellows feed-through ISO100	B90000640
Bellows feed-through ISO160	B90000650
Spare gate NW50	B90000655
Spare gate ISO63	B90000660
Spare gate ISO80	B90000665
Spare gate ISO100	B90000670
Spare gate ISO160	B90000680
Spare solenoid 24V a.c./d.c.	B90000790

# Pneumatic gate valves



The BGV basement gate valves are a range of stainless steel, bellows-sealed basement isolation valves. They have been designed, in conjunction with VAT, to enable pumps to be kept running during foreline maintenance in order to maximise the reliability and up-time of pumps operating on harsh processes. The BGV valves are designed for an operating pressure range of  $1 \times 10^{-9}$  mbar to 1.2 bar absolute ( $1 \times 10^{-7}$  to  $1.2 \times 10^5$  Pa). The valves withstand 1.2 bar absolute in either direction and can tolerate against a 1 bar differential pressure across the valve seal.

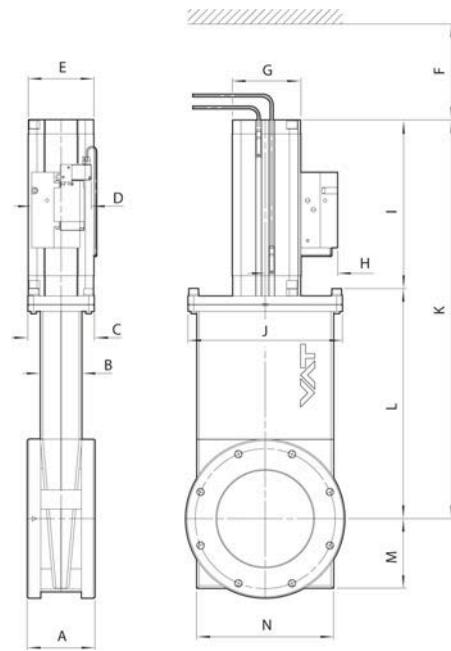
Although principally designed for isolation of pumps in a semiconductor fab basement, the BGV valves are ideal for other applications where a 1 bar differential at opening is desirable and 20000 cycles is acceptable.



## Features & Benefits

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## Dimensions



		NW50	ISO63	ISO80	ISO100	ISO160
A	mm/inch	60/2.36	70/2.75	70/2.75	70/2.75	90/3.54
B	mm/inch	36/1.41	43/1.69	43/1.69	43/1.69	52.5/2.06
C	mm/inch	63/2.48	69/2.71	69/2.71	69/2.71	87/3.42
D	mm/inch	60/2.36	68/2.67	68/2.67	68/2.67	87/3.42
E	mm/inch	57/2.24	57/2.24	57/2.24	57/2.24	73/2.87
F	mm/inch	130/5.1	15.5/0.61	15.5/0.61	15.5/0.61	20.3/0.8
G	mm/inch	120/4.71	160/6.3	200/7.87	200/7.87	260/10.23
H	mm/inch	62.5/2.46	71/2.79	71/2.79	71/2.79	91/3.58
I	mm/inch	110/4.32	123/4.84	142/5.58	160/6.3	210/8.26
J	mm/inch	134/5.27	149/5.86	165/6.49	185/7.28	264/10.39
K	mm/inch	333/13.09	375/14.76	424/16.66	474/18.66	651/25.62
L	mm/inch	149/5.86	176/6.92	209/8.21	239/9.4	337/13.27
M	mm/inch	45/1.77	53.5/2.1	72/2.83	72/2.83	97/3.83
N	mm/inch	90/3.54	105/4.13	124/4.87	142/5.59	192/7.55

## Technical Data

Leak rate	
Body	$< 1 \times 10^{-9}$ mbar ls <sup>-1</sup>
Valve seat	$< 1 \times 10^{-7}$ mbar ls <sup>-1</sup>
Pressure range	1 x 10 <sup>-9</sup> mbar to 1.2 bara
Differential pressure on the gate	1.2 bar in either direction
Differential pressure at opening	1 bar
Cycles until first service	20, 0000
Maximum operating temperatures	
Valve body	120 C
Manual actuator	80 C
Pneumatic actuator	80 C
Position indicator	60 C
Solenoid	50 C
Molecular flow conductance	
NW50	300 ls <sup>-1</sup>
ISO63	400 ls <sup>-1</sup>
ISO80	1100 ls <sup>-1</sup>
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Bonnet	Black anodized aluminum
Gate	AISI 304 stainless steel
Gliders	PEEK
Bellows	AISI 633 stainless steel
Seals	Fluoroelastomer
Gate fixation screw	A2 stainless steel Ni-TEFLON coated
Handle	Reinforced polyamide
Pneumatic valves	
Solenoid rating	
Standard solenoid	24 V - 15% / 10%, AC/DC, 2.4 W
Position indicator contact rating	12 - 30 V AC/DC, max 500 mA, max 10 W
Pneumatic supply	
Min supply pressure	58 psig (4 bar gauge, 5 bar absolute, 5 x 10 <sup>5</sup> Pa)
Max supply pressure	100 psig (7 bar gauge, 8 bar absolute, 8 x 10 <sup>5</sup> Pa)
Pneumatic connection	R1/8 inch (1/8 inch NPT for valves ordered in USA)

## Ordering Information

Product description	Order no.
BGV pneumatic gate valve NW50	B90003105
BGV pneumatic gate valve ISO63	B90003110
BGV pneumatic gate valve ISO80	B90003125
BGV pneumatic gate valve ISO100	B90003130
BGV pneumatic gate valve ISO160	B90003140
Accessories Spares	Order no.
Vacuum seals kit NW50	B90000595
Vacuum seals kit ISO63	B90000600
Vacuum seals kit ISO80	B90000605
Vacuum seals kit ISO100	B90000610
Vacuum seals kit ISO160	B90000620
Bellows feed-through NW50	B90000625
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Bellows feed-through ISO80	B90000635
Bellows feed-through ISO100	B90000640
Bellows feed-through ISO160	B90000650
Spare gate NW50	B90000655
Spare gate ISO63	B90000660
Spare gate ISO80	B90000665
Spare gate ISO100	B90000670
Spare gate ISO160	B90000680
Spare solenoid 24V a.c./d.c.	B90000790
BGV mk2 TIM interface cable	B90003388