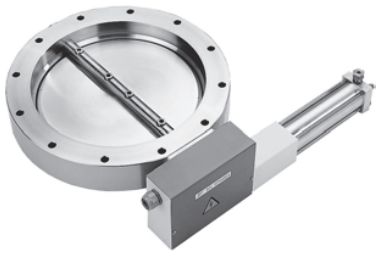
Vacuum Valves



Valves for Vacuum Systems

Complete Range

Whatever the application, Edwards has the right solution to meet your process requirements. Well known for its innovation in pump design, Edwards applies the same energy and commitment to its valves. The result is an extensive range of valves, with a choice of actuation methods, materials and size. Materials of construction have been uncompromisingly selected for performance in high vacuum.

Confidence in Edwards valves begins early in the design process. We use techniques such as Finite Element Analysis to optimise the design of the valve. An arduous testing program in our environmental testing laboratory prior to release to production ensures that every valve we supply will meet the needs of your application. Once in production, all valves are subject to stringent quality control and are individually tested with a helium mass spectrometer leak detector.

Bellows sealed pipeline valves are manufactured with 100% grease free O-rings exposed to vacuum delivering unrivalled low contamination levels.

Selection Guide

When you design a vacuum system, your choice of valves will be determined by the need for certain operating parameters. When you choose a valve for your vacuum system, consider all of the parameters listed in the left hand column of the table as described below.

Actuation The choice is manual, solenoid or pneumatic, which will be determined by your system design and what facilities are available to the machine.

Dirty System Tolerance Vacuum valves have a differing ability to remain leak tight in "dirty" vacuum systems. If your system generates or contains dust or other particulates, choose a valve with a high tolerance.

Size Choose a valve which complements the size of your vacuum pipeline. To maintain high pumping speeds and throughputs, do not reduce the size of your pipeline to accommodate a smaller valve.

Pressure Range Both the maximum and minimum pressure rating are important, particularly if the vacuum system is occasionally pressurized to above atmospheric pressure.

Port Configuration Depending on the location of the valve, you may need either an in-line or a right angle valve.

Life The mean time to failure is important for solenoid and pneumatic valves in rapid cycle duties, or where you have extended maintenance intervals.

Position Indication You may need local or remote indication of valve position as part of your control system.

Closure Speed Use either a solenoid valve or pneumatic valve if you must have rapid valve closure.

Corrosion Resistance Valves are available in stainless steel for those applications that process corrosive gases.

Speedivalve

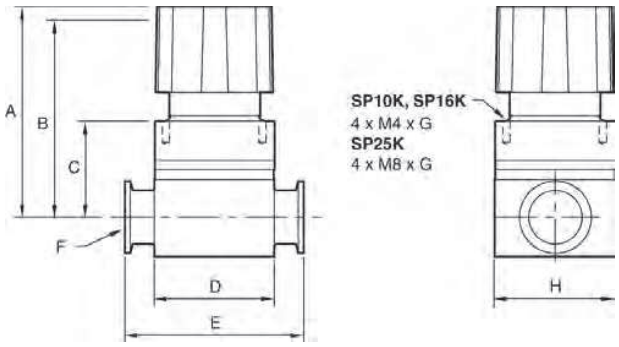
Edwards SP Speedivalves are diaphragm sealed in-line, isolation valves. The construction consists essentially of a flexible elastomer diaphragm which is sealed onto a lightly polished seat by a screw thread mechanism. The mechanism is isolated from the system by the diaphragm resulting in an extremely rugged and 'dirty' system tolerant valve.

The valve terminates in NW flanges and can be pipeline supported or panel mounted. (SP40K is pipeline supported only)

Features & Benefits

- Easy to operate with visual indication of valve open (SP10K to SP25K)
- Leak tight to better than 10^{-6} mbar l s^{-1} / 8 x 10^{-7} Torr l s^{-1}
- Diaphragm completely isolates mechanism from vacuum system
- Extremely rugged and 'dirty' system tolerant
- Will withstand 9 bar overpressure (SP10K to SP40K, with Co-Seal)

Dimensions



Model	A Open	A Closed	B	C	D	E	F	G	H
SP10K	71	64	33.5	42	60	NW10	8	43	
SP16K	71	64	33.5	42	80	NW16	8	43	
SP25K	123	111	51	67	100	NW25	12	72	
SP40K	130	–	–	105	130	NW40	–	96	

Technical Data

Construction materials	
Body	Aluminum alloy to BS1490
Handwheel and bonnet	Glass reinforced plastics
Diaphragms	Nitrile or Fluoroelastomer
Leak rate (1 bar / 14.5 psi differential)	
Valve (overall and across seat)	10^{-6} mbar ls $^{-1}$ /8 x 10^{-7} Torr ls $^{-1}$
Coupling	10^{-7} mbar ls $^{-1}$ /8 x 10^{-8} Torr ls $^{-1}$
Molecular conductance	
SP10K, SP16K	1.7 ls $^{-1}$
SP25K	9.0 ls $^{-1}$
SP40K	23.3 ls $^{-1}$
Pressure rating using Co-Seal	9 bar / 131 psi
Ambient operating range	0 to 40 °C
Ambient storage range	-10 to 40 °C
Panel thickness	3 mm / 0.117 in maximum
Weight	
SP10K	230 g / 8.1 oz
SP16K	240 g / 8.4 oz
SP25K	760 g / 26.6 oz
SP40K	2300 g / 80.5 oz
Baking temperature	60 °C

Ordering Information

Product Description	Order No.
SP10K, Nitrile Diaphragm	C33105000
SP10K, Fluoroelastomer Diaphragm	C33155000
SP16K, Nitrile Diaphragm	C33205000
SP16K, Fluoroelastomer Diaphram	C33255000
SP25K, Nitrile Diaphram	C33305000
SP25K, Fluoroelastomer Diaphram	C33355000
SP40K, Nitrile Diaphragm	C33405000
SP40K, Fluoroelastomer Diaphragm	C33455000
Accessories & Spares	**Order No.**
Fluoroelastomer Diaphragm for SP10/16	C33155800
Fluoroelastomer Diaphragm for SP25	C33355800
Fluoroelastomer Diaphragm for SP40	C33455800
Nitrile Diaphragm for SP10/16	C33105800
Nitrile Diaphragm for SP25	C33305800
Nitrile Diaphragm for SP40	C33405800

IBV series vacuum ball valves

Ball valves are popular in applications where fast action and full bore pumping are needed. The Edwards IBV series valves combine these practical everyday features plus ease of use and economy in a high specification design. Manufactured in 316L stainless steel with PTFE seats they deliver robust performance in a wide variety of vacuum duties.

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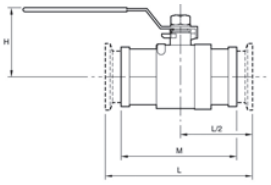
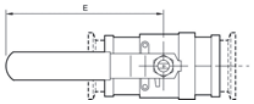
Features & Benefits

- Low capital cost
- Convenient NW16, 25, 40, 50 sizes
- Optional BSP threaded versions
- Easy to use manual operation
- High conductance full bore pumping

Dimensions





MODEL	E	H	L	M	FLANGE
IBV16MKS	120	56	92.5	-	NW10/16
IBV16MS	120	56	-	59.7	½" BSP
IBV25MKS	148	70	118.5	-	NW25
IBV25MS	148	70	-	82.5	1" BSP
IBV40MKS	164	84	166.5	-	NW40
IBV40MS	164	84	-	111	1½" BSP
IBV50MKS	164	94	175.5	-	NW50
IBV50MS	164	94	-	125	2" BSP

Technical Data

Construction materials	
Body	AISI 316L stainless steel
Ball	AISI 316L stainless steel
Cups	PTFE
Leak rate	1 x 10^{-6} mbar l s^{-1} / 8 x 10^{-7} Torr l s^{-1}
Molecular conductance	
IBV16MKS	5.3 l s^{-1}
IBV25MKS	15.9 l s^{-1}
IBV40MKS	46.5 l s^{-1}
IBV50MKS	86.0 l s^{-1}
Pressure rating (bar absolute) using NW Co-Seal	7 bar / 102 psi
Ambient operating temp range	5 to 65 °C
Reliability MTTF	30000 cycles
Weight (g/lbs)	
IBV16MKS (MS)	1200 / 2.6 (750 / 1.7)
IBV25MKS (MS)	1750 / 3.9 (1500 / 3.3)
IBV40MKS (MS)	3100 / 6.8 (2600 / 5.7)
IBV50MKS (MS)	4300 / 9.4 (3600 / 7.9)

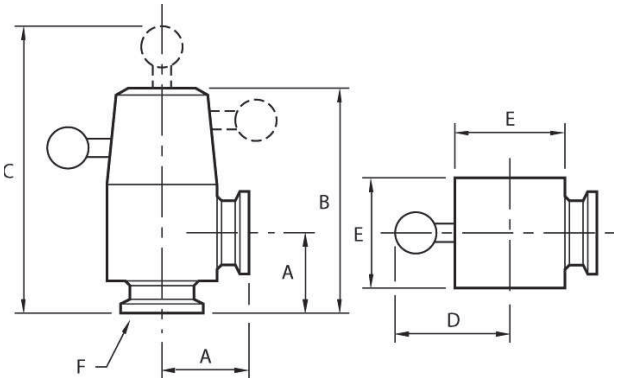
Ordering Information

Product Description	Order No.
IBV16MKS Ball Valve NW16	C36000100
IBV16MS Ball Valve 1/2" BSP	C36000110
IBV25MKS Ball Valve NW25	C36000200
IBV25MS Ball Valve 1" BSP	C36000210
IBV40MKS Ball Valve NW40	C36000300
IBV40MS Ball Valve 1.1/2" BSP	C36000310
IBV50MKS Ball Valve NW50	C36000400
IBV50MS Ball Valve 2" BSP	C36000410

PVMK Manual Operation Right Angle Isolation Valves

The PVMK is a quick acting, bellows sealed, right-angled lever operated valve and is available with either an Aluminium or stainless steel body. The lever, connected to a self-lubricating plastic cam-piston, actuates the valve stem and valve plate through PTFE bearings. The valve plate 'O' ring groove is vented to prevent gas bursts. The valves are designed to operate down to 10^{-9} mbar / 8 x 10^{-10} Torr and up to a pressure of 2100 mbar / 1575 Torr (30 psi).

Dimensions



	A	B	C	D	E	F
PV10MK	30	76.5	105	38	38	NW10
PV16MK	40	85.6	114	38	38	NW16
PV25MK	50	120	149	51	51	NW25
PV40MK	65	169	222	86	77	NW40
PV50MK	70	186	239	86	89	NW50

Ordering Information

Product Description	Order No.
PV16MKA Right Angle, Aluminum, NW16	C31205000
PV16MKS Right Angle, Stainless Steel, NW16	C31215000
PV25MKA Right Angle, Aluminum, NW25	C31305000
PV25MKS Right Angle, Stainless Steel, NW25	C31315000
PV40MKA Right Angle, Aluminum, NW40	C31405000
PV40MKS Right Angle, Stainless Steel, NW40	C31415000
PV50MKS Right Angle, Stainless Steel, NW50	C31515000
PV10MKA Right Angle, Aluminum, NW10	C31105000
Accessories & Spares	**Order No.**
PV10/16MK O-Ring Kit	C41101800
PV25MK O-Ring kit	C41301810
PV40MK O-Ring kit	C41401800
PV50MK O-Ring kit	C41501800
PV10/16MK Major overhaul kit	C31105826
PV25MK Major overhaul kit	C31305826
PV40MK Major Overhaul kit	C31405826
PV50MK Major overhaul kit	C31515826
Valve Body PV10KA	C41101816
Valve body PV16KA	C41201816
Valve Body PV16KS	C41602801
Valve Body PV25KA	C41301816
Valve Body PV25KS	C41622801
Valve Body PV40KS	C41642801
Valve Body PV50KS	C41662801

Technical Data

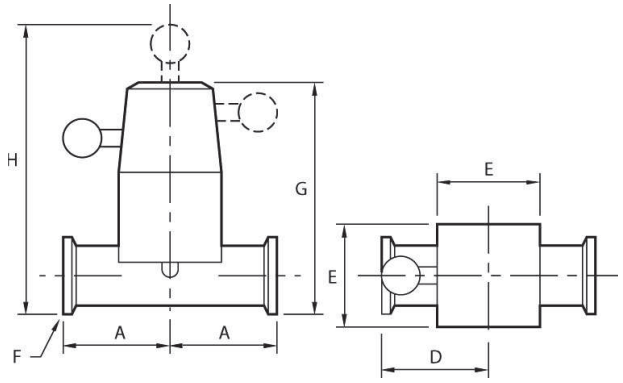
Construction material	
Body	HE30TF grade aluminum
Bellows	AISI 316L stainless steel
'O' ring	Fluoroelastomer
Leak rate	$< 10^{-9}$ mbar l s^{-1} / $< 7.5 \times 10^{-10}$ Torr l s^{-1}
Operating pressure range	10^{-9} - 2100 mbar / 8×10^{-10} - 1575 Torr (30 psi)
Molecular conductance	
PV10MK	3 l s^{-1}
PV16MK	4 l s^{-1}
PV25MK	10 l s^{-1}
PV40MK	38 l s^{-1}
PV50MK	50 l s^{-1}
Maximum baking temperature	100 °C
Reliability (MTTF)	100000 operations

Weight	Aluminium	Stainless Steel
PV10MK	170 g / 6 oz	-
PV16MK	180 g / 6.3 oz	500 g / 17.5 oz
PV25MK	490 g / 17.1 oz	1050 g / 36.8 oz
PV40MK	1400 g / 49 oz	3300 g / 116 oz
PV50MK	-	3800 g / 133 oz

IPVMK Manual Operation In-line Isolation Valves

The IPVMK is a quick acting, bellows sealed, right-angled lever operated valve and is available with either an Aluminium or stainless steel body. The lever, connected to a self-lubricating plastic cam-piston, actuates the valve stem and valve plate through PTFE bearings. The valve plate O-ring groove is vented to prevent gas bursts. The valves are designed to operate down to 10^{-9} mbar / 8 x 10^{-10} Torr and up to a pressure of 2100 mbar / 1575 Torr (30 psi).

Dimensions



	A	B	C	D	E	F	G	H
IPV10MK	30	76.5	105	38	38	NW10	-	-
IPV16MK	40	85.6	114	38	38	NW16	70	99
IPV25MK	50	120	149	51	51	NW25	112	141
IPV40MK	65	169	222	86	77	NW40	155	208
IPV50MK	70	186	239	86	89	NW50	-	-

Ordering Information

Product Description	Order No.
IPV16MKA, Aluminum, NW16	C41218000
IPV16MKS, Stainless Steel, NW16	C41219000
IPV25MKA, Aluminum, NW25	C41321000
IPV25MKS, Stainless Steel, NW25	C41322000
IPV40MKS, Stainless Steel, NW40	C41421000
IPV40MKA, Aluminum, NW40	C41420000
Accessories & Spares	**Order No.**
PV10/16MK O-Ring Kit	C41101800
PV25MK O-Ring kit	C41301810
PV40MK O-Ring kit	C41401800
PV10/16MK Major overhaul kit	C31105826
PV25MK Major overhaul kit	C31305826
PV40MK Major Overhaul kit	C31405826
Valve body IPV16KA	C41201802
Valve Body IPV16KS	C41602811
Valve Body IPV25KA	C41621802
Valve Body IPV25KS	C41622811
Valve Body IPV40KA	C41641802
Valve Body IPV40KS	C41642811

Technical Data

Construction material		
Body	HE30TF grade aluminium or AISI304 grade stainless steel	
Bellows	AISI 316L stainless steel	
O-ring	Fluoroelastomer	
Leak rate	< 10^{-9} mbar l s^{-1} / < 7.5 x 10^{-10} Torr l s^{-1}	
Operating pressure range	10^{-9} - 2100 mbar / 8 x 10^{-10} - 1575 Torr (30 psi)	
Molecular conductance		
IPV16MK	2 l s^{-1}	
IPV25MK	6 l s^{-1}	
IPV40MK	22 l s^{-1}	
Maximum baking temperature	100 °C	
Reliability (MTTF)	100000 operations	
Weight	Aluminium	Stainless Steel
IPV16MK	180g / 6.3oz	500g / 17.5oz
IPV25MK	490g / 17.1oz	1050g / 36.8oz
IPV40MK	1400g / 49oz	3300g / 116oz

PVPK Pneumatic Operation Right Angle Isolation Valve

The range of single acting cylinder, spring return pipeline valves is designed for high speed actuation from standard pneumatic lines, and are offered in sizes NW10, 16, 25, 40 and 50. They are available with aluminium or stainless steel bodies with either O-ring (shaft seal Aluminium only) or bellows seal.

The valves are designed for long life duties, with a MTTF of 5000000 cycles for both bellows and 'O' ring sealed versions providing long intervals between services.

Features & Benefits

- Improved lifetime, mean-time-to-failure now 5000000 cycles
- Electrical and visual indication of valve status
- Fast acting - 20 ms to close (PV16)
- Available in aluminum or stainless steel
- Choice of bellows or 'O' ring shaft sealing with aluminum bodies

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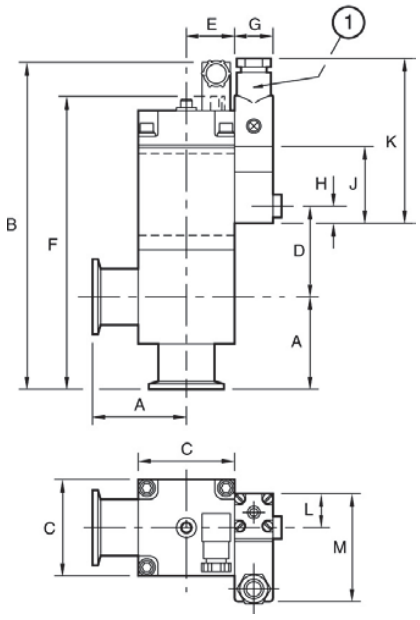
Dimensions



	A	B	C	D	E	F	G	H	J	K	L	M
PV10PK	30	139.5	38	41	25	122	20	10	40	88	19	59
PV16PK	40	149.5	38	41	25	132	20	10	40	88	19	59
PV25PK	50	171.3	50.8	47.6	28	153.7	20	10	40	88	19	59
PV40PK	65	200.6	76.2	57.8	41	183	20	10	40	88	19	59
PV50PK	70	218	92	70	41	200	20	10	40	88	19	59

1 Optional control valve

Technical Data

Valve actuation type	Single acting, pneumatically opened, spring closed
Pressure range	1 x 10^{-9} to 2100 mbar / 8 x 10^{-10} to 1575 Torr
Max pressure differential	
Opening	1000 mbar / 750 Torr
Closing	2100 mbar / 1575 Torr
Leak rate	< 1 x 10^{-9} mbar l s^{-1} / < 8 x 10^{-10} Torr l s^{-1}
Pneumatic connector	Rp 1/8 (1/8 inch BSP) *
Pneumatic operating pressure	2.8 to 4.2 bar / 41 to 61 psi
Electrical indicator	Single microswitch ‡
Microswitch electrical rating	24 V, 1.5 A a.c. or d.c.
Max cycle frequency	900 h^{-1}
Bellows reliability, MTTF	5000000 cycles
Ambient operating temp	5 - 100 °C
Maximum baking temp	100 °C
Construction materials	
PVPKA	HE30TF aluminium
PVPKS	AISI304 stainless steel
Bellows	AISI316L stainless steel
O-ring	Fluoroelastomer
Molecular conductance (l s^{-1})	**Right angled**
PV10PK	3
PV16PK	4
PV25PK	10
PV40PK	40
PV50PK	50

‡ Twin microswitch versions are available on request.

	Time to open (ms)*	Time to close (ms)*
PV10/16PK	60	20
PV25PK	15	41
PV40PK	50	155
PV50PK	50	155
Weight	**Aluminium**	**Stainless Steel**
PV16PK	310g / 10.9oz	520g / 18.2oz
PV25PK	610g / 21.4oz	980g / 34.3oz
PV40PK	1500g / 52.5oz	2300g / 80.5oz
PV50PK	2000g / 70.5oz	4000g / 140oz

* With optional control valve fitted

Ordering Information

Product Description	Order No.
PV10PKAO, O-ring sealed, aluminium	C41113000
PV10PKA, bellows sealed, aluminium	C41111000
PV16PKAO, O-ring sealed, aluminium	C41213000
PV16PKA, bellows sealed, aluminium	C41211000
PV16PKS, bellows sealed, stainless steel	C41215000
PV25PKAO, O-ring sealed, aluminium	C41313000
PV25PKA, bellows sealed, aluminium	C41311000
PV25PKS, bellows sealed, stainless steel	C41315000
PV40PKAO, O-ring sealed, aluminium	C41413000
PV40PKA, bellows sealed, aluminium	C41411000
PV40PKS, bellows sealed, stainless steel	C41415000
PV50PKA, bellows sealed, aluminium	C41510000
PV50PKS, bellows sealed, stainless steel	C41515000
Accessories & Spares	**Order No.**
Spares Kit Valve Seals PVPK10/16	C41111800
Spares Kit Valve Seals PV25PK	C41311800
Spares Kit Valve Seals PV40PK	C41411800
PV50MK O-Ring kit	C41501800
Top Cap Assembly PV10/16P	C41111821
Top Cap Assy PV25P	C41311821
Top Cap Assembly PV40P	C41411821
PV10PO Ring Actuator Assembly	C41113035
Bellows Actuator Assy PV10P	C41111035
PV25PO Ring Actuator Assembly	C41313035
Bellows Actuator Assy PV25P	C41311035
O Ring Actuator Assy PV40P	C41413035
Bellows Actuator Assy PV240P	C41411035
Bellows Actuator Assy PV50P	C41515035
Valve Body PV10KA	C41101816
Valve body PV16KA	C41201816
Valve Body PV16KS	C41602801
Valve Body PV25KA	C41301816
Valve Body PV25KS	C41622801
Valve Body PV40KA	C41401816
Valve Body PV40KS	C41642801
Valve body PV50KA	C41662816
Valve Body PV50KS	C41662801
3 Port Electropneumatic Control Valve 24V d.c.	H06200124
3 Port Electropneumatic Control Valve 24V a.c.	H06200125
3 Port Electropneumatic Control Valve 110V a.c.	H06200126
3 Port Electropneumatic Control Valve 230V a.c.	H06200138

IPVPK Pneumatic Operation In-Line Isolation valves

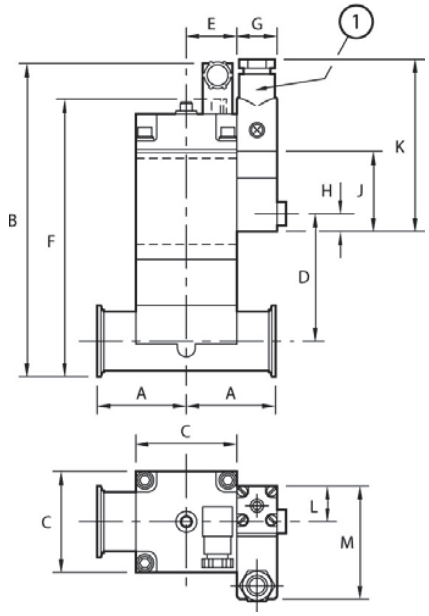
The Edwards range of in-line single acting cylinder, spring return pipeline valves are designed for high speed actuation from standard pneumatic lines, and are offered in sizes NW16, 25, 40 and 50. They are available with aluminium or stainless steel bodies with either O-ring (shaft seal, aluminium only) or bellows sealed.

The valves are designed for long life duties, with a MTTF of 5000000 cycles for both bellows and 'O' ring sealed versions providing long intervals between services.

Features & Benefits

- Improved lifetime, mean-time-to-failure now 5000000 cycles
- Electrical and visual indication of valve status
- Fast acting - 20 ms to close (PV16)
- Available in aluminum or stainless steel
- Choice of bellows or 'O' ring shaft sealing with aluminum bodies

Dimensions



	A	B	C	D	E	F	G	H	J	K	L	M
PV16PK	40	132.9	38	49.4	22.9	115.4	20	10	40	88	19	59
PV25PK	50	161.9	50.8	68.2	25.8	144.3	20	10	40	88	19	59
PV40PK	65	192.2	76.2	86.9	38.2	174.6	20	10	40	88	19	59
PV50PK	70	216.9	92	101.6	38.8	199.3	20	10	40	88	19	59

1 Optional control valve

Technical Data

Valve actuation type	Single acting, pneumatically opened, spring closed
Pressure range	1 x 10^{-9} to 2100 mbar / 8 x 10^{-10} to 1575 Torr
Maximum pressure differential	
Opening	1000 mbar / 750 Torr
Closing	2100 mbar / 1575 Torr
Leak rate	< 1 x 10^{-9} mbar l s^{-1} / < 8 x 10^{-10} Torr l s^{-1}
Pneumatic connector	Rp 1/8 (1/8 inch BSP) *
Recommended pneumatic operating pressure	2.8 to 4.2 bar / 41 to 61 psi
Electrical indicator	Single microswitch ‡
Microswitch electrical rating	24 V, 1.5 A a.c. or d.c.
Max cycle frequency	900 h^{-1}
Bellows reliability, MTTF	5000000 cycles
Ambient operating temperature	5 - 100 °C
Maximum baking temperature	100 °C
Construction materials	
IPVPKA	HE30TF aluminum
IPVPKS	AISI304 stainless steel
Bellows	AISI316L stainless steel
O-ring	Fluoroelastomer

‡ Twin microswitch versions are available on request.

	IPV16PK	IPV25PK	IPV40PK	IPV50PK
Molecular conductance (ls^{-1})	2	6	18	30
Time to open (ms)*	60	15	50	50
Time to close (ms)*	20	41	155	155
Weight				
Aluminium	310 / 10.9	610 / 21.4	1500 / 52.5	-
Stainless Steel	520 / 18.2	980 / 34.3	2300 / 80.5	4000 / 140

· With optional control valve fitted

Ordering Information

Product Description	Order No.
IPV16PKAO, O-ring sealed, aluminium	C41603000
IPV16PKA, bellows sealed, aluminium	C41601000
IPV16PKS, bellows sealed, stainless steel	C41602000
IPV25PKAO, O-ring sealed, aluminium	C41623000
IPV25PKA, bellows sealed, aluminium	C41621000
IPV25PKS, bellows sealed, stainless steel	C41622000
IPV40PKAO, O-ring sealed, aluminium	C41643000
IPV40PKA, bellows sealed, aluminium	C41641000
IPV40PKS, bellows sealed, stainless steel	C41642000
IPV50PKS, bellows sealed, stainless steel	C41662000
Accessories & Spares	**Order No.**
Spares Kit Valve Seals PVPK10/16	C41111800
Spares Kit Valve Seals PV25PK	C41311800
Spares Kit Valve Seals PV40PK	C41411800
PV50MK O-Ring kit	C41501800
Top Cap Assembly PV10/16P	C41111821
Top Cap Assy PV25P	C41311821
Top Cap Assembly PV40P	C41411821
PV10PO Ring Actuator Assembly	C41113035
Bellows Actuator Assy PV10P	C41111035
PV25PO Ring Actuator Assembly	C41313035
Bellows Actuator Assy PV25P	C41311035
O Ring Actuator Assy PV40P	C41413035
Bellows Actuator Assy PV240P	C41411035
Bellows Actuator Assy PV50P	C41515035
Valve body IPV16PKA	C41601802
Valve Body IPV16KS	C41602811
Valve Body IPV25KA	C41621802
Valve Body IPV25KS	C41622811
Valve Body IPV40KA	C41641802
Valve Body IPV40KS	C41642811
Valve body IPV50KS	C41662811
3 Port Electropneumatic Control Valve 24V d.c.	H06200124
3 Port Electropneumatic Control Valve 24V a.c.	H06200125
3 Port Electropneumatic Control Valve 110V a.c.	H06200126
3 Port Electropneumatic Control Valve 230V a.c.	H06200138

PVEK Solenoid Operation Right Angle Isolation valves

The Edwards PVEK series valves are compact, light-weight electromagnetic vacuum valves suitable for use in vacuum pipeline systems down to 1 x 10^{-9} mbar. A double wound coil combined with an electronic switching circuit ensures low energy consumption, low operating temperatures and extended operating life.

Bellows sealed, the PVEK solenoid operated right angle valves are available with either aluminum (A) or stainless steel (S) bodies, with an overall MTTF of up to 500,000 cycles.

Features & Benefits

- Transient high power for opening - electronically switched
- Low energy consumption in the 'hold open' position
- Enclosure rating to IP55
- Grease free vacuum
- MTTF up to 500000 cycles

5

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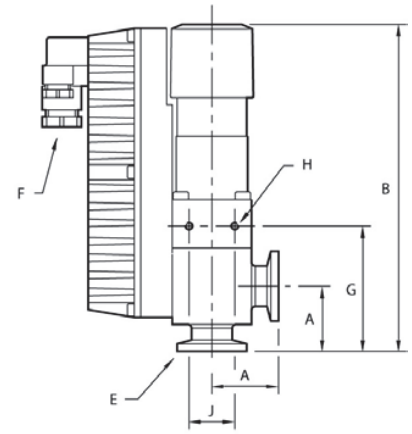
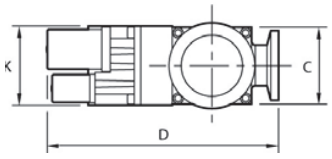
Dimensions





F Connectors for electrical supply and reed switch cables.

(mm)	A	B	C	D	E	G	H	J	K
PV10EK	30	150	38	116	NW10	59	M4 x 7	20	41
PV16EK	40	160	38	126	NW16	69	M4 x 7	20	41
PV25EK	50	182	51	142	NW25	82	M4 x 7	20	41
PV40EK	65	230	76	170	NW40	110	M6 x 9	40	41

(inches)	A	B	C	D	E	G	H	J	K
PV10EK	1.17	5.85	1.48	4.52	NW10	2.3	M4 x 7	0.78	1.6
PV16EK	1.56	6.24	1.48	4.91	NW16	2.69	M4 x 7	0.78	1.6
PV25EK	1.95	7.1	1.99	5.54	NW25	3.2	M4 x 7	0.78	1.6
PV40EK	2.54	8.97	2.96	6.63	NW40	4.29	M6 x 9	1.56	1.6

Technical Data

Valve actuation type	Single acting, electrically opened, spring closed
Pressure range valve open	1×10^{-9} to 2000 mbar / 7.5×10^{-10} to 1500 Torr (30 psi)
Maximum press differential opening/closing	1000 mbar / 750 Torr
Leak rate	$< 1 \times 10^{-9}$ mbar l s^{-1} / $< 7.5 \times 10^{-10}$ Torr l s^{-1}
Reed switch (peak ratings)	
Maximum voltage	24 V a.c. or d.c.
Maximum current	0.25 A
Maximum power	3 VA
Maximum cycle frequency	400 h^{-1}
Ambient operating temperature	
PV10/16	5 °C to 45 °C
PV25/40	5 °C to 50 °C
Valve temperature above ambient	
Rapid cycling	
PV10/16	<25 °C
PV25/40	<20 °C
Valve open	<10 °C
Bellows reliability MTTF	
PV10/16	500000 cycles
PV25/40	130000 cycles
Construction materials	
PVEKA	HE30TF aluminum
PVEKS	AISI304 stainless steel
Bellows	AISI316L stainless steel
O-ring	Fluoroelastomer

Ordering Information

Product Description	Order No.
PV10EKA, 110-127V 1-ph 50/60Hz, aluminium	C41103000
PV10EKA, 220-240V 1-ph 50/60Hz, aluminium	C41101000
PV16EKA, 110-127V 1-ph 50/60Hz, aluminium	C41203000
PV16EKA, 220-240V 1-ph 50/60Hz, aluminium	C41201000
PV16EKS, 110-127V 1-ph 50/60Hz, stainless steel	C41204000
PV16EKS, 220-240V 1-ph 50/60Hz, stainless steel	C41202000
PV25EKA, 110-127V 1-ph 50/60Hz, aluminium	C41303000
PV25EKA, 220-240V 1-ph 50/60Hz, aluminium	C41301000
PV25EKS, 110-127V 1-ph 50/60Hz, stainless steel	C41304000
PV25EKS, 220-240V 1-ph 50/60Hz, stainless steel	C41302000
PV40EKA, 110-127V 1-ph 50/60Hz, aluminium	C41403000
PV40EKA, 220-240V 1-ph 50/60Hz, aluminium	C41401000
PV40EKS, 110-127V 1-ph 50/60Hz, stainless steel	C41404000
PV40EKS, 220-240V 1-ph 50/60Hz, stainless steel	C41402000

Accessories & Spares	Order No.
PV10/16MK O-Ring Kit	C41101800
Spares Kit Pad & Body O-ring PV25EK	C41301800
PV40MK O-Ring kit	C41401800
Moving Pole Assy PV10E	C41101007
Moving Pole Assy PV25EK	C41301007
Moving Pole Assy PV40E	C41401007
Spare PCA 110V for PVEK valve	C41101805
Spare PCA 240V for PVEK	C41101806
Spare PCA 110V, for PVEK	C41301805
Spare PCA 230V for PVEK	C41301806
Spare PCA 110 V for PVEK	C41401805
Spare PCA 240 V for PVEK	C41401806
Valve Body PV10KA	C41101816
Valve body PV16KA	C41201816
Valve Body PV16KS	C41602801
Valve Body PV25KA	C41301816
Valve Body PV25KS	C41622801
Valve Body PV40KA	C41401816
Valve Body PV40KS	C41642801

IPVEK Solenoid Operation In-Line Isolation valves

The Edwards IPVEK series valves are compact, light-weight electromagnetic vacuum valves suitable for use in vacuum pipeline systems down to 1 x 10^{-9} mbar. A double wound coil combined with an electronic switching circuit ensures low energy consumption, low operating temperatures and extended operating life.

Bellows sealed, the IPVEK solenoid operated in-line valves are available with either aluminum (A) or stainless steel (S) bodies, with an overall MTTF of up to 500,000 cycles.

Features & Benefits

- Transient high power for opening - electronically switched
- Low energy consumption in the 'hold open' position
- Enclosure rating to IP55
- Grease free vacuum
- MTTF up to 500000 cycles

5

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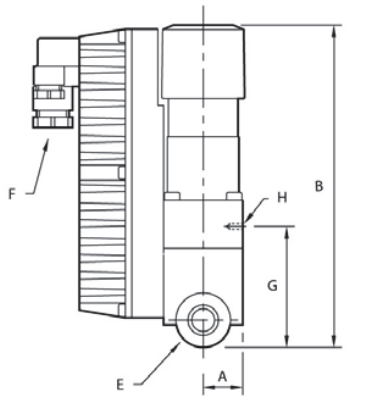
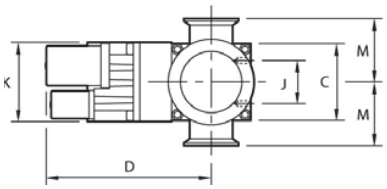
Dimensions





F Connectors for electrical supply and reed switch cables.

(mm)	A	B	C	D	E	G	H	J	K	M
IPV16EK	19	142.9	38	85	NW16	37.4	M4 x 7	20	41	40
IPV25EK	25.4	172	51	93	NW25	72.5	M4 x 7	20	41	50
IPV40EK	38.1	222	76	111	NW40	101.5	M6 x 9	40	41	65

(inches)	A	B	C	D	E	G	H	J	K	M
IPV16EK	0.7	5.57	1.48	3.32	NW16	1.46	M4 x 7	0.78	1.6	1.56
IPV25EK	1.0	6.7	1.99	3.63	NW25	2.83	M4 x 7	0.78	1.6	1.95
IPV40EK	1.5	8.69	2.96	4.33	NW40	3.96	M6 x 9	0.78	1.6	2.54

Technical Data

Valve actuation type	Single acting, electrically opened, spring closed
Pressure range valve open	1×10^{-9} to 2000 mbar / 7.5×10^{-10} to 1500 Torr (30 psi)
Maximum press differential	
Opening/closing	1000 mbar / 750 Torr
Leak rate	< 1×10^{-9} mbar l s- 1 / < 7.5×10^{-10} Torr l s^{-1}
Reed switch (peak ratings)	
Maximum voltage	24 V a.c. or d.c.
Maximum current	0.25 A
Maximum power	3 VA
Maximum cycle frequency	400 h^{-1}
Ambient operating temperature	5 °C to 45 °C
Valve temperature above ambient	
Rapid cycling	<25 °C
Valve open	<10 °C
Bellows reliability MTTF	500000 cycles
Construction materials	
IPVEKA	HE30TF aluminum
Bellows	AISI316L stainless steel
O-ring	Fluoroelastomer
Molecular conductance (l s^{-1})	2
Time to open (ms)	40
Time to close (ms)	100
Operating power (VA)	
220 V a.c. at 25 °C pulse	417
220 V a.c. at 25 °C hold	4.7
Maximum continuous power 220 V a.c. rms (W)	4.5
Weight (g/oz)	800/28

Ordering Information

Product Description	Order No.
IPV16EKA, 220-240V, 1-ph 50/60Hz, aluminium	C41610000
IPV16EKA, 110-127V 1-ph 50/60Hz, aluminium	C41611000
IPV16EKS, 110-127V 1-ph 50/60Hz, stainless steel	C41613000
IPV25EKA, 220-240V 1-ph 50/60Hz, aluminium	C41630000
IPV25EKA, 110-127V 1-ph 50/60Hz, aluminium	C41631000
IPV25EKS, 220-240V 1-ph 50/60Hz, stainless steel	C41632000
IPV25EKS, 110-127V 1-ph 50/60Hz, stainless steel	C41633000
IPV40EKA, 220-240V 1-ph 50/60Hz, aluminium	C41651000
IPV40EKA, 110-127V 1-ph 50/60Hz, aluminium	C41652000
IPV40EKS, 220-240V 1-ph 50/60Hz, stainless steel	C41653000
IPV40EKS, 110-127V 1-ph 50/60Hz, stainless steel	C41654000
Accessories & Spares	**Order No.**
IEC plug to mating socket for PVEK valves	C41101090
Moving Pole Assy PV10E	C41101007
Moving Pole Assy PV25EK	C41301007
Moving Pole Assy PV40E	C41401007
PV10/16MK O-Ring Kit	C41101800
PV40MK O-Ring kit	C41401800
Spare PCA 110 V for PVEK	C41401805
Spare PCA 110V for PVEK valve	C41101805
Spare PCA 110V, for PVEK	C41301805
Spare PCA 230V for PVEK	C41301806
Spare PCA 240 V for PVEK	C41401806
Spare PCA 240V for PVEK	C41101806
Spares Kit Pad & Body O-ring PV25EK	C41301800
Valve Body IPV16KS	C41602811
Valve body IPV16PKA	C41601802
Valve Body IPV25KA	C41621802
Valve Body IPV25KS	C41622811
Valve Body IPV40KA	C41641802
Valve Body IPV40KS	C41642811
Valve body PV16KA	C41201816

LCPVEK Solenoid Operation Isolation valves

Edwards' aluminum right angle LCPVEK valves are designed for vacuum applications which need a compact, simple, solenoid operation valve to control gas flow. These economical valves are ideal for a number of duties ranging from simple laboratory pump isolation to OEM vacuum system integration and design. Their versatility makes them effective both in vacuum pipelines and in chamber admittance applications.

Careful design of the solenoid power control and vacuum isolation components delivers efficient magnetic actuation with optimum vacuum performance at an affordable price. This facilitates the use of an electrically actuated valve in many applications where previously this had been uneconomic.

Features & Benefits

- Economical design can be used in low budget applications
- Electrical actuation
- Low power requirements
- Electronic boost power supply
- Efficient magnetic design

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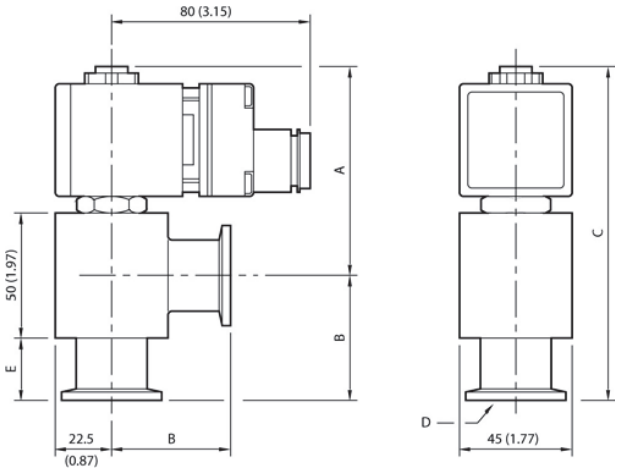
Dimensions



(mm)	A	B	C	D	E
LCPV16EK	95	40	135	NW16	17.5
LCPV25EK	92.5	50	142.5	NE25	25

(inches)	A	B	C	D	E
LCPV16EK	3.33	1.56	4.89	NW16	0.69
LCPV25EK	3.24	1.95	5.19	NW25	0.98

Technical Data

Valve actuation type	Single acting, electrically opened, spring return
Molecular conductance	3 l s^{-1}
Pressure range	1 x 10^{-6} - 1000 mbar / 7.5 x 10^{-7} - 750 Torr
Max pressure differential (open/close)	1000 mbar / 750 Torr
Time to open	60 ms
Time to close	<20 ms
Max cycle frequency	1800 h^{-1}
Leak rate	< 1 x 10^{-6} mbar l s^{-1} / < 7.5 x 10^{-7} Torr l s^{-1}
Power consumption	
Open	95 W for 60 ms
Hold	2.5 to 4 W
Reliability (MTTF)	500000 cycles
Operating temperature range	5 to 45 ºC
Weight	
LCPV16EK	810g / 28oz
LCPV25EK	840g / 29oz
Enclosure rating	IP67
Voltage	
230V	±10%
110V	-10% +15%
24V a.c/d.c.	-10% +15%
Construction materials	
Body	Aluminium, stainless steel
Seals	Fluoroelastomer

Ordering Information

Product Description	Order No.
LCPV16EKA, 24V ac,dc, aluminium	C41751200
LCPV16EKA, 110V, 50/60Hz, aluminium	C41751100
LCPV16EKA, 230V 50/60Hz aluminium	C41751000
LCPV25EKA, 24V ac,dc, aluminium	C41752200
LCPV25EKA, 110V 50/60Hz, aluminium	C41752100
LCPV25EKA, 230V, 50/60Hz, aluminium	C41752000

BRV Backing/Roughing Valve

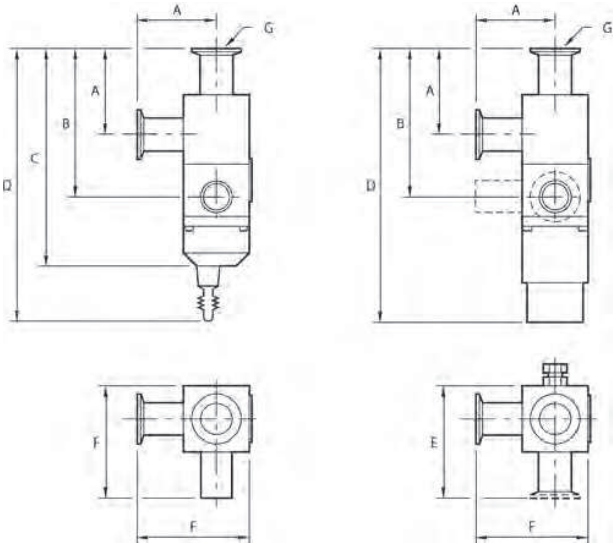
Edwards backing/roughing valves with ISO NW roughing and forepump terminations feature manual or pneumatic actuation. They combine the function of separate backing/roughing valves in one integral 3 port unit.

A flexible neoprene connector is supplied for the backing connection. The roughing and forepump ports terminate in the appropriate NW termination.

Features & Benefits

- Easy to operate - both ports closed position
- Long life - 100,000 operations or more
- Position indicator on pneumatic valve
- Leak tight to better than 10^{-9} mbar $l s^{-1}$ /8 x 10^{-10} Torr $l s^{-1}$

Dimensions



(mm)	A	B	C	D	E	F	G
BRV10K	30	90	134	169	52.5	49	NW10
BRV10PK	30	90	-	198	52.5	49	NW10
BRV25K	50	98	155	195	82	75	NW25
BRV25PK	50	98	-	203	82	75	NW25

(inches)	A	B	C	D	E	F	G
BRV10K	1.17	3.51	5.23	6.59	2.05	1.91	NW10
BRV10PK	1.17	3.51	-	7.72	2.05	1.91	NW10
BRV25K	1.95	3.82	6.05	7.61	3.2	2.93	NW25
BRV25PK	1.95	3.82	-	7.92	3.2	2.93	NW25

Applications

The valves have been designed particularly for the Diffstak® pumping systems, but have applications where a compact change-over valve is required in the pressure range 10^{-7} - 2000 mbar / 8 x 10^{-8} - 1500 Torr.

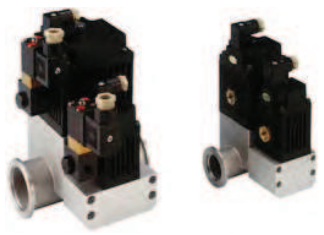
Ordering Information

Product Description	Order No.
BRV10K, Manual Operation	C32103000
BRV10PK Backing/Roughing Valve Pneumatic Operation	C32104000
BRV25K Backing/Roughing Valve, Manual Operation	C32303000
BRV25PK Backing/Roughing Valve, Pneumatic Operation	C32304000
BRV25PK Backing/Roughing Valve, Pneumatic Operation, In-line Flanges	C32304900
BRV25PK Backing/Roughing Valve, Pneumatic Operation, All NW25 Flanges	C32303500
Accessories & Spares	**Order No.**
NW10 Flexible Sleeve For 15mm OD Tube	C26501002
NW25 Flexible Sleeve For 28mm OD Tube	C26501004
O Ring Viton 1119 Pk 2	H02106119
O Ring Viton 0215 Pk 5	H02106025
O Ring Viton 024 Pk 5	H02106261
O Ring Viton Vit 031 Pk 2	H02106262
5 Port Lightweight Electropneumatic Control Valve 24V a.c.	B28703030
5 Port Lightweight Electropneumatic Control Valve 24V d.c.	B28703055
5 Port Lightweight Electropneumatic Control Valve 110V a.c.	B28703031
5 Port Lightweight Electropneumatic Control Valve 230V a.c.	B28703032

Technical Data

Construction materials	
Body and pneumatic cylinder	HE 30TF aluminum
Lever and bonnet (manual)	Glass reinforced plastic
Operating shaft/valve seat	Stainless steel
Body seals, port seals, shaft seal 'O' ring	Fluoroelastomer
Leak rate	
Overall	< 10^{-9} mbar l $^{s-1}$ / < 8 x 10-10 Torr l s^{-1}
Across ports	< 10^{-9} mbar l s-1 / < 8 x 10-10 Torr l s^{-1}
NW coupling	< 10^{-9} mbar l s-1 / < 8 x 10-10 Torr l s^{-1}
Operating pressure range	10^{-7} - 2100 mbar / 8 x 10^{-8} - 1575 Torr
Max baking temperature	
Pneumatic	70 °C
Manual	90 °C
Reliability (MTTF)	100000 cycles
Recommended air pressure	2.8 - 4.2 bar / 40.6 - 61 psi
Maximum air pressure	7.0 bar / 102 psi
Minimum air pressure	2.4 bar / 35 psi
Air connections	1/8 in BSP, for 6 mm Ø plastic or copper tube
Microswitch rating	24 V 1.5 A a.c. or d.c.
Weight	
BRV10K	350g / 12oz
BRV10PK	380g / 13oz
BRV25K	860g / 30oz
BRV25PK	900g / 31.7oz

SIPVP Soft-Start Isolation Valves



Soft-start, pneumatically operated, in-line valves with interchangeable orifices for the controlled pumpdown of processes where turbulent flow can cause problems with particulate contamination.Slave and master valve combination allows slow initial pumping to minimise disturbance. Both slave and master vlaves require separate pneumatic connections.

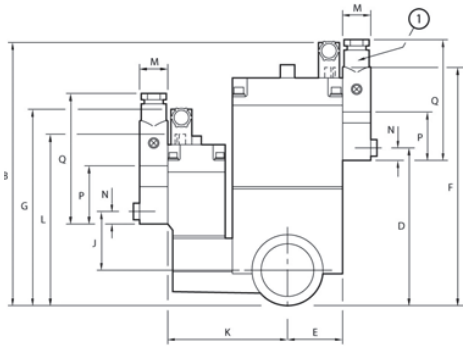
Features & Benefits

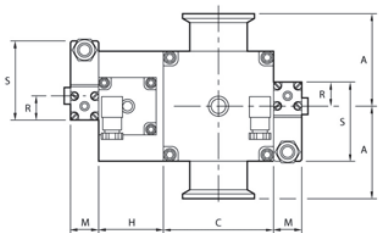
- MTTF of 5000000 cycles
- Controlled pump down to match process
- Aluminum bodies
- Fast acting valves in the event of power failure
- Supplied with 5 mm, 6 mm and 7 mm interchangeable orifices

Applications

When the slave valve is opened gas flows flows at a low rate between the two sides of the valve through interchangeable orifices allowing slow pumping. Having reached a predetermined pressure level specified by the user, the master valve is opened by means of a user supplied signal allowing full bore pumping.
The bellows sealed valves are single acting with pneumatic opening and spring closure. They are supplied with three interchangeable orifices to enable pumping characteristics to be matched to your process. A microswitch is supplied as standard to indicate valve status. Both the valve and the microswitch can be baked to 100°C to speed up degassing, and to prevent process gases from condensing inside the valve.
While designed primarily for the semiconductor industry the valve can also be used in other applications requiring controlled pump-down.

Dimensions



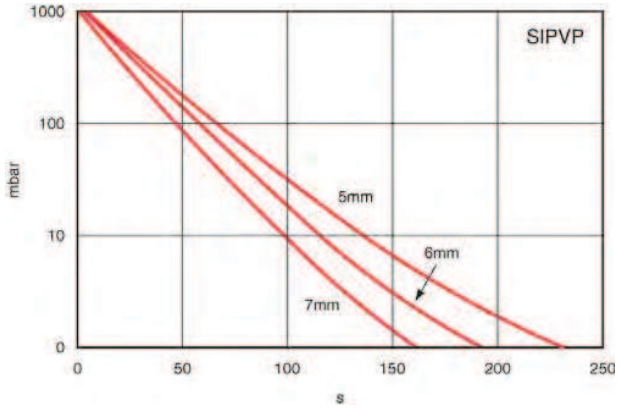


(mm)	A	B	C	D	E	F
SIPV25P	50	161.9	50.8	68.2	25.8	144.3
SIPV40P	65	192.2	76.2	68.2	38.2	174.6

(inches)	A	B	C	D	E	F
SIPV25P	1.95	6.31	1.98	2.66	1	5.63
SIPV40P	2.54	7.49	2.97	2.66	1.49	6.81

(mm) G=145, H=43.5, J=49, K=86, L=127, M=20, N=10, P=40, Q=88, R=19, S=59
(inches) G=5.66, H=1.69, J=1.91, K=3.35, L=4.95, M=0.78, N=0.39, P=1.56, Q=3.43, R=0.74, S=2.3

Performance Curves



Typical pump-down curve of initial pumping phase with 80 m3h-1 pump on a 66l chamber

Technical Data

Valve actuation type	Single acting, pneumatically opened, spring closed
Pressure range	1 x 10^{-9} to 2100 mbar / 8 x 10^{-10} to 1575 Torr
Maximum pressure differential	
Opening	1000 mbar / 750 Torr
Closing	2100 mbar / 1575 Torr
Leak rate	10^{-9} mbar l s^{-1} / 10^{-10} Torr l s^{-1}
Pneumatic connector	Rp 1/8 (1/8 inch BSP)*
Pneumatic operating pressure	2.8 to 4.2 bar / 41 to 61 psi
Electrical indicator	Single microswitch
Microswitch electrical rating	24 V, 1.5 A a.c. or d.c.
Max cycle frequency	900 h^{-1}
Bellows reliability, MTTF	5000000 cycles
Ambient operating temperature	5 - 100 °C
Maximum baking temperature	100 °C
Construction materials	HE30TF aluminum
O-ring	Fluoroelastomer
Time to open/close at 4 bar (ms)	SIPV25P (SIPV40P)
Slave valve	60/20 (60/20)
Master valve	15/41 (50/155)
Weight (g / oz)	
SIPV25P	920 / 32
SIPV40P	1760 / 62

* With optional control valve fitted

Ordering Information

Product Description	Order No.
SIPV25P, pneumatic, bellows sealed, aluminium body	C41624000
SIPV40P, pneumatic, bellows sealed, aluminium body	C41644000
Accessories & Spares	**Order No.**
3 Port Electropneumatic Control Valve 110V a.c.	H06200126
3 Port Electropneumatic Control Valve 230V a.c.	H06200138
3 Port Electropneumatic Control Valve 24V a.c.	H06200125
3 Port Electropneumatic Control Valve 24V d.c.	H06200124

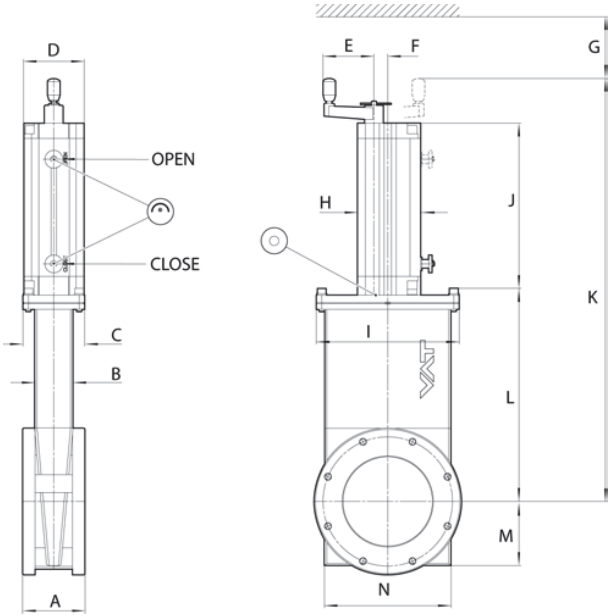
BGV Manual Gate Valves

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 x 10^{-9} mbar to 1.2 bar absolute (1 x 10^{-7} to 1.2 x 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 x 10^{-9} mbar ls^{-1}
Valve seat	< 1 x 10^{-7} mbar ls^{-1}
Pressure range	1 x 10^{-9} mbar to 1.2 bar (abs)
Differential pressure on the gate	=1.2 bar in either direction
Differential pressure at opening	= 1.0 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^{-1}
ISO63	400 ls^{-1}
ISO80	1100 ls^{-1}
ISO100	1700 ls^{-1}
ISO160	4600 ls^{-1}
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 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
Manual Valves	
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

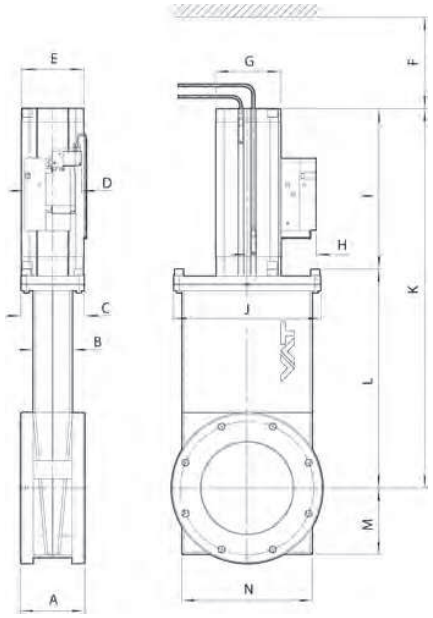
BGV Pneumatic Gate Valves

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 x 10^{-9} mbar to 1.2 bar absolute (1 x 10^{-7} to 1.2 x 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	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	13/0.51	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 x 10^{-9} mbar $l s^{-1}$
Valve seat	< 1 x 10^{-7} mbar $l s^{-1}$
Pressure range	1 x 10^{-9} mbar to 1.2 bar (abs)
Differential pressure on the gate	=1.2 bar in either direction
Differential pressure at opening	= 1.0 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 $l s^{-1}$
ISO63	400 $l s^{-1}$
ISO80	1100 $l s^{-1}$
ISO100	1700 $l s^{-1}$
ISO160	4600 $l s^{-1}$
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 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^{5} Pa)
Max supply pressure	100 psig (7 bar gauge, 8 bar absolute, 8 x 10^{5} 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
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
BGV mk2 TIM interface cable	B90003388

GV Manual and Pneumatic Gate Valves

The Edwards GV range of stainless steel, bellows sealed gate valves is designed for applications requiring overall leak tightness and a minimum of hydrocarbon in the residual atmosphere.

These superior quality valves offer high vacuum integrity coupled with maximum conductance. The valves are available with flange options of ISO, ANSI or CF (metal sealed) for applications at ultra high vacuum requiring increased bakeout temperatures.

The stainless steel valve bodies are vacuum brazed, a special process which includes a bakeout at 1100 °C. This eliminates any possibility of virtual leaks and ensures a product with low outgassing characteristics.

A laser welded stainless steel bellows effectively seals the actuator from the valve. The concept provides ease of servicing and allows the gate and linkage mechanism to be removed while the valve remains in situ.

Features & Benefits

- In situ removal of gate and linkage mechanism for easy servicing
- Virtual leaks eliminated due to vacuum brazed manufacture
- Electropolished finish inside and outside
- Compact design with high conductance
- Manual or pneumatic options
- Microswitch position indicator as standard on pneumatic version
- Long periods of use between maintenance
- Low vibration and shock
- Free choice of orientation
- Wide range from 40 mm / 1.56 inch bore up to 320 mm / 12.48 inch bore
- Flange options – ISO, ASA or CF (metal sealed)
- High reliability – 1000000 cycle option
- Optional 3 position operation
- Vacuum brazed to 1100 °C to eliminate virtual leaks

Technical Data

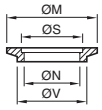
Pressure range	10^{-9} mbar to 1 bar (absolute) / 8 x 10^{-10} – 750 Torr
Leak rate	< 10^{-9} mbar l s^{-1} / 8 x 10^{-10} Torr l s^{-1}
Maximum differential pressure on the valve plate	1 bar / 750 Torr in either direction
Maximum differential pressure on the valve plate at opening	20 mbar / 15 Torr
Position indicator switch, breaking capacity	24 V d.c., 5 A
Material of construction	
Body, valve plate	AISI 304 stainless steel
Mechanism	AISI 304 stainless steel
Bearings	Hardened high carbon chrome steel
Circlips	SS PH 15-7 Mo
Bellows	AM 350 stainless steel
Seals, valve plate	Fluoroelastomer
Bonnet	
Metal sealed valves	OFHC
Other valves	Fluoroelastomer
Bakeout temperature	
Valve body, valve open	150 °C (fluoroelastomer bonnet seal)
Valve body, valve open	250 °C (metal bonnet seal)
Valve closed	200 °C
Actuator, manual	200 °C
Actuator, pneumatic	100 °C
Average life until first service*	100000 closures
Mounting position	Any orientation
Pneumatic operating pressure	4 – 5.5 bar / 60 – 80 psi

* Dependent on the vacuum environment and the opening and closing speed

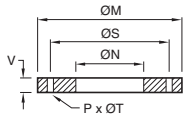
Flange Bore		Conductance in High Vacuum l s^{-1}	Pneumatic Valve Minimum Closing & Opening Time at 5 bar, Seconds	Approx Weight, kg
mm	in			
40	1.5	130	0.5	5
50	2	250	0.5	6
63	2.5	520	1	8
100	4	2000	1.5	15
160	6	6300	1.5	23
200	8	15000	2 (close) 3 (open)	34
250	10	23000	3 (close) 4 (open)	73
320	12	39000	3 (close) 4 (open)	77

* *Special versions available, including 1 million cycle types, 3 position types, larger valves, and pneumatic versions with reed switch position indicators.*

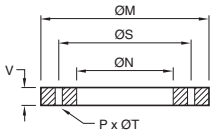
NW



ISO



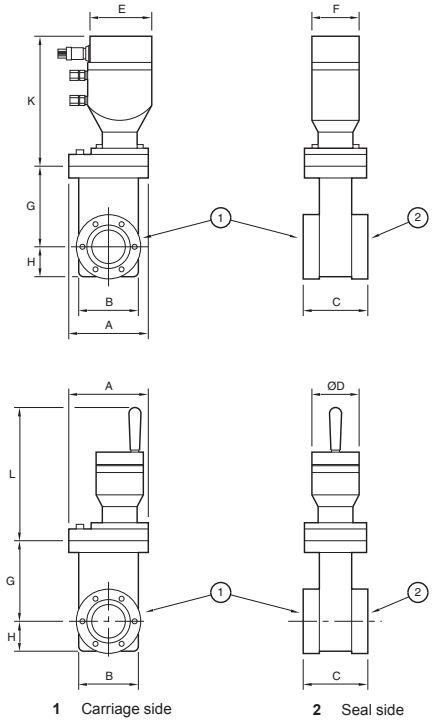
CF



Model No.	Body Dimensions (mm) A	B	C	Ø D	E	F	G	H	K	L	Flange Dimensions (mm) Ø M	Ø N	P	Ø S	Ø T*	V
GVI 040	84.1	26.2	50.5	50.8	69.3	50.7	86.1	33.0	134.9	91.7	55.0	38.1	–	41.2	–	12.7
GVI 050	96.8	75.2	50.5	50.8	69.3	50.7	104.5	37.6	134.9	91.7	75.0	50.8	–	52.2	–	12.7
GVI 063	111.0	89.4	51.6	50.8	69.3	50.7	122.1	43.1	134.9	91.7	130.1	63.5	4	110.0	M8	12.7
GVI 080	125.0	109.1	51.6	50.8	69.3	50.7	145.9	72.8	134.9	91.7	145.1	75.9	8	126.0	M8	12.7
GVI 100	177.8	143.5	61.2	75.5	93.5	76.2	206.4	66.9	175.6	201.3	165.1	101.6	8	145.0	M8	12.7
GVI 160	222.3	191.8	67.0	75.5	93.5	76.2	270.5	87.6	175.6	201.3	225.0	152.4	8	200.0	M10	16.0
GVI 200	285.8	254.5	67.6	75.5	93.5	76.2	353.4	114.6	175.6	201.3	285.8	203.2	12	260.0	M10	15.9
GVI 250	341.1	303.5	80.0	88.9	120.4	120.4	460.6	146.6	240.7	231.7	335.0	254.0	12	310.0	M10	19.0
GVI 320	408.2	362.7	80.0	88.9	120.4	120.4	560.5	174.9	240.7	231.7	425.0	304.8	12	395.0	M12	19.0
GVC 015	84.1	62.5	51.6	50.8	69.3	50.7	86.1	33.0	134.9	91.7	69.3	38.1	6	58.7	M6	12.7
GVC 020	96.8	75.2	57.9	50.8	69.3	50.7	104.5	37.6	134.9	91.7	85.7	50.8	8	72.4	M8	15.9
GVC 025	111.0	89.4	61.2	50.8	69.3	50.7	122.1	43.1	134.9	91.7	113.5	63.5	8	92.2	M8	17.5
GVC 040	177.8	143.5	75.4	75.9	93.5	76.2	206.4	66.9	175.6	190.6	151.6	101.9	16	130.3	M8	19.8
GVC 060	222.3	191.8	80.5	75.9	93.5	76.2	270.5	87.6	175.6	200.2	202.4	152.4	20	181.1	M8	22.4
GVC 080	285.8	254.5	85.1	75.9	93.5	76.2	353.4	114.6	175.6	200.2	253.2	203.2	24	231.9	M8	24.6
GVC 100	341.4	303.5	98.8	88.9	120.4	101.6	460.6	146.6	240.7	231.7	304.8	254.0	32	284.0	M8	28.5
GVC 120	403.2	362.7	98.8	88.9	120.4	101.6	560.5	174.9	240.7	231.7	354.6	304.8	30	325.4	M10	28.5

* For the ANSI flange valves, the dimensions given define the diameter of the flange holes in inches and the pitch of the screw thread. For example, ⅜-16 denotes a hole diameter of ⅜ inch and a pitch of 16 threads per inch.

Dimensions



1 Carriage side **2** Seal side

Ordering Information

Type	Model	Flange seals	No. seals*	Fixing kit	No. kits†
ISO	GVI 063	B27158170	1	B22417187	1
	GVI 100	B27158171	1	B22417187	2
	GVI 160	B27158172	1	B22417217	2
	GVI 200	B27158081	1	B22417217	2
	GVI 250	B27158143	1	B22417247	2
	GVI 320	B27158166	1	B22417247	2
CF	GVC 015	C10001290	10	B22417157	2
	GVC 020	C10005290	10	B22417187	2
	GVC 025	C10007490	10	B22417188	2
	GVC 040	C10009290	10	B22417189	2
	GVC 060	C10011290	5	B22417190	2
	GVC 080	C10012290	5	B22417190	2
	GVC 100	C10013290	5	B22417190	2

* *Number of seals in each pack.*
† *Number of fixing kits that are needed to mount both flanges of the valve.*

Ordering Information

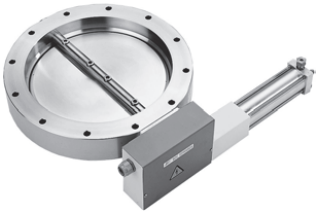
Type	Flange	Nominal Bore mm/ in	Model	Valve Ordering (Number)	For Valves Manufactured 1996 and Onwards Seal Kits	Bellow Kits	Pins & Bearing Kits
ISO Manual	NW40	40/1½	GVI040	B65001000	B65001020	B65001030	B65001040
	NW50	50/2	GVI050	B65101000	B65101020	B65001030	B65101040
	ISO63	63/2½	GVI063	B65201000	B65201020	B65001030	B65201040
	ISO80	75/3	GVI080	N03933800	Call	Call	Call
	ISO100	100/4	GVI100	B65301000	B65301020	B65301030	B65301040
	ISO160	160/6	GVI160	B65401000	B65401020	B65301030	B65401040
	ISO200	200/8	GVI200	B65501000	B65501020	B65301030	B65501040
	ISO250	250/10	GVI250	B65601000	B65601020	B65601030	B65601040
	ISO320	320/12	GVI320	B65701000	B65701020	B65601030	B65701040
ISO Pneumatic	NW40	40/1½	GVI040	B65051000	B65001020	B65001030	B65001040
	NW50	50/2	GVI050	B65151000	B65101020	B65001030	B65101040
	ISO63	63/2½	GVI063	B65251000	B65201020	B65001030	B65201040
	ISO80	75/3	GVI080	U30002092	Call	Call	Call
	ISO100	100/4	GVI100	B65351000	B65301020	B65301030	B65301040
	ISO160	160/6	GVI160	B65451000	B65401020	B65301030	B65401040
	ISO200	200/8	GVI200	B65551000	B65501020	B65301030	B65501040
	ISO250	250/10	GVI250	B65651000	B65601020	B65601030	B65601040
	ISO320	320/12	GVI320	B65751000	B65701020	B65601030	B65701040
CF Manual	2.37 inch od CF	40/1½	GVC015	B65003000	B65003020	B65003030	B65001040
	3.37 inch od CF	50/2	GVC020	B65103000	B65103020	B65103030	B65101040
	4.47 inch od CF	63/2½	GVC025	B65203000	B65203020	B65203030	B65201040
	6.00 inch od CF	100/4	GVC040	B65303000	B65303020	B65303030	B65303040
	8.00 inch od CF	160/6	GVC060	B65403000	B65403020	B65403030	B65403040
	10.00 inch od CF	200/8	GVC080	B65503000	B65503020	B65503030	B65503040
	12.00 inch od CF	250/10	GVC100	B65603000	B65603020	B65603030	B65603040
	14.00 inch od CF	320/12	GVC120	B65703000	B65703020	B65703030	B65703040
CF Pneumatic	2.37 inch od CF	40/1½	GVC015	B65053000	B65003020	B65003030	B65001040
	3.37 inch od CF	50/2	GVC020	B65153000	B65103020	B65103030	B65101040
	4.47 inch od CF	63/2½	GVC025	B65253000	B65203020	B65203030	B65201040
	6.00 inch od CF	100/4	GVC040	B65353000	B65303020	B65303030	B65303040
	8.00 inch od CF	160/6	GVC060	B65453000	B65403020	B65403030	B65403040
	10.00 inch od CF	200/8	GVC080	B65553000	B65503020	B65503030	B65503040
	2.00 inch od CF	250/10	GVC100	B65653000	B65603020	B65603030	B65603040
	14.00 inch od CF	320/12	GVC120	B65753000	B65703020	B65703030	B65703040

Seals kits contain: gate O-ring, bonnet seal and set of pneumatic actuator O-rings.
Bellows kits contain: bonnet/bellows/actuator link welded assembly, and circlips (as required).
Pins and bearings kits contain: pins, washers, bearings, springs and, as required, wheels.

QSB Quarter Swing Butterfly Valve

The QSB quarter swing valves are compact, quick acting, high conductance isolation valves. The QSB valves have a polished, stainless steel, ISO flanged body with fluoroelastomer ‘O’ ring sealed valve plate and shaft. The valve plate ‘O’ ring groove is vented to help maintain a stable high vacuum. The valve shaft ‘O’ rings and bearings are lubricated with Fomblin grease to prevent gas bursts from behind the shaft seals.

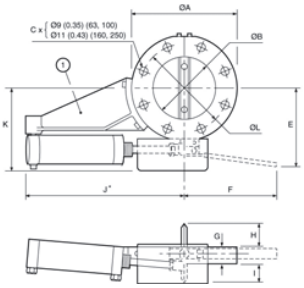
This valve is supplied with a Co-Seal.



Features & Benefits

- Manual operation
- High conductivity
- Resists atmosphere in either direction
- Compact and quick acting
- Corrosion resistant construction

Dimensions



	A	B	C	E	F	G	H	I	J	K	ØL
63	130	63	4	111	130	23.5	24.5	19	-	-	110
63P	130	63	4	105	-	23.5	24.5	19	235	108	110
100	165	96	8	125	130	26	41	33	-	-	145
100P	165	96	8	123	-	26	41	33	238	126	145
160	225	142.5	8	170	180	43.5	55	48.5	-	-	200
160P	225	142.5	8	166	-	43.5	55	48.5	263	166	200

1 Actuator cylinder support bracket (QSB63P, QSB100P and QSB160P only)

Technical Data

Valve plate material	AISI 304 stainless steel
Operating pressure range	10^{-9} - 3000 mbar / 8 x 10^{-10} - 2250 Torr
Max pressure differential	1000 mbar / 750 Torr
Operating temp range	5 - 40 °C
Max baking temp	200 °C (without actuator)
Leak rate	< 10^{-9} mbar l s^{-1} / 8 x 10^{-10} Torr l s^{-1}
Pneumatic valves only:	
Reliability (MTTF)	>1.5 x 10^{5} cycles
Pneumatic connectors	1/8 inch BSP, for 6mm OD tube
Number of connectors	
QSB63, QSB100, QSB160	2
Reed switch rating	
Max voltage	30V
Max current	500mA
Max Power	6W
Reed switch connectors	3m flying leads
Microswitch rating	5A at 48V
Microswitch connectors	
QSB63, QSB100, QSB160	Solder tags
Flange Size	ISO63 upto ISO250
Conductance *	420 l s^{-1}
QSB63	420 l s^{-1}
QSB100	1250 l s^{-1}
QSB160	2700 l s^{-1}
Recommended pneumatic pressure~ (bar)	
QSB63, QSB100, QSB160	2.8 to 4.2

* Conductance of equivalent tube length
~ Pneumatic operation

Ordering Information

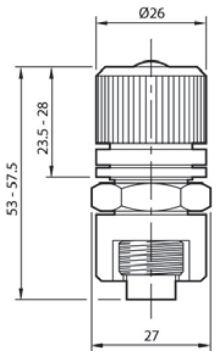
Product Description	Order No.
QSB63, Manual Operation	B42402000
QSB100, Manual Operation	B42602000
QSB160, Manual Operation	B42802000
QSB63P, Double Pneumatic Operation	B42403000
QSB100P, Double Pneumatic Operation	B42603000
QSB160P, Double Pneumatic Operation	B42803000
QSB63P, Double Pneumatic Operation with reed switches	B42409000
QSB100P, Double Pneumatic Operation with reed switches	B42609000
QSB160P, Double Pneumatic Operation with reed switches	B42809000
Accessories & Spares	**Order No.**
O Ring Viton 1161 Pk 1	H02106161
O Ring Viton 0340 Pk 1	H02106055
O Ring Viton Vit 1208 Pk 1	H02106208
Valve shaft seal O-Ring Vit0012 Pk5	H02106010
O Ring Viton Vit 0111 Pk 5	H02106011
5 Port Lightweight Electropneumatic Control Valve 24V a.c.	B28703030
5 Port Lightweight Electropneumatic Control Valve 24V d.c.	B28703055
5 Port Lightweight Electropneumatic Control Valve 110V a.c.	B28703031
5 Port Lightweight Electropneumatic Control Valve 230V a.c.	B28703032

AV5A Air Admittance Valve With Couplings

The AV5A is manufactured in aluminum alloy. It has a control knob attached to a screw-actuated plunger: turn the control knob clockwise to close the valve. A nitrile 'O' ring seals the plunger to the valve body.

The valve can be connected directly, pipeline supported or panel mounted, and is connected to the vacuum system with the Edwards SC5 coupling (supplied).

Dimensions



Technical Data

Materials of construction	
Body	HE30 aluminum / nickel plated brass
Plunger	HE30 aluminum
Seal	Nitrile
Leak rate across seat	10^{-7} mbar ls^{-1} / 8 x 10^{-8} Torr ls^{-1}
Leak rate through body	10^{-1} mbar ls^{-1} / 8 x 10^{-2} Torr ls^{-1}
Panel mounting	Ø 17 mm / Ø 0.66 in hole, 3 mm / 0.117 in maximum thickness
Vacuum connections	SC5 couplings or 3/8 inch BSP threaded body and bonded seal
Weight	85 g / 3 oz

Ordering Information

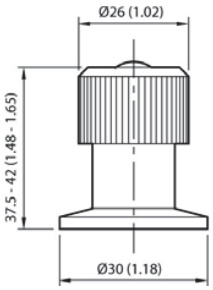
Product Description	Order No.
AV5A Air Admittance Valve With Couplings	C35003000
Accessories & Spares	**Order No.**
O Ring Nitrile Vor 2A Pk 10	H02105115
Dowty Seal 3/8 BSP MkC	H02104003

AV10K Air Admittance Valve

The AV10K is manufactured in aluminum alloy. It has a control knob attached to a screw-actuated plunger: turn the control knob clockwise to close the valve. A nitrile 'O' ring seals the plunger to the valve body.

The valve can be pipeline supported only, and is connected to the vacuum system with an NW10 fitting.

Dimensions



Technical Data

Materials of construction	
Body	HE30 aluminum
Control knob	Nylon 6
Seal	Nitrile
Leak rate across seat	10^{-7} mbar ls^{-1} / 8 x 10^{-8} Torr ls^{-1}
Leak rate through body	10^{-1} mbar ls^{-1} / 8 x 10^{-2} Torr ls^{-1}
Vacuum connections	NW10
Weight	100 g / 3.5 oz

Ordering Information

Product Description	Order No.
AV10K Air Admittance Valve	C35103000
Accessories & Spares	**Order No.**
O Ring Nitrile Vor 2A Pk 10	H02105115

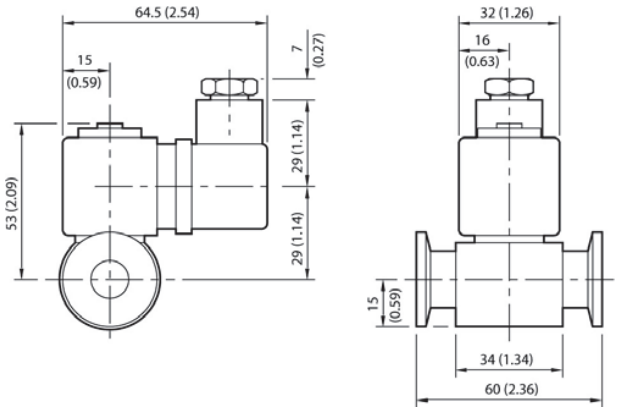
IPVA10EK Air Admit Valve

The IPVA10EK is a solenoid operated valve designed for automatic admittance of air or vent gas into a vacuum system. The valve has two ports with NW flanges. One of the valve ports is connected to the vacuum system, the other port can be left open to atmosphere or connected to a vent gas supply. The vacuum system is isolated from atmosphere (or the vent gas supply) by a fluoroelastomer pad on the base of the valve plunger, which seals against the body of the valve.

Features & Benefits

- Normally open or normally closed option.
- Small envelope
- IP65 protection
- MTTF 100000 Cycles

Dimensions



Technical Data

Operating temperature range	-20 to 55 °C
Vent gas temperature range	-10 to 130 °C
Venting rate	10 liters in 12 s
Response time	30 ms
Maximum cycle frequency	100 min^{-1}
Reliability (MTTF)	10^5 cycles
Leak rate	1 x 10^{-9} mbar l s^{-1} / 8 x 10^{-10} Torr l s^{-1}
Electrical supply	110V or 240V a.c. 1-ph, 50/60 Hz or 24V d.c.
Tolerance	
a.c.	-10% to +10%
d.c.	-5% to +10%
Power	
a.c.	9.3 VA inrush 6.3 VA hold
d.c.	5W
Enclosure rating	IP65
Weight	310 g / 11 oz
Materials of construction	
Body	Aluminum
Valve seal	Fluoroelastomer
Actuator	Stainless steel
Coil insulation	Class F

The air or vent gas path through the valve is free from heavy metals.

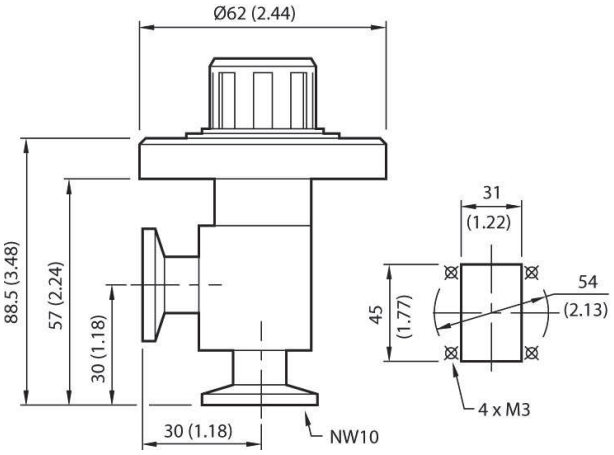
Ordering Information

Product Description	Order No.
IPVA10EK, 240 V a.c. (normally open)	C41721000
IPVA10EK, 110 V a.c. (normally open)	C41722000
IPVA10EK, 24 V d.c. (normally open)	C41723000
IPVA10EK, 240 V a.c. (normally closed)	C41731000
IPVA10EK, 110 V a.c. (normally closed)	C41732000
IPVA10EK, 24 V d.c. (normally closed)	C41733000

LV10K Leak Valve NW10 Flanges

The LV10K needle valve provides fine control of gas bleed into a vacuum chamber or a regulated leak to control pressure in a vacuum system and is suitable for gas admission down to 10^{-5} mbar / 8 x 10^{-6} Torr. Suitable for pipeline or panel mounting.

Dimensions



Technical Data

Materials of construction	
Body	Aluminum HE30
Seat	Brass BS2784 C2112
Needle	Martensitic stainless steel EN56AM
Filter	Brass BS249
Max flow rate (approx)*	0.1 l s^{-1}
Max inlet pressure	2000 mbar / 1500 Torr
Max leak rate, across seat	10^{-7} mbar ls^{-1} / 8 x 10^{-8} Torr ls^{-1}
Max leak rate, across body	10^{-7} mbar ls^{-1} / 8 x 10^{-8} Torr ls^{-1}
Vacuum connection	NW10
Weight (g/oz)	138 g / 4.8 oz

* Flow rate relates to a pressure differential across valve of one bar.

Ordering Information

Product Description	Order No.
LV10K Leak Valve NW10 Flanges	C37102000
Accessories & Spares	**Order No.**
Spares Kit Valve Seat	C37102812

Electropneumatic Control Valve

Electropneumatic control valves can be used to control the operation of pneumatically activated vacuum valves. Control valves are available with different electrical supply voltages and frequencies to suit your application.

Dimensions

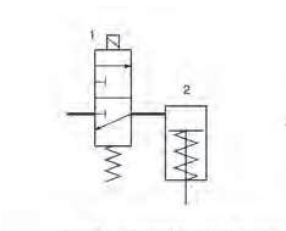


Figure 1 - Pneumatic circuit for 3-port control valve

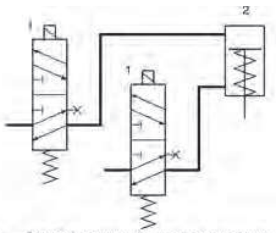


Figure 2 - Pneumatic circuit for two 5-port lightweight control valves

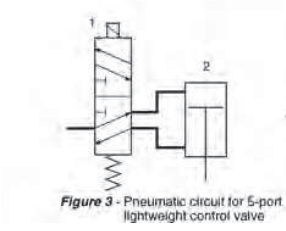


Figure 3 - Pneumatic circuit for 5-port lightweight control valve

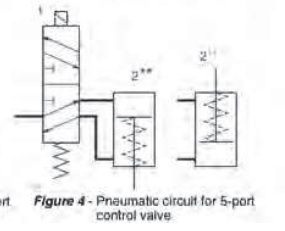


Figure 4 - Pneumatic circuit for 5-port control valve

Ordering Information

Product Description	Order No.
3-Port, 24V d.c, 1/8 Inch BSP	H06200124
3-Port, 24 V a.c, 50/60 Hz, 1/8 Inch BSP	H06200125
3-Port, 48 V d.c, 1/8 Inch BSP, North America	H06200130
3-Port, 110 V a.c, 50/60 Hz, 1/8 Inch BSP	H06200126
3-Port, 230 V a.c, 50/60 Hz, 1/8 Inch BSP	H06200138
5-Port, 24 V d.c, 6mm BSP	B28703055
5-Port, 24 V a.c, 50/60 Hz, 6mm BSP	B28703030
5-Port, 110 V a.c, 50/60 Hz, 6mm BSP	B28703031
5-Port, 230 V a.c, 50/60 Hz, 6mm BSP	B28703032

Technical Data

Valve	Valve Type	Recommend Control Valve Configuration	Schematic
GV gate valves	Double-acting cylinder with no spring return	1 x 5-port	3
PVPK pipeline valves soft start	Single-acting cylinder with spring return	1 x 3-port	1
BRV backing/roughing valve	Double-acting cylinder with spring return to the mid-position (that is, isolated position)	2 x 5-port or (1 x 5-port)	2*(4†)
QSB63/100/160 quarter swing butterfly valves, Diffstak isolation-valves	Double-acting cylinder with no spring return	1 x 5-port	4
Supply pressure	**3-port**	**5-port**	
bar gauge	2.1 - 8	3.4 – 4.8	
Psig	30 – 115	50 - 70	

* This configuration allows the use of the isolated position of the vacuum valve.
† This configuration only allows the use of the roughing and backing positions of the vacuum valve.