

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 / 8×10^{-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



	A	B	C	D	E	F	G	H
Model	Open	Closed						
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 l s ⁻¹ / 8×10^{-7} Torr l s ⁻¹
Coupling	10^{-7} mbar l s ⁻¹ / 8×10^{-8} Torr l s ⁻¹
Molecular conductance	
SP10K, SP16K	1.7 l s ⁻¹
SP25K	9.0 l s ⁻¹
SP40K	23.3 l s ⁻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 Diaphragm	C33255000
SP25K, Nitrile Diaphragm	C33305000
SP25K, Fluoroelastomer Diaphragm	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

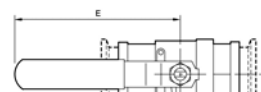
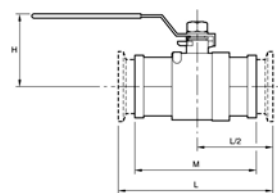


Ball valves are popular in applications where fast action and full bore pumping are needed. The Edwards IBV series valves combine these practical everyday features plus ease of use and economy in a high specification design. Manufactured in 316L stainless steel with PTFE seats they deliver robust performance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

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	1/2" BSP
IBV25MKS	148	70	118.5	-	NW25
IBV25MS	148	70	-	82.5	1" BSP
IBV40MKS	164	84	166.5	-	NW40
IBV40MS	164	84	-	111	1 1/2" 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 1×10^{-6} mbar ls⁻¹ / 8×10^{-7} Torr ls⁻¹

Molecular conductance

IBV16MKS 5.3 ls⁻¹

IBV25MKS 15.9 ls⁻¹

IBV40MKS 46.5 ls⁻¹

IBV50MKS 86.0 ls⁻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 / 8×10^{-10} Torr and up to a pressure of 2100 mbar / 1575 Torr (30 psi).



Technical Data

Construction material		
Body	HE30TF grade aluminium	
Bellows	AISI 316L stainless steel	
‘O’ ring	Fluoroelastomer	
Leak rate	$< 10^{-9}$ mbar ls ⁻¹ / $< 7.5 \times 10^{-10}$ Torr ls ⁻¹	
Operating pressure range	10^{-9} - 2100 mbar / 8×10^{-10} - 1575 Torr (30 psi)	
Molecular conductance		
PV10MK	3 ls ⁻¹	
PV16MK	4 ls ⁻¹	
PV25MK	10 ls ⁻¹	
PV40MK	38 ls ⁻¹	
PV50MK	50 ls ⁻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

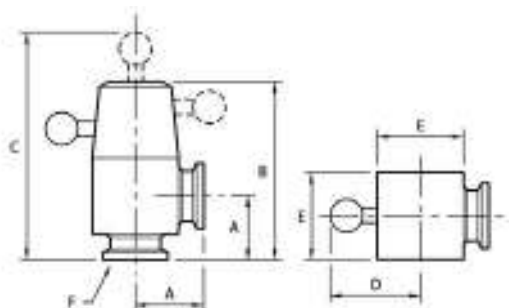
Ordering Information

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

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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

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 / 8×10^{-10} Torr and up to a pressure of 2100 mbar / 1575 Torr (30 psi).

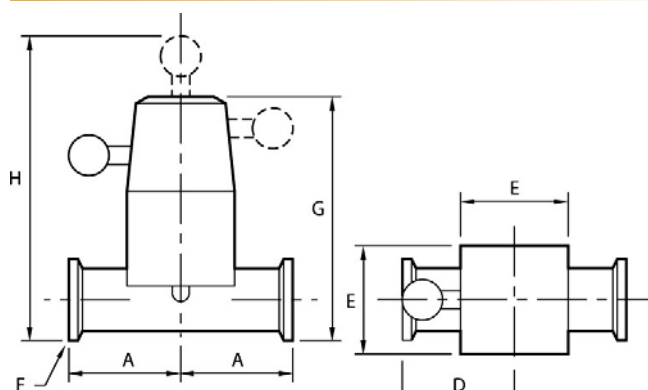
Technical Data

Construction material

Body	HE30TF grade aluminium or AISI304 grade stainless steel	
Bellows	AISI 316L stainless steel	
O-ring	Fluoroelastomer	
Leak rate	$< 10^{-9}$ mbar ls ⁻¹ / $< 7.5 \times 10^{-10}$ Torr ls ⁻¹	
Operating pressure range	10^{-9} - 2100 mbar / 8×10^{-10} - 1575 Torr (30 psi)	
Molecular conductance		
IPV16MK	2 ls ⁻¹	
IPV25MK	6 ls ⁻¹	
IPV40MK	22 ls ⁻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

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, Aluminium, NW16	C41218000
IPV16MKS, Stainless Steel, NW16	C41219000
IPV25MKA, Aluminium, NW25	C41321000
IPV25MKS, Stainless Steel, NW25	C41322000
IPV40MKS, Stainless Steel, NW40	C41421000
IPV40MKA, Aluminium, 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