PRODUCT DATA SHEET

VACUUM ISOLATION VALVE (VIV)

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Intended for use with nXDS, XDS, nXLi and nXRi dry primary pumps, the VIV vacuum isolation valve is a high conductance, fast acting high vacuum isolation valve that is designed to prevent the movement of vapour or particulates from the backing pump to the process chamber. When the VIV is closed, the backing pump is safely vented.

The VIV protects the process chamber from being vented when the pump stops or is stopped.

When the backing pump is restarted, the valve will slowly open when the pressure within the VIV has dropped, minimising the effects of any pressure burst.

Features

- VIV valves have high conductance
- Fast closing action
- Power failure protection
- Flexible installation options

Benefits

- Does not restrict primary pump performance
- Prevents migration of vapour or particulates from the backing pump to the process chamber
- Prevents process chamber venting in the event of a power supply failure
- For Edwards backing pumps fitted with the M8 valve connector or the 15 way D Type logic interface connector, Edwards recommends the use of 24V dc valves and optional accessory cable or VIV Link as this offers increased levels of protection. See table below

The VIV Valve protects the process chamber in the following situations:

VIV Functions in event of:	Valve electrical supply type		
	24V d.c.	100-115V a.c.†	208-230V a.c.†
Power failure	✓	✓	✓
Drive failure	✓*	✗	✗
Pump error	✓*	✗	✗
Manual/remote start stop command	✓*	✗	✗

*Maximum upstream protection for the secondary pump (if used) and process chamber is achieved by use of either the optional ViV power cable M8 - valve (nXLi and nXRi) or the VIV Link interface box (nXDS) and an appropriately sized 24V d.c. VIV valve.

†VIV Valve must be wired in parallel with the pump mains supply by the customer. This is the most cost-effective installation option but provides only power supply failure protection.

Technical data

		Unit	VIV25EKA	VIV40EKA	VIV50EKA
Flange type			NW25	NW40	NW50
Operating pressure range		mbar	$1x10^{-8}$ to 1000		
Conductance		$l s^{-1}$	11	30.5	126
Electrical supply options	24V d.c.		✓	✓	✓
	100-115V a.c.		✓	✓	
	208-230V a.c.		✓	✓	
Differential pressure	Closing	mbar	>200		
	Opening	mbar	<200		
Leak tightness	Body	mbar $l s^{-1}$	$<1x10^{-9}$		
	Across valve seat	mbar $l s^{-1}$	$<1x10^{-5}$		
	Pilot valve	mbar $l s^{-1}$	$<1x10^{-7}$		
Switching times	For opening	s	<15*		
	For closing	s	<0.1		
	Response time	s	<0.05		
Material	Body		Aluminium		
	Seals		Fluoroelastomer		

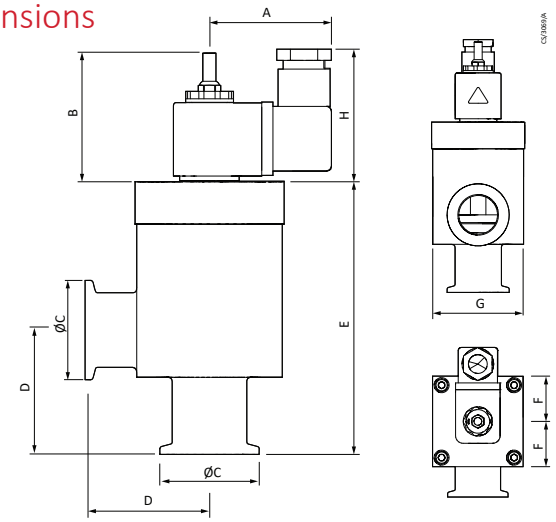
*Time to open is related to when the pressure differential is <200mbar. This is strongly dependent on the pumping speed of the vacuum system.

VIV flange variant	Unit	Weight	A	B	C	D	E	F	G	H
NW25	kg	0.5	57 (2.24)	48 (1.88)	40 (1.57)	50 (1.97)	110 (4.33)	30 (1.18)	60 (2.36)	55 (2.15)
NW40	kg	0.9	57 (2.24)	48 (1.88)	55 (2.17)	65 (2.56)	126 (4.96)	40 (1.57)	79 (3.11)	55 (2.15)
NW50	kg	1.5	57 (2.24)	48 (1.88)	75 (2.96)	70 (2.76)	136 (5.36)	45 (1.75)	89 (3.50)	55 (2.15)

Ordering information

Product description	Order number
VIV25EKA 24V DC	A50637500
VIV25EKA 100-115V AC	A50637501
VIV25EKA 208V-230V AC	A50637502
VIV40EKA 24V DC	A50637510
VIV40EKA 100-115V AC	A50637511
VIV40EKA 208V-230V AC	A50637512
VIV50EKA 24V DC	A50637520
VIVLINK C13/14 100-230V 50/60HZ	A50637580
VIV cable power to valve	A50637392
VIVLINK C19/20 100-230V 50/60HZ	A50637590

Dimensions



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