

XDD1 DIAPHRAGM VACUUM PUMP

edwardsvacuum.com

XDD1 diaphragm pumps are compact and efficient pumps, used for backing small compound turbomolecular pumps in clean, high vacuum applications, and also designed to be free standing bench top units. A typical ultimate pressure of better than 5×10^{-8} mbar can be achieved when using an XDD1 to back a 70 ls^{-1} turbomolecular pump. The XDD1 pumps are intended for use on non-aggressive, safe area applications.

The 24 V version is designed to provide a complete pumping package and can be used with the Edwards Turbo and Instrument Controller (TIC). The d.c. voltage motor runs on 24 V via a 15 pin DIN connector. By selecting the appropriate mode the pump speed can be controlled by the user to provide variable pumping speed or max pumping speed. The pump is compact and efficient. The Mk3 24V version can now be user set to run at a maximum speed of $1.8 \text{ m}^3\text{h}^{-1}$ running at 2400 rpm.

Under normal conditions the XDD1 is virtually maintenance free, the lifetime of the diaphragms and valves is typically $> 10,000$ operating hours, depending on the application.



FEATURES AND BENEFITS

Dry pumping, lubricant free technology
eliminating the need for costly oil changes and disposal

Lightweight and compact
with a small footprint allowing flexibility of use.

Ideal backing pump
for small turbomolecular pumps.

Complies
with EN61010, EN1012, CSA/UL standards.

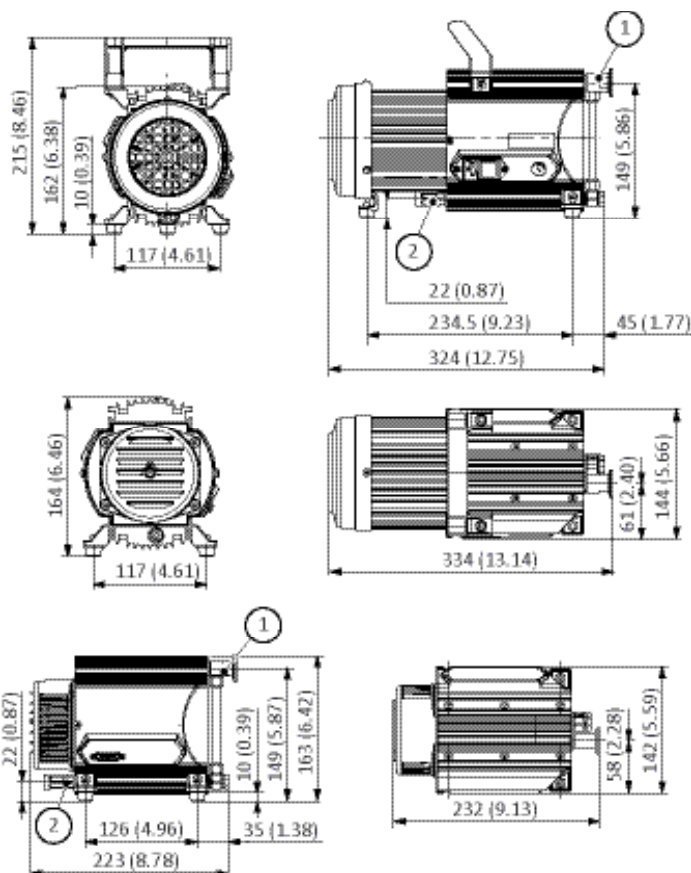
Worldwide
115/230 V or 24 V options.

IEC 60320 C13 connector
on a.c. pumps.

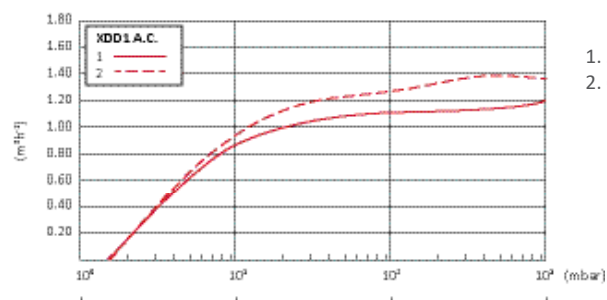
APPLICATIONS

- Residual gas analysis
- Mass spectrometers
- Cryostat and Dewar evacuation
- Ion pump evacuation
- Surface science

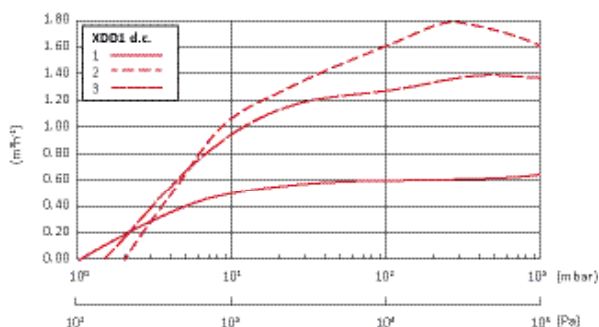
DIMENSIONS



PERFORMANCE CURVE



1. 50 Hz
2. 60 Hz



1. 600 rpm
2. 2400 rpm
3. 1700 rpm
factory set

TECHNICAL DATA

a.c.		d.c.	
Pumping speed			
50Hz	$1.2 \text{ m}^3\text{h}^{-1}$	600 rpm	$0.6 \text{ m}^3\text{h}^{-1}$
60Hz	$1.4 \text{ m}^3\text{h}^{-1}$	1700 rpm (Factory setting)	$1.4 \text{ m}^3\text{h}^{-1}$
		2400 rpm	$1.8 \text{ m}^3\text{h}^{-1}$
Motor power	Weight	Motor power	Weight
80 W	7.3 kg	64 W	4.5 kg

Performance	
Ultimate vacuum (typical)	<2 mbar
Ambient temperature limit	10 to 40 °C
Inlet connection	NW16
Exhaust connection	The pump is fitted with a silencer which can be removed and an exhaust line connected with a 1/8 inch BSP fitting
Max allowed inlet pressure	1 bar (abs)
Power connector (a.c.)	IEC EN60320 C13

ACCESSORIES & SPARES

Product description	Order number
2m electrical supply cable for 1-ph pumps, UK plug 3A	A50516000
2m electrical supply cable for 1-ph pumps, no plug	A50508000
2m electrical supply cable for 1-ph pumps, North America/Japan plug	A50507000
2m electrical supply cable for 1-ph pumps, North European plug	A50506000
XDD/DX/EXDC extension cable 1m	D39700835
XDD/DX/EXDC extension cable 2m	D39700836
XDD/DX/EXDC extension cable 5m	D39700837
XDD1 diaphragm service kit	A74601800

ORDERING INFORMATION

Product description	Order number
XDD1 diaphragm pump Mk2 100-115V 50/60Hz, 120V 60Hz, 220-230V 50/60Hz	A74602983
XDD1 diaphragm pump Mk3 24 V d.c.	A74603991

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