

Instruction Manual

Acoustic Enclosure for XDS Scroll Pumps and Rotary Vane Pumps



Description	Electrical Supply	Item Number
XDS Acoustic Enclosure	200-240 V 50/60 Hz	A506-36-903
XDS Acoustic Enclosure	110-120 V 50/60 Hz	A506-36-906
RV/EM Acoustic Enclosure	200-240 V 50/60 Hz	A506-35-903
RV/EM Acoustic Enclosure	110-120 V 50/60 Hz	A506-35-906





Declaration of Conformity

We, Edwards Limited,
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declare under our sole responsibility, as manufacturer and person within the EU authorised to assemble the technical file, that the product(s)

EM/RV Enclosure High volts	A506-35-903
EM/RV Enclosure Low volts	A506-35-906
XDS Enclosure High volts	A506-36-903
XDS Enclosure Low volts	A506-36-906

to which this declaration relates is in conformity with the following standard(s) or other normative document(s)

EN61010-1:2010	Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use. General Requirements
EN12100:2010	Safety of machinery. General principles for design. Risk assessment and risk reduction.
EN50581:2012	Technical Documentation for the Assessment of Electrical and Electronic Products with respect to the Restriction of Hazardous Substances

and fulfils all the relevant provisions of

2014/35/EU	Low Voltage Directive
2012/19/EU	Waste from Electrical and Electronic Equipment (WEEE) Directive
2011/65/EU	Restriction of Certain Hazardous Substances (RoHS) Directive

Note: This declaration covers all product serial numbers from the date this Declaration was signed onwards.

Mr Peter Meares
Senior Technical Support Manager, General Vacuum

10.08.2015, Burgess Hill

Date and Place

This product has been manufactured under a quality management system certified to ISO 9001:2008

Official Distributor in Australia



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Why Choose Ezzi Vision?

'Partner with excellence in Vacuum Technology, opt for Ezzi Vision'

Decades of Expertise: With 30+ years in the industry, Ezzi Vision is highly experienced in vacuum technology and its applications.

Quality Assurance: We ensure that every Edwards pump meets the highest standards of performance and reliability.

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Nationwide: Ezzi Vision brings quality vacuum solutions to all of Australia.

After-Sales Support: We provide comprehensive support to maintain your equipment's longevity and efficiency.

Sustainable Practices: Our products at Ezzi Vision align with contemporary environmental standards, promoting sustainable practices in your business operations.

With Ezzi Vision propel your business forward using state-of-the-art technology and steadfast support.

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For return of equipment, complete the HS Forms at the end of this manual.

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Associated publications

Publication title	Publication number
Vacuum pump and vacuum system safety	P400-40-100

1 Introduction

1.1 Scope and definitions

The Acoustic Enclosure is designed to be used in an industrial or laboratory environment. All Edwards XDS and nXDS scroll pumps will fit the XDS Acoustic Enclosure and all RV and EM pumps up to E2M28 will fit the RV/EM Acoustic Enclosure.

The enclosure is designed to slot together without removable fixings and so requires no tooling to assemble or dismantle it. It is powered by a power cable fitting into an IEC 320 socket.

Note: *The power cable for the pump is connected to its own supply. This supply should have an external means of isolation and not rely upon the on/off switch located on the pump.*

Read this manual before you install and operate the Acoustic Enclosure. Important safety information is highlighted as WARNING and CAUTION instructions; you must obey these instructions. The use of WARNINGS and CAUTIONS is defined below.



WARNING

Warnings are given where failure to observe the instruction could result in injury or death to people.

CAUTION

Cautions are given where failure to observe the instruction could result in damage to the equipment, associated equipment and process.

The following IEC warning labels appear on the Acoustic Enclosure:



Warning - refer to accompanying documentation.





Warning - risk of electric shock.

2 Technical data

2.1 Specifications

Figure 1 - Specifications of XDS and RV/EM pumps

	
XDS	RV/EM
Dimensions: Length 778 mm Width 442 mm Height 580 mm	Dimensions: Length 790 mm Width 285 mm Height 460 mm
Mass: 37 kg	Mass: 23 kg

The fuse rating is 5 amps, Type T, 20mm long x 5mm diameter (RS668-6010 or equivalent).

The Acoustic Enclosure can be used to attenuate the noise from the XDS, nXDS range of scroll pumps, EM and RV pumps typically by the figures listed in Table 1.

Table 1 - Pump noise levels

XDS5	8 dBA
XDS10	8 dBA
XDS35i	9 dBA
nXDS	5 dBA
RV	7dBA
E2M28	7 dBA

Two fans are fitted. Fan 1 starts up when the power is on. Fan 2 is controlled by a thermal switch set to operate when the internal temperature exceeds 35 ± 5 °C.

Environmental conditions:

Altitude 2000 m
Ambient temperature 30 °C

3 Installation

3.1 Safety



WARNING

Obey the safety instructions given below and take note of appropriate precautions. If you do not, you can cause injury to people and damage to equipment.

- A suitably trained and supervised technician must install the Acoustic Enclosure.
- Ensure that all equipment is safe and in a suitable condition to be installed in the enclosure.
- For safety issues, refer to Edwards Vacuum Pump and Vacuum System Safety Publication P400-40-100 or contact Edwards if in doubt.
- Casters should be locked when the pump is in operation.
- Route all electrical cables in a safe manner.



WARNING

Care should be taken when removing the enclosure from the packaging and also when removing the enclosure side panels.



WARNING

Use suitable lifting equipment or at least two people to lift the empty Acoustic Enclosure.



WARNING

Do not lift the Acoustic Enclosure with a pump installed.



WARNING

Be careful not to drop any of the enclosure panels during assembly/disassembly as this may either damage the panel or cause injury.



WARNING

Do not install the enclosure on a slope. When the castors are unlocked the enclosure could move and cause injury.

3.2 Installing the XDS Acoustic Enclosure

The various elements of the Enclosure are designed to slot together without additional fixings.

Figure 2 - Inserting XDS pump into Acoustic Enclosure



Figure 3 - Locating left hand panel on side of pump



Figure 4 - Fitting second cover to right hand side of pump



After removing all packaging:

- Remove side panels by lifting (this will disengage the panel from the locating pins) and moving to the side. Be careful not to drop a panel.
- Insert XDS pump - refer to [Figure 2](#).
- Attach inlet and exhaust fittings. Note that sufficient length will be needed to clear enclosure.
- Locate first panel on left hand side of pump - refer to [Figure 3](#).
- Adjust pump position to suit.
- Position pump power cable through hole provided.
- Switch the Pump start switch to ON.
- Fit Second Cover to right hand side of pump - refer to [Figure 4](#).

3.3 Installing RV EM Acoustic Enclosure

The various elements of the Enclosure are designed to slot together without additional fixings.

Figure 5 - Attaching inlet and exhaust fittings



Figure 6 - Locating first panel on left hand side of pump



Figure 7 - Fitting second cover to right hand side of pump



Figure 8 - Fitting end cover



After removing all packaging:

- Attach inlet and exhaust fittings. Note that an extension piece will be needed if Exhaust Mist Filter (EMF) or an inlet accessory is to be fitted - refer to [Figure 5](#).
- Locate first panel on left hand side of pump - refer to [Figure 6](#).
- Adjust pump position to suit.
- Position pump power cable through hole provided.
- Switch the motor start switch to ON.
- Fit Second Cover on right hand side of pump - refer to [Figure 7](#).
- Fit end cover - refer to [Figure 8](#).

4 Operation

4.1 Safety



WARNING

This enclosure must only be operated in an upright position. Isolate power before removing the pump from the enclosure.

Plug the power cable into the IEC 320 socket at back of the enclosure.

Switch on the power.

- Fan 1 should start up on the power being switch on.
- Check there is airflow from the fan by placing your hand over the mesh at the opposite end of the box from the fan.
- Do not block the inlet of the fan or the ventilation mesh. Allow at least 50mm clearance around the Acoustic Enclosure.
- If the internal temperature reaches 35 ± 5 °C the second fan will switch in.

4.2 Over temperature alarm

There is a warning buzzer on the front face of the bulkhead. This is triggered by a thermal switch inside the Enclosure, which is set to 50 ± 5 °C. The buzzer will be triggered if the fan fails and the pump continues running, interruption of the power supply or similar event. If the pump overheats it will thermally protect itself.

The buzzer will run for at least 12 hours on battery back up.

4.3 Buzzer test

There is a push button test switch for checking that the battery backed up buzzer works. This can be tested either with the unit connected to the Mains supply or on battery back up.

4.4 Pump Monitoring

It is recommended that the user should use appropriate techniques to monitor the pump temperature and initiate protective measures in fault-intolerant applications.

5 Maintenance

5.1 General

Note: The unit is easily movable on its castors.

The enclosure requires no regular maintenance if the indicated temperature is within the guidelines.

For the RV EM pumps regular checks can be carried out.

Figure 9 - Removing front panel to view sight glass



Figure 10 - Removing panel to gain access to filler cap



- To check the oil level, remove the front end panel (lift and pull towards you). The sight glass is visible through the opening in the covers - refer to [Figure 9](#).
- If the oil level needs to be topped up, remove panel to gain access to the filler cap - refer to [Figure 10](#).

CAUTION

With the pump enclosed by the Acoustic Enclosure, regular checks of the pump oil level should be made.

The frequency of checks will depend on the particular application, but note that oil consumption will increase under the following circumstances:

- Running at elevated inlet pressures (either as a result of the application or a vacuum leak.)
- Running with gas ballast.
- Mist filter in conjunction with an oil return kit not fitted.

5.2 Servicing

The enclosure requires no regular servicing but it is suggested that the Acoustic enclosure is inspected yearly to ensure safe operation.

If the fan stops turning, check the electrical cable is still connected and that the fuse does not need replacing. If the fan needs replacing a suitably trained and supervised technician must complete the task.

Ensure that the air duct is checked regularly and clean where appropriate.

Replace battery (PP9 Alkaline-Manganese dioxide cell) annually, or in case of failure (can be tested by sounding buzzer).

Edwards spare part recommended:

Fan unit A726-01-804

There is no other servicing required.

5.3 Cleaning

The outside surface can be cleaned with a damp cloth and mild detergent. Do not allow water near the electrical components.

6 Disposal

Dispose of any used equipment safely in accordance with all local and national safety and environmental requirements.

Ensure the battery is disposed of safely in accordance with all local and national safety and environmental requirements.

Return the equipment or components for service

Before you send your equipment to us for service or for any other reason, you must send us a completed Declaration of Contamination of Vacuum Equipment and Components - Form HS2. The HS2 form tells us if any substances found in the equipment are hazardous, which is important for the safety of our employees and all other people involved in the service of your equipment. The hazard information also lets us select the correct procedures to service your equipment.

We provide instructions for completing the form in the Declaration of Contamination of Vacuum equipment and Components - Procedure HS1.

If you are returning a vacuum pump, note the following:

- If a pump is configured to suit the application, make a record of the configuration before returning the pump. All replacement pumps will be supplied with default factory settings.
- Do not return a pump with accessories fitted. Remove all accessories and retain them for future use.
- The instruction in the returns procedure to drain all fluids does not apply to the lubricant in pump oil reservoirs.

Download the latest documents from www.edwardsvacuum.com/HSForms/, follow the procedure in HS1, fill in the electronic HS2 form, print it, sign it, and return the signed copy to Edwards.

Note: *If we do not receive a completed HS2 form, we will not accept the return of the equipment.*