

Setup and Daily Use Instructions v3.0

DS-26P 26L Professional Vacuum Degassing System

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1. Introduction

Thank you for choosing to buy a *DS-26P 26L Professional Vacuum Degassing System* from Easy Composites.

Please read the following instructions **before use** to familiarise yourself with the setup and daily operation of the equipment.

DS-26P is a high quality integrated vacuum degassing system suitable for use degassing materials including polyurethane resin, epoxy resin and all types of RTV silicone rubber.

Important: Use with Acrylic Resins, Solvented Resins and Solvents

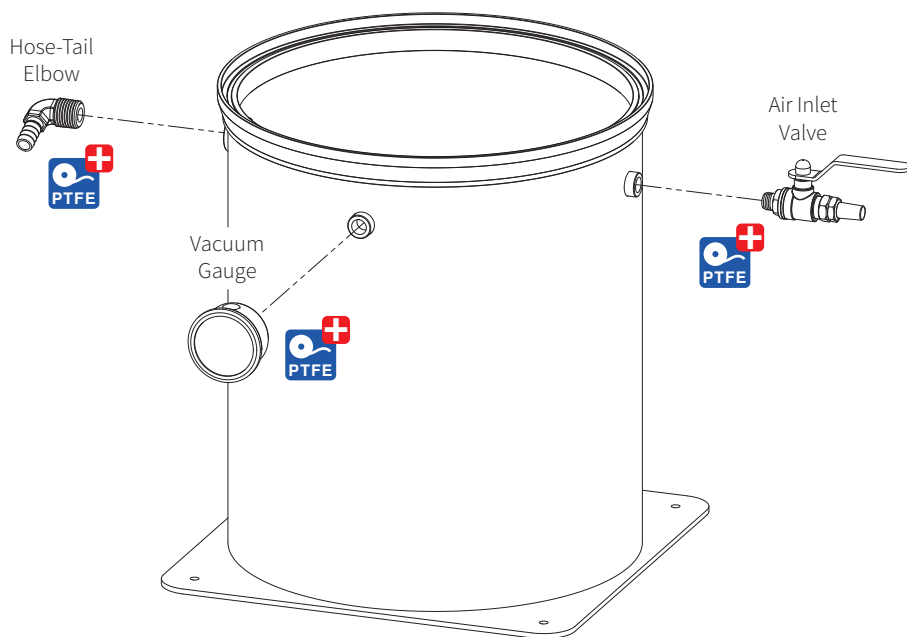
Whilst clear acrylic provides the best combination of clarity, durability and practicality for the vast majority of applications, it is susceptible to attack from solvents such as acetone and styrene, and acrylic compounds such as methacrylate ester. This is true for all potential clear lid materials (such as Plexiglass, Perspex and polycarbonate).

For this reason, the chamber must NOT be used for the degassing of acrylic resins (such as 'Cactus Juice' methacrylate) or styrene-borne resins such as polyesters and vinylesters. Use of the chamber to degas such materials will weaken the integrity of the lid and ultimately result in failure.

It is also essential to never use solvents such as acetone, alcohol or MEK to clean the lid.

2. First Time Use - Assembly

When you first receive your Easy Composites' *DS-26P 26L Professional Vacuum Degassing System*, please follow these steps to assemble the system and prepare it for first use.

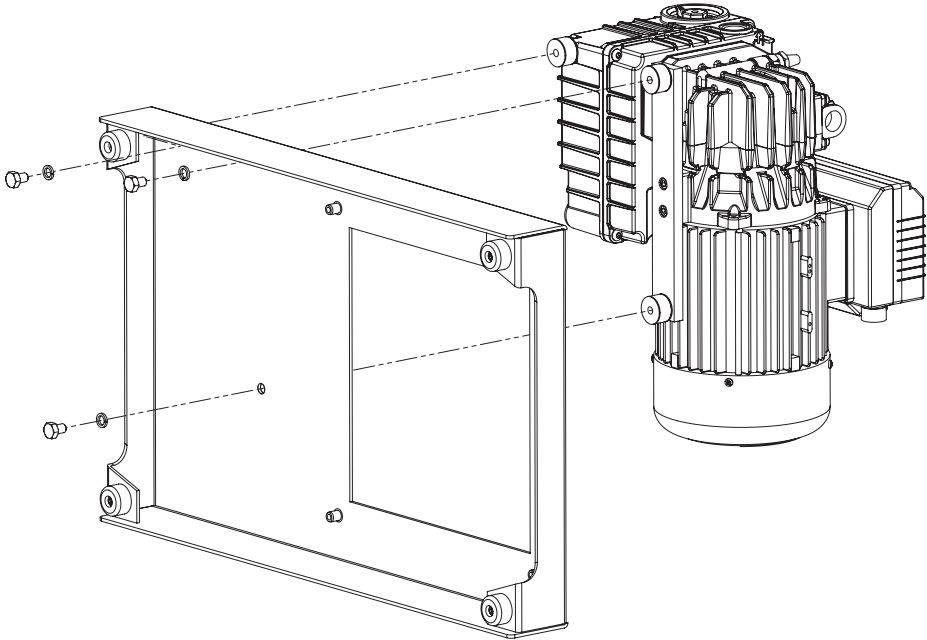


1. Fit vacuum gauge

Screw the vacuum gauge into the threaded hole on the front of the degassing chamber. Tighten firmly with a spanner, finishing with the gauge in the upright position.

2. Fit air-inlet valve and hose-tail elbow

Screw the air-inlet valve assembly into position on the right-hand side of the chamber. Tighten firmly with a spanner, finishing with the handle in the horizontal position. Screw the hose-tail elbow on the left-hand side, finishing with the fitting pointing diagonally down and right.



3. Fix vacuum pump to baseplate

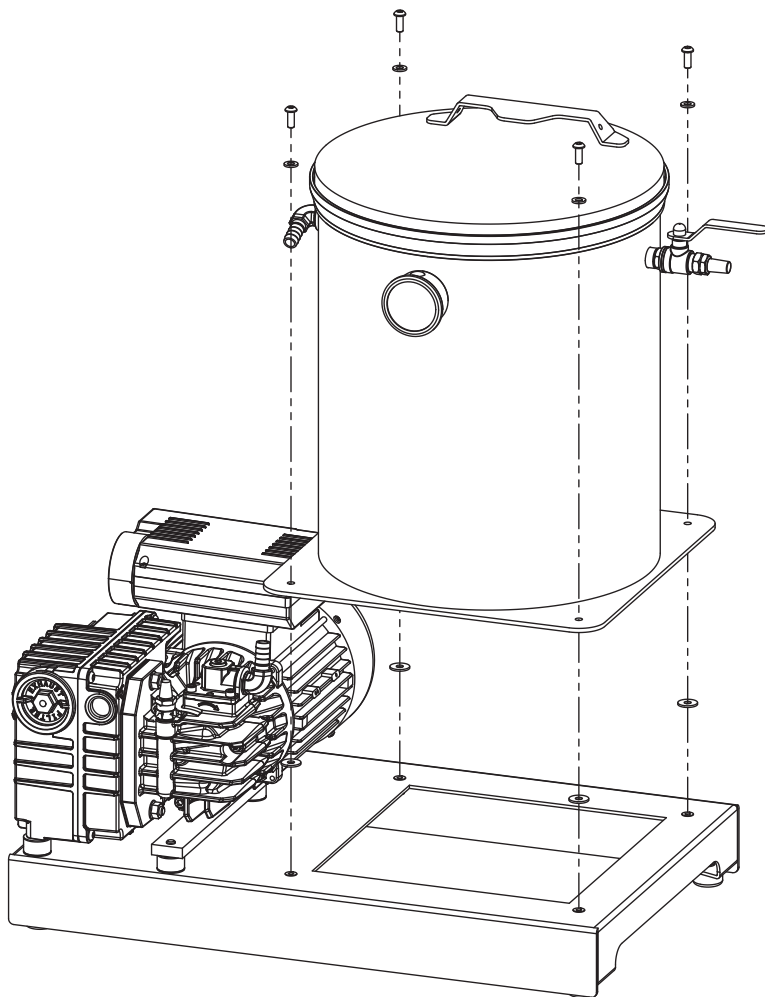
3.1. Carefully lie the **LC20EC Industrial Vacuum Pump** vacuum pump on its motor fan housing.

3.2. If they are not already fitted, screw the three rubber *anti-vibration mounts* into the base of the vacuum pump.

3.3. Lie the baseplate upright and align the holes on the baseplate with the *anti-vibration mounts* on the pump.

3.4. Fit *M8 spring washers* to three *M8x12mm hex bolts* and pass the bolts through the holes in the baseplate.

3.5. Screw the bolts into the *anti-vibration mounts* and tighten using a spanner.



4. Fix degassing chamber to baseplate

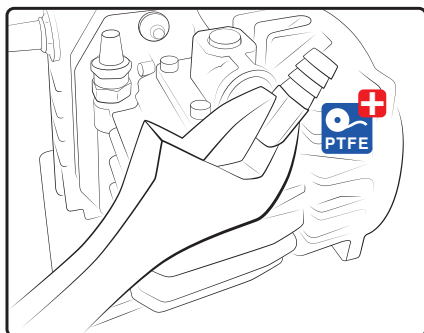
4.1. Turn the vacuum pump and baseplate to their correct upright position.

4.2. Align the degassing chamber over the four fasteners on the baseplate. Make sure you orient the chamber as shown; with the gauge facing towards you when the pump is on the left.

4.3. Position *rubber washers* between the chamber and baseplate, under the holes at the four corners of the chamber.

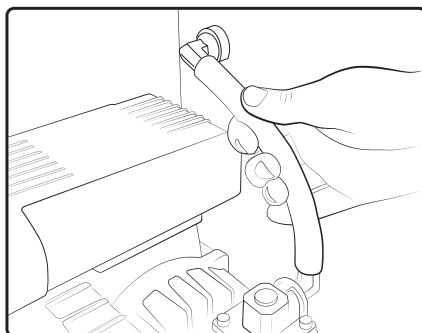
4.4. Fit *M6 plain washers* to four *M6x16mm button head bolts* and screw them through holes in the corner of the chamber into the threaded fasteners in the baseplate and tighten with a 4mm allen key.

5. Fit hose-tail elbow to pump



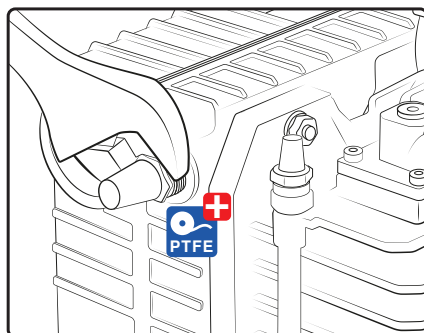
Tightly screw the 90° brass elbow fitting into the 1/2" port on the **LC20EC** vacuum pump. Finish with the fitting facing upwards.

6. Connect vacuum hose



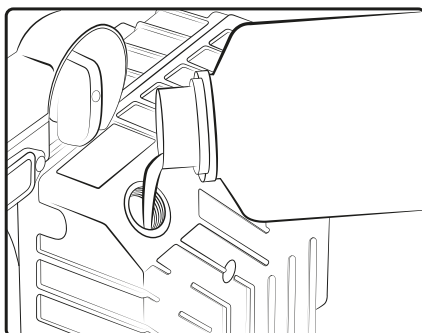
Connect the vacuum pump to the chamber by pushing the hose firmly onto both hose-tail fittings.

7. Fit exhaust silencer



Using a spanner, screw the exhaust silencer into the outlet on the **LC20EC** vacuum pump.

8. Fill pump with oil



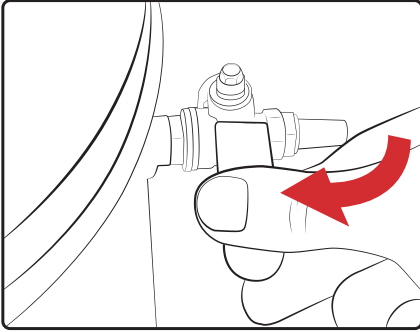
The **LC20EC** pump ships without oil and needs to be filled to the correct level using the supplied oil before use.

Use a 10mm allen key to unscrew the oil filler plug and fill the pump with oil until the level is halfway up the sight-gauge on the side of the pump. Be aware that it might take a few moments for the oil to work its way down into the pump.

Replace the oil filler plug and tighten again.

3. Daily Operation - Degassing Procedure

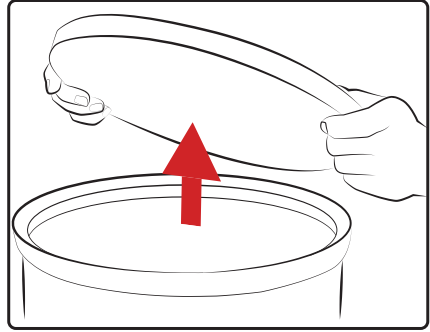
1. Check inlet is closed



Make sure the inlet valve (which has the brass filter fitted) is in the closed position, especially if you have just run a degassing operation.

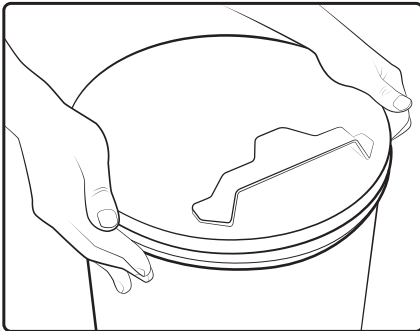
The inlet valve is closed when the lever is at 90° to the fitting.

2. Load material



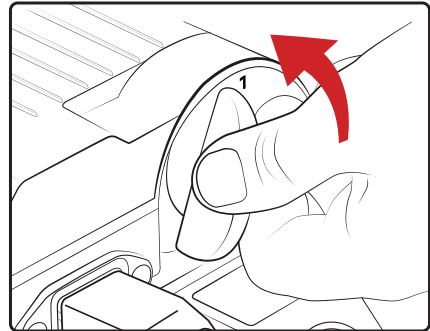
Start by removing the acrylic lid and loading your material (casting resin, RTV silicone rubber etc.) into the degassing chamber.

3. Press down lid firmly



Press down firmly on the lid to make sure it is well seated into the seal.

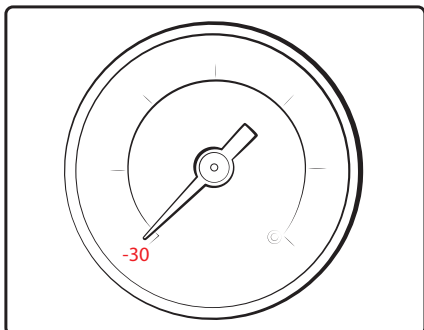
4. Switch pump on



Turn the vacuum pump on using the power switch on the pump.

At this point you may need to press lightly on the lid to make the initial vacuum seal.

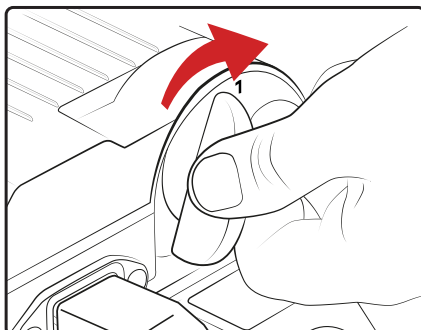
5. Wait for degassing



Wait whilst the pressure drops inside the vacuum chamber. The powerful **LC20EC** will take around 1 minute to reach the high levels of vacuum where degassing starts to occur.

Wait for your material to degas, as required.

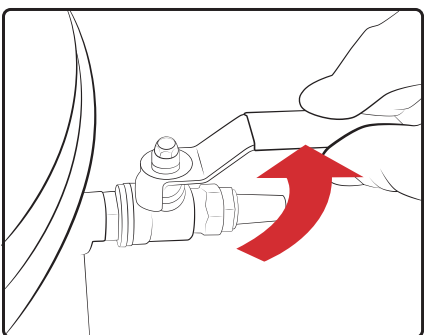
6. Switch off pump



Switch off the pump to stop the degassing process.

The **LC20EC** is fitted with a non-return check valve which will immediately close when the pump is switched off, sealing off the chamber and protecting the pump.

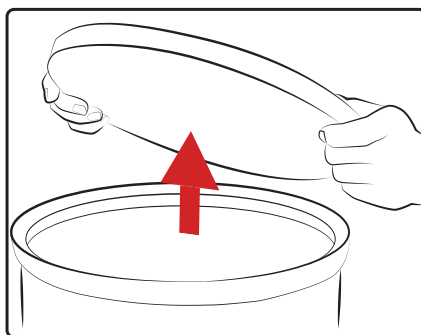
7. Open inlet valve



To let air back into the chamber, turn the re-pressuring (inlet) valve on the degassing chamber counter-clockwise into the open (inline) position.

The inlet port is fitted with a filter to restrict the rate at which air re-enters the chamber, helping to avoid disturbing materials inside or contaminating them with dust and other particles.

8. Remove lid



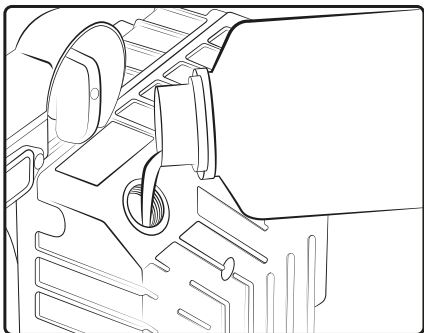
Once air can no longer be heard passing through the filter the chamber will be back up to normal atmospheric pressure.

Lift the lid off the chamber to remove your degassed material.

The handle on the lid is designed to hook over the rubber seal, allowing the lid to be safely hung off the back of the chamber.

4. Vacuum Pump Maintenance

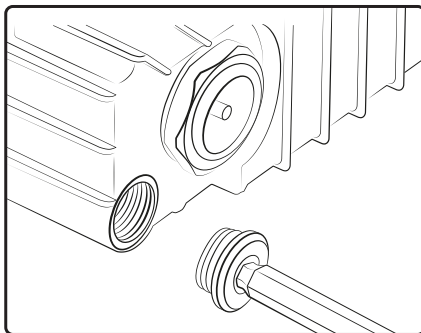
Maintaining the oil level



Unlike conventional oil-bath vacuum pumps, the **LC20EC** emits virtually no oil from the pump during operation however, depending on how frequently you use your vacuum pump and how you are using it, you still need to periodically check and top-up the oil level to ensure it stays at the recommended level.

Only ever use original **DVP BV32(SW40)** or Easy Composites' **VPO32 Vacuum Pump Oil** to fill or top-up your pump. This is NOT the same oil used by conventional rotary vane vacuum pumps.

Replacing the oil



If the oil appears cloudy, discoloured or contaminated at any time, drain the old oil from the vacuum pump using the drain screw and then refill the pump with fresh vacuum pump oil.

Only ever use original **DVP BV32(SW40)** or Easy Composites' **VPO32 Vacuum Pump Oil** to fill or top-up your pump.

5. Operating Conditions & Maintenance

Your *DS-26P Professional Vacuum Degassing System* is designed to provide years of reliable service however it is very important to ensure that you're using your equipment in an appropriate environment and maintaining it properly; failure to do so will shorten the life of the system and invalidate the warranty.

Please read and follow these important points on operating conditions and maintenance:

EC20-1 Industrial Vacuum Pump

Do...

- Periodically check the oil level in the pump and top-up as necessary using *VPO32 Vacuum Pump Oil*. If oil appears contaminated (cloudy), empty it from the pump and replace it with fresh vacuum pump oil.
- Use the system in a clean, dry environment and in an elevated position such as on a workbench or counter-top.
- Keep the system clean using a damp cloth and soapy water.

Don't...

- Never run the pump unattended.
- Never use the system on the floor.
- Never operate the pump in dusty conditions. Dust particles will be drawn into the pump and will contaminate the oil and accelerate wear.
- Don't use the system as a vacuum *dryer*. Moisture extracted from damp materials such as wood or plaster will emulsify the oil.
- Never use anything other than *DVP BV32(SW40)* or Easy Composites' *VPO32 Vacuum Pump Oil* to top-up your vacuum pump.
- Never use solvents to clean the pump.

DC-26 Vacuum Degassing Chamber

Do...

- Keep the system clean using a damp cloth and soapy water.
- Make sure all fittings are properly sealed. Use PTFE to seal and fittings you need to adjust or re-fit.
- Avoid spilling liquids on the silicone seal. Replace the seal if it becomes contaminated or damaged.

Don't...

- **Never use the chamber to degas resins containing solvents like styrene (such as polyester or vinylester resin)**
- **Never use the chamber to degas acrylic resins such as methacrylate ester.**
- **Never clean the lid with solvents**

6. Warranty

The *DC-26P 26L Vacuum Degassing Chamber* and baseplate is manufactured and warranted by Easy Composites Ltd. Easy Composites Ltd warrants that the *DC-26P Vacuum Degassing Chamber* will be free from defects in materials and workmanship for a period of 12 months from the date of purchase. Should a failure occur within this period, Easy Composites Ltd will repair or replace any defective part of the system on a return-to-base, like-for-like basis.

The *LC20EC Industrial Vacuum Pump* is manufactured and warranted by D.V.P. Vacuum Technology s.p.a.

This limited warranty does not cover damage to the system caused by misuse, improper maintenance or use not in accordance with these instructions. In circumstances of very frequent use it is quite possible for the vanes on the vacuum pump to wear-out, indicated by reduced vacuum levels being achieved. This is normal wear-and-tear and not covered by the warranty. Although not considered a user-serviceable part, replacement vanes can be supplied for installation by a competent person to renew the pump and restore the vacuum level.

Easy Composites Ltd is not liable for, and does not cover under warranty, any damages or losses of any kind whatsoever resulting from failure of this product. In the event of a claim, Easy Composites Ltd's sole obligation shall be to issue a refund or replacement of the product itself.

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