



APPLIED VACUUM
ENGINEERING

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DEGASSING SYSTEM

OPERATING INSTRUCTIONS

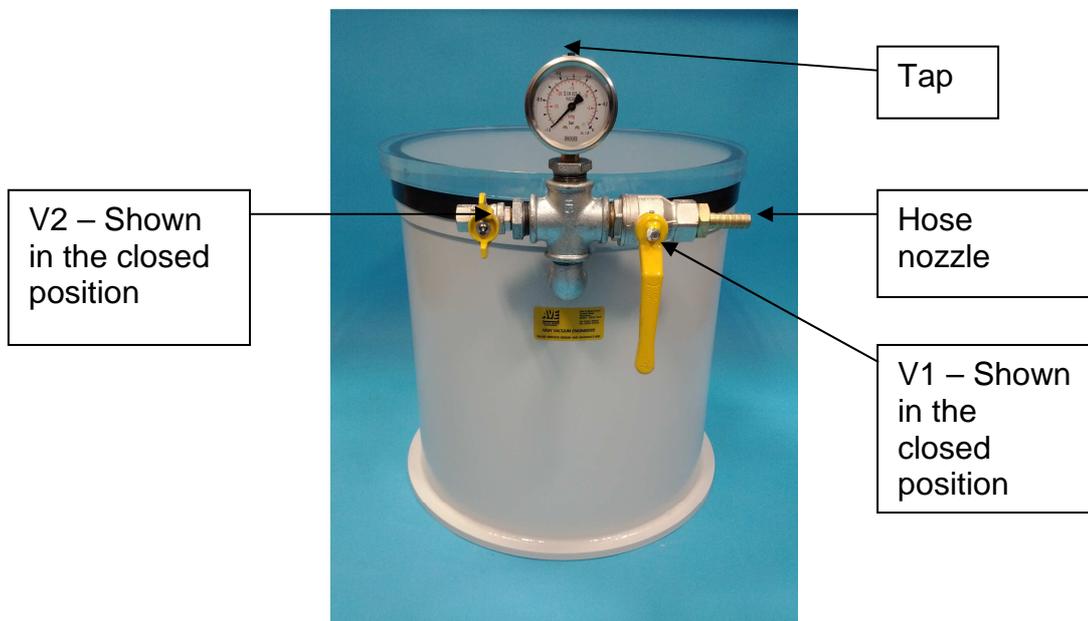


Figure 1 - Degassing System

On receipt check for any damage and report this to us immediately and before attempting to use the equipment.

WARNING The work-chamber is shipped under vacuum. **DO NOT** attempt to remove the lid without first opening either one of the valves to release the vacuum.

If the chamber has been under vacuum for a long period of time the lid may be adhered to the gasket. Do NOT lever the lid off but apply a steady lifting pressure to one side of the lid and gradually it will separate.

Do not carry the chamber by the gauge/valve manifold assembly.

Remove the protective film on both sides of the acrylic lid before operation.

Note - The vacuum gauge is fitted with a small tap positioned at the top of the gauge – see figure 1. The tap is to prevent the glycerine which is inside the gauge from leaking out during transit. The tap has been closed for shipping with the tap lever facing towards the dial face. Before operations please ensure the tap is open with the lever facing towards the rear of the gauge. Failure to do this could result in an incorrect vacuum measurement being displayed on the gauge.

To commission the equipment.

Connect a vacuum hose to the hose nozzle on valve V1.

Connect the other end of the hose to a vacuum pump.

Fill the pump with oil to level approximately $\frac{3}{4}$ up the sight glass. (Only required on DVP vacuum pumps supplied as a kit).

Connect the vacuum pump to a suitable mains supply but do not switch on.

Close the pump isolation valve V1.

Switch on the vacuum pump. This will allow the pump to warm up and for the pump oil to circulate while the chamber is being loaded.

To operate the equipment.

WARNING. Some resins and solvents react with the acrylic lids. Take care not to allow resin or solvent to come into contact with the lid otherwise irreparable damage could occur.

Put the resin/silicone in to a suitable container and place in the chamber DO NOT OVERFILL THE CONTAINER. Resins expand rapidly under vacuum (4-5 times the volume) and if overfull will overflow into the chamber.

Close the air vent valve V2 and make sure the lid is properly in place on the top of the chamber.

Slowly open the pump isolation valve V1 and watch the surface of the resin.

As soon as you see the surface showing bubbles close the isolation valve V1. Do not initially allow the resin to bubble vigorously.

If the resin continues to rise bleed some air in through the vent valve V2, then close that valve.

When the surface subsides partially open the pump valve V1 again.

By balancing the operation of the valves it will be possible to pump even quite troublesome resins down to a good vacuum without them overflowing.

Once you are satisfied that the resin is degassed close the pump isolation valve V1, and open the vent valve V2 and remove the lid.

WARNING Never switch the pump off, with the chamber under vacuum and the isolation valve open otherwise the pump can run in reverse damaging the pump (only on vacuum pumps that do not have an anti-suck back valve fitted) There is also the possibility that pump oil could enter the chamber.

MAINTENANCE

Always check the level and condition of the pump oil. If the oil appears to be milky change the oil according to the manufacturers instructions. Never use thinners or other solvents as a pump flushing agent. If the pump needs flushing then only use clean vacuum pump oil.

Keep the lid seal clean and free from resin or other materials.

If the pump requires a complete overhaul or full service please contact our service department. We recommend that pumps are serviced annually, but that period is dependant on usage.

Wash the acrylic with a solution of mild soap or detergent and lukewarm water. Rinse with clean water and dry. Do not use abrasive cleaners or cleaners containing solvents such as acetone, gasoline, benzene, alcohol, carbon tetrachloride or lacquer thinner.