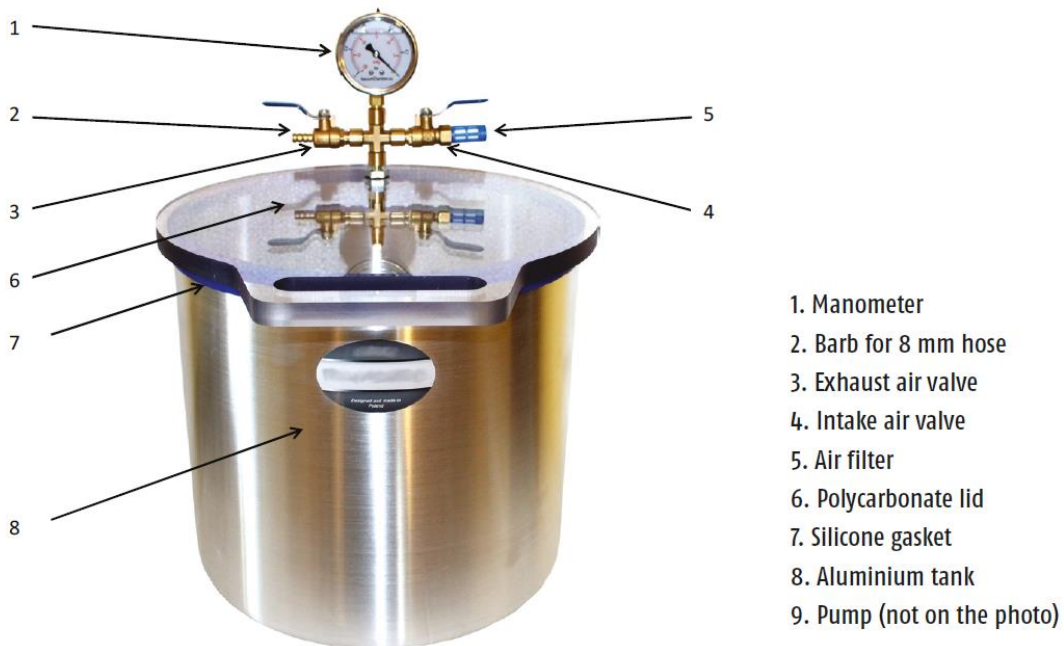


TI 15/17: Instructions for using "Bubble-free plus"

"Bubble-free plus" is used to evacuate 2-pack casting compounds by removing the air entrapped during mixing. Taking just a few minutes, this evacuation process permits to achieve a bubble-free potting result.

"Bubble-free plus" is composed of an aluminium desiccator with polycarbonate lid (see picture below) and a high performance vacuum pump.



Component parts of "Bubble-free plus" desiccator

The transparent lid permits to observe the evacuation process. By means of the intake and exhaust air valves, it is possible to adjust the vacuum, while the air intake filter prevents dirt from getting into the casting compound. The diffusor included in the scope of delivery evenly distributes the air flow that enters the desiccator when the vacuum is balanced; this way, splashing of the compound is avoided.

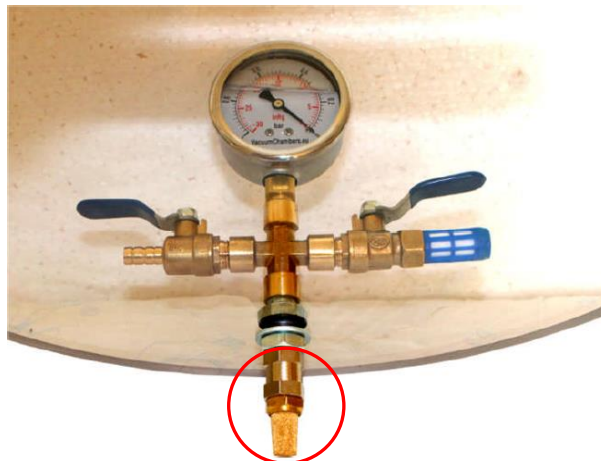
Operation of „Bubble-free plus“

For evacuating casting compounds, a vacuum of 30 mbar (60 mbar for epoxy resins) is sufficient. „Bubble-free plus“ is suitable for evacuating a setup quantity > 500 g.

→ When operating the pump, follow the instructions supplied.

Before first start-up

- Mount the ¼" brass hose nozzle supplied in the installation package on the check valve at the suction port of the pump.
- Tightly screw the diffusor (see picture below) with your hand, from the underside of the lid, onto the lower part of the valve group.



- Plug the hose supplied in the installation package on the barb of the desiccator (see picture on page 1) and fix it with a hose clamp.
- Plug the other hose end on the hose nozzle of the pump and fix it with a hose clamp, too. Make sure that the hose is not kinked.

Before each start-up

- Make sure before each start-up that the desiccator is not damaged. Never use it if the lid shows cracks, or if the aluminium container is deformed or damaged.
- Pull out the green rubber cap located on the upper side of the manometer. Do not turn the manometer upside down when the cap is pulled out, as glycerol may leak out.

Step by step evacuation

- Keep your work environment clean and avoid soiling the desiccator.
- Mix the casting compound just shortly before the evacuation process.
- Fill up the container to be used for evacuation with compound to no more than one third, in order to avoid foaming over when evacuating.
- Place the container on the base of the desiccator and position the lid centrally on the aluminium container to close tightly.
- Make sure that the intake and exhaust valves are open.
- Start the pump and close the intake valve slowly.
- If necessary, press slightly on the lid until you notice an increase of the vacuum in the desiccator.

Depending on the volume of air stirred in, you will notice a strong bubbling of the compound followed by the collapsing of the foam.

→ Close the exhaust valve and switch off the pump immediately if the compound tends to foam over due to excessive bubbling; wait until most bubbles have dissolved before you continue to evacuate.

Once the foam has collapsed you may stop the evacuation process, even if some more bubbles go up from the compound.

→ Close the exhaust valve; switch off the pump and ventilate the desiccator by opening the intake valve **slowly**.

Should you open the valve too quickly, the compound may start splashing.

→ Now you can take off the lid. If the lid has been sucked strongly, shake it cautiously while holding the gasket with your other hand.

If you pull on the lid too strongly, the gasket may be torn off.

→ After your work has been completed, push the green rubber cap on the manometer downward again to prevent the glycerol from escaping.

→ Never displace or transport the desiccator under vacuum.

→ Do not use the desiccator for evacuating solvent-containing products or aggressive resins (e.g. based on acrylate) as these may attack the lid surface of the desiccator.

Auxiliary products recommended

For the cleaning of "Bubble-free plus", a cleaning kit is available which is composed of:

- Plastic cleaner **HP 5402** for the gentle cleaning even of very dirty surfaces
- Special cloth: high quality cotton cloth, soft and fluff-free, hard-wearing and absorbent.

Cleaning of desiccator

→ Clean the desiccator directly after use, since cleaning will be more difficult after the compound has started curing and will be impossible when fully cured.

→ Wipe off splashes with a soft and dry paper towel. Remaining residues can be removed with cleaning kit **HP 5402**. For this, apply the plastic cleaner **HP 5402** on the special cloth and rub the surface, or pour **HP 5402** directly on the dirty surface and rub with the special cloth. If necessary rub again with fresh water. Make sure that the lid surface is not dried by rubbing.

→ Dust or other loosely adhering particles can be removed with water and a soft cloth or sponge.

→ **Do not use solvents, (solvent-containing) cleaners or abrasive products, as these may attack/scratch the surface.**

For reasons of safety, do not use a desiccator showing cracks or damages.

→ **Do not use hard, pointed or sharp-edged objects for cleaning as they may damage the surface.**

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