



## Cleaning and maintenance

### what and how to clean injection pumps

This instruction manual is a brief description of how to clean, what to use for cleaning, and how to maintain injection pumps.

We thank Hammpack® brand for providing marketing materials and assistance in creating this description.

### How to clean injection resin pumps?

Injection resins, such as **EasyInject** / **HydroGum** / **CrackFlex** / **WaterStopper**, cannot come into contact with water inside the pump. Solvents like acetone, nitro, and others are not suitable for cleaning pumps, as there is a risk of resin foaming in the pump, which can clog the pump.

We recommend using the eco-friendly Hammpack® PI-Cleaner, which does not damage O-rings and seals in pumps and injection heads, has conserving properties, does not foam in case of contact with resins, and does not evaporate.

After each use of the injection pump, we recommend filling it with the specialized lubricant Hammpack® PI-Saver.



### What should be used to clean pumps after cementitious grouts?

Cementitious mortars / grouts (such as **ResinBau InjectGrout 4035** / **AnkerBau**) delivered by pumps should be cleaned with a large amount of water. After each water cleaning, we recommend flushing the pump with the specialized lubricant Hammpack® PI-Saver to extend the device's lifespan.



### How to prepare an injection pump for injection?

- ❖ Make sure that there are no resin or water residues in the pump (in case of resin injection).
- ❖ Pour PI-Saver lubricant into the pump (most pumps should not operate "dry").
- ❖ Start the pump and check if it is working correctly.
- ❖ If you want the pressure gauge to work after completing the injection, use PI-Saver lubricant before and after each injection: pour the oil into the pump so that you can create maximum pump pressure with the valve closed. PI-Saver should reach the space of the Bourdon tube and remain there throughout the injection - if injected material hardens there, the pressure gauge will stop working or stop at a certain pressure.
- ❖ Drain the contents of the pump.
- ❖ The pump is ready for injection.

## How to clean an injection pump?

- ❖ Pump out the injection material
- ❖ Pour Hammack® PI-Cleaner into the pump tank.
- ❖ Pump until a clean solvent (without any color of the injected material) appears in the expelled material.
- ❖ Increase the pressure to near the maximum pump level (maximum flow).
- ❖ Close and open the injection valve a few times (perform a "valve shot").
- ❖ If your pump is equipped with an overflow valve, or an overflow valve with a pressure reducer, remember to clean this system as well.
- ❖ Drain the contents of the device.
- ❖ The pump has been cleaned.
- ❖ We recommend flushing the pump with Pi-Saver lubricant.

## Tips & Tricks

- ❖ During injection, cleaning, and pump preparation, wear safety glasses and protective clothing.
- ❖ In emergency situations, if the resin starts to set in the pump tank, do not drain the resin through the pump. Instead, pour it out of the tank and proceed immediately to the cleaning procedure.
- ❖ Foaming injection resins react with moisture from the air. If a skin forms on the top of the cup, take care not to pull it into the pump (despite the tight sieve in the pump, we recommend removing the skin).

