

moist air in your system. After a few minutes of cooling turn on your pump and make sure you have a good vacuum seal.

In operation, turn on the PumpSaver a few (10 minutes) minutes before you will need to operate the vacuum system. This will allow sufficient cooling time. If moisture is in the trap, remove the lid and baffle and dry with a cloth or towel. Paper towels are not recommended since paper fibers may be left in the trap and be drawn into the vacuum pump. You can leave the PumpSaver on while setting up and running tests with your vacuum system during daily use. It does not need to be turned off after each use, however, once daily testing or use is complete unplug or turn the unit off.

ALL NEW AutoRice™ Controller

AUTOMATIC CONTROL UNIT FOR YOUR RICE TEST

InstroTek's NEW AutoRice is an automatic control unit allowing laboratory technicians to conduct Maximum Specific Gravity tests with the press of a button. Designed to accurately control and monitor the vacuum pressure, vacuum time and shaker vibration frequency, AutoRice ensures more consistent inter-laboratory repeatability and accuracy.



Patent No: 10,215,678

Works with glass flasks and metal container setups.

Digital manometer included in the AutoRice is corrected for temperature changes for enhanced accuracy.



PUMPSAVER™

An environmentally friendly electronic moisture trap that replaces desiccants



Patent No: US RE 46,616E

OPERATING MANUAL



Research Triangle Park, NC | Philadelphia, PA | Grand Rapids, MI
Austin, TX | Denver, CO | Las Vegas, NV | Concord, CA

Please visit: www.instrotek.com
email: sales@instrotek.com • tel: (919) 875-8371

www.InstroTek.com

CAUTION: DO NOT ATTEMPT TO MAKE REPAIRS TO THE UNIT WHILE IT IS PLUGGED INTO AC POWER.

DANGER: TO AVOID INJURY, DO NOT INSERT FINGERS UNDER OR OVER THE FAN.

The PumpSaver™ is an innovative product designed to remove moisture from air lines leading to vacuum pumps. With the Pumpsaver on and the trap cold, moisture in air passing through the aluminum trap will be condensed and accumulate in the trap. The unit is designed for use with vacuum pumps drawing down a closed system. Additional moisture traps such as desiccants are not necessary when using the PumpSaver.

Included with PumpSaver is a lid with gasket to seal the trap, a baffle which goes inside the trap to cool air and help force the air towards the coldest part of the trap, and a set of adapters to adapt your hose sizes to the PumpSaver.

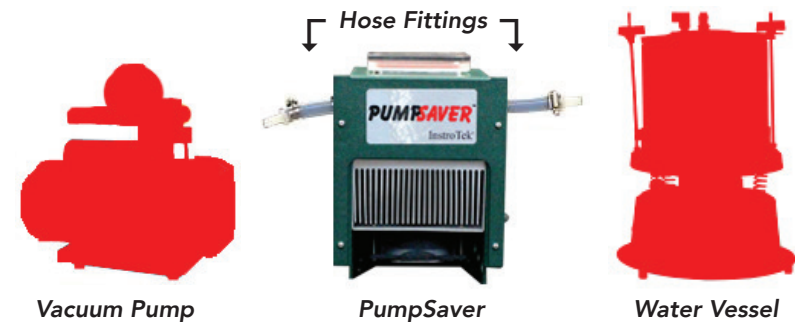
The PumpSaver operates on 110-120V AC (220V optional). The unit is connected in-line on the vacuum pump side of a system. Do not block the front fan exhaust on the unit and leave space around the PumpSaver to allow adequate airflow.

Once you unpack your PumpSaver you can check the operation simply by removing the tape from the lid, placing the lid on the trap and plugging the unit in to an outlet. You will hear the fan come on and the green lights on the power supplies will come on. Within a few minutes you can remove the lid and feel the bottom of the trap and walls getting cold. The unit will continue to get very cold if left on.

Now, unplug the unit and connect into your vacuum system:

There are two brass fittings extending from each side of the PumpSaver. Your vacuum pump hose will be connected to one side and the hose coming from your vacuum chamber to the other side. It does not matter which side of the PumpSaver is connected to the

vacuum pump. The PumpSaver fittings are made for 1/2" internal diameter hoses. If your hose is 1/2" ID use the hose clamps to connect your hose to each side of the unit. Tighten the hose clamps tightly against the hoses on the brass fittings to assure there is no vacuum leak. If your hose end seems discolored or brittle, cut back to allow a new section of hose to attach to the PumpSaver. Your PumpSaver unit has been factory tested and does not leak vacuum. If your system will not pull to its normal vacuum after installing the PumpSaver, it is likely the hoses are not connected correctly or the hose clamps are not tight. If your hose does not fit the Pumpsaver, 2 sets of adapters have been provided: the smaller is to connect to a 3/8" ID hose and the larger to a 7/16" hose. Measure the inside diameter of your hose to help you select the correct adapter. Use the blue hose provided to connect to the PumpSaver 1/2" fittings and then use the adapter at the end of the hose. You must use a hose clamp on every hose connection to seal for vacuum. If neither adapter fits, you can either change to a larger diameter hose or locate an appropriate adapter. Usually these can be found in the plumbing section of a hardware store and will be either plastic or brass. You may need a smaller hose clamp in some cases. InstroTek recommends going to a 3/8" or larger hose if possible since this will help air flow through your system.



Once your connections are made, plug the PumpSaver in and test the vacuum. The temperature of the PumpSaver will not affect the vacuum but will only remove moisture in air when it is cold. Allow a few minutes (10 minutes) cooling before activating the vacuum pump if there is (cont.)