

EM-Tec Save-Storr inert gas sample storage container

Product #[13-001060](#)



Description

The EM-Tec Save-Storr inert gas sample storage container has been designed to safely store and transport moisture or oxygen sensitive samples under a dry and inert gas atmosphere. Features are:

- Clear and robust poly carbonate box (2)
- Solid hinge, locking claps and vacuum/gas seal (1 & 3)
- Gas inlet with ball valve and 6mm hose barb connection (6 & 7)
- Gas outlet with ball valve, safety valve and 6mm hose barb connection (6, 5 & 8)
- Internal gas distribution hose (4)

A separate source of inert gas is needed to use this box; this has to be provided by the user and is not included with the EM-Tec Save-Storr box. Use the gas inlet to connect an external inert gas source. Use the gas outlet either with natural flow or connect a vacuum pump for more effective purging. The gas distribution hose transports inert gas to the opposite side to facilitate effective purging. Alternatively, the Save-Storr box can be brought into a glove box and loaded with samples under inert atmosphere.

Storage Capacity

The volume of the EM-Tec Save-Storr container is 1.75ltr. The optionally available perforated shelves greatly increase the storage area. Inside dimensions are 200 x 99 x 89mm. Choice of single perforated shelf and double perforated shelves. The perforation holes are compatible with the $\varnothing 3.2$ mm pins of the standard SEM pin stubs and the Zeiss pin stubs.

Operation

Inert gas with natural flow purging method

- Place the closed EM-Tec Save-Storr sample container on a stable and flat surface
- Connect the gas inlet to an inert gas source
- Check the pressure; maximum of 0.4 bar over-pressure
- Open the gas outlet valve
- Purge the EM-Tec Save-Storr box with inert gas by opening the gas inlet valve
- Close both valves
- Place the samples in the EM-Tec Save-Storr box.
- Check if O-ring surface is clean; if not, wipe clean with a lint-free cloth
- Close the lid and lock it with the two clasps
- Open gas outlet valve
- Open gas inlet valve and purge again with inert gas
- Close gas inlet valve
- Close gas outlet valve
- The samples are now stored under inert gas

Inert gas vacuum pump purging method

- Place the closed EM-Tec Save-Storr sample container on a stable and flat surface
- Connect the gas inlet to an inert gas source
- Check the pressure; maximum of 0.4 bar over-pressure
- Open gas outlet valve
- Purge the EM-Tec Save-Storr box with inert gas by opening the gas inlet valve
- Close both valves
- Place the samples in the EM-Tec Save-Storr box.
- Check if O-ring surface is clean; if not, wipe clean with a lint-free cloth
- Close the lid and lock it with the two clasps
- Connect an oil-free vacuum pump to the gas outlet
- Open gas outlet valve and pump down the Save-Storr container
- Close gas outlet valve and disconnect vacuum pump, alternatively keep the gas outlet valve open and keep the vacuum pump running during inert gas venting.
- Slowly open the gas inlet valve and vent with inert gas
- In case of over-pressure, open the gas outlet valve
- Close gas inlet valve
- Close gas outlet valve
- The samples are now stored under inert gas

Maintenance

The EM-Tec Save Storr inert gas sample storage container requires little maintenance:

- Keep the sealing gasket clean and dust free.
- Do not allow dust or debris to enter the ball valves
- Keep the sealing of the over-pressure valve free clean
- If needed, apply a small amount of silicon grease to the sealing surface of the over-pressure valve

Warning

- 1 - Do not use high pressure gas to fill or purge the EM-Tec Save-Storr container. The maximum over-pressure allowed is 0.4 bar which translates in a maximum of 1.4 bar gas pressure at sea level. When higher pressures are used, the safety valve will open or can even pop out.
- 2 – Always open the gas outlet valve when filling the Save-Storr container; this will avoid over-pressure
- 3 – Only use this device in a well ventilated area with sufficient supply of fresh air
- 4 – Do not use the EM-Tec Save-Storr container as a vacuum storage container; it is not designed for this purpose

Over-pressure valve

The over-pressure valve consists of a clear silicon umbrella type mini-valve seated on an aluminium flat surface. A pin in the center keeps the silicone mini-valve in place. This valve opens at over-pressures in the range of 0.3 – 0.5 mbar by lifting the top. It closes by sealing the silicon rim of the “umbrella” to the aluminium flat. If the over-pressure is too high, the silicon mini-valve can pop out; it needs to be re-inserted. Light greasing with silicon grease at the underside of the “umbrella” improves sealing; silicon grease at the holding pin can cause the mini-valve to pop out too easily.

TSB 13-001060 EM-Tec Save-Storr inert gas sample storage container 2017- 04-25 Revision 2