

FT-IR Purge Gas Generators

Frequently Asked Questions

Q: How do I select an FT-IR purge gas generator?

A:

- Use model 75-45 with single instrument purge, low daily sample throughput.
- Use model 75-52 with single instrument purge, high daily sample throughput.
- Use model 75-52 for all dual instrument purges.
- Use model 75-62 for purge to three instruments: use with all high-end research assays.
- Use model 75-5041 for all labs that do not have access to a house compressed air supply.

Q: Can the purge gas generator be installed outdoors?

A: **No, indoor areas only and not subject to freezing temperatures.**

Q: What is needed to install the FT-IR purge gas generator properly?

A:

- Inlet isolation valve to turn compressed air supply on and off.
- Inlet pressure regulator, Parker's offers model 72-130-V883 regulator.
- Outlet pressure regulator and flow controller, Parker offers 72 series.
- ¼" suitable length of hard or soft tubing, polyethylene or Fluorocarbon.
- Suitable bench or wall space for mounting.

Q: Can the purge gas generator be installed outside the lab?

A:

- Preference is in the same lab as the FT-IR.
- Yes, installer will have to account for pressure drop, piping impurities, and piping cost.
- Please Note: long runs of piping can promote the potential for plumbing impurities.

Q: What are the maintenance requirements for the FT-IR purge gas generators?

A:

- Parker recommends simple annual maintenance of inlet filter cartridges, see owner's manual for MK style maintenance kit.
- Replace compressor-core and filter cartridges on 74-5041 units every 4,000 to 8,000 of use.

Q: How does the FT-IR purge gas generator remove water vapor and CO₂?

A: At the heart of each system is a proprietary blend of molecular sieve, the sieve is 100% regenerative. During alternating high pressure and low-pressure cycles, the sieve has a high affinity to remove water vapor and CO₂.

Q: How can you determine if the FT-IR purge gas generator is working?

A:

- Check background spectra, there should be no water vapor and CO₂ noise.
- Listen, solid-state solenoid should switch every 4-5 minutes.
- Check output humidity indicator for green color, green is good.

Q: What if output purity indicator is yellow?

A:

- Make sure unit is powered up, also check fuse and fuse holder.
- For model 74-5041, open right panel and check internal pressure gauge, should be above 100 psig. If not, order new compressor-core.
- Verify inlet compressor air pressure is above 60 psig.
- Snoop all outlet connections for leak points.
- Make sure the purge generator is not being overflowed, refer to manual to the capacities in product operating manual, compare against desired purge rate.
- Listen for irregularities in solenoid switching or loud noise or humming.
- Inspect automatic drains on each inlet filter to make sure they are closed.
- Order and install MK style filter maintenance kit.
- Contact technical support department, solenoid/logic box may need service.
- Remove the cover and check for internal leaks.

Q: What is purpose of blue muffler/silencer?

A:

- **This is the release point of waste air that is saturated with water vapor and CO₂ ; this allows the proprietary molecular sieve full regeneration.**
- **It is normal to hear an air leak at the blue muffler/silencer.**

Q: What if there is no outlet pressure or flow from the purge gas generator?

A:

- **Perform the same steps listed if output purity indicator is yellow.**
- **Contact technical support department, solenoid/logic box may need service.**

Q: When should the FT-IR purge gas generator be taken out of service?

A: Congruent with the normal useful life of a lab instrument, Parker recommends decommissioning every seven years.

Q: How long is the warranty period for purge gas generators?

A:

- **12 months from date of shipment: can be upgraded to 24 months.**
- **90 days for service center repairs: non-upgradeable.**

Q: What if the inlet compressed air to the purge the gas generator is heavily concentrated with inherent compressor water and oil?

A:

- **Usually do nothing: the purge gas generator has single or dual stage inlet coalescing conditioning filters to purify the incoming compressor air.**
- **Consider Parker's 72-100 series inlet compressed air purifier as extra safety measure.**

Q: Does the proprietary molecular sieve need to be replaced?

A:

- **No, not under normal operating circumstances.**
- **Yes, in event of abnormal poisoning with compressor oil.**

Q: Can the proprietary molecular sieve be regenerated?

A: Yes, this can be done on-site. Leave the generator on and in normal operation mode, simply shut off all flow demand downstream. Moisture indicator should return to green after 12 hours. If not, contact technical support department.

Q: Can the proprietary molecular sieve be repacked?

A: Yes, at the factory only, for a nominal fee.