



MMR Technologies, Inc.

ELAN2 LIQUID NITROGEN GENERATOR FREQUENTLY ASKED QUESTIONS

What does the elan2 system do?

The elan2 liquid nitrogen generator generates liquid nitrogen from the air, at a rate of up to 4.5 liters per 24 hour period. The air we breathe is approximately 78% nitrogen gas – it makes sense to use that as an inexpensive source.

Once the air is brought into the elan2, the air is compressed to remove water vapor and other contaminants. The nitrogen is then filtered from the remaining air, and the oxygen and other gases are returned to the room. The nitrogen is then liquefied, and transferred to the internal storage container, ready to deliver on-demand when needed.

What is the difference between the Office Generator and the Autotransfer system?

The Office Generator has an internal reservoir that can hold 0.75 liters of liquid nitrogen. Once this tank is full, the system goes into a standby mode until some or all of the liquid nitrogen has been used. At this point, the elan2 will power up and start production again. It will take just over 5 hours to fill the internal reservoir.

The Autotransfer system produces liquid nitrogen at the rate of up to 4.5 liters every 24 hours, but continuously transfers this to a large external 20 liter tank. It takes approximately 4.5 days to fill this tank. When you need larger volumes of liquid nitrogen at a time, this is the ideal set up – you can take what you need from the larger tank, and then continue production.

How quickly does the elan2 generate liquid nitrogen?

The elan2 systems can generate liquid nitrogen as much as 4.5 liters of liquid nitrogen every 24 hour period (this equates to between 2 and 4 CryAcs every 4 hours, depending on the size).

What is the warranty on the instrument?

This instrument has a one year warranty. If you would like information on our standard warranty terms, please contact us, and we would be happy to provide you with this agreement.

What maintenance is required?

Once a month, you will need to change a filter. This takes roughly 2 minutes to do, through an easy access door on the back of the unit. The cost of filters is approximately \$40 per year. A one year supply is included with the initial system purchase.

The elan2 has a self cleaning cycle that it undergoes once a week, in the middle of the weekend. This will not affect your ability to get liquid nitrogen as you need it.



MMR Technologies, Inc.

Once a year the compressor will require a more detailed maintenance by MMR Technologies to ensure proper operation and longevity. There will be a small charge for this maintenance.

How large is the elan2?

The elan2 Office Liquid Nitrogen Generate is composed of two parts: the Generator and the Air Compressor.

Compressor: 7.5" wide x 17.5" deep x 15" high
(45 cm wide x 45 cm deep x 38 cm high)

Generator: 13" wide x 13" deep x 37" high
(33 cm wide x 33 cm deep x 94 cm high)

The generator can easily sit on top of the compressor, making the footprint for the system smaller.

17.5" wide x 17.5" deep x 52" high
(45 cm wide x 45 cm deep x 132 cm high)

The elan2 Liquid Nitrogen System with Autotransfer is also composed of two parts: The Generator with Autotransfer and the Air Compressor.

Compressor: 17.5" wide x 17.5" deep x 15" high
(45 cm wide x 45 cm deep x 38 cm high)

Generator with Autotransfer: 14.5" wide x 35" deep x 37" high
(37 cm wide x 89 cm deep x 94 cm high)

The compressor can be located anywhere within a 15 foot (4.5 meter) distance of the Generator with Autotransfer.

What do I need to operate the elan2?

You need two things to operate the elan2:

1. Standard electricity from a wall outlet: 2 outlets

Note: It is recommended this is not on the same circuit as other heavy equipment like lasers, sanitizers, autoclaves, etc.

2. Good airflow in the room the elan2 is installed.

Note: These may not be installed in a small closer or storage room where there is not good air flow. The elan2 uses the nitrogen from the air to produce liquid nitrogen. An inadequate air supply, like that found in a small closet, could result in damage to the instrument, not covered under warranty.

3. The room the élan2 is in must meet the following requirements:
 - a. Room temperature may not exceed 25 C (77 F).



MMR Technologies, Inc.

- b. The room should be free of dust and exhaust from other instrumentation.
- c. The room should be of low humidity.

How is this system safer than the liquid nitrogen I have delivered?

There are three tiers of safety built into the elan2 liquid nitrogen generator, for the safety of you and your staff:

1. Liquid nitrogen is available only when you push a button. There is no automatic delivery of this to your container. The liquid nitrogen will only dispense as long as you hold the button down.
2. The system has a key – if the key is not placed in the system and turned to the on position, no liquid nitrogen will be transferred, even if you push the button. This allows you to control who has access.
3. Liquid nitrogen cannot be dispensed unless there is an RFID tagged container placed below the delivery spout. This tag will unlock the dispensing mechanism and enable transfer. This way there is no possibility of accidentally pressing the button and letting the liquid nitrogen dispense with no container present.

How is this liquid nitrogen different from the liquid nitrogen I have delivered?

The liquid nitrogen you have delivered is approximately 98% pure, but it frequently has additional particulate matter and water that are picked up when it is transferred several times between where it is generated and delivery to your office.

The liquid nitrogen from the elan2 is 98% pure, and you are in control of the nitrogen from the time it is generated – ensuring minimal water or contamination between the time you get what you need and use it.

What is the cost per liter of liquid nitrogen generated?

The cost of operating the elan2 varies based on the cost of electricity, but an average estimate is between \$26 and \$43 per month in electricity – approximately the same as a refrigerator.

Who uses these systems?

These liquid nitrogen generators are found in dermatology offices, government and military medical centers, research facilities, and scientific laboratories.

Where are these systems being sold?

Currently, these systems are available for sale in Japan, the United Kingdom and Ireland, and throughout the United States. If you are from somewhere outside of these areas, please feel free to contact us to be placed on a list to be notified when we can sell to your area.



MMR Technologies, Inc.

**IF THERE IS FURTHER INFORMATION YOU WOULD LIKE, PLEASE CONTACT MMR TECHNOLOGIES BY
PHONE (650-962-9620), FAX (650-962-9647) OR EMAIL (ELAN2SALES@MMR.COM).**