

## Are there any safety concerns when using the HAKKO FX-780 or FX-781 Nitrogen Generators?

The use of the HAKKO FX-780 and FX-781 Nitrogen Generators in soldering applications as designed are completely safe and pose no risks of nitrogen asphyxiation to users. The nitrogen generators are membrane filters that separate the nitrogen from the compressed air source, providing a near pure flow. The myth that these generators could lead to nitrogen asphyxiation of the user or create dangerous levels of nitrogen in a room is erroneously founded in the dangers when dealing with dewars or large cylinders of nitrogen. For example, when using a dewar, a spill of only 1 liter of liquid nitrogen would result in the expansion of approximately 700 liters of nitrogen gas which could rapidly change oxygen levels in a room.

Nitrogen generators are far safer than using large cylinders or dewars. When the compressed air source is provided to the nitrogen generator, the gases are separated at that point temporarily, and as the nitrogen flows to the soldering iron around the tip, it then re-mixes with the air in the room. At the same time, the gases expelled by the nitrogen generator also mix with the air in the room. At no time will the level of nitrogen or oxygen in the room increase or decrease. The gases are only temporarily separated for a short time. Furthermore, the use of nitrogen generators also allows nitrogen to be created on demand and avoids the dangers of having to store and handle high pressure cylinders or dewars.

HakkoUSA Knowledge Base

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