

Freeze drying systems, Lyotrap



For most laboratory, light process and pilot scale applications.

- Choice of 3 models from 3kg to 18kg ice capacity
- Large range of accessories and consumables
- Compatible with "Edwards" accessories
- Simple and safe to operate
- Corrosion resistant refrigeration systems
- CFC-free refrigerant
- Stainless steel chamber
- -55°C/-80°C capabilities
- Flexible applications

Mini Lyotrap

LTE's smallest bench top freeze dryer still has an ice capacity of 3kg and represents excellent value. Taking up minimal bench space, the Mini Lyotrap is ideal for all common freeze drying applications and can be used as a cold trap for single or multiple units.

Lyotrap

This simple to use, microprocessor controlled bench top model is packed with useful features. The Lyotrap incorporates an electric defrost facility, displays temperature and vacuum parameters digitally and incorporates a safety system which prevents the vacuum pump being activated until the temperature has reached -30°C.

Lyotrap Ultra

LTE's largest freeze dryer has an 18kg ice capacity. With the same controls and features as the Lyotrap, the Lyotrap Ultra is ideal for high product volumes and long running times before defrost. It is well suited for multi-user laboratories and pilot scale applications. Includes an integral vacuum pump and is floor standing.

Freeze drying using:

Flasks

The sample in the flask would be pre-frozen before being freeze dried. A popular method of freezing liquid sample is to rotate the flask in a pre-freezing bath. This has the benefit of providing a thin film of frozen material around the inside of the flask which improves the efficiency and overall speed of the freeze drying process. Flasks are usually placed onto a suitable manifold for freeze-drying, many of which are available. Column manifolds are ideal if you are freeze drying flasks and jars only. Drum manifolds or the acrylic chamber fitted with a manifold lid will allow more flexibility in the type of product to be freeze dried.

Trays or shelves

Again, product would be pre-frozen before freeze drying. Using our standard shelf arrangement, samples would be placed onto the shelves directly. For drying using the tray and support option, samples would be pre-frozen in the trays provided and slotted onto the rack. Up to six trays could be freeze dried at any one time. Temperature controlled heater mats can be supplied for this application.

Vials

Freeze drying in vials requires the use of our manual stoppering shelf arrangement, connected to the required base unit. This stoppering system will allow up to 500 vials to be dried at once, with a maximum vial height of 50mm. Supplied with suitable trays and an acrylic vacuum chamber. Optional temperature controlled heater mats will allow improved drying rates.

Ampoules

Ampoules need to be frozen before being fitted to the manifold and can be frozen in two ways. They can be placed into a conventional freezer. Whilst this is a common method, freezing in this way can prolong the freeze drying process due to the concentration of the sample. A much better way is to use a spin freezer. Following pre-freezing, the ampoules would be freeze dried using either a single or double manifold arrangement, each manifold capable of holding 48 ampoules. Following freeze drying it is then normal to seal the ampoules using a fine flame technique.



Technical Specification - Specific

	12783075	12793075	12703085	12713085
Description	Mini Lyotrap	Lyotrap	Lyotrap Plus	Lyotrap Ultra
Capacity	3 (ice)	5 (ice)	4 (ice)	18 (ice)
Compressor	0.5 (HP)	0.66 (HP)	0.66 (HP)	1.5 (HP)
Extraction rate, W	80W	170W	220W	350W
Temperature limit, °C	-55	-55	-55	-55
Dimensions, mm	175 x 130 (chamber)	175 x 300 (chamber)	200 x 222 (chamber)	350 x 655 (chamber)
Dimensions, internal [w x d x h], mm	450 x 500 x 400 (overall)	470 x 650 x 535 (overall)	580 x 920 x 500 (overall)	1,180 x 670 x 760 (overall)

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