

Features

- Compatible with 'Edwards' accessories
- Simple and safe to operate
- Corrosion resistant refrigeration systems
 - CFC-Free Refrigerant
 - Simple installation
- Stainless steel chamber
 - 55°C capability
- Flexible applications
- Built to ISO9001
- CE Marked

Freeze-Dryers

Description

Ideal for the majority of laboratory, light process and pilot-scale applications, the Lyotrap™ range provides cost-effective and reliable freeze-drying.

Mini-Lyotrap™

LTE 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-Plus™

This unique bench-top freeze dryer has all the features of the Lyotrap, but also incorporates a built-in temperature controllable work chamber complete with three shelves. Four floating temperature probes allow the load temperatures to be monitored, and as an option, the unit can be monitored and controlled via a remote PC.

Lyotrap-Ultra™

The largest LTE 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. The Lyotrap-Ultra 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 on the trays provided and slotted onto the rack. Up to 6 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 a stoppering shelf arrangement, connected to the required base unit. This stoppering system, which is manually operated, will allow up to 500 vials to be dried at once, with a maximum vial height of 50mm. It is supplied complete with suitable trays and an acrylic vacuum chamber. Optional temperature-controlled heater mats will allow improved drying rates.

Ampoules

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.

3 to 18kg ice capacity
Large range of accessories

The Base Unit

Model/Cat. No.	Ice capacity	Compressor HP	Heat extraction rate (-40°C)	Min Temp °C	Condenser chamber dims. dia x D (mm)	Overall dims. HxWxD (mm)	Recommended vacuum pump
Mini-Lyotrap LF/LYO/02/1	3kg	0.5	80W	-55	175 x 130	450 x 500 x 400	
Lyotrap LF/LYO/01/1	5kg	0.66	170W		175 x 300	470 x 650 x 535	FP/PMP/01/0
Lyotrap-Plus LF/LYO/03/1	4kg	0.66	220W		200 x 222	580 x 920 x 500	
Lyotrap-Ultra LF/LYO/03/1	18kg	0.5	350W		350 x 655	1180 x 670 x 760	Included

Accessories

- | Cat. No. | Description |
|-------------|--|
| LF/LYO/01/0 | Acrylic drying chamber, 240mm internal dia x 300mm high. Stainless steel 4-shelf unit, 220mm dia. For acrylic chamber. |
| LF/LYO/02/0 | 8-port flask manifold lid, including 8 x 3/4" quickseal valves. Cold trap lid with hose for solvent recovery vacuum pump protection. |
| LF/LYO/03/0 | Drying chamber plain lid, 250mm dia x 20mm thick. 16-port drum manifold 24-port drum manifold 6-tray shelf support to fit inside drum manifold |
| LF/LYO/04/0 | (if LF/LYO/11/0 fitted) or acrylic chamber |
| LF/LYO/05/0 | 8-port column manifold |
| LF/LYO/06/0 | 24-port column manifold |
| LF/LYO/07/0 | Temperature-controlled heater mat arrangement (6 mats) |
| LF/LYO/08/0 | Stoppering shelf arrangement |
| LF/LYO/09/0 | 48-port ampoule manifold |
| LF/LYO/10/0 | Acrylic lid with fitting and clamp to accept ampoule manifold |
| LF/LYO/11/0 | Split manifold plus clamps to allow 2 x LF/LYO/30/0 to be fitted |
| LF/LYO/20/0 | Pre-freeze bath (-40°C) |
| LF/LYO/30/0 | 1m vacuum hose and clamp to fit Lyotrap, plus KF25 hose for vacuum pump 2-off 'L' section rubber gaskets for drying chamber |
| LF/LYO/31/0 | |
| LF/LYO/32/0 | |
| LF/LYO/45/0 | VRC100 vacuum pump plus oil mist filter. |
| LF/LYO/50/0 | |
| LF/LYO/51/0 | |
| FP/PMP/01/0 | |



Lyotrap Ultra



Lyotrap with stoppering shelf arrangement



Mini Lyotrap