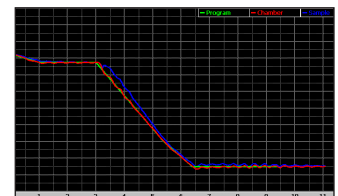
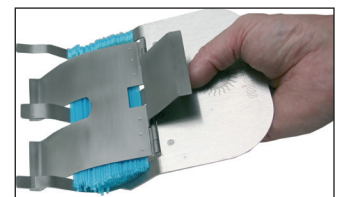




# TURBOFREEZER



## The innovation in straw freezing technology – directed, horizontal nitrogen gas flow for homogeneous and superior freezing results



### Benefits over traditional freezing machines

- The aerodynamic design of the TurboFreezer and the unidirectional, horizontal nitrogen gas flow ensure that all straws pass through identical freezing curves.
- The freezing pattern of each single straw is precisely controlled by instant removal of crystallization energy.
- The heat energy produced by each straw during crystallization is directly removed and does not influence other straws.
- A homogeneous nitrogen gas flow is provided over the complete height and length of the stacks of straw racks.

Semen freezing in conventional freezers suffers from unpredictable cold and warm spots distributed throughout the freezing chamber.

### Your benefits

- Standardized semen freezing curves independent of straw position.
- Higher yields through improved, uniform post-thaw quality of ejaculate.
- Precise control through user defined freezing programs.
- Ergonomic and easy handling of racks and straws in ample freezing chamber.
- Outstanding economy due to high throughput.
- Option to start with temperature +5°C from second freezing cycle on, saving time and LN<sub>2</sub>.



## Product features TurboFreezer L

- Dual operation lid: inserted sliding covers for low impact in terms of cold loss when handling straws and racks after freezing. Complete cover opens supported by gas pressure springs.
- Ample space available to unload racks and safely transfer straws into goblets inside the freezing chamber.
- Subsequent freezing cycles can start immediately after the previous freezing.
- Temperature curves and data of each freezing cycle can be stored and transferred into MS Excel for further analysis.
- Innovative new design of freezing racks, streamlined for optimal LN<sub>2</sub> gas flow.
- Capacity: 30 racks of 175 0.25 ml straws or 30 racks of 100 0.5 ml straws
- Outer dimensions: 222 x 132 x 86 cm (W x H x D)
- Chamber size: 145 x 41 x 32 cm (W x H x D)

## Product features TurboFreezer M

- Capacity: 15 racks of 175 0.25 ml straws or 15 racks of 100 0.5 ml straws
- Outer dimensions: 153 x 132 x 86 cm (W x H x D)
- Chamber size: 78 x 41 x 32 cm (W x H x D)
- Electric connection: 220 V/ 50 Hz

## TurboFreezer M REF. : 16810/0000

### Included in the delivery scope of both freezers:

2 holding devices for 4 goblets, straw pliers, holding box for straw pliers, funnel for filling straws into goblets (65 mm)

## Technical features TurboFreezer L

- Highly insulated body with stainless steel cover
- Quadruple LN<sub>2</sub> injection ports
- Conditioning plenum separated from the freezing chamber
- 2 fan blocks with 4 fans each for homogeneous LN<sub>2</sub> dispersion and precision air flow throughout the chamber
- Programmable logic controller
- 2 temperature sensors (1 chamber sensor, 1 sample sensor)
- Electric connection: 220 V/ 50 Hz (220 V/ 60 Hz optional)
- Required LN<sub>2</sub> pressure: 2.5 bar

## TurboFreezer L REF. : 16811/0000



## Accessories

### Freezing rack Turbo with new design

for 175 0.25 ml straws REF. : 15040/0175

for 100 0.5 ml straws REF. : 15040/0100

### Loading and counting device

for 175 0.25 ml straws REF. : 15041/0175

for 100 0.5 ml straws REF. : 15041/0100

**Pressure container, 189 liters** REF. : 16150/0185

### Heating module for TurboFreezer M/L

to shorten heating time between cycles;  
2 for TurboFreezer L, 1 for TurboFreezer M needed

REF. : 16811/1100