

# Portable Animal Controlled-Rate Freezer



reliable  
precise  
affordable



# PLANER

## IBF-100 Portable Animal Freezer

- Specifically designed for the animal market, powered by a 12 volt battery or mains (via the supplied adapter)
- The freezing chamber sits on a vapour shipper. The nitrogen vapour is used as a cold sink in this unique “dry” system. The same technology ensures quiet operation.
- The chamber can hold 0.25ml and 0.5ml straws and 1.2ml and 2.0ml ampoules.
- Data recording is catered for via the internal memory which holds the last 4 runs and provides an output to Planer's DeltaT software.



### Features

- Totally portable
- Integrated storage facility via the vapour shipper
- High specification temperature range
- Economical
- Quiet in operation
- Easy access to samples
- Straw AND ampoule capacity
- Multi program
- Data retrieval for record keeping
- No separate liquid nitrogen source needed when out in the field
- Simple connectivity

### Patented dual fan configuration

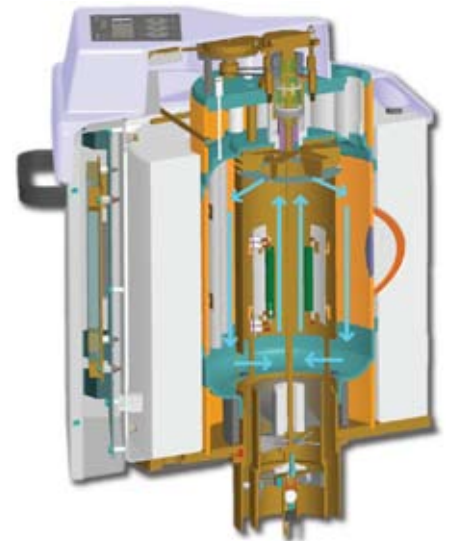
Primary fan keeps the chamber at a uniform temperature

Secondary fan draws cold air in from the dry shipper



### Vapour Shipper

The IBF-100 sits on a vapour shipper, making it completely portable



### Control Panel

Simple user interface only has 3 buttons

Straight-forward, logical controls to save you time



Our freezer has been hard at work in the field...

“Overall I was very impressed with the function of the IBF-100 and most importantly very pleased with the sample post thaw results obtained from the samples frozen with the IBF-100.”

Delene Draper is a lecturer in equine sciences at Writtle College, Essex.



“What I am looking for in an animal freezer is accuracy, reliability, safety and precise recording of all my data. I think that the IBF-100 meets my needs admirably.”

Peter Townley, Genus Breeding Services

*“I was amazed by how accurately the machine controlled the temperature during the cooling process. It is unusual to be able to combine this level of control with ease of use and portability. One is able to take the machine to different zoos and use onsite without any problems.”*

Prof. Bill Holt. Head of Reproductive Biology, Institute of Zoology, London Zoo



# Kryo Series precision controlled-rate freezers

## IBF - 100 Portable Animal Freezer

### System Specification:

|                         |   |
|-------------------------|---|
| • Range                 | +30°C to -100°C (-80°C programmable end temperature)                      |
| • Heating rate          | 5°C/min if powered from 18 V DC supply (2°C/min if low power option used) |
| • Cooling rate          | -10°C/min maximum rate  |
| • Controller accuracy   | ±0.5°C on a hold at 0°C   |
| • Storage temperature   | -10 °C to +50 °C  |
| • Storage humidity      | 5 % to 95 % relative humidity non-condensing                              |
| • Operating temperature | 5 °C to 40 °C   |
| • Operating humidity    | 5 % to 90 % relative humidity non-condensing                              |

### Physical Specification:

|                             |                                      |
|-----------------------------|--------------------------------------|
| • Dimensions                | 430mm high x 290mm deep x 330mm wide |
| • Fitted to dry-shipper     | 980mm high x 369mm diameter          |
| • Weight of freezer         | 8.3 kg                               |
| • Weight of shipper empty   | 10.9 kg                              |
| • Weight of shipper charged | 17 kg                                |
| • Capacity 0.25 ml straws   | 40                                   |
| • Capacity 0.5 ml straws    | 30                                   |
| • Capacity 2 ml ampoules    | 20                                   |

### Controller Specification:

|                              |   |
|------------------------------|---|
| • Display                    | 16 character x 2 line liquid crystal display (LCD) with backlight |
| • Keypad                     | 3 button keypad   |
| • Interface                  | RS 232, 9 way male D-Type for connection to DeltaT                |
| • Number of steps in profile | 32  |
| • Number of stored profiles  | 10  |
| • Number of stored runs      | 4   |

### Power Requirements:

(If low power option used heating rates restricted)

#### Controller Input

|   |                     |
|---|---------------------|
| • Single connection to the high power input                                       | 12 - 18 V DC, 8.2 A |
| • Connection to the low and the high power inputs using the low power input cable | 12 V DC, 4 A        |

#### Mains power adaptor

|          |                               |
|----------|-------------------------------|
| • Input  | 100-240 V AC, 47-63 Hz, 3.2 A |
| • Output | 18 V DC, 6.5 A                |

### Liquid Nitrogen Usage:

|                          |  |
|--------------------------|--|
| • Dry Shipper            | 8.5 litres fully charged   |
| • Typical Nitrogen Usage | 0.3 litres / hour  |
| • Nitrogen Gas Liberated | 1 litre / minute when not powered<br>4 litres / minute maintaining a hold at -30°C<br>45 litres / minute full speed plunge |

**Planer plc, Windmill Road, Sunbury, Middlesex, TW16 7HD, United Kingdom.**

Tel: +44(0)1932 755000 Fax: +44(0)1932 755001 email: sales@planer.co.uk website: www.planer.co.uk

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