

3000 Clini-RF Rapid Freezer Specification



 **MADE IN BRITAIN**

Bright
Instruments

Introduction

The Bright Clini-RF is a small, free standing, top opening, and ultra low temperature freezer. Its function is to rapidly freeze tissue specimens ready for cryotomy or for storage. Inside the Clini-RF are two cylindrical chambers, the upper chamber is held at -40°C and the lower at -80°C .

The lower chamber can be filled with 3M's Novec HFE-7100, into which specimens can be immersed. Alternatively, an aluminium block can be incorporated into which a specimen holder or chuck can be fitted. The upper chamber is used as a short term storage area for specimens after they have been initially frozen in the lower chamber.

A seven day timer can be fitted to the Clini-RF and is available as an accessory. This means that during the hours when the Clini-RF is not being used it can be run in a 'standby' mode with both the upper and lower chambers running at -40°C , thus saving power. At the start of the working day it can be switched to its normal operating mode and the lower chamber can be brought down to -80°C .



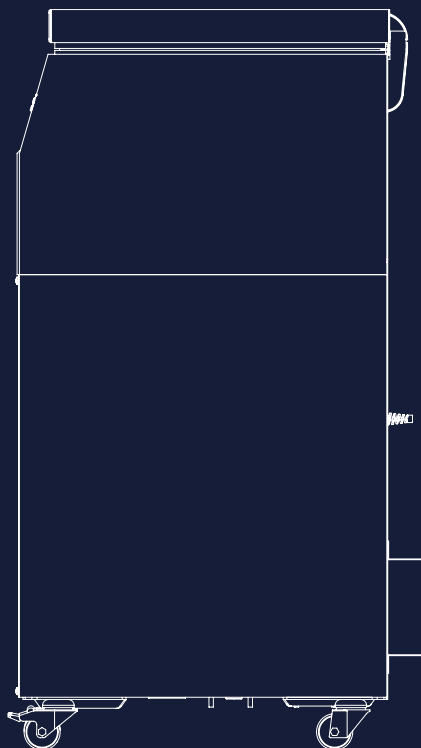
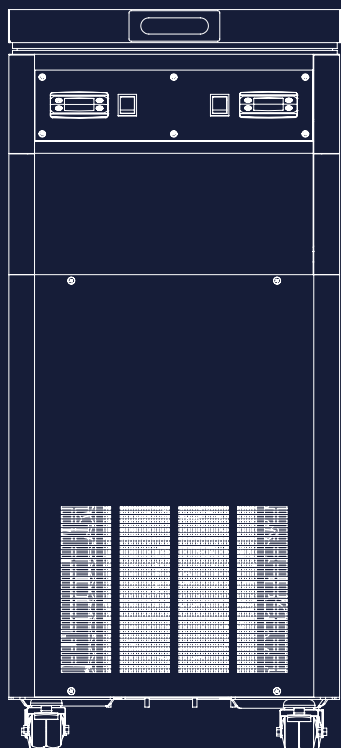
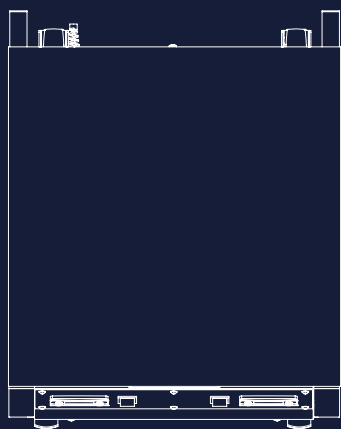
The lower chamber is pictured here containing the aluminium block for quick freezing.

Features and Benefits

- Replaces liquid nitrogen freezing systems
- Replaces carbon dioxide freezing systems of all types
- Offers a distinct improvement in laboratory safety
- Easy to use, therefore little operator training
- Upper chamber available for storage at -40°C
- Hold 3M's Novec Engineered Fluid HFR-7100 for immersion of specimens Typical tissue cooling rate of 0.5°C/s

Standard accessories include:

- Cryo-M-Bed
- Cooling block removal tool
- Allen key
- Spare set of fuses
- Operating manual



Specification

Compressor type	1 x 15cc displacement (primary) 1 x 12cc displacement (secondary)
Refrigerant	Ozone friendly HFC refrigerants R404a (primary) R23 (secondary)
Cooling power	300 watts Main freezer at -40°C Rapid freezer at -70°C
Lowest set temperature	Main freezer -43°C (preset) Rapid freezer -83°C
Main freezer to -35°C	60 minutes
Rapid freezer to -80°C (Liquid bath or solid freezer block)	50 minutes (Main freezer at -40°C)
Fixed freezer block (optional) to -80°C	Less than 30 minutes (Main freezer at -40°C)
Safety Features	Handle designed to ensure maximum distance away from knife edge. Knife guards cover full width of knife
Total power consumption	1100 watts
Dimensions	Cabinet: H1000 x W450 x D500mm Freezer dimensions: Diameter 275 x D136mm Rapid freezer dimensions: Diameter 95 x D95mm
Packing	Packed weight: 85kg Unpacked weight: 113kg

Weights vary according to specification of instrument

3000 Clini-RF Rapid Freezer

Order List 2021

PRODUCT	
Code	Description
ULTRA LOW TEMPERATURE RAPID FREEZERS	
3000-001	Clini-RF Rapid Freezer for 220/240V AC, 50/60Hz Complete with: • Rapid freezer tank to -80°C. • -30°C freezer area for short term storage of specimens. • Removeable block. • Object holder adaptor. Standard accessories include: • Cryo-M-Bed embedding compound. • Cooling block removal tool. • Allen Key. • Spare set of fuses. • Operating manual.
3000-002	Clini-RF Rapid Freezer for 110/115V AC, 50/60Hz Same features & accessories as 3000-001
/T	Clini-RF Rapid Freezer Timer (optional feature) For all models of the Clini-RF, 7 day timing facility, complete with operating instructions.
/VTC	Clini-RF Rapid Freezer Variable Temperature Control (optional feature) For all models of the Clini-RF, variable temperature control for temperatures above -80°C.
57807	Stainless Steel Beaker
57807-1	Stainless Steel Metal Strainer with lid Recommended for use with 3M's Novec 7100
CRYOSTAGE - REFRIGERATED FREEZING STAGE	
8000-208-01	Cryostage Freezing Stage for 220/240V AC, 50/60Hz Complete with: • 130 x 90mm stage. • Freezing to -30°C. • Heater for easy removal of specimen debris. Standard accessories include: • Cryo-M-Bed embedding compound. • Spare set of fuses. • Operating manual.
8000-208-02	Cryostage Freezing Stage for 110/115V AC, 50/60Hz Same features & accessories as 8000-208-01

PRODUCT	
Code	Description
SOLID STATE FREEZER WITH PELTIER DEVICE	
53024-01	Solid State Freezer for 220/240V AC, 50/60Hz Complete with: • 40 x 40mm stage. • Freezing to -25°C • Temperature control is by current limit to Peltier device. • Safety cut-out to detect low water pressure. Standard accessories include: • Cryo-M-Bed embedding compound. • Cooling block removal tool. • Allen Key. • Spare set of fuses. • Operating manual.
53024-02	Solid State Freezer for 110/115V AC, 50/60Hz Same features & accessories as 53024-01
200-012	Solid State Filters
231-001	Cooling Water Re-circulator (for Solid State Freezer (240v 50/60Hz only)). Removes the reliance on close proximity to a sink and water supply while preventing water loss and is subsequently environmentally friendly.

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*Included in standard order | **Not included in overseas orders. VAT not included - E & OE

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