

3000 Clini-RF Rapid Freezer Specification



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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 .



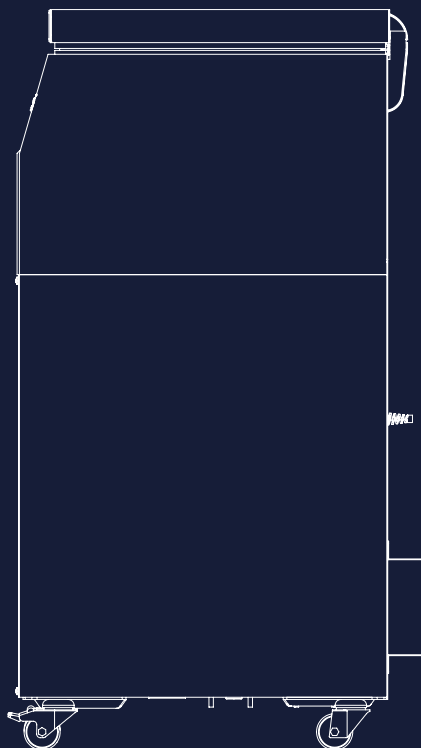
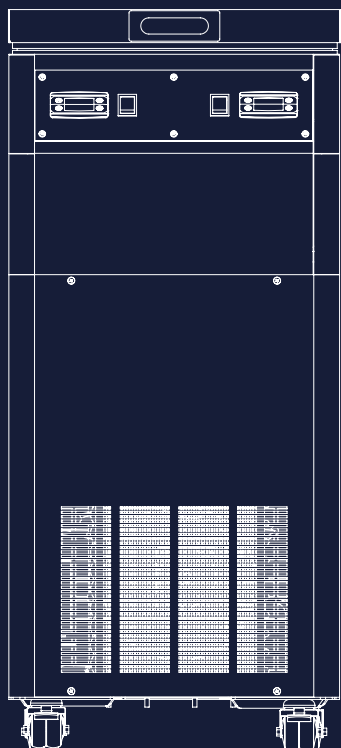
The lower chamber is pictured here containing the aluminium block for quick freezing.

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 $0.5^{\circ}\text{C}/\text{s}$

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.

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

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Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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Please contact us if this literature doesn't answer all your questions.