Deep Freezers DF40U 150 L, 300 L and 400 L

TERUMO
BLOOD AND CELL TECHNOLOGIES

Vital Protection for Your Valuable Plasma Products

You know how critical it is to have reliable storage for your plasma. Terumo Blood and Cell Technologies deep freezers are designed to provide the long-lasting protection you can depend on.

Ordering Details

Model Number	Ordering Code
DF40U 300L	DF40U300A0
DF40U 400L	DF40U400A0
DF40U 150L	DF40U150A0

Reliable Temperature Control

Your freezer doors are opened and closed frequently, putting temperature consistency and the quality of your stored plasma at risk. Our plasma freezers include important features to minimize temperature variations, including:

- Chloroflourocarbon (CFC)-free polyurethane (PU) foam insulation 125 mm thick in the exterior walls and the door to help maintain temperatures and reduce power consumption
- Multiple rubber gaskets sealing the door to keep cold air in
- Multiple interior compartments featuring multiple inner doors with magnetic latches to reduce cold air loss during opening and closing
- Heating around cabinet front edges to prevent condensation
- Audible alarms to alert you if the temperature is either too high or too low or when the door is open
- Temperature recording unit with 24-hour backup battery for uninterrupted temperature recording

Energy-Efficient Operation

Each Terumo Blood and Cell Technologies deep freezer is developed based on rigorous research, using high-quality components, expansion valve technology and voltage stabilizers to stay within temperatures of –20 °C to –40 °C while operating efficiently.

- Automatically regulated compressor adjusts according to the freezer load for more efficient operation
- Low temperature of the compressor shell augments performance
- CFC-free refrigerants reduce harm to the environment

Solid Construction

Terumo Blood and Cell Technologies deep freezers are designed to last. The heavy-gauge steel exterior is powder-coated to avoid corrosion and cosmetic wear and tear, while the interior is stainless steel to minimize the possibility of contamination and to simplify cleaning. The 4 kVA external stabilizer gives a constant output to the compressor to protect against short circuits and high temperatures.

Terumo Blood and Cell Technologies deep freezers are designed to safely protect blood and blood component products. The DF40U 150 L and 300 L include several operator convenience features:

- Ergonomic door handle with a self-pushing mechanism that helps the door close tight
- Handy storage rack to hold inventory control records, chart paper, operator's manual and more
- Display of temperature recording and control unit (150 L and 300 L) around eye level

To learn more about our deep freezers, contact your Terumo Blood and Cell Technologies representative.

Specifications

Specification Type	DF40U 150 L	DF40U 300 L	DF40U 400 L
Type	Vertical	Vertical	Vertical
Voltage	230 V ± 10%, 50 Hz, single-phase AC	230 V ± 10%, 50 Hz, single-phase AC	230 V ± 10%, 50 Hz, single-phase AC
Power consumption	800 W	2000 W	2000 W
Voltage stabilizer	4 kVA external stabilizer (170 to 270 V, 50 Hz, single-phase AC)	4 kVA external stabilizer (170 to 270 V, 50 Hz, single-phase AC)	4 kVA external stabilizer (170 to 270 V, 50 Hz, single-phase AC)
Chamber temperature range	−20 °C to −40 °C (at 22 °C to 30 °C ambient temperature)	−20 °C to −40 °C (at 22 °C to 30 °C ambient temperature)	−20 °C to −40 °C (at 22 °C to 30 °C ambient temperature)
External dimensions (W × D × H)	650 × 737 × 1765 mm with casters	805 × 895 × 1940 mm with casters	800 × 962 × 1917 mm with casters
Internal dimensions (W × D × H)	400 × 430 × 950 mm	550 × 500 × 1100 mm	550 × 662 × 1100 mm
Weight	180 kg	350 kg	340 kg
Inner chamber volume	150 L	300 L	400 L
Total storage capacity	160 bags (250 mL)	320 bags (250 mL)	400 bags (250 mL)
Storage capacity per compartmen	40 bags	80 bags	80 bags
Number of trays	3 adjustable stainless steel	3 adjustable stainless steel	4 adjustable stainless steel
Number of compartments	4	4	5
Inner doors	4 made of stainless steel	4 made of stainless steel	5 made of stainless steel
Door insulation	125-mm-thick PU foam; rubber gasket seal around door	125-mm-thick PU foam; rubber gasket seal around door	125-mm-thick PU foam; rubber gasket seal around door
Cabinet insulation	125-mm-thick PU foam	125-mm-thick PU foam	125-mm-thick PU foam
Heating near the door opening	Using the compressor discharge line	Using the compressor discharge line	Using the compressor discharge line
Outer cabinet	1 mm powder-coated steel	1.5 mm powder-coated steel	1.2 mm powder-coated steel
Inner chamber	0.8 mm stainless steel	1 mm stainless steel	1 mm stainless steel
Portability	2 lockable casters in the front 2 non-lockable casters in the rear	2 lockable casters in the front 2 non-lockable casters in the rear	2 lockable casters in the front 2 non-lockable casters in the rear
Refrigerant	R404a (CFC-free)	R404a (CFC-free)	R404a (CFC-free)
Compressor	Hermetically sealed	Hermetically sealed	Hermetically sealed
Insulation of the suction line	PU tubing	PU tubing	PU tubing
Temperature sensing method	Resistance temperature detector (RTD)	Resistance temperature detector (RTD)	Resistance temperature detector (RTD)
Temperature sensor	PT100 RTD	PT100 RTD	PT100 RTD
Chart range	−100 °C to +50 °C	−100 °C to +50 °C	−100 °C to +50 °C
Alarms and indicators Compressor on High/low temperature Door open Battery low Power on Power fail	 Visible Audible/visible Audible/visible Visible Visible Visible	 Visible Audible/visible Audible/visible Visible Visible Visible	 Visible Audible/visible Audible/visible Visible Visible Visible
Chart duration	7 days	7 days	7 days
Controller display interval	0.1 °C	0.1 °C	0.1 °C
Chart interval	3 °C	3 °C	3 °C
Temperature recording	Ink pen on paper chart or pressure-sensitive pen on pressure-sensitive chart (optional)	Ink pen on paper chart or pressure-sensitive pen on pressure-sensitive chart (optional)	Ink pen on paper chart or pressure-sensitive pen on pressure-sensitive chart (optional)
High temperature alarm	Set value +10 °C	Set value +10 °C	Set value +10 °C
Low temperature alarm	Set value −10 °C	Set value −10 °C	Set value −10 °C
Data retrieval	Not applicable	Not applicable	RS-232 interface to connect to computer (optional)
Manufacturing standards	ISO 9001:2015 EN ISO 13485: 2016	ISO 9001:2015 EN ISO 13485: 2016	ISO 9001:2015 EN ISO 13485: 2016
Regulatory compliance	93/42/ECC (CE Mark)	93/42/ECC (CE Mark)	93/42/ECC (CE Mark)
Plasma racks	Not applicable	Optional (may reduce storage capacity)	Optional (may reduce storage capacity)
Medical device classification	Class IIa; Directive 42/EEC Annex IX, Rule 2	Class IIa; Directive 42/EEC Annex IX, Rule 2	Class IIa; Directive 42/EEC Annex IX, Rule 2

Available in select markets.

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TERUMO BLOOD AND CELL TECHNOLOGIES

Terumo Blood and Cell Technologies is a medical technology company. Our products, software, and services enable customers to collect and prepare blood and cells to help treat challenging diseases and conditions. Our employees around the world believe in the potential of blood and cells to do even more for patients than they do today. **TerumoBCT.com**

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