



**Thermo Scientific  
Cryopreservation Equipment**

Indefinite storage, infinite possibilities

**your samples  
our obsession**

**Thermo**  
SCIENTIFIC



dependable  
secure

sample protection

**Thermo**  
SCIENTIFIC

# Thermo Scientific Cryopreservation Equipment

Our cryopreservation sample preparation and storage solutions offer scientists outstanding temperature performance, low operating costs and integrated control features.

- **Extended Hold Times** – Unlike mechanical systems, Thermo Scientific LN<sub>2</sub> storage solutions are designed to offer consistent temperatures even when electricity is lost. Samples remain protected much longer during power outages than alternative technologies. With cryo storage tanks, the need to locate backup storage and relocate samples is dramatically reduced.
- **Low Power Consumption** – Because most Thermo Scientific cryogenic storage products rely on liquid nitrogen, they consume less power than a standard light bulb, providing significant energy savings.
- **Zero Greenhouse Gases** – Because LN<sub>2</sub> storage depends on the cooling power of naturally sourced nitrogen gas, there are no halogenated hydrocarbon refrigerants used and no greenhouse gas concerns.

## Thermo Scientific CryoMed

Controlled-rate freezers prepare your samples prior to cryogenic storage, ensuring maximum viability. Available in standard and IVF format.

## Thermo Scientific CryoExtra

Large capacity, high-efficiency storage solutions offer outstanding sample protection and storage capacities up to 93,000 1.2-2.0 mL vials.

## Thermo Scientific Dewars

BioCane, Locator and Locator Plus offer cost-effective storage flexibility and excellent portability with capacities from 180 to 3,600 1.2-2.0 mL vials for cost-effective flexibility and portability.

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# Thermo Scientific CryoMed Controlled-Rate Freezer

## dependable, controlled-rate freezing

Our CryoMed freezers feature an integrated control system (consisting of freezing chamber, microprocessor control and printer – all in one bench top unit), allowing multiple freezing profiles to be tailored to specific protocols. Freezer functionality is enhanced by a MS Windows®-based controlled-rate freezing interface software (included) that connects to your PC and external printer.

### Easy Programming and Monitoring

- Chamber and sample temperatures and operation status are simultaneously displayed on a backlit LCD
- Chamber temperatures is monitored by a fixed-mount Type T thermocouple
- Sample temperature is monitored by Type T thermocouple with flexible cable (2 mL sample probe included as a standard feature, but others are available)
- Audible indicators alert operator when hold time has elapsed
- Continual operation if power outage lasts less than ten seconds; audible/visual alarm for outages lasting longer than ten seconds
- Four-digit access code for added security
- Six standard preset profiles and 10 user defined profiles (20 steps each) for customer-created profiles are standard. (Unlimited user-defined profiles when operating through a PC)
- Preset profiles, which are suggested starting points for freezing protocols, can be copied and pasted easily to create new profiles. New profiles can be edited and named to meet your specific freezing protocol requirements.

### LN<sub>2</sub> Freezing System Components

- Intuitive control panel and integrated thermal printer
- Dual solenoid valves increase LN<sub>2</sub> injection volume for precise temperature control and accelerated freezing for optimum cell viability
- Specifically designed air handling system and patented liquid nitrogen injection ring work in tandem for precise temperature control and uniformity
- Overtemperature protection for heating element
- Specific models designed for human IVF use
- IVF chambers allow convenient top access for manual seeding of samples

### Construction

- Type 304 stainless steel with exterior powder-coat finish
- Foamed in-place polyurethane insulation and Teflon® heat break minimizes cabinet condensation
- Bulb-style gaskets ensure tight door seal



Top- and front-access models are designed for easy access for manual seeding

# Thermo Scientific CryoMed

**CryoMed**  
0.6 cu. ft.

**CryoMed**  
1.2 cu. ft.

**CryoMed**  
1.7 cu. ft.

**CryoMed**  
0.6 cu. ft. - IVF

**CryoMed**  
1.2 cu. ft. - IVF

<b>Model No. (120V)</b>	<b>7450</b>	<b>7452</b>	<b>7454</b>	<b>7456</b>	<b>7458</b>
<b>Model No. (220V)</b>	<b>7451</b>	<b>7453</b>	<b>7455</b>	<b>7457</b>	<b>7459</b>
<b>Model No. (100V)</b>	<b>7472</b>	<b>7473</b>	<b>7474</b>	<b>7475</b>	<b>7476</b>

## Selection Guide

Application	Sample Preparation	Sample Preparation	Sample Preparation	Sample Preparation	Sample Preparation
Preparation Type	Controlled Rate Freezing	Controlled Rate Freezing	Controlled Rate Freezing	Controlled Rate Freezing	Controlled Rate Freezing
Chamber Volume	0.6 cu. ft. / 17 L	1.2 cu. ft. / 34 L	1.7 cu. ft. / 48.1 L	0.6 cu. ft. / 17	1.2 cu. ft. / 34
Access Type	Front Access	Front Access	Front Access	Top and Front Access IVF units	Top and Front Access IVF units
Temperature Range	50°C to -180°C	50°C to -180°C	50°C to -180°C	50°C to -180°C	50°C to -180°C
<b>Straw Rack</b>	4	8	12	4*	8*
Number of straws per rack	40	40	40	40*	40*
Maximum number of straws	160	320	480	160*	320*
<b>Cane Rack</b>	1	1	1	1*	1*
Number of canes per rack	77	162	162	77*	162*
Maximum number of canes	77	162	162	77*	162*
<b>Canister Rack Cord Blood</b>	3	6	9	3*	6*
Number of canisters per cord blood rack	10	10	10	10*	10*
Maximum number of canisters for cord blood rack	30	60	90	30*	60*
<b>Canister Rack Adjustable</b>	N/A	2	2	N/A	2*
Number of canisters per adjustable rack	N/A	10	10	N/A	10*
Maximum number of canisters for adjustable	N/A	22	22	N/A	22*
<b>Vial Rack Holder</b>	1	1	1 and 1	1*	1*
Number of 1.2 and 2 mL racks per holder	5	5	5	5*	5*
Number of 1.2 and 2 mL vials per rack	76	161	237	76*	161*
Maximum number of 1.2 and 2 mL vials	380	805	1,185	380*	805*
Number of 4 and 5 mL racks per holder	3	3	3	3*	3*
Number of 4 and 5 mL vials per rack	76	161	237	76*	161*
Maximum number of 4 and 5 mL vials	228	483	711	228*	483*
<b>Skin Rack 2 Level</b>	1	2	3	1*	2*
Number of packets per 2 skin level rack	48	48	48	48*	48*
Maximum number of packets per 2 skin level rack	48	96	144	48*	96*
<b>Skin Rack 1 Level</b>	2	4	6	2*	4*
Number of packets per 2 skin level rack	24	24	24	24*	24*
Maximum number of packets per 2 skin level rack	48	96	144	48*	96*
<b>Bag press Nexell R4R9953 (Fenwal 4R5461)</b>	4	8	16	4*	8*
Number of bags Nexell R4R9953 (Fenwal 4R5461) per press	2	2	2	2*	2*
Maximum number of Nexell R4R9953 (Fenwal 4R5461) bags	8	16	32	8*	16*
<b>Bag press Gambro DF-200</b>	N/A	4	8	N/A	4*
Number of bags Gambro DF-200	N/A	2	2	N/A	2*
Maximum number of Gambro DF-200 bags	N/A	8	16	N/A	8*
<b>Bag press Delmed 2030-2</b>	N/A	4	8	N/A	4*
Number of bags Delmed 2030-2	N/A	4	4	N/A	4*
Maximum number of Delmed 2030-2 bags	N/A	16	32	N/A	16*
<b>Bag press Nexell R4R9953 (Fenwal 4R5461)</b>	N/A	4	4	N/A	4*

\*These accessories can only be used when top loading cane vial and straw holders are not in use

# selection guide

**CryoMed**  
0.6 cu. ft.

**CryoMed**  
1.2 cu. ft.

**CryoMed**  
1.7 cu. ft.

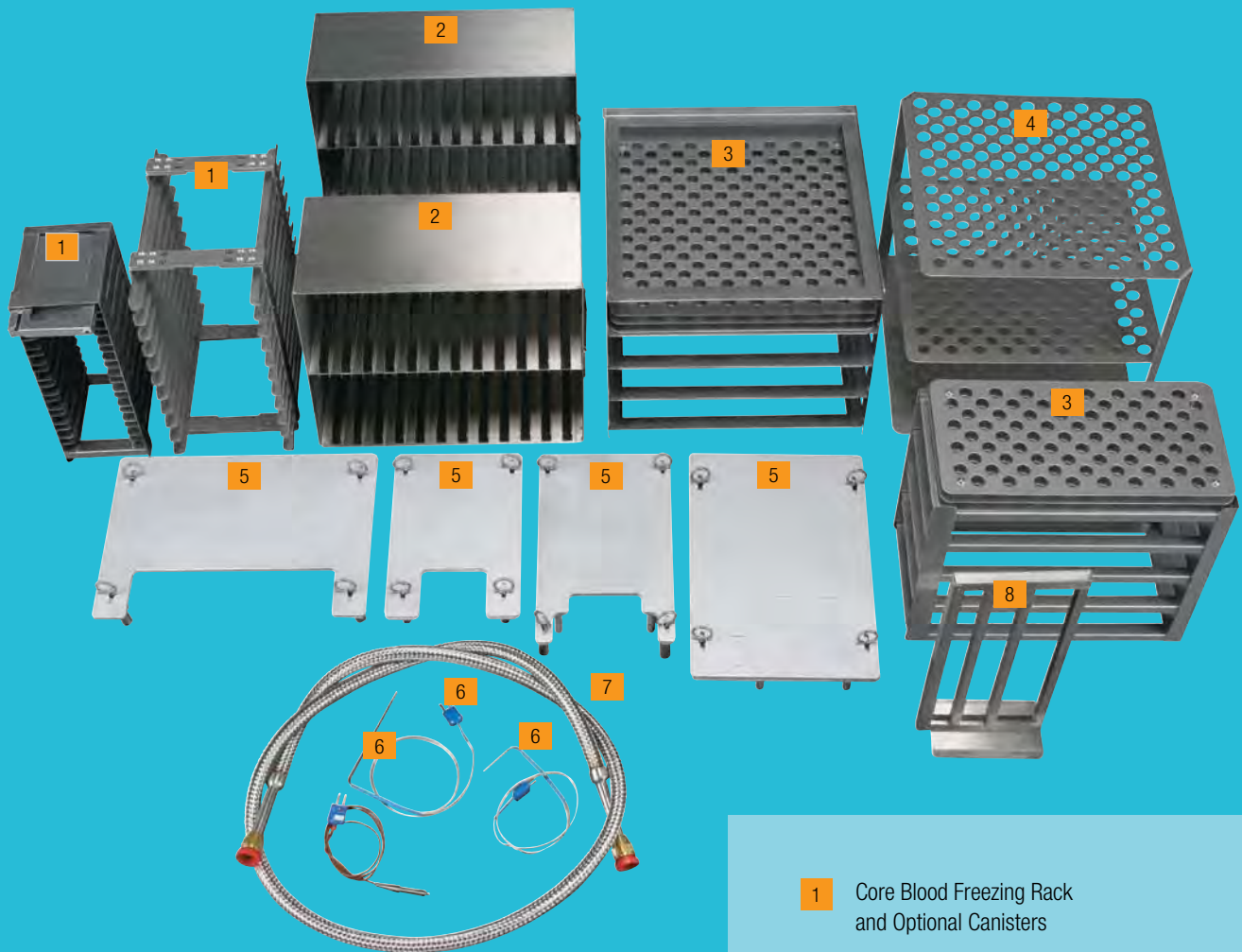
**CryoMed**  
0.6 cu. ft. - IVF

**CryoMed**  
1.2 cu. ft. - IVF

Number of bags Nexell R4R9953 (Fenwal 4R5461)	N/A	4	4	N/A	4*
Maximum number of Nexell R4R9953 (Fenwal 4R5461) bags	N/A	16	16	N/A	16*
<b>Bag press Gambro DF-200</b>	N/A	4	8	N/A	4*
Number of bags Gambro DF-200	N/A	4	4	N/A	4*
Maximum number of Gambro DF-200 bags	N/A	16	32	N/A	16*
<b>Bag press Gambro DF-700</b>	N/A	4	8	N/A	4*
Number of bags Gambro DF-700	N/A	2	2	N/A	2*
Maximum number of Gambro DF-700 bags	N/A	8	16	N/A	8*
<b>Bag press Nexell R4R9955 (Fenwal 4R5462)</b>	4	8	12	4*	8*
Number of bags Nexell R4R9955 (Fenwal 4R5462)	2	2	2	2*	2*
Maximum number of Nexell R4R9955 (Fenwal 4R5462) bags	8	16	24	8*	16*
<b>Holders and Plug for IVF application</b>					
0.25 / 0.5 mL straw holder (holds 4 straws)	N/A	N/A	N/A	N/A	N/A
1.2 / 2.0 mL vial holder, (holds 1 vial)	N/A	N/A	N/A	N/A	N/A
1.2 / 2.0 / 4.0 / 5.0 mL cane holder (holds 6, 5, 4, 3 canes)	N/A	N/A	N/A	N/A	N/A
Sleeve plug	N/A	N/A	N/A	N/A	N/A
<b>Chamber Dimensions</b>					
Exterior (w x h x d)	31.7 x 21.2 x 20.4 in. 80.5 x 53.8 x 51.8 cm	37.7 x 21.2 x 20.4 in. 95.8 x 53.8 x 51.8 cm	43.7 x 21.2 x 20.4 in. 111 x 53.8 x 51.8 cm	31.7 x 22.5 x 20.4 in. 80.5 x 57.2 x 51.8 cm	37.7 x 22.5 x 20.4 in. 95.8 x 57.2 x 51.8 cm
Interior (w x h x d)	7 x 12 x 13 in. 17.8 x 30.5 x 33 cm	13 x 12 x 13 in. 33 x 30.5 x 33 cm	19 x 12 x 13 in. 48.3 x 30.5 x 33 cm	7 x 12 x 13 in. 17.8 x 30.5 x 33 cm	13 x 12 x 13 in. 33 x 30.5 x 33 cm
<b>Product Weight</b>					
Net	140 lbs. / 63.5 kg	160 lbs. / 72.6 kg	180 lbs. / 81.63 kg	140 lbs. / 63.5 kg	160 lbs. / 72.6 kg
Packaged / Shipping	200 lbs. / 90.7 kg	215 lbs. / 97.5 kg	235 lbs. / 106.6 kg	200 lbs. / 90.7 kg	215 lbs. / 97.5 kg
<b>Regulatory Listing</b>					
	cULus and CE	cULus and CE	cULus and CE	cULus and CE	cULus and CE
<b>Protocols and on site validations services:</b>					
Specification sheets for protocols and field validations deliverables are available upon request					
<b>GLP Level Protocols (IQ OQ)</b>	IQQDOCE89003506	IQQDOCE89003506	IQQDOCE89003506	IQQDOCE89003506	IQQDOCE89003506
<b>GMP Level Protocols (IQ OQ PQ)</b>	IOPQDOCE89003506	IOPQDOCE89003506	IOPQDOCE89003506	IOPQDOCE89003506	IOPQDOCE89003506
<b>GLP Level (IQ OQ) Validation Service performed at the customer site</b> (protocol included at no extra charge)	IQQPCKE89003506	IQQPCKE89003506	IQQPCKE89003506	IQQPCKE89003506	IQQPCKE89003506
<b>GMP Level (IQ OQ PQ) Validation Service performed at the customer site</b> (protocol included at no extra charge)	IOPQPCKE89003506	IOPQPCKE89003506	IOPQPCKE89003506	IOPQPCKE89003506	IOPQPCKE89003506
<b>Installation Information</b>					
Product clearance	Add 2.8 in. (7.1 cm) to F-B for utilities and door handle	Add 2.8 in. (7.1 cm) to F-B for utilities and door handle	Add 2.8 in. (7.1 cm) to F-B for utilities and door handle	Add 2.8 in. (7.1 cm) to F-B for utilities and door handle	Add 2.8 in. (7.1 cm) to F-B for utilities and door handle
Utility connection	0.5 in., 45° flare, 6 ft. (1.8 m) SS flexible hose	0.5 in., 45° flare, 6 ft. (1.8 m) SS flexible hose	0.5 in., 45° flare, 6 ft. (1.8 m) SS flexible hose	0.5 in., 45° flare, 6 ft. (1.8 m) SS flexible hose	0.5 in., 45° flare, 6 ft. (1.8 m) SS flexible hose
Electrical 100V, 50/60 Hz	10.5 FLA, operating range 90-110V, NEMA 5-15P plug	10.5 FLA, operating range 90-110V, NEMA 5-15P plug	10.5 FLA, operating range 90-110V, NEMA 5-15P plug	10.5 FLA, operating range 90-110V, NEMA 5-15P plug	10.5 FLA, operating range 90-110V, NEMA 5-15P plug
Electrical 120V, 50/60 Hz	12 FLA, operating range 108-132V, NEMA 5-15P plug	12 FLA, operating range 108-132V, NEMA 5-15P plug	12 FLA, operating range 108-132V, NEMA 5-15P plug	12 FLA, operating range 108-132V, NEMA 5-15P plug	12 FLA, operating range 108-132V, NEMA 5-15P plug
Electrical 220V, 50/60 Hz	5.5 FLA, operating range 207-253V	5.5 FLA, operating range 207-253V	5.5 FLA, operating range 207-253V	5.5 FLA, operating range 207-253V	5.5 FLA, operating range 207-253V
LN <sub>2</sub> supply tank	Requires 22 psi low pressure supply tank	Requires 22 psi low pressure supply tank	Requires 22 psi low pressure supply tank	Requires 22 psi low pressure supply tank	Requires 22 psi low pressure supply tank

\*These accessories can only be used when top loading cane vial and straw holders are not in use

# CryoMed accessories



- 1 Core Blood Freezing Rack and Optional Canisters
- 2 Two-Level Skin Rack
- 3 1.2/2.0 mL Cryo Rack and Holder
- 4 Cane Freezing Rack
- 5 Fenwals
- 6 Thermocouple Sensors
- 7 Flexible Metal Hose
- 8 Straw Rack



**CryoMed**  
0.6 cu. ft.

**CryoMed**  
1.2 cu. ft.

**CryoMed**  
1.7 cu. ft.

**CryoMed**  
0.6 cu. ft. - IFV

**CryoMed**  
1.2 cu. ft. - IFV

**Racks**

Straw Rack (0.25/0.5 mL straws which holds 40 straws)	4000294	4000294	4000294	4000294*	4000294*
Cane Rack (162 canes)	N/A	4000303	4000303	N/A	4000303*
Cane Rack (77 canes)	4000700	4000700	4000700	4000700*	4000700*
Canister Rack Cord Blood holds 10 of 4000610 canisters	4000340	4000340	4000340	4000340*	4000340*
Canister Rack Adjustable (10 position, 5.875 to 7.875 in.)	185089	185089	185089	185089*	185089*
Vial Rack Holder for small racks (1.2 and 2 mL vials) holds 5	4000702	4000702	4000702	4000702*	4000702*
Small rack for 1.2 and 2 mL vials holds 76	4000701	4000701	4000701	4000701*	4000701*
Vial Rack Holder for large racks (1.2 and 2 mL vials) holds 5	N/A	4000704	4000704	N/A	4000704*
Large rack for 1.2 and 2 mL vials holds 161	N/A	4000703	4000703	N/A	4000703*
Vial Rack Holder for small racks (4 and 5 mL vials) holds 3	4000706	4000706	4000706	4000706*	4000706*
Small rack for 4 and 5 mL vials holds 76	4000705	4000705	4000705	4000705*	4000705*
Vial Rack Holder for large racks (4 and 5 mL vials) holds 3	N/A	4000708	4000708	N/A	4000708*
Large rack for 4 and 5 mL vials holds 161	N/A	4000707	4000707	N/A	4000707*
Skin Rack 3 Level (holds 72 skin packets)	4000311	4000311	4000311	4000311*	4000311*
Skin Rack 2 Level (holds 48 skin packets)	4000310	4000310	4000310	4000310*	4000310*
Skin Rack 1 Level (holds 24 skin packets)	4000312	4000312	4000312	4000312*	4000312*

**Presses**

Bag press Nexell R4R9953 (Fenwal 4R5461) holds 2 bags	4000314	4000314	4000314	4000314*	4000314*
Bag press Gambro DF-200 holds 2 bags	N/A	4000316	4000316	N/A	4000316*
Bag press Delmed 2030-2 holds 4 bags	N/A	4000317	4000317	N/A	4000317*
Bag press Nexell R4R9953 (Fenwal 4R5461) holds 4 bags	N/A	4000318	4000318	N/A	4000318*
Bag press Gambro DF-200, holds 4 bags	N/A	4000320	4000320	N/A	4000320*
Bag press Gambro DF-700, holds 2 bags	N/A	4000321	4000321	N/A	4000321*
Bag press Nexell R4R9955 (Fenwal 4R5462), holds 2 bags	4000555	4000555	4000555	4000555*	4000555*

**Sensors**

Thermocouple sensor for 1.2/2.0 mL cryo tube	4000385	4000385	4000385	4000385*	4000385*
Thermocouple sensor for 4.0/5.0 mL cryo tube	4000386	4000386	4000386	4000386*	4000386*
Thermocouple sensor ribbon type for bags	4000393	4000393	4000393	4000393*	4000393*
Thermocouple sensor 0.020 sheath straw sample	N/A	N/A	N/A	4000402	4000402
Thermocouple sensor 0.062 sheath vial sample	N/A	N/A	N/A	4000403	4000403

**Holders and Plug**

0.25 / 0.5 mL straw holder (holds 4 straws)	N/A	N/A	N/A	4000710	4000710
1.2 / 2.0 mL vial holder, (holds 1 vial)	N/A	N/A	N/A	4000711	4000711
1.2 / 2.0 / 4.0 / 5.0 mL cane holder (holds 6, 5, 4, 3 canes)	N/A	N/A	N/A	180254	180254
Sleeve plug	N/A	N/A	N/A	180255	180255

**Thermal Data**

Thermal printer paper (5 rolls/package)	4000566	4000566	4000566	4000566	4000566
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\*These accessories can only be used when top loading cane vial and straw holders are not in use

# Thermo Scientific CryoPlus LN<sub>2</sub> Storage Systems

Our CryoPlus LN<sub>2</sub> storage systems provide precise and accurate control over all parameters without complicated programming. Storage capacities of up to 38,500 vials (2.0 mL) make the most of your laboratory storage space.

## precise and accurate control

### Microprocessor Control

- Precise liquid level control more than 16 parameters; with autofill system
- Control panel is mounted on the top of the unit for convenient access and easy touchpad programming
- Digital temperature display sensor is located under the lid; this indicates the highest temperature reading inside the tank
- 24 tricolor LEDs continuously display actual liquid nitrogen level and high-level/low-level setpoints
- Remote alarm contacts for in-house remote alarms or connection to a Sensaphone™ Telephone Dialing System
- Fast access to samples with large, piston-supported insulated lid
- Keyed lock for security

### Standard Accessories

- CryoPlus 1 model has 0.5 in. 45° flare, 4 ft. (1.2 m) flexible hose
- CryoPlus 2, 3 and 4 come with 0.5 in. 45° flare, 6 ft. (1.8 m) flexible hose

### Optional Accessories

- A complete offering of racks including vertical, square and arrowhead options to maximize storage space
- Choose from cardboard, polycarbonate or stainless steel cryo boxes
- Sensaphone Telephone Dialing System for added peace of mind





# Thermo Scientific CryoPlus

## CryoPlus 1

## CryoPlus 2

## CryoPlus 3

## CryoPlus 4

<b>Model No. (100-120V, 50/60 Hz)</b>	<b>7400</b>	<b>7402</b>	<b>7404</b>	<b>7406</b>
<b>Model No. (200-230V, 50/60 Hz)</b>	<b>7401</b>	<b>7403</b>	<b>7405</b>	<b>7407</b>

### Selection Guide

Application	Sample Storage	Sample Storage	Sample Storage	Sample Storage
Storage type	AutoFill Vessel / Racks, Frames and Canisters	AutoFill Vessel / Racks, Frames and Canisters	AutoFill Vessel / Racks, Frames and Canisters	AutoFill Vessel / Racks, Frames and Canisters
LN <sub>2</sub> capacity	90 L	200 L	340 L	552 L
Tank diameter	16 in. / 40.6 cm	24 in. / 61 cm	31 in. / 78.7 cm	39.5 in. / 100.3 cm
Interior tank usable height	27.5 in. / 69.9 cm	27.5 in. / 69.9 cm	27.5 in. / 69.9 cm	29.5 in. / 74.9 cm

### Maximum System Capability

Vial capacity 2 mL	6,318 with arrowhead rack no. 4000044	13,000 with square rack no. 4000006 or vertical rack no. 4000012	24,000 with vertical rack no. 4000012	38,500 with vertical rack no. 4000012
Vial capacity 4 mL	3,888 with arrowhead rack no. 4000104	7,920 with square rack no. 4000008	13,464 with square rack no. 4000008	24,552 with square rack no. 4000008
Vial capacity 5 mL	3,402 with arrowhead rack no. 4000043	6,930 with square rack no. 4000010	11,781 with square rack no. 4000010	21,483 with square rack no. 4000010
Bag capacity 50 mL, Fenwal 4R9951	238 with 7 place frame no. 4000670	630 with 7 place frame no. 4000670	1,078 with 7 place frame no. 4000670	1,792 with 7 place frame no. 4000670
Bag capacity 250 mL bag, Fenwal 4R5461	112 with 4 place frame no. 4000371	256 with 4 place frame no. 4000371	448 with 4 place frame no. 4000371	696 with 4 place frame no. 4000371
Bag capacity 500 mL bag, Fenwal 4R5462	88 with 4 place frame no. 4000372	200 with 4 place frame no. 4000372	328 with 4 place frame no. 4000372	608 with 4 place frame no. 4000372
Bag capacity 500 mL bag, Gambro DF-200	76 with 4 place frame no. 4000368	160 with 4 place frame no. 4000368	272 with 4 place frame no. 4000368	464 with 4 place frame no. 4000368
Bag capacity 700 mL bag, Gambro DF-700	40 with 4 place frame no. 4000369	104 with 4 place frame no. 4000369	176 with 4 place frame no. 4000369	N/A
Cane capacity	800 with Canister Cane Storage square rack no. 4000379	2,000 with Canister Cane Storage square rack no. 4000379	3,400 with Canister Cane Storage square rack no. 4000379	6,200 with Canister Cane Storage square rack no. 4000379

### Maximum Organizational Capability

Number of square racks	4	10	17	31
Number of vertical racks	11	26	48	77
Number of arrowhead racks	6	N/A	N/A	N/A
Number of frames (50 mL bag, Fenwal 4R9951)	34	90	154	256
Number of frames (250 mL bag, Fenwal 4R5461)	28	64	112	174
Number of frames (500 mL bag, Fenwal 4R5462)	22	50	82	152
Number of frames (500 mL bag, Gambro DF-200)	19	40	68	116
Number of frames (700 mL bag, Gambro DF-700)	10	26	44	N/A

# selection guide

## CryoPlus 1

## CryoPlus 2

## CryoPlus 3

## CryoPlus 4

### Product Exterior Dimension

Width x Height x Depth	21.5 x 41 x 26 in. 54.6 x 104.1 x 66 cm	28.5 x 41 x 34 in. 72.4 x 104.1 x 86.4 cm	34.5 x 41 x 41.5 in. 87.6 x 104.1 x 105.4 cm	43.5 x 47 x 50 in. 110.5 x 119.4 x 127 cm
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### Product Weight

Empty	214 lbs. / 97.1 kg	325 lbs. / 147.4 kg	416 lbs. / 188.7 kg	820 lbs. / 371.9 kg
Filled with LN <sub>2</sub>	354 lbs. / 160.6 kg	680 lbs. / 308.4 kg	1021 lbs. / 463.1 kg	1620 lbs. / 734.8 kg
Packaged / Shipping	260 lbs. / 117.9 kg	480 lbs. / 217.7 kg	550 lbs. / 249 kg	1070 lbs. / 485.3 kg

### Installation Information

Product clearance	Add 5 in. (12.7 cm) to F-B for utilities and lid opening	Add 5 in. (12.7 cm) to F-B for utilities and lid opening	Add 5 in. (12.7 cm) to F-B for utilities and lid opening	Add 5 in. (12.7 cm) to F-B for utilities and lid opening Total height with lid open is 97 in. (246.38 cm)
Utility connection	0.5 in., 45° flare, 4ft (1.2m) SS flexible hose	0.5 in., 45° flare, 6ft (1.8m) SS flexible hose	0.5 in., 45° flare, 6ft (1.8m) SS flexible hose	0.5 in., 45° flare, 6ft (1.8m) SS flexible hose
Electrical 100-120V, 50/60 Hz	0.8 FLA, operating range 90-132V, NEMA 5-15P plug	0.8 FLA, operating range 90-132V, NEMA 5-15P plug	0.8 FLA, operating range 90-132V, NEMA 5-15P plug	0.8 FLA, operating range 90-132V, NEMA 5-15P plug
Electrical 200-230V, 50/60 Hz	0.5 FLA, operating range 180-253V, CEE 7/7 plug	0.5 FLA, operating range 180-253V, CEE 7/7 plug	0.5 FLA, operating range 180-253V, CEE 7/7 plug	0.5 FLA, operating range 180-253V, CEE 7/7 plug
LN <sub>2</sub> supply tank	Requires 22 psi low pressure supply tank	Requires 22 psi low pressure supply tank	Requires 22 psi low pressure supply tank	Requires 22 psi low pressure supply tank

### Regulatory Listing

	SFDA, cULus and CE	SFDA, cULus and CE	SFDA, cULus and CE	SFDA, cULus and CE
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### Protocols and on site validations services:

Specification sheets for protocols and field validations deliverables are available upon request

<b>GLP Level Protocols (IQ OQ)</b>	IOQDOCE89003506	IOQDOCE89003506	IOQDOCE89003506	IOQDOCE89003506
<b>GMP Level Protocols (IQ OQ PQ)</b>	IOPQDOCE89003506	IOPQDOCE89003506	IOPQDOCE89003506	IOPQDOCE89003506
<b>GLP Level (IQ OQ) Validation Services performed at the customer site</b> (protocol included at no extra charge)	IOQPCKE89003506	IOQPCKE89003506	IOQPCKE89003506	IOQPCKE89003506
<b>GMP Level (IQ OQ PQ) Validation Services performed at the customer site</b> (protocol included at no extra charge)	IOPQPCKE89003506	IOPQPCKE89003506	IOPQPCKE89003506	IOPQPCKE89003506

# CryoPlus accessories

- 1 Platform Divider
- 2 Vertical Racks
- 3 Arrowhead Racks
- 4 Square Racks with Stainless Steel Boxes
- 5 Canister Cane Storage Racks
- 6 Cassettes
- 7 Platform Riser
- 8 Frames
- 9 Square Vertical Racks with Boxes
- 10 Square Mini Vertical Rack with Boxes



**Racks**

**VERTICAL**

**Liquid Phase**

2 mL, 5 cardboard boxes (100 cell divider)	4000012	4000012	4000012	4000012
2 mL, 12 cardboard boxes (25 cell divider). Mini Rack.	4000260	4000260	4000260	4000260

**Vapor Phase**

2 mL, 4 cardboard boxes (100 cell divider)	4000011	4000011	4000011	4000011
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**SQUARE**

**Liquid Phase**

2 mL includes 12 cardboard boxes with a 100 cell divider	4000042	4000042	4000042	4000042
2 mL, 13 cardboard boxes (100 cell divider) – <i>See footnote (2)</i>	4000006	4000006	4000006	4000006
2 mL, 13 Stainless Steel boxes (100 cell divider)	4000007	4000007	4000007	4000007
4 mL, 8 cardboard boxes (100 cell divider)	4000008	4000008	4000008	4000008
4 mL, 8 Stainless Steel boxes (100 cell divider)	4000009	4000009	4000009	4000009
5 mL, 7 cardboard boxes (100 cell divider)	4000010	4000010	4000010	4000010

**Vapor Phase**

2 mL, 11 cardboard boxes (100 cell divider)	4000001	4000001	4000001	4000001
2 mL, 11 Stainless Steel boxes (100 cell divider)	4000002	4000002	4000002	4000002
4 mL, 7 cardboard boxes (100 cell divider)	4000003	4000003	4000003	4000003
4 mL, 7 Stainless Steel boxes (100 cell divider)	4000004	4000004	4000004	4000004
5 mL, 6 cardboard boxes (100 cell divider)	4000005	4000005	4000005	4000005

**Canister Cane Storage**

**Vapor**

Rack includes 8 canisters (#4000176) for storing canes (2, 4, 5 mL vials or goblets and straws)	4000379	4000379	4000379	4000379
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**Arrowhead**

**Liquid**

2 mL, 12 cardboard boxes (81 cell divider)	4000112	N/A	N/A	N/A
2 mL, 13 cardboard boxes (81 cell divider)	4000044	N/A	N/A	N/A
2 mL, 12 Stainless Steel boxes (81 cell divider)	4000113	N/A	N/A	N/A
4 mL, 8 cardboard boxes (81 cell divider)	4000104	N/A	N/A	N/A
4 mL, 8 Stainless Steel boxes (81 cell divider)	4000105	N/A	N/A	N/A
5 mL, 7 cardboard boxes (81 cell divider)	4000043	N/A	N/A	N/A

**Vapor**

2 mL, 11 cardboard boxes (81 cell divider)	4000110	N/A	N/A	N/A
2 mL, 11 Stainless Steel boxes (81 cell divider)	4000111	N/A	N/A	N/A
2 mL, 10 cardboard boxes (81 cell divider)	4000108	N/A	N/A	N/A

**Boxes**

**CARDBOARD**

**Vertical**

2 mL (with a 100 cell divider)	4000014	4000014	4000014	4000014
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**Square**

2 mL (with a 100 cell divider)	4000014	4000014	4000014	4000014
4 mL (with a 100 cell divider)	4000015	4000015	4000015	4000015
5 mL (with a 100 cell divider)	4000015	4000015	4000015	4000015

**Arrowhead**

2 mL (Includes a 81 cell divider)	4000193	4000193	4000193	4000193
4 mL (Includes a 81 cell divider)	4000195	4000195	4000195	4000195
5 mL (Includes a 81 cell divider)	4000195	4000195	4000195	4000195

Footnote:

(2) This rack will not accommodate polycarbonate boxes. Use 4000042 instead.

# Thermo Scientific CryoPlus

CryoPlus 1

CryoPlus 2

CryoPlus 3

CryoPlus 4

## Boxes (continued)

### POLYCARBONATE

#### Vertical

2 mL (100 cell division)	820010	820010	820010	820010
2 mL (81 cell division)	820011	820011	820011	820011

#### Square

2 mL (100 cell division)	820010	820010	820010	820010
2 mL (81 cell division)	820011	820011	820011	820011
4 mL (81 cell division)	820013	820013	820013	820013

### STAINLESS STEEL

#### Square

2 mL (Does not include a 100 cell divider)	4000238	4000238	4000238	4000238
4 mL (Does not include a 100 cell divider)	4000239	4000239	4000239	4000239

#### Arrowhead

2 mL (Does not include a 81 cell divider)	4000194	N/A	N/A	N/A
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#### Cell Dividers

Square box 100 – <i>See footnote (3)</i>	4000013	4000013	4000013	4000013
Arrowhead box 81 – <i>See footnote (3)</i>	4000181	4000181	4000181	4000181
Square box 81 – <i>See footnote (3)</i>	820081	820081	820081	820081

### Frames

#### Liquid

Bag capacity 50 mL, Fenwal 4R9951, holds 7 cassettes	4000670	4000670	4000670	4000670
Bag capacity 250 mL bag, Fenwal 4R5461, holds 4 cassettes	4000371	4000371	4000371	4000371
Bag capacity 500 mL bag, Fenwal 4R5462, holds 4 cassettes	4000372	4000372	4000372	4000372
Bag capacity 500 mL bag, Gambro DF-200, holds 4 cassettes	4000368	4000368	4000368	4000368
Bag capacity 700 mL bag, Gambro DF-700, holds 4 cassettes	4000369	4000369	4000369	N/A

#### Vapor

Bag capacity 50 mL, Fenwal 4R9951, holds 6 cassettes	4000660	4000660	4000660	4000660
Bag capacity 250 mL bag, Fenwal 4R5461, holds 4 cassettes	4000371	4000371	4000371	4000371
Bag capacity 500 mL bag, Fenwal 4R5462, holds 4 cassettes	4000372	4000372	4000372	4000372

#### Cassettes

Bag capacity 50 mL, Fenwal 4R9951 swing arm canister	4000610	4000610	4000610	4000610
Bag capacity 250 mL bag, Fenwal 4R5461 sliding canister	4000335	4000335	4000335	4000335
Bag capacity 500 mL bag, Fenwal 4R5462 sliding canister	4000336	4000336	4000336	4000336
Bag capacity 500 mL bag, Gambro DF-200 sliding canister	4000332	4000332	4000332	4000332
Bag capacity 500 mL bag, Gambro DF-200 swing arm canister	4000356	4000356	4000356	4000356
Bag capacity 700 mL bag, Gambro DF-700 sliding canister	4000333	4000333	4000333	4000333
Bag capacity 700 mL bag, Gambro DF-700 swing arm canister	4000357	4000357	4000357	4000357

#### Platform Dividers

50 mL Fenwal 4R9951 for frames and canisters	4000616	4000624	4000631	4000368
250 mL Fenwal 4R5461 for frames and canisters	N/A	4000075	4000050	4000053
500 mL Fenwal 4R5462 for frames and canisters	N/A	4000076	4000051	4000054
500 mL Gambro DF-200 for frames and canisters	N/A	N/A	4000047	4000052
700 mL Gambro DF-700 for frames and canisters	N/A	N/A	4000048	N/A

\*Not CE marked

Footnote:

(3) All cell divider material is cardboard for both cardboard and stainless steel box application.



# accessories

**CryoPlus 1** | **CryoPlus 2** | **CryoPlus 3** | **CryoPlus 4**

## Platform Risers (Vapor Phase only)

### Racks

#### Vertical

5.0 in. riser for rack part # 4000011	4000061	4000061	4000064	4000067
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#### Square

3.5 in. riser for rack part # 4000001	4000060	4000060	4000063	4000066
3.5 in. riser for rack part # 4000002	4000060	4000060	4000063	4000066
4.0 in. riser for rack part # 4000005	4000056	4000062	4000065	4000068
5.0 in. riser for rack part # 4000003	4000061	4000061	4000064	4000067
5.0 in. riser for rack part # 4000004	4000061	4000061	4000064	4000067

#### SUC-1 (Canister Cane Storage)

3.5 in. riser for rack part # 4000379	4000060	4000060	4000063	4000066
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#### Arrowhead

4.0 in. riser for rack part # 4000097	4000056	N/A	N/A	N/A
4.0 in. riser for rack part # 4000100	4000056	N/A	N/A	N/A
4.0 in. riser for rack part # 4000101	4000056	N/A	N/A	N/A
4.0 in. riser for rack part # 4000108	4000056	N/A	N/A	N/A
4.0 in. riser for rack part # 4000109	4000056	N/A	N/A	N/A
4.0 in. riser for rack part # 4000110	4000056	N/A	N/A	N/A
4.0 in. riser for rack part # 4000111	4000056	N/A	N/A	N/A

#### Frames

Bag capacity 50 mL, Fenwal 4R9951, 6 places for cassettes	4000060	4000060	4000063	4000066
Bag capacity 250 mL bag, Fenwal 4R5461, 4 places for cassettes	4000060	4000060	4000063	4000066
Bag capacity 500 mL bag, Fenwal 4R5462, 4 places for cassettes	4000060	4000060	4000063	4000066

#### Thermal Data

120V, 60 Hz Printer with cable assembly and RS-232 connector kit	4000565	4000565	4000565	4000565
220V, 50 Hz Printer with cable assembly and RS-232 connector kit	4000665	4000665	4000665	4000665
Thermal Printer Paper (5 rolls/package)	4000566	4000566	4000566	4000566

#### Recorder Kit

120, 60 Hz with 6 in. diameter circular chart, 7-day temperature recorder, pen and chart drive (top, left and right side mount)	201175	201175	201175	201175
220, 50 Hz with 6 in. diameter circular chart, 7-day temperature recorder, pen and chart drive (top, left and right side mount)	201280	201280	201280	201280
Replacement Felt Tip Pen	245231	245231	245231	245231

#### Sensaphone® Telephone Dialing Systems

4 pre-programmed numbers, 120V 60 Hz	400047	400047	400047	400047
4 pre-programmed numbers, 220V 50 Hz	400182*	400182*	400182*	400182*
8 pre-programmed numbers, 120V 60 Hz	400134	400134	400134	400134
8 pre-programmed numbers, 220V 50 Hz	400183*	400183*	400183*	400183*
RJ-11 Remote Alarm Cable Kit used to connect remote alarm to equipment	400142	400142	400142	400142

#### Tall Sleeves for CryoPlus Vessels

Factory installed	1950720	1950721	Standard	Standard
Customer installed/retrofit	1950706	1950707	1950708	1950709

#### Hot Gas Bypass

120 V factory installed	195021	195021	195021	195021
220 V factory installed	195023	195023	195023	195023
120 V field installed	195700	195700	195700	195700
220 V field installed	195701	195701	195701	195701

#### Miscellaneous

T-Valve assembly	4000290	4000290	4000290	4000290
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## Thermo Scientific BioCane Canister and Cane Systems

# cost-effective storage

Our BioCane canister and cane systems cost-effectively store cell, tissues or other biological samples. Available in four sizes, the system can safely hold samples for up to seven months without replenishing LN<sub>2</sub>.

- Models include six stainless steel canisters to accommodate vials (eight with BioCane 73)
- Canisters are color-coded to simplify sample identification
- Durable aluminum construction and vacuum insulation
- Narrow-mouth design minimizes LN<sub>2</sub> evaporation
- Secure locking clasp



**BioCane 20**
**BioCane 34**
**BioCane 47**
**BioCane 73**

Model No.	CK509X2	CK509X3	CK509X4	CK509X6
<b>Selection Guide</b>				
Application	Portable Sample Storage Vessel	Portable Sample Storage Vessel	Portable Sample Storage Vessel	Portable Sample Storage Vessel
Storage Type	Manual Fill / Canister	Manual Fill / Canister	Manual Fill / Canister	Manual Fill / Canister
LN <sub>2</sub> Capacity	20.5 L	34.8 L	47.4 L	73 L
Static Evaporation Rate – See footnote (1)	0.1 L / Day	0.18 L / Day	0.4 L / Day	0.6 L / Day
Static Holding Time	227 Days	193 Days	121 Days	121 Days
Neck Diameter	2.0 in. / 5.1 cm	3.5 in. / 8.8 cm	5.0 in. / 12.7 cm	6.0 in. / 15.2 cm
Number of Canisters (included)	6	6	6	8
Canister Dimensions Length x Diameter	11 x 1.5 in. (27.9 x 3.8 cm)	11 x 2.8 in. (27.9 x 7.1 cm)	11 x 4 in. (27.9 x 10.2 cm)	11 x 5 in. (27.9 x 12.7 cm)
<b>Maximum System Capability</b>				
Number of Canes per Canister	5	20	42	42
Vial Capacity 1.2 mL (6 per cane)	180	720	1,512	2,016
Vial Capacity 2 mL (5 per cane)	150	600	1,260	1,680
Vial Capacity 4 mL (3 per cane)	90	360	756	1,008
Vial Capacity 5 mL (2 per cane)	60	240	504	672
Straw Capacity (10 per cane)	300	1,200	2,520	3,360
<b>Vessel Exterior Dimension</b>				
Diameter x Height	14.5 x 25.7 in. 36.8 x 65.3 cm	18.2 x 26.6 in. 46.2 x 67.6 cm	20.0 x 26.5 in. 50.8 x 67.3 cm	22.0 x 27.3 in. 55.9 x 69.3 cm
<b>Product Weight</b>				
Empty	26 lbs. / 11.8 kg	34 lbs. / 15.4 kg	39 lbs. / 17.7 kg	52 lbs. / 23.6 kg
Full	63 lbs. / 28.2 kg	96 lbs. / 43.5 kg	120 lbs. / 54.5 kg	192 lbs. / 87.3 kg
Packaged / Shipping	29 lbs. / 13.2 kg	41 lbs. / 18.6 kg	47 lbs. / 21.3 kg	95 lbs. / 43.2 kg
<b>Accessories</b>				
<b>Vials</b>				
1 mL, case of 500	AY509X32	AY509X32	AY509X32	AY509X32
Cryogenic Vials(E), case/500, 1.2 mL, 13.5 mm O.K., 38.1 mm H	AY509X13	AY509X13	AY509X13	AY509X13
1.5 mL, case of 500	AY509X33	AY509X33	AY509X33	AY509X33
Cryogenic Vials(E), case/500, 2.0 mL, 13.5 mm O.K., 48.3 mm H	AY509X12	AY509X12	AY509X12	AY509X12
<b>Miscellaneous</b>				
Low Level Alarm	8130	8130	8130	8130
Wheeled Accessory Cart (5 in. high)	AY509X9	AY509X9	AY509X9	AY509X1
Square Rack Option interchangeable with canisters (includes 5 cardboard boxes, each box with 25 cell dividers) – See footnote (2)	N/A	N/A	195555	N/A
One Cryo Cane, 1.2 mL – 6 Ampule	4000211	4000211	4000211	4000211
CryoSleeve (100 per case, length 273 mm / 10.75 in.)	AY509X21	AY509X21	AY509X21	AY509X21
<b>Regulatory Listing</b>				
	CE	CE	CE	CE

**Footnotes:**

(1) Static evaporation rates are based on new container performance with no lid openings and no product loads. Actual working performance may vary with individual applications.

(2) 1.2 / 2 mL vial capacity with each square rack is 125 vials.

# Thermo Scientific Locator PLUS Rack and Box Systems

Available with or without ultrasonic level monitor, our Locator PLUS indexed rack and box systems allow quick, efficient sample retrieval and offer cost-effective maximum storage capacity (up to 6,000 samples) combined with minimum liquid nitrogen consumption.

- Outstanding temperature uniformity: samples are stored below  $-180^{\circ}\text{C}$  even when less than 2 in. (5 cm) of liquid nitrogen remains in the vessel
- Ultrasonic Level Monitor safeguards irreplaceable samples with minimal liquid nitrogen evaporation and conduction
- Monitor provides continuous LED readout of liquid nitrogen level in 1/8 increments
- Optional alarm sounds when nitrogen level falls below safe range
- Advanced vacuum insulation minimizes liquid nitrogen evaporation and reduces operating costs
- Secure locking clasp prevents unauthorized entry
- Includes stainless steel racks designed for use with 2 in. (5 cm) Nalgene cryogenic boxes (larger racks available for 5.0 mL ampoules in Locator Jr. PLUS and Locator 4 PLUS)



quick, efficient  
sample retrieval



**Locator Jr. PLUS | Locator 4 PLUS | Locator 6 PLUS | Locator 8 PLUS**

<b>Model No.</b> (Does not include level monitor)	<b>CY50925-70</b>	<b>CY50935-70</b>	<b>CY50985-70</b>	<b>CY50945-70</b>
<b>Model No.</b> (With factory installed level monitor 100-240V) – See footnote (1)	<b>CY509106</b>	<b>CY509108</b>	<b>CY509109</b>	<b>CY509111</b>

**Selection Guide**

Application	Portable Sample Storage Vessel	Portable Sample Storage Vessel	Portable Sample Storage Vessel	Portable Sample Storage Vessel
Storage Type	Manual Fill / Rack and Box	Manual Fill / Rack and Box	Manual Fill / Rack and Box	Manual Fill / Rack and Box
LN <sub>2</sub> Capacity	71 L	121 L	184 L	121 L
Neck Diameter	8.5 in. / 21.5 cm	8.5 in. / 21.5 cm	8.5 in. / 21.5 cm	6.0 in. / 15.2 cm
Static Evaporation Rate – See footnote (2)	0.85 L / Day	0.99 L / Day	0.99 L / Day	0.60 L / Day
Static Holding Time	83 Days	122 Days	185 Days	201 Days
Number of 1.2 / 2 mL vial racks (boxes not included)	4	4	6	8

**Maximum System Capability**

Number of 2 mL vial boxes per rack	5	10	10	10
Number of 2 mL vials per box	100	100	100	25
Vial Capacity 2 mL	2,000	4,000	6,000	2,000
Vial Capacity 5 mL	648	1,620	2,430	N/A

**Vessel Exterior Dimension (Add 2 in. for lid and handle)**

Diameter x Height	22.0 x 26.9 in. 55.8 x 68.3 cm	22.0 x 37.5 in. 55.8 x 95.3 cm	26.0 x 37.5 in. 66.0 x 95.3 cm	22.0 x 37.5 in. 55.8 x 95.3 cm
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**Product Weight**

Empty – See footnote (3)	59.4 lbs. / 27 kg	82.5 lbs. / 37.5 kg	105.3 lbs. / 47.9 kg	81.3 lbs. / 37 kg
Full – See footnote (3)	82 lbs. / 37.3 kg	133.5 lbs. / 60.7 kg	180.3 lbs. / 82 kg	132 lbs. / 60 kg
Packaged / Shipping	91 lbs. / 41.3 kg	118 lbs. / 53.5 kg	160 lbs. / 72.6 kg	115 lbs. / 52.2 kg

**Accessories**

**Racks**

5.0 mL vial Rack , does not include boxes	HR509X19A-70	HR509X20A-70	HR509X32A-70	N/A
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**Boxes**

2 in. height: 1.0 and 1.5 mL Nalgene, 100 vial per box, case of 10	CS509X24	CS509X24	CS509X24	N/A
2 in. height: 2 mL Nalgene, 25 vial per box, case of 80	N/A	N/A	N/A	CS509X3
2 in. height: 2 mL Nalgene, 81 vial per box, case of 40	CS509X4	CS509X4	CS509X4	N/A
2 in. height: 2 mL Nalgene, 81 vial per box, case of 20	CS509X5	CS509X5	CS509X5	N/A
4 in. height: 5 mL Nalgene, 81 vial per box, each	CS509X10	CS509X10	CS509X10	N/A

**Vials**

1 mL, case of 500	AY509X32	AY509X32	AY509X32	AY509X32
Cryogenic Vials(E), case/500, 1.2 mL, 13.5 mm O.K., 38.1 mm H	AY509X13	AY509X13	AY509X13	AY509X13
1.5 mL, case of 500	AY509X33	AY509X33	AY509X33	AY509X33
Cryogenic Vials(E), case/500, 2.0 mL, 13.5 mm O.K., 48.3 mm H	AY509X12	AY509X12	AY509X12	AY509X12

**Miscellaneous**

Low Level Alarm (stand alone)	8130	8130	8130	8130
Wheeled Accessory Cart (5 in. high)	AY509X1	AY509X1	AY509X1-70	AY509X1
Customer installed level monitor 100-240V	CN509X16-70	CN509X17-70	CN509X15	CN509X7-70
Log Book	1950338	1950338	1950338	1950338
CryoClaw	AY509X18	AY509X18	AY509X18	AY509X18
Replacement Suction Cups (2) for CryoClaw	AY509X19	AY509X19	AY509X19	AY509X19

**Regulatory Listing**

	cCSAus (4) and CE	cCSAus (4) and CE	cCSAus (4) and CE	cCSAus (4) and CE
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Footnotes:

- (1) For China models use: CY509106CN for Locator Jr. PLUS; CY509108CN for Locator 4 PLUS; CY509109CN for Locator 6 PLUS; and CY509111CN for Locator 8 PLUS.
- (2) Static evaporation rates are based on new container performance with no lid openings and no product loads. Actual working performance may vary with individual applications.
- (3) Add 1.6 lbs. / 0.73 kg for units with level monitor.
- (4) cCSAus listing for models with factory-installed level monitor.

## Thermo Scientific Locator Rack and Box Systems

# simplified storage and retrieval

Our Locator rack and box systems simplify sample storage and retrieval with unique hanging rack and gridded box design, advanced vacuum insulation, unmatched temperature uniformity and an innovative liquid nitrogen monitor.

- Outstanding temperature uniformity: samples are stored below  $-180^{\circ}\text{C}$  even when less than 2 in. (5 cm) of liquid nitrogen remains in the vessel
- Ultrasonic Level Monitor safeguards irreplaceable samples with minimal liquid nitrogen evaporation and conduction
- Optional monitor provides continuous LED readout of liquid nitrogen level; activates visual and audible alarms when level falls below safe range of approximately 1 in. (2.5 cm)
- Optional alarm also alerts operator in the event of excessive liquid nitrogen loss
- Secure locking clasp prevents unauthorized entry
- Includes stainless steel racks designed for use with 2 in. (5 cm) Nalgene cryogenic boxes (larger racks available for 5.0 mL ampoules in Locator Jr. and Locator 4)



## Locator Jr.

## Locator 4

## Locator 8

<b>Model No.</b> (does not include level monitor)	<b>CY50925</b>	<b>CY50935</b>	<b>CY50945</b>
<b>Model No.</b> (With factory installed level monitor 100-240V) – See footnote (1)	<b>CY509105</b>	<b>CY509107</b>	<b>CY509110</b>

### Selection Guide

Application	Portable Sample Storage Vessel	Portable Sample Storage Vessel	Portable Sample Storage Vessel
Storage Type	Manual Fill / Rack and Box	Manual Fill / Rack and Box	Manual Fill / Rack and Box
LN <sub>2</sub> Capacity	60.00 L	111.0 L	111.0 L
Neck Diameter	8.5 in. / 21.5 cm	8.5 in. / 21.5 cm	6.0 in. / 15.2 cm
Static Evaporation Rate – See footnote (2)	0.85 L / Day	0.99 L / Day	0.6 L / Day
Static Holding Time	70 Days	112 Days	185 Days
2 mL vial racks standard (boxes not included)	4	4	8

### Maximum System Capability

Number of 1.2 / 2 mL vial boxes per rack	4	9	9
Number of 1.2 / 2 mL vials per box	100	100	25
Vial Capacity 1.2 / 2 mL	1,600	3,600	1,800
Vial Capacity 5 mL	648	1,620	N/A

### Vessel Exterior Dimension (Add 2 in. for lid and handle)

Diameter x Height	22.0 x 24.5 in. 55.8 x 62.2 cm	22.0 x 35.5 in. 55.8 x 90.2 cm	22.0 x 35.5 in. 55.8 x 95.3 cm
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### Product Weight

Empty – See footnote (3)	54.1 lbs. / 24.6 kg	77.8 lbs. / 35.4 kg	77.8 lbs. / 35.4 kg
Full – See footnote (3)	76.5 lbs. / 34.8 kg	128.5 lbs. / 58.4 kg	128.5 lbs. / 58.4 kg
Packaged / Shipping	90 lbs. / 40.8 kg	115 lbs. / 52.2 kg	117 lbs. / 53.1 kg

### Accessories

#### Racks

5.0 mL vial Rack, does not include boxes	HR509X19A	HR509X20A	N/A
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#### Boxes

2 in. height: 1.0 and 1.5 mL Nalgene, 100 vial per box, case of 10	CS509X24	CS509X24	N/A
2 in. height: 2 mL Nalgene, 25 vial per box, case of 80	N/A	N/A	CS509X3
2 in. height: 2 mL Nalgene, 81 vial per box, case of 40	CS509X4	CS509X4	N/A
2 in. height: 2 mL Nalgene, 81 vial per box, case of 20	CS509X5	CS509X5	N/A
4 in. height: 5 mL Nalgene, 81 vial per box, each	CS509X10	CS509X10	N/A

#### Vials

1 mL, case of 500	AY509X32	AY509X32	AY509X32
Cryogenic Vials(E), case/500, 1.2 mL, 13.5 mm O.K., 38.1 mm H	AY509X13	AY509X13	AY509X13
1.5 mL, case of 500	AY509X33	AY509X33	AY509X33
Cryogenic Vials(E), case/500, 2.0 mL, 13.5 mm O.K., 48.3 mm H	AY509X12	AY509X12	AY509X12

#### Miscellaneous

Low Level Alarm (stand alone)	8130	8130	8130
Wheeled Accessory Cart (5 in. high)	AY509X1	AY509X1	AY509X1
Logbook	1950338	1950338	1950338
Customer installed level monitor 100-240V – See footnote (4)	CN509X16	CN509X17	CN509X7
CryoClaw	AY509X18	AY509X18	AY509X18
Replacement Suction Cups (2) for CryoClaw	AY509X19	AY509X19	AY509X19

### Regulatory Listing

	cCSAus and CE (5)	cCSAus and CE (5)	cCSAus and CE (5)
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#### Footnotes:

(1) For China models use: CY509105CN for Locator Jr.; CY509107CN for Locator 4; and CY509110CN for Locator 8.

(2) Static evaporation rates are based on new container performance with no lid openings and no product loads. Actual working performance may vary with individual applications.

(3) Add 1.6 lbs. / 0.73 kg for units with level monitor.

(4) For China models use: CN509X1CN for Locator Jr.; CN509X4CN for Locator 4; and CN509X7CN for Locator 8.

(5) cCSAus listing for models with factory-installed level monitor.

## Thermo Scientific Thermo Series Liquid Nitrogen Transfer Vessels



Designed for storing and dispensing small amounts of liquid nitrogen, our Thermo Series includes four models with capacities from 5 to 32 L.

- Designed to bring liquid nitrogen to other cryo vessels
- Lightweight aluminum dewars assure low-static evaporation rates
- Compact Thermo 5 and 10 dewars feature a convenient handle for pouring and for use in applications where only small quantities of liquid nitrogen are needed
- Thermo 10, 20 and 30 can be fitted with self-pressurized withdrawal accessory devices to easily dispense LN<sub>2</sub> without pouring
- Optional withdrawal device, 12 mL dipper and wheeled accessory cart



# compact, convenient





**Thermo 5**

**Thermo 10**

**Thermo 20**

**Thermo 30**

Model No.	TY509X1	TY509X2	TY509X3	TY509X4
<b>Selection Guide</b>				
Application	Transfer Vessel	Transfer Vessel	Transfer Vessel	Transfer Vessel
Storage Type	Manual Fill	Manual Fill	Manual Fill	Manual Fill
LN <sub>2</sub> Capacity	5.0 L	10.0 L	20.0 L	32.0 L
Neck Diameter	2.2 in. / 5.6 cm	2.2 in. / 5.6 cm	2.0 in. / 5.0 cm	2.5 in. / 6.4 cm
Static Evaporation Rate – See footnote (1)	0.15 L / Day	0.18 L / Day	0.18 L / Day	0.22 L / Day
Static Holding Time	33.3 Days	55.6 Days	111 Days	145 Days
<b>Vessel Exterior Dimension</b>				
Diameter x Height	8.8 x 18.2 in. 22.4 x 46.2 cm	10.3 x 21.5 in. 26.2 x 54.6 cm	14.5 x 24.7 in. 36.8 x 62.7 cm	17.0 x 24.1 in. 43.2 x 61.2 cm
<b>Product Weight</b>				
Empty	8 lbs. / 3.6 kg	12 lbs. / 5.5 kg	19 lbs. / 8.6 kg	25 lbs. / 11.4 kg
Full	17 lbs. / 7.7 kg	31 lbs. / 14.1 kg	55 lbs. / 25 kg	82 lbs. / 37.3 kg
Shipping	12 lbs. / 5.5 kg	14 lbs. / 6.4 kg	24 lbs. / 10.9 kg	30 lbs. / 13.6 kg
<b>Accessories</b>				
Withdrawal Device	N/A	AY509X5	AY509X4	AY509X3
12 mL Dipper	AY509X6	AY509X6	AY509X6	AY509X6
Wheeled Accessory Cart (5 in. high)	N/A	N/A	AY509X9	AY509X9

**Footnotes:**

(1) Static evaporation rates are based on new container performance with no lid openings and no product loads. Actual working performance may vary with individual applications.

# Thermo Scientific Arctic Express Storage Systems

Our Arctic Express and Arctic Express Dual systems protect samples during shipment and storage. Featuring excellent flexibility and safety features, these systems can be used as dry shippers or laboratory cryo storage vessels.



# safe sample shipping

## Arctic Express Dual Shipper Storage Systems

- When filled with liquid nitrogen, Arctic Express dual shippers can be used as a canister and cane storage system indefinitely with static holding times of up to 125 days
- Dual shippers hold six numbered, color-coded, stainless steel cans (included) which accommodate canes that hold ampoules
- Hard-shell shipping container comes standard for both Arctic Express and Dual Shippers

## Arctic Express IATA-Shipper Transport Systems

- Worldwide shipment of precious samples with safety and security; approved for UN and IATA
- Two-week holding time preserves sample integrity
- Lockable cover with internal security compartment provides protection and sample isolation
- Aluminum container with handle holds internal security compartment

## Arctic Express Cryogenic Shipping Containers

- Innovative material absorbs liquid nitrogen to prevent spillage during shipment
- 14- and 21-day liquid nitrogen holding times allow specimens to be shipped safely
- Durable construction and sturdy base allow dry shipper to withstand rough handling
- Lockable lid prevents unauthorized entry
- Easily transported via most common carriers
- Lightweight aluminum design and convenient pail-style handle



# Thermo Scientific Arctic Express

Arctic Express 5

Arctic Express 10

Arctic Express 20

Arctic Express  
IATA Approved

Model No.	CY50915	CY50905	CY50910	CY50920
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## Selection Guide

Application	Dry Shipping Container	Dry Shipping Container	Dry Shipping Container	Dry Shipping Container
Storage Type	Manual Fill / Canister	Manual Fill / Canister	Manual Fill	Manual Fill
LN <sub>2</sub> Capacity	1.5 L	4.3 L	10.0 L	10.0 L
Neck Diameter	1.4 in. / 3.5 cm	2.0 in. / 5.0 cm	8.5 in. / 21.6 cm	8.5 in. / 21.6 cm
Canister Diameter	1.2 in. / 3.1 cm	1.8 in. / 4.6 cm	N/A	N/A
Static Evaporation Rate – <i>See footnote (1)</i>	0.19 L / Day	0.2 L / Day	0.7 L / Day	0.7 L / Day
Static Holding Time	8 Days	21 Days	14 Days	14 Days
Number of Canisters (included)	1	1	N/A – <i>See footnote (2)</i>	Internal Security Compartment
Canister Dimensions (Length x Diameter)	5 x 1.2 in. (12.7 x 3.0 cm)	11 x 1.80 in. (27.9 x 4.6 cm)	N/A	N/A
Hard Shell Shipping Container	standard	standard	standard	standard
Shipping Dimensions (Diameter x Height)	15 x 24 in. 38.1 x 61 cm	15 x 24 in. 38.1 x 61 cm	22 x 28 in. 55.9 x 71.1 cm	22 x 28 in. 55.9 x 71.1 cm

## Maximum System Capability

Number of Canes per Canister	3	8	161	N/A
Number of 1.2 mL Vials per Cane	3	6	6	N/A
Vial Capacity 1.2 mL	9	48	966	480
Vial Capacity 2 mL	9	48	966	384
Vial Capacity 4 mL	6	24	483	288
Vial Capacity 5 mL	3	16	322	N/A
Straw Capacity	15	120	1,610	N/A

## Vessel Exterior Dimension

Diameter x Height	7.3 x 13.5 in. 18.5 x 34.3 cm	8.7 x 19.4 in. 22.1 x 49.3 cm	15.0 x 23.0 in. 38.1 x 58.4 cm	15.0 x 23.0 in. 38.1 x 58.4 cm
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## Product Weight

Empty	6 lbs. / 2.7 kg	13 lbs. / 5.9 kg	30 lbs. / 13.6 kg	36 lbs. / 16.4 kg
Fully Absorbed	8.8 lbs. / 4 kg	20.0 lbs. / 9.1 kg	47 lbs. / 21.4 kg	53 lbs. / 24.1 kg
Packaged / Shipping	24 lbs. / 10.9 kg	29 lbs. / 13.2 kg	52 lbs. / 23.6 kg	58 lbs. / 26.4 kg

## Regulatory Listing

	CE	CE	CE	CE
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Footnotes:

(1) Static evaporation rates are based on new container performance with no lid openings and no product loads. Actual working performance may vary with individual applications.

(2) Shipments of bone marrow, heart valves or other large samples require specific package size to determine capacity.

# Thermo Scientific Arctic Express Dual

**Arctic Express Dual 10** | **Arctic Express Dual 19** | **Arctic Express Dual 28**

Model No.	CK50920	CK50921	CK50922
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## Selection Guide

	Arctic Express Dual 10	Arctic Express Dual 19	Arctic Express Dual 28
Application	Transport / Storage System	Transport / Storage System	Transport / Storage System
Storage Type	Manual Fill / Canisters	Manual Fill / Canisters	Manual Fill / Canisters
LN <sub>2</sub> Capacity	10.0 L	18.5 L	28.0 L
Absorbed LN <sub>2</sub> Capacity	3 L	3 L	8 L
Neck Diameter	2.0 in. / 5.08 cm	2.2 in. / 5.6 cm	3.8 in. / 9.7 cm
Static Holding Time – Laboratory	42 Days	125 Days	50 Days
Static Holding Time – Shipper	21 Days	21 Days	21 Days
Number of Canisters (included)	6	6	6
Canister Dimensions	1.5 x 11 in. 3.8 x 27.9 cm	1.6 x 11 in. 4.1 x 27.9 cm	3.1 x 11 in. 7.9 x 27.9 cm
Hard Shell Shipping Container	standard	standard	standard
Exterior dimensions (Diameter x Height)	18 x 25 in. 45.7 x 63.5 cm	22 x 28 in. 55.9 x 71.1 cm	22 x 28 in. 55.9 x 71.1 cm

## Maximum System Capability

	Arctic Express Dual 10	Arctic Express Dual 19	Arctic Express Dual 28
Number of Canes per canister	5	6	21
Total Number of Canes	30	36	126
Vial Capacity 1.2 mL (6 per cane)	180	216	756
Vial Capacity 2 mL (5 per cane)	150	175	630
Vial Capacity 4 mL (3 per cane)	90	108	378
Vial Capacity 5 mL (2 per cane)	60	72	252
Straw Capacity (10 per cane)	300	360	1,260

## Vessel Exterior Dimension

	Arctic Express Dual 10	Arctic Express Dual 19	Arctic Express Dual 28
Diameter x Height	10.2 x 21.6 in. 25.9 x 54.9 cm	14.5 x 25.7 in. 36.8 x 65.3 cm	18.2 x 22.0 in. 46.2 x 55.9 cm

## Product Weight

	Arctic Express Dual 10	Arctic Express Dual 19	Arctic Express Dual 28
Empty	17 lbs. / 7.7 kg	24 lbs. / 10.9 kg	37 lbs. / 16.8 kg
Full	35 lbs. / 15.9 kg	57 lbs. / 25.9 kg	87 lbs. / 39.5 kg
Packaged / Shipping	34 lbs. / 15.5 kg	46 lbs. / 20.9 kg	60 lbs. / 27.3 kg

## Accessories

### Vials

	Arctic Express Dual 10	Arctic Express Dual 19	Arctic Express Dual 28
1 mL, Case of 500	AY509X32	AY509X32	AY509X32
Cryogenic Vials(E), case/500, 1.2 mL, 13.5 mm, 38.1 mm H	AY509X13	AY509X13	AY509X13
1.5 mL, Case of 500	AY509X33	AY509X33	AY509X33
Cryogenic Vials(E), case/500, 2.0 mL, 13.5 mm, 48.3 mm H	AY509X12	AY509X12	AY509X12

### Miscellaneous

	Arctic Express Dual 10	Arctic Express Dual 19	Arctic Express Dual 28
Low-Level Alarm, stand alone – <i>See footnote (1)</i>	8130	8130	8130
Wheeled Accessory Cart, 5 in. high – <i>See footnote (1)</i>	N/A	AY509X9	AY509X9
One Cryo Cane, 1.2 mL – 6 Ampule	4000211	4000211	4000211
CryoSleeve (100 per case, length 273 mm / 10.75 in.)	AY509X21	AY509X21	AY509X21

## Regulatory Listing

	Arctic Express Dual 10	Arctic Express Dual 19	Arctic Express Dual 28
	CE	CE	CE

Footnote:

(1) The low-level alarm and wheeled accessory cart can only be used in the laboratory application. Not for shipping.

# Thermo Scientific Thermo-Flask Benchtop Liquid Nitrogen Containers

Our Thermo-Flask liquid nitrogen containers feature inner vessels of borosilicate glass evacuated to 1x10<sup>-5</sup>mmHg. Available in stainless steel, and featuring vented clamped lids, carrying handles and rubber cushioned bases.

- Durable, corrosion-resistant stainless steel exterior
- Shallow wide-mouth ideal for use as a cold trap
- Convenient dish-shaped design perfect for benchtop use with crushed ice and dry ice/alcohol
- “Push-fit” insulated lid, vented to prevent pressure build-up



**Model No.** | 2129 | 2130 | 2122 | 2123 | 2124

## Selection Guide

Application	LN <sub>2</sub> Benchtop Container	LN <sub>2</sub> Benchtop Container	LN <sub>2</sub> Benchtop Container	LN <sub>2</sub> Benchtop Container	LN <sub>2</sub> Benchtop Container
Storage Type	Manual Fill / Shallow Wide Mouth	Manual Fill / Shallow Wide Mouth	Manual Fill / SS with Lids and Handles	Manual Fill / SS with Lids and Handles	Manual Fill / SS with Lids and Handles
LN <sub>2</sub> Capacity	1,000 mL	1,900 mL	1.01 L	2.01 L	4.51 L
Inside Neck Diameter	5.1 in. / 13 cm	6.1 in. / 15.5 cm	3.4 in. / 8.6 cm	4.2 in. / 10.7 cm	5.9 in. / 15 cm

## Vessel Exterior Dimension

Diameter x Height	6.3 x 4.5 in. 16 x 11.4 cm	7.3 x 5.4 in. 18.5 x 13.7 cm	4.6 x 9 in. 11.7 x 22.9 cm	5.6 x 10.6 in. 14.2 x 26.9 cm	7.2 x 13.8 in. 18.3 x 35.1 cm
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## Product Weight

Packaged / Shipping	8 lbs. / 3.6 kg	10 lbs. / 4.5 kg	6 lbs. / 2.7 kg	8 lbs. / 3.6 kg	10 lbs. / 4.5 kg
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## Accessories

12 mL Dipper	AY509X6	AY509X6	AY509X6	AY509X6	AY509X6
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# Thermo Scientific LN<sub>2</sub> Supply Tanks

All of our stainless steel LN<sub>2</sub> supply tanks are rated at 22 psi.



<b>Model No.</b>	<b>8127</b>	<b>8120TF</b>	<b>8121</b>
<b>Model No. (outside North America)</b>	<b>8127CE</b>	<b>8120CE</b>	<b>8121CE</b>

## Selection Guide

Application	LN <sub>2</sub> Supply Tank	LN <sub>2</sub> Supply Tank	LN <sub>2</sub> Supply Tank
Type	Stainless Steel Low Pressure (22 psi)	Stainless Steel Low Pressure (22 psi)	Stainless Steel Low Pressure (22 psi)
LN <sub>2</sub> Capacity	50.0 L	180.0 L	230.0 L
Static Evaporation Rate	4% per day	2% per day	2% per day
Caster	Standard	Option	Standard

## Vessel Exterior Dimension

Diameter x Height / Hand Truck	16.0 x 41 in. 40.6 x 104.1 cm	20.0 x 63.5 in. 50.8 x 161.3 cm	26.0 x 54.8 in. / <b>Hand Truck:</b> 27 x 28 F/B in. 66.0 x 139.2 cm / <b>Hand Truck:</b> 68.6 x 71.1 F/B cm

## Product Weight

	98.5 lbs. / 47.7 kg	210 lbs. / 95.3 kg	275 lbs. / 124.7 kg
Empty			
Full	187.6 lbs. x 85.1 kg	531 lbs. / 241 kg	684.9 x 310.6 kg
Packaged / Shipping	136 lbs. / 62 kg	326 lbs. / 148 kg	425 lbs. / 193 kg

## Accessories

LN <sub>2</sub> Cylinder Hand Truck with Pneumatic Wheels	N/A	4000173	N/A
LN <sub>2</sub> Cylinder Roller Base	N/A	4000175	N/A
6 ft. Transfer Hose	4000401	4000401	4000401
Phase Separator for Transfer Hose	4000571	4000571	4000571

Not approved for sales requiring CE

# Cryopreservation accessories



- |                             |                                   |                                  |                                |
|-----------------------------|-----------------------------------|----------------------------------|--------------------------------|
| 1 Cell Dividers             | 5 LN <sub>2</sub> Measuring Stick | 8 Cryo Sleeve with Optional Cane | 13 Sensaphone Dialing System   |
| 2 Square Box with Hole      | 6 CryoClaw                        | 9 Cryo Markers                   | 14 Low-Level Alarm with Sensor |
| 3 Rectangular Cardboard Box | 7 Cryo Gloves                     | 10 T-Valve Assembly              | 15 Flexible Metal Hose         |
| 4 Polycarbonate Boxes       |                                   | 11 Phase Separator               |                                |
|                             |                                   | 12 Tongs                         |                                |



## Description

## Model No.

Cryo Vials	
<b>Each vial is constructed of sterile polypropylene with a white marking area and includes a screw cap.</b>	
1.2 mL, self-standing, conical interior bottom, silicone washer, one case of 500	4000198
2.0 mL, self-standing, round interior bottom, silicone washer, one case of 500	4000200
4.0 mL, self standing, round bottom, silicone washer, one case of 500	4000206
5.0 mL, round bottom, silicone washer, one case of 500	4000208
Cryo Vial Color Coding Caps	
Rainbow (assortment of all colors), one case of 400	4000389
Cryo Boxes	
Individual	
2.0 in. (5.1 cm) Rectangular Cardboard Box, includes a 40-Cell Divider (for CryoPlus models)	4000189
2.0 in. (5.1 cm) Square Stainless Steel Box, does not include a 100-Cell Divider	4000238
2.0 in. (5.1 cm) Square Cardboard Box, includes a 100-Cell Divider (for CryoPlus models)	4000014
2.75 in. (7.0 cm) Square Cardboard Box, does not include a 25-Cell Divider (for CryoPlus models)	189470
3.0 in. (7.6 cm) Square Cardboard Box, includes a 100-Cell Divider (for CryoPlus models)	4000015
2.0 in. (5.1 cm) High Polycarbonate Box with 100-Cell Divider, includes a numerical grid system printed on the cover	820010
2.0 in. (5.1 cm) High Polycarbonate Box with 81-Cell Divider, includes a numerical grid system printed on the cover	820011
3.0 in. (5.1 cm) High Polycarbonate Box with 81-Cell Divider, includes a numerical grid system printed on the cover	820013
Dividers	
Cardboard 100-Cell Divider	4000013
Cardboard 40-Cell Divider	4000174
Cardboard 25-Cell Divider	189387
Canes	
One Cane, 1.2 mL – 6 Ampoule	4000211
One Aluminum Cane for storage of 12.5 mm diameter Cryo Tubes	4000217
One Cane, 5.0 mL – 2 Ampoule	4000214
One Aluminum Cane for 9.2 mL and 10.0 mL Goblets	4000216
Cryo Sleeve	
Polyvinyl Sleeve, 0.6 in. (1.5 cm) interior diameter, 10.8 in. (27.4 cm) long, one case of 100	4000218
Tongs	
Transport vials from freezing racks to boxes	
Stainless Steel Cryo Tongs	4000388
Claws	
Retrieve fallen object in the LN <sub>2</sub> vessels	
CryoClaw	AY509X18
Replacement suction cups for CryoClaw	AY509X19

## Description

## Model No.

Measuring Stick	
LN <sub>2</sub> Measuring Stick	180143
Gloves (Water Proof Cryo)	
Mid-Arm, 14.0 in. to 15.0 in. (35.6 cm to 38.1 cm)	
Small	189441
Medium	189442
Large	189443
Elbow-Length, 18.0 in. to 20.0 in. (45.7 cm to 50.8 cm)	
Medium	189445
Large	189446
Extra-Large	189447
Shoulder-Length, 28.0 in. (71.1 cm)	
Medium	189448
Large	189449
Extra-Large	189450
Aprons	
Small, 36.0 in.W (91.4 cm)	189451
Medium, 42.0 in.W (106.7 cm)	189452
Large, 48.0 in.W (121.9 cm)	189453
Cryo Marker Pens	
<i>Fine tip, fast-drying, non-smearing, permanent ink; recommended for all Cryogenic vials at -200C (-328F).</i>	
Black, blue, green, and red, set of 4	4000221
Black, set of 4	4000222
LN <sub>2</sub> Transfer Hoses and Phase Separator	
4.0 ft. (1.2 m) Flexible Metal Hose, 1/2 in., 45° flare, swivel ends	4000400
6.0 ft. (1.8 m) Flexible Metal Hose, 1/2 in., 45° flare, swivel ends	4000401
Phase Separator, 1.3 in. (3.3 cm) diameter x 3.0 in. (7.6 cm) long x 1/4 in. FPT	4000571
Low-Level Alarm	
Low-Level Alarm (120V) with Sensor for any standard-sized LN <sub>2</sub> container, includes dry contacts for remote alarm	8130
Sensaphone® Telephone Dialing Systems	
4 pre-programmed numbers, 120V 60 Hz	400047
4 pre-programmed numbers, 220V 50 Hz*	400182
8 pre-programmed numbers, 120V 60 Hz	400134
8 pre-programmed numbers, 220V 50 Hz*	400183
T-Valve Assembly	
T-Valve assembly with fittings, used to connect two transfer hoses to a supply tank	4000290

\*Not CE marked



# keep track of your samples

with Thermo Scientific Nunc Cryobank

Nunc™ Cryobank™ is the next generation of cryogenic storage. Developed for superior tracking of valuable samples, Cryobank tubes have the same exceptional features as standard cryo tubes, with the addition of a laser-etched unique 2D code on the bottom of each tube. Cryobank tubes are ideal for storage temperatures down to vapor phase of liquid nitrogen. The Cryobank 2D code is a 14 x 14 array, and the entire rack is readable in a single pass by any Thermo Scientific VisionMate 2D barcode reader. Unique 2D codes are error-proof and denser than normal linear bar codes, and are etched to ensure there is no label to fall off.



### **The next generation of cryogenic storage**

0.5 and 1.0 mL tubes are supplied in a standard ANSI-footprint locking rack. The 2.0 and 5.0 mL tubes are supplied in a non-locking ANSI-standard footprint rack featuring a latched lid design that is compatible with manual or automated use. Bulk packaged configurations and color cap options are also available.

**Flexible Capping.** Cryobank tubes can be capped and decapped using a number of methods: a single-socket tool, an 8-channel automated decapper or the Thermo Scientific 48- or 96- format Capit-All Decapper. Multi-tube decapping ensures optimum torque is applied to every tube for effective storage and enables the user to handle a large number of tubes without fear of repetitive-stress injuries.

**Standard Features.** The full portfolio from 0.5 mL to 5.0 mL allows you to standardize on a single set of accessories. Cryobank tubes are compatible with standard Nunc accessories, including color coders, standard freezer racks and cryo boxes. The Cryobank portfolio is also compatible with the full line of Thermo Scientific VisionMate 2D barcode readers and Thermo Scientific VisionTracker Storage Tracking Database Software.

### **Stringent Quality Control**

- 2D barcodes are scanned for readability and checked against a full database of previous barcodes to ensure no duplicates across the Cryobank storage tube product line.
- Leak testing validation performed during the manufacturing process to ensure sample integrity is maintained
- Certified to meet your storage needs
- CE Certified
- 0.5 and 1.0 mL conform to IATA requirements for transportation

**For more information, visit [www.thermoscientific.com/cryobank](http://www.thermoscientific.com/cryobank)**



[thermoscientific.com/cold](http://thermoscientific.com/cold)

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**Australia** +61 39757 4300  
**Austria** +43 1 801 40 0  
**Belgium** +32 53 73 42 41  
**China** +800 810 5118 or  
+400 650 5118  
**France** +33 2 2803 2180  
**Germany national toll free** 0800 1 536 376  
**Germany international** +49 6184 90 6000

**India toll free** 1800 22 8374  
**India** +91 22 6716 2200  
**Italy** +32 02 95059 552  
**Japan** +81 3 5826 1616  
**Netherlands** +31 76 579 55 55  
**New Zealand** +64 9 980 6700  
**Nordic/Baltic/CIS countries**  
+358 9 329 10200

**Russia** +7 812 703 42 15  
**Spain/Portugal** +34 93 223 09 18  
**Switzerland** +41 44 454 12 22  
**UK/Ireland** +44 870 609 9203  
**USA/Canada** +1 866 984 3766

**Other Asian countries** +852 2885 4613  
**Countries not listed** +49 6184 90 6000

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