



VS

The VS Class

CryoSafe's VS Class Vapor Shippers are the standard when the shipment of biological samples is required. The VS Class utilizes a highly effective hydro-phobic absorbent that maintains cryogenic temperatures while helping to eliminate spillage. Reusable shipping cartons are available for all units to provide additional protection and safety during shipment.

LS	VS 1	VS 2	VS 3	VS 4	VS 5	VS 6	VS 7	VS 8	VS 9	VS-IATA
(Cans) 9	24	106	1,134	48	900/720	500	966(Bulk)	180	350 (bulk)	
isters 1	1	1	7	1	4+1Center	1 Rack	-	6	-	
(10 Level Bulk) 88	88	440	4,354	210	3,750/3000	-	-	780	-	
(10 Cane)	-	60	280	3,080	120	2,500/2000	-	540	-	
neal (8953)	-	-	-	-	-	10	10	-	22 (Female 48953)	
(Liters) 1.5	2.9	3.6	4.2	4.3	6.8	8.5	10	12.3	11.8	
Evaporation Rate (Liters/Day)	0.19	0.20	0.26	0.35	0.20	0.3	0.85	0.7	0.09	.8
Working Time (Days)	8	14	14	12	21	23	10	14	85	14
r Height in (mm)	1.4 (35)	1.4 (35)	2.75 (70)	3.8 (97)	2 (51)	3.81 (96.7)	8.5(216)	8.5 (216)	2 (51)	8.5 (216)
Height in (mm)	13.5 (343)	19.5 (495)	18.4 (468)	22 (558)	19.4 (492)	25 (635)	21.5 (546)	23 (584)	25.7 (652)	24 (610)
er Height in (mm)	7.25 (184)	7.2 (183)	8.7 (222)	18.3 (464)	8.7 (222)	14.5 (368)	14.5 (368)	15 (381)	14.5 (368)	15 (381)
Height in (mm)	5 (127)	11 (278)	11 (278)	11 (278)	11 (278)	11 (278)	-	12.5 (317.5)	11 (278)	-
er Height in (mm)	1.2 (31)	1.2 (31)	2.62 (67)	3.1 (79)	1.81 (46)	3.2 (80)	-	-	1.5 (38)	-
Weight (kg)	6 (2.7)	8 (3.6)	11 (5)	30.5 (13.8)	13 (5.9)	23 (10.5)	24 (10.9)	30 (13.6)	30 (13.6)	29 (13.1)
Weight (kg)	8.8 (4)	11.6 (5)	18 (8.1)	38 (17.2)	20 (9.3)	35 (16)	37.5 (17)	47 (21.4)	52 (23.6)	50.5 (22.9)



VS & VS 8 Class units come standard with Hard Shell Shipping Case. ACCESSORIES: Hard Shell Shipping Case • Cryo-Shipper Frame



LD

The LD Class

The storage and dispensing of liquid nitrogen can now be accomplished safely and efficiently with the LD Class from CryoSafe. These super insulated dewars have minimal evaporation rates and are available for pouring, pressurized dispensing and dipping of liquid nitrogen.

MODELS	LD 4	LD 5	LD 10	LD 20	LD 30	LD 5
L ₂ Capacity (Liters)	4	5	10	21	32	50
Static Evaporation Rate* (Liters/Day)	0.19	0.15	0.18	0.18	0.22	0.49
Neck Diameter in (mm)	1.4 (35.5)	2.2 (56)	2.2 (56)	2 (51)	2.5 (64)	2.5 (64)
Exterior height in (mm)	16.8 (426)	18.2 (462)	21.5 (546)	24.7 (627)	24.1 (611)	30.7
Exterior Diameter in (mm)	7.3 (185)	8.8 (222)	10.3 (260)	14.5 (368)	17 (432)	17 (432)
Weight Empty lbs. (kg)	6 (2.7)	8 (4)	13 (6)	19 (9)	27 (12)	34 (1)
Weight Full lbs. (kg)	13 (6)	17 (8)	31 (14)	56 (26)	84 (38)	123 (1)

* Static Evaporation Rate and Static Holding Time are nominal. Actual rate may be affected by the nature of the contents, atmospheric conditions, container history and manufacturing tolerances.



SSC

The SSC Class

The SSC Class from CryoSafe offers a variety of units with a wide range of storage capacities. Designed specifically for the user utilizing canes or straws for sample storage with small to medium capacity requirements. The SSC Class features reduced neck openings to insure superior temperature uniformity and economical LN₂ evaporation rates.

DELS	SSC 20	SSC 21	SSC 22	SSC 32	SSC 33	SSC 34	SSC 43	SSC47-6	SSC 47-10
Capacity (Cane)	210	N/A	810	855	360	630	360	1,320	1,050
Number of Canisters	6	9	6	9	6	6	6	6	10
Straws (1 Level Bulk)	1,122	3,870	3,666	3,960	1,764	3,000	1,764	6,216	5,000
Straws (10 cane)	720	N/A	2,400	2,520	1,260	2,100	1,260	4,500	3,500
Capacity (Liters)	20.5	21	22.4	32	33.4	34.8	42.2	47.4	47.4
Evaporation Rate* (Liters/Day)	0.095	0.25	0.35	0.35	0.14	0.18	0.14	0.39	0.39
Working Time (Days)	140	53	40	57	154	123	193	76	76
Height in (mm)	2.18 (55.4)	3.5 (89)	3.81 (97)	3.81 (97)	2.75 (70)	3.5 (89)	2.75 (70)	5 (127)	5 (127)
Height in (mm)	25.7 (652)	17.2 (438)	22 (559)	21.5 (546)	26 (660)	26.6 (675)	26.4 (670)	26.5 (673)	26.5 (673)
Diameter in (mm)	14.5 (368)	18.2 (464)	14.5 (368)	18.2 (464)	18.2 (464)	18.2 (464)	20 (508)	20 (508)	20 (508)
Height in (mm)	11 (279)	5 (127)	11 (279)	11 (279)	11 (279)	11 (279)	11 (279)	11 (279)	11 (279)
Diameter in (mm)	1.65 (41.9)	2.75 (70)	3.09 (79)	2.62 (67)	2.22 (56)	2.81 (71)	2.22 (56)	4 (120)	2.8 (71)
Weight Empty (kg)	25 (110.5)	30 (13.6)	26 (11.8)	30 (13.6)	34 (15.4)	34 (15.4)	36 (16.4)	42 (19)	42 (19)
Weight Full (kg)	59.5 (27)	62.5 (28.3)	66 (30)	87 (39.5)	94 (42.5)	96 (43.5)	111 (50.5)	120.4 (54.6)	120.4 (54.6)

* Evaporation Rate and Static Holding Time are nominal. Actual rate may be affected by the nature of the contents, atmospheric conditions, container history and manufacturing tolerances. Working Time is an arbitrary reference, to estimate container performance under normal operation conditions. Actual working time may vary due to current atmospheric conditions, container history, manufacturing tolerances and any individual patterns of use.



SSC UNITS COME STANDARD WITH: Measuring Ruler • Level Alarm



SSC-ET

The SSC-ET Class

The SSC-ET Class from CryoSafe offers a variety of units for applications where the vial or straw capacity is expected to remain low. With the requirement for low volume storage the SSC-ET Class is specifically engineered to offer the longest holding times with the lowest evaporation rates.

MODELS	ET 3	ET 8	ET 11	ET 16	ET 20	ET 33	ET 31
Vial Capacity (Cane)	-	-	-	150	150	150	150
Number of Canisters	6	6	6	9	6	6	6
1/2 cc Straws (1 Level Bulk)	732	732	732	1,098	780	780	780
1/2 cc Straws (10 cane)	-	-	540	-	540	540	540
L ₂ Capacity (Liters)	3.6	8.4	11	16.4	20.5	33	36.5
Static Evaporation Rate* (Liters/Day)	0.12	0.15	0.15	0.14	0.09	0.13	0.10
Normal Working Time (Days)	19	35	46	74	142	182	224
Neck Diameter in (mm)	2 (51)	2 (51)	2 (51)	2 (51)	2 (51)	2 (51)	2 (51)
Exterior height in (mm)	16 (406)	18.5 (470)	21.6 (549)	17.5 (444)	25.7 (652)	25.9 (657)	27.2 (691)
Exterior Diameter in (mm)	8.7 (222)	10.2 (260)	10.2 (260)	17.2 (438)	14.5 (368)	18.2 (464)	18.2 (464)
Canister Height in (mm)	5 (127)	5 (127)	11 (279)	5 (127)	11 (279)	11 (279)	11 (279)
Canister Diameter in (mm)	1.5 (38)	1.5 (38)	1.5 (38)	1.5 (38)	1.5 (38)	1.5 (38)	1.5 (38)
Weight Empty (kg)	8 (3.6)	12(5.3)	17 (7.7)	14 (6.4)	26 (11.8)	34 (15.4)	34 (15.4)
Weight Full (kg)	14.4 (6.5)	27 (12.1)	36.6 (16.6)	43 (19.6)	62.5 (28.3)	93.4 (42.4)	100 (45.4)

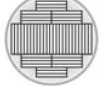

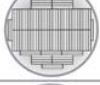

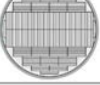



* Static Evaporation Rate and Static Holding Time are nominal. Actual rate may be affected by the nature of the contents, atmospheric conditions, container history and manufacturing tolerances. Working Time is an arbitrary reference, to estimate container performance under normal operation conditions. Actual working time may vary due to current atmospheric conditions, container history, manufacturing tolerances and any individual patterns of use.



SSC-ET CLASS COME STANDARD WITH: Canisters • L₂ Measuring Ruler

L A Y O U T S

Auto-Fill Inventory Systems

Box / Cassette	21" DIAMETER TANKS	Frame / Cassette
7 each 13-2 Tower Racks 91 each 100/81 Cell Boxes 4 each 13-2 Mini Tower Racks 52 each 25 Cell Boxes Total Vial Capacity 10,400 (2ml)	56 each Frames* 224 each Cassette*	
12 each 13-2 Tower Racks 156 each 100/81 Cell Boxes 4 each 13-2 Mini Tower Racks 52 each 25 Cell Boxes Total Vial Capacity 16,900 (2ml)	82 each Frames* 328 each Cassette*	
17 each 13-2 Tower Racks 221 each 100/81 Cell Boxes 6 each 13-2 Mini Tower Racks 78 each 25 Cell Boxes Total Vial Capacity 24,050 (2ml)	140 each Frames* 560 each Cassette*	
18 each 13-2 Tower Racks 234 each 100/81 Cell Boxes 6 each 13-2 Mini Tower Racks 78 each 25 Cell Boxes Total Vial Capacity 25,350 (2ml)	144 each Frames* 576 each Cassette*	
28 each 13-2 Tower Racks 364 each 100/81 Cell Boxes 6 each 13-2 Mini Tower Racks 78 each 25 Cell Boxes Total Vial Capacity 38,350 (2ml)	228 each Frames* 912 each Cassette*	
14 each 13-2 Tower Racks 182 each 100/81 Cell Boxes 4 each 13-2 Mini Tower Racks 52 each 25 Cell Boxes Total Vial Capacity 19,500 (2ml)	80 each Frames* 400 each Cassette*	
30 each 13-2 Tower Racks 390 each 100/81 Cell Boxes 8 each 13-2 Mini Tower Racks 104 each 25 Cell Boxes Total Vial Capacity 41,600 (2ml)	164 each Frames* 820 each Cassette*	
58 each 13-2 Tower Racks 754 each 100/81 Cell Boxes 12 each 13-2 Mini Tower Racks 156 each 25 Cell Boxes Total Vial Capacity 79,300 (2ml)	301 each Frames* 1505 each Cassette*	

*Fenwal Blood Bag 4R9953

ACCESSORIES



Cylinder Carts and Rollerbases
6644 Adjustable rollerbase for tanks 14" to 24" in diameter
6622-51 Liquid Cylinder Hand Truck
*Others available upon request

Inventory Boxes and Grids
25C Cardboard box with 25 cell grid
25P Plastic box with 25 cell grid
81C Cardboard box with 81 cell grid
81P Plastic box with 81 cell grid
100C Cardboard box with 100 cell grid
100P Plastic box with 100 cell grid
*Others available upon request

Stainless Steel Armor Plated Transfer Hose, T-Connectors and Phase Separator
TMS 6" Stainless Steel Transfer Hose
TMS 10" Stainless Steel Transfer Hose
P300 Phase Separator
T-90FF T-Piece Connection for Multiple Units
T-100V T-Piece
*Others available upon request

SUC-1 Racks, Canisters, Cans and Sleeves
SUC-1 Large Rack with 8 Cn. Canisters
SUC-1 SM Mini Rack with 2 Cn. Canisters
CA Cans - Aluminum (50/pack)
CRBSLV Cardboard Sleeves for Cans (50/pack)
PSLV Plastic Sleeves for Cans (50/pack)
*Others available upon request

Frames, Cassettes and Platform Dividers
Cassettes Aluminum cassette for blood bags
4-Place Frame Aluminum 4-place frame
Fenwal 4R9953 Bag & Cass
P8 Platform divider for 4-place frames
P8 Platform riser
*Others available upon request

Liquid Cylinders
CRYOYL 120 LP 120 Liter LN₂ Supply Tank
CRYOYL 180 LP 180 Liter LN₂ Supply Tank
CRYOYL 230 LP 230 Liter LN₂ Supply Tank
*Others available upon request

ViaGopher™ Gloves and Measuring Ruler
VLS Safety Tongs to retrieve lost vials & Boxes
CGI CryoGloves - Mid arm length
LLM LN₂ Measuring Ruler
*Others available upon request

CRYOSAFE 3/5 YEAR WARRANTY

• Three-year warranty on all parts and labor • Five year on vacuum

TABLE OF CONTENTS

CRYOMIZER CLASS Manual Fill Sample Storage in Racks/Boxes, Medium Capacity	▶
MODEL T-CRYO Economical Auto-Fill, Medium Capacity	▶
AUTO BASIC CLASS Economical Auto-Fill, High Capacity	▶
AUTO-PROTECTOR PLUS CLASS Economical Auto-Fill with Full Featured Controller, High Capacity	▶
AUTO-STAINLESS STEEL BASIC CLASS Economical Auto-Fill with Stainless Steel Tank Exterior, High Capacity	▶
AUTO-STAINLESS/ALUMINUM PROTECTOR PLUS CLASS Full Featured Auto-Fill with Stainless Steel/Aluminum Cabinet, High Capacity	▶
CRYOGUARD CLASS Full Featured Auto-Fill with Stainless Steel Tank and Restricted Opening, High Capacity	▶
AUTO-FILL TANK INVENTORY SYSTEM LAYOUTS	▶
AUTO-FILL ACCESSORIES	▶
SSC CLASS Sample Storage in Canisters/Cans, Low Capacity	▶
SSC-ET CLASS Extended Time, Sample Storage in Canisters/Cans, Very Low Capacity	▶
VS CLASS Vapor Shippers and Cases for Safe Sample Shipment	▶
LD CLASS Liquid Dewars For the Storage and Dispensing of Liquid Nitrogen	▶



Cryopreservation Equipment and Supplies

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THE CRYOMIZER™ CLASS

The CryoMizer™ Class

NEW

The CryoMizer™ Class from CryoSafe™ has been specifically engineered to provide cryogenic vapor temperatures throughout the tank well below the critical -135°C range. In fact, with as little as 2 inches of liquid, vapor temperatures of -185°C or lower can be maintained on the highest shelf. Maintaining temperatures below the glass transition temperature of -135°C helps insure long-term cell viability. The unique fiberglass restricted-opening neck design also brings liquid consumption to one of the lowest rates in the industry.

In addition, with the hanging rack design, sample access is achieved without the use of a mechanical "lazy susan". And, vial storage in boxes allows for ease of use and accurate tracking of samples.

Every CryoMizer™ comes standard with stainless steel racks, a Max Rack™ cast aluminum roller base and LN₂ measuring ruler. Package Systems are available with either plastic or cardboard inventory boxes with grids and cryogloves.

- High on Storage Capacity
- Stingy on Liquid Nitrogen Consumption
- Low Vapor Phase Storage Temperatures



BACKED BY THE CRYOSAFE™
3/5 YEAR
TOP TO BOTTOM WARRANTY

- Three-year warranty on all parts and labor
- Five year on vacuum

MODELS CM-1 CM-2 CM-3 CM-4

	CM-1	CM-2	CM-3	CM-4
Vial Capacity	875	2,500	5,000	7,000
Box Capacity	35	25	50	70
Rack Capacity	7	5	5	7
Boxes per Rack	5	5	10	10
Vials per Box (2ml)	25	100	100	100
LN ₂ Capacity (Liters)	47.4	61	121	175
Static Evaporation Rate* (Liters/Day)	0.39	0.85	0.99	0.99
Static Holding Time* (Days)	121	71	122	176

*Static Evaporation Rate and Static Holding Time are nominal. Actual rate may be affected by the nature of the contents, atmospheric conditions, container history and manufacturing tolerances.

Package Systems:

MODEL CM-1PS / CM-2PS / CM-3PS / CM-4PS

Includes:

Tank, Stainless Steel Racks, Max Rack™ Roller Base, LN₂ Measuring Ruler, Plastic Boxes & Grids and Cryogloves.

MODEL CM-1CS / CM-2CS / CM-3CS / CM-4CS

Includes:

Tank, Stainless Steel Racks, Max Rack™ Roller Base, LN₂ Measuring Ruler, Cardboard Boxes & Grids and Cryogloves.



ACCESSORIES:
Cast Aluminum Roller Base, Armor Plated Transfer Hose, Phase Separator, Cryogloves, LN₂ Measuring Ruler, Boxes and Grids

CM-1

Neck Diameter in (mm) 5 (127)
Exterior Height in (mm) 26.5 (673)
Exterior Diameter in (mm) 20 (508)
Weight Empty lbs. (kg) 36 (16.2)
Weight Full lbs. (kg) 120 (54)
Shipping Weight lbs. (kg) 60 (28)

CM-2

Neck Diameter in (mm) 8.5 (216)
Exterior Height in (mm) 37.5 (950)
Exterior Diameter in (mm) 22 (559)
Weight Empty lbs. (kg) 76 (34.2)
Weight Full lbs. (kg) 166 (74.7)
Shipping Weight lbs. (kg) 135 (62)

CM-3

Neck Diameter in (mm) 8.5 (216)
Exterior Height in (mm) 37.5 (950)
Exterior Diameter in (mm) 22 (559)
Weight Empty lbs. (kg) 114 (51.3)
Weight Full lbs. (kg) 311 (140)
Shipping Weight lbs. (kg) 170 (77)

CM-4

Neck Diameter in (mm) 8.5 (216)
Exterior Height in (mm) 37.5 (950)
Exterior Diameter in (mm) 26 (660)
Weight Empty lbs. (kg) 125 (56.7)
Weight Full lbs. (kg) 419 (189.6)
Shipping Weight lbs. (kg) 180 (81.6)

THE MODEL T-CRYO™

The Model T-Cryo™

The Auto-Tend™

NEW

The new Model T-Cryo™ now puts the convenience of automatic filling in a size and price range for every laboratory. This unit features the Auto-Tend™ controller and alarm providing LN₂ level control and audible / visual alarms with remote contacts for security. The unique fiberglass restricted-opening neck design reduces LN₂ consumption rates far below other auto-filling units. In fact, under laboratory testing providing one opening, per day, the Model T-Cryo™ operated and maintained "cryogenic temperatures" for over a month on one 160-liter LN₂ supply tank. Competitive units can consume three or four per month. The Model T-Cryo™ has also been specifically engineered to provide cryogenic vapor temperatures throughout the tank well below the critical -135°C range. With as little as 2 inches of liquid, vapor temperatures of -185°C or lower can be maintained on the highest shelf. The convenient hanging rack design enables easy access to all samples without the use of a mechanical "lazy susan". The Model T-Cryo™ is the economical auto-fill for every lab.

Featuring: The Model T-Cryo™ now makes available the convenience of automatic LN₂ monitoring and filling to every laboratory.



Portable Auto-Fill
Reservation System
ery Laboratory

- The Low Temperature Benefits of Liquid
- The Safety of Vapor Phase Storage
- Combined with Lower LN₂ Consumption

The Model T-Cryo™ Includes:

- Auto-Tend™ Controller
- 6ft. Stainless Steel Armor Plated Transfer Hose
- Stainless Steel Inventory Racks
- Cast Aluminum Roller Base
- Max Rack™
- Locking Provision

BACKED BY THE CRYOSAFE™
3/5 YEAR
TOP TO BOTTOM WARRANTY

- Three-year warranty on all parts and labor
- Five year on vacuum



ACCESSORIES

Blind Bag Racks & Cassettes,
Canister/Carb Racks, Boxes
and Cryogloves



MODEL T-CAT7

Total Vial Capacity (2ml)	7000
Total Bag Capacity (Based on Fenwal #4R9953)	154
Box Capacity (Not Included)	70
Rack Capacity (Max Rack™ Included)	7
Boxes per Rack	10
Vials per Box	100
LN ₂ Capacity (Liters)	165
Static Evaporation Rate* (Liters/Day)	0.84
Static Holding Time* (Days)	194
Power Requirement	24 VAC

*Static Evaporation Rate and Static Holding Time are nominal. Actual rate may be affected by the nature of the contents, atmospheric conditions, container history and manufacturing tolerances.

- Automatic LN₂ Monitoring & Filling
- Audible and Visual Low Level Alarm
- LN₂ Supply Monitor & Alarm
- Remote Alarm Contacts
- UL-Listed-24 Volt Power Supply & Oper
- Safer Operation & Maintenance
- Controller Surge Protection
- Low Cost Replacement

Package Systems:

MODEL T-CAT7

Includes:

Tank, Controller, Complete Stainless S Rack Inventory System, Max Rack™, Pla Boxes & Grids, Transfer Hose, Cryoglo LN₂ Measuring Ruler and Roller B

MODEL T-CAT7

Includes:

Tank, Controller, Complete Stainless S Rack Inventory System, Max Rack™ C board Boxes & Grids, Transfer H Cryogloves, LN₂ Measuring Ruler and R Base.



T-CAT7

Neck Diameter in (mm) 8.5 (216)
Exterior Height in (mm) 39 (991)
Exterior Diameter in (mm) 26.9 (683)
Weight Empty lbs. (kg) 121 (55.0)
Weight Full lbs. (kg) 410 (186.4)
Shipping Weight lbs. (kg) 250 (114)

AUTO-BASIC & PROTECTOR PLUS

The Auto-Tend™ Liquid Nitrogen Controller and Alarm

- Automatic LN₂ Monitoring & Filling
- Audible and Visual Low Level Alarm
- LN₂ Supply Monitor & Alarm
- Remote Alarm Contacts
- Keypad Controller Lock



AUTO Basic & Protector Plus Cabinet Features:

- Stainless Steel Vacuum Tank
- Cold Rolled Steel Cabinet
- Recessed Casters
- Fiberglass Top
- 7 inch Foam Insulated Lid with Protective Box & Pneumatic Lifters
- Keypad Lid Lock
- Full Access Opening for Easy Sample Placement & Retrieval
- Temperature Gradient Suppressor Liner (AB-2, APP-2, and APP-3)
- Leveling Platform
- 6 ft. Stainless Steel Armor Plated Transfer Hose
- UL-Listed-24 Volt Power Supply & Operation
- Safer Operation & Maintenance
- Controller Surge Protection
- Low Cost Replacement

ACCESSORIES:
Inventory Racks & Boxes, Frames & Cassettes, Cryogloves & LN₂ Measuring Ruler

MODELS AB-1 AB-2

Total Vial Capacity (2ml)	10,400	24,050
Bag Capacity (Based on Fenwal #4F953)	224	560
LN ₂ Capacity (Liters)	165	365
Evaporation Rate* (Liters/Day)	5	7
Holding Time* (Days)	33	52
Power Requirements	24 VAC	24 VAC

Package Systems: MODEL AB-1PS / AB-2PS

Includes:
Tank, Controller, Complete Stainless Steel Rack Inventory System with Plastic Boxes & Grids, Transfer Hose, Cryogloves and LN₂ Measuring Ruler.

MODEL AB-1GS / AB-2GS

Includes:
Tank, Controller, Complete Stainless Steel Rack Inventory System with Cardboard Boxes & Grids, Transfer Hose, Cryogloves and LN₂ Measuring Ruler.



- Three-year warranty on all parts and labor
- Five year on vacuum

Evaporation Rate and Static Holding Time are nominal. Actual rate may be affected by the contents, atmospheric conditions, container history and manufacturing tolerances.

When the lights go out
will your freezer?



Power Guard™ Fully operational battery backed-up freezers

Protector Plus™ Controller Features:

- Automatic Filling-7 thermistor sensor for accurate level readings
- Power Guard™ battery back-up system continues full operation for 3-5 days after a power failure
- Freeze Guard™ - monitors the filling solenoid valve & takes action to correct a "stuck open" situation
- Auto-Defog-automatic removal of fog after lid openings improving visibility & safety
- Quick Chill-improves temperature recovery from lid openings
- Sample & Vapor Temp Monitoring-two independent temp probes
- Direct Liquid Level Reading- +/- 1" direct read from thermistors
- Data Logging-40,960 events-battery backed to avoid loss of data.
- Alarm Test Validation
- RS232 Port
- Remote Alarm Contacts
- Alarms- Low LN₂ Supply, High Temp, Sensor Error, Power Failure, Remote Contacts, Lid Open, Valve Open, Low LN₂ Level, High LN₂ Level & Thermocouple Open

ACCESSORIES:

Inventory Racks & Boxes, Frames & Cassettes, Cryogloves & LN₂ Measuring Ruler

MODELS APP-1 APP-2 APP-3

Total Vial Capacity (2ml)	10,400	24,050	38,350
Total Bag Capacity (Based on Fenwal #4F953)	224	560	912
LN ₂ Capacity (Liters)	165	365	590
Static Evaporation Rate* (Liters/Day)	5	7	8
Static Holding Time* (Days)	33	52	74
Power Requirements	16.5 VAC	16.5 VAC	16.5 VAC

Static Evaporation Rate and Static Holding Time are nominal. Actual rate may be affected by the nature of the contents, atmospheric conditions, container history and manufacturing tolerances.

Package Systems:

MODEL APP-1PS / APP-2PS / APP-3PS

Includes:
Tank, Controller, Complete Stainless Steel Rack Inventory System with Plastic Boxes & Grids, Transfer Hose, Cryogloves and LN₂ Measuring Ruler.

MODEL APP-1GS / APP-2GS / APP-3GS

Includes:
Tank, Controller, Complete Stainless Steel Rack Inventory System with Cardboard Boxes & Grids, Transfer Hose, Cryogloves and LN₂ Measuring Ruler.

- Features exclusive Sample Grid Probe area with dedicated temperature probe enables user to monitor a specific pre most temperature challenged area of 1

AB-1

Exterior (width) in (mm) 23.1 (907)
Exterior (depth) in (mm) 30.5 (775)
Overall Height in (mm) 44 (1118)
Usable Height in (mm) 29 (737)
Internal Diameter in (mm) 21 (533)
Weight Empty lbs. (kg) 245 (111)
Weight Full lbs. (kg) 537 (243)
Shipping Weight lbs. (kg) 400 (182)

AB-2

Exterior (width) in (mm) 34 (864)
Exterior (depth) in (mm) 38 (965)
Overall Height in (mm) 44 (1118)
Usable Height in (mm) 29 (737)
Internal Diameter in (mm) 31 (787)
Weight Empty lbs. (kg) 405 (184)
Weight Full lbs. (kg) 1046 (474)
Shipping Weight lbs. (kg) 640 (291)

APP-1

Exterior (width) in (mm) 23.1 (907)
Exterior (depth) in (mm) 30.5 (775)
Overall Height in (mm) 44 (1118)
Usable Height in (mm) 29 (737)
Internal Diameter in (mm) 21 (533)
Weight Empty lbs. (kg) 245 (111)
Weight Full lbs. (kg) 537 (243)
Shipping Weight lbs. (kg) 400 (182)

APP-2

Exterior (width) in (mm) 34 (864)
Exterior (depth) in (mm) 38 (965)
Overall Height in (mm) 44 (1118)
Usable Height in (mm) 29 (737)
Internal Diameter in (mm) 31 (787)
Weight Empty lbs. (kg) 405 (184)
Weight Full lbs. (kg) 1046 (474)
Shipping Weight lbs. (kg) 640 (291)

APP-3

Exterior (width) in (mm) 44 (1118)
Exterior (depth) in (mm) 44 (1118)
Overall Height in (mm) 44 (1118)
Usable Height in (mm) 29 (737)
Internal Diameter in (mm) 41 (1041)
Weight Empty lbs. (kg) 605 (274)
Weight Full lbs. (kg) 1646 (747)
Shipping Weight lbs. (kg) 1000 (454)

THE CRYO GUARD CLASS



The CryoGuard™ Class from CryoSafe™ has been specifically engineered to provide cryogenic vapor temperatures throughout the tank well below the critical -135°C range. In fact, with only a few inches of liquid, vapor temperatures approaching the actual -196°C temperature of liquid nitrogen can be maintained at the highest shelf. Maintaining temperatures below the glass transition temperature of -135°C helps insure long-term cell viability. The unique restricted-opening neck design with double-hinged lid, brings liquid consumption to one of the lowest rates in the industry.

In vapor phase operation the liquid is also stored out of the inventory storage area helping to eliminate cross contamination issues. The unique inventory holding container is also engineered to maximize the use of 100 cell box / racks. This feature greatly improves Cryo vial inventory, placement, tracking and retrieval.

Every CryoGuard™ comes standard with: 6ft. stainless steel armor plated transfer hose, 3/5 warranty, PowerGuard™ battery back-up, casters, folding step, inventory carousel, keyed lid lock, flat stainless steel work surface, and Protector Plus™ controller.

- 190°C Vapor Phase Storage
- High Sample Volume Capacities
- Low LN₂ Consumption
- Full Featured Protector Plus™ Controller
- PowerGuard™ Fully Operational Battery Back-up System

CryoGuard™ Stainless Steel Tank Features:

- Stainless Steel Outer & Inner Tank Wrapped with Super Insulate
- Front Access Protector Plus™ Controller
- Hinged Lid with Keypad Lock & Protective Boot
- Flat Stainless Steel Work Surface
- Inner Aluminum Inventory Carousel for Convenient Sample Access
- Near LN₂ Temperatures at Top Rack in Vapor Phase
- Engineered to Maximize Storage of 100 Cell Racks
- Foldable Skid Free Step
- 5 Low Profile Lockable Casters
- Fully Operational Battery Back-Up
- 6 ft. Armor Plated Transfer Hose
- 5 Year Vacuum Warranty
- UL-Listed-16.5 Volt Power Supply & Operation
- Safer Operation & Maintenance
- Controller Surge Protection
- Low Cost Replacement



Protector Plus™ Controller Features:

- Automatic Filling-7 thermistor sensor for accurate level readings
- Power Guard™ battery back-up system continues full operation for 3-5 days after a power failure
- Freeze Guard™ - monitors the filling solenoid & takes action to correct a "stuck open" situation
- Auto-Defog-automatic removal of fog after lid openings improving visibility & safety
- Quick Chill-improves temperature recovery from lid openings
- Sample & Vapor Temp Monitoring-two independent temp probes
- Direct Liquid Level Reading-direct read from thermistors
- Data Logging-40,960 events-battery backed to avoid loss of data.
- Alarm Test Validation
- RS232 Port
- Remote Alarm Contacts
- Alarms- Low LN₂ Supply, High Temp, Sensor Error, Power Failure, Remote Contacts, Lid Open, Valve Open, Low LN₂ Level, High LN₂ Level & Thermocouple Open

Package Systems:

MODEL CG-1PS / CG-2PS / CG-3PS

Includes:
Tank, Controller, Complete Stainless Steel Rack Inventory System with Plastic Boxes & Grids, Transfer Hose, Cryogloves and LN₂ Measuring Ruler.

MODEL CG-1GS / CG-2GS / CG-3GS

Includes:
Tank, Controller, Complete Stainless Steel Rack Inventory System with Cardboard Boxes & Grids, Transfer Hose, Cryogloves and LN₂ Measuring Ruler.

MODELS CG-1 CG-2 CG-3

Total Vial Capacity (2ml)	19,500	41,600	79,300
Total Bag Capacity (Based on Fenwal #4F953)	400	820	1,505
LN ₂ Capacity (Liters) (Below Variable)	46	76	150
Total LN ₂ Capacity (Liters)	407	606	1,350
Static Evaporation Rate* (Liters/Day)	8	9	15
Power Requirements	16.5 VAC	16.5 VAC	16.5 VAC

Static Evaporation Rate and Static Holding Time are nominal. Actual rate may be affected by the nature of the contents, atmospheric conditions, container history and manufacturing tolerances.



- Three-year warranty and labor
- Five year

CG-1

Overall Height in (mm) 60 (1524)
Usable Height in (mm) 42.5 (1080)
External Diameter in (mm) 34 (863.6)
Internal Diameter in (mm) 29.5 (750)
Neck Opening in (mm) 13 (330)
Weight Empty lbs. (kg) 650 (295)
Weight Full lbs. (kg) 1375 (624)
Shipping Weight lbs. (kg) 920 (417)

CG-2

Overall Height in (mm) 42.5 (1080)
Usable Height in (mm) 30 (762)
External Diameter in (mm) 45 (1143)
Internal Diameter in (mm) 40.5 (1029)
Neck Opening in (mm) 18 (457)
Weight Empty lbs. (kg) 920 (417)
Weight Full lbs. (kg) 2000 (907)
Shipping Weight lbs. (kg) 1350 (613)

CG-3

Overall Height in (mm) 42.5 (1080)
Usable Height in (mm) 30 (762)
External Diameter in (mm) 55 (1391)
Internal Diameter in (mm) 55 (1391)
Neck Opening in (mm) 24.5 (622)
Weight Empty lbs. (kg) 1550 (703)
Weight Full lbs. (kg) 3556 (1794)
Shipping Weight lbs. (kg) 2000 (907)

CG-3

Overall Height in (mm) 42.5 (1080)
Usable Height in (mm) 30 (762)
External Diameter in (mm) 55 (1391)
Internal Diameter in (mm) 55 (1391)
Neck Opening in (mm) 24.5 (622)
Weight Empty lbs. (kg) 1550 (703)
Weight Full lbs. (kg) 3556 (1794)
Shipping Weight lbs. (kg) 2000 (907)