



# International Cryogenics, Inc.

*Innovators in cryogenic dewars and transfer equipment*

## **DIRECTOR SERIES, Inventory Racking System**

- Efficient and easy storage
- Rugged construction
- 3-year vacuum warranty



### **Designed for Vial Storage**

The Director Series Group is designed primarily for storing vials in liquid nitrogen. These units range in size from 60 Liters to 120 Liters and can store 2,000 and 4,000 vials.

### **Features**

- Larger neck openings
- Lightweight aluminum construction
- Durable inventory racks
- High strength aluminum shell
- Greater nitrogen efficiency
- Easy access and retrieval of samples

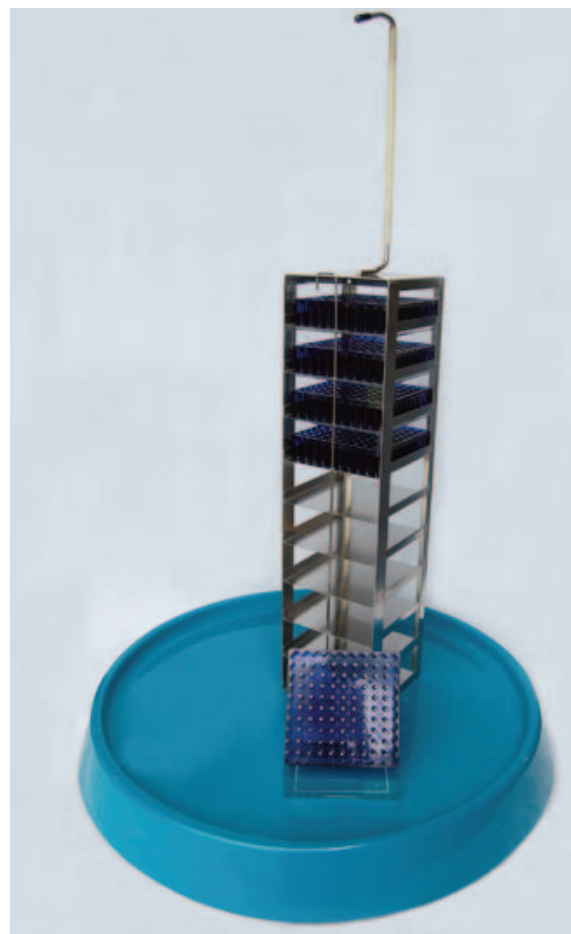
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[www.internationalcryogenics.com](http://www.internationalcryogenics.com)

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# Director Series, Inventory Racking System SPECIFICATIONS

All dewar models and sizes shown below are available for shipment from our Indianapolis, Indiana manufacturing facility. Our strict quality control governs every step of our manufacturing process to ensure years of trouble-free performance, fully backed by our 3-year vacuum warranty. Every Director comes standard with inventory racks and is thoroughly tested and quality documented before leaving our facility.

Model	D-4000	D-2000C
LN2 Capacity, Liters	120	60
Static Hold Time, Days	150	83
Evap. Rate, Liters/day	.80	.72
Working Time/days	94	52
<b>Dimensions</b>		
<u>Necktube</u>		
in.	8.5	8.5
mm	216	216
<u>Outside Diameter</u>		
in.	22	22
mm	559	559
<u>Height</u>		
in.	38	28
mm	965	711
<b>Weight</b>		
<u>Empty</u>		
lb	71	55
kg	32.5	25
<u>Full</u>		
lb	285	163
kg	129.5	74
<b>Racks</b>		
Number	4	4
Boxes/rack	10	5
Box dimensions, inches	5.25 x 5.25	5.25 x 5.25
mm	133 x 133	133 x 133
Ampules per box	100	100
Boxes per vessel	40	20
<b>Capacity</b>		
Ampules in boxes (1.2 or 2.0 ml)	4000	2000



Roller base, inventory rack shown with vial boxes (optional), low level alarm.



Transfer Line

- Evaporation rate and hold time are nominal.
- Working time is an arbitrary reference, to estimate container performance under normal operating conditions.



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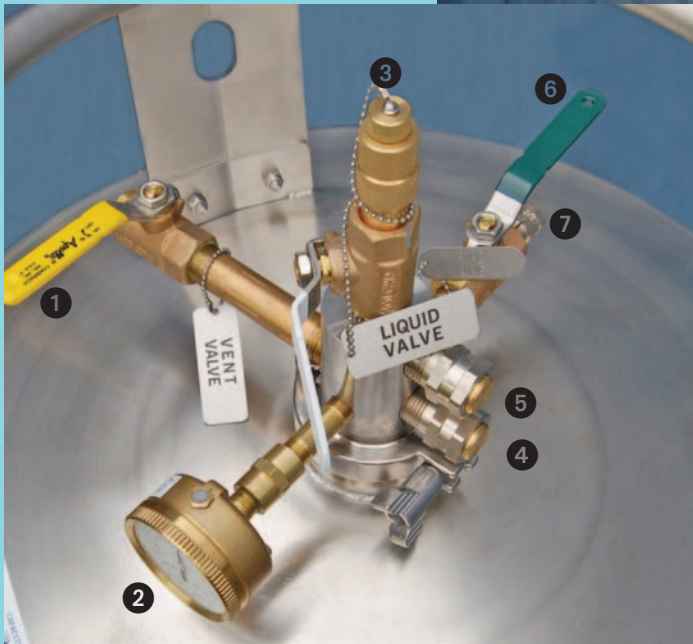
*Innovators in cryogenic dewars and transfer equipment*

## IC Series Liquid Helium

# Transport/Storage Container

### Features

- Non-magnetic construction
- 30, 60 and 100 Liter containers come with a demountable roller base for easier truck transport
- Easily removable manifolds
- Suitable for air transport
- Two-year vacuum warranty



### Manifold Assembly

1. Vent valve
2. Pressure gauge
3. Withdrawal valve
4. Secondary relief valve
5. Primary relief valve
6. Road valve
7. In-transit relief valve



### Options

- Locking casters
- Larger diameter neck openings
- Top housing can be modified for use with liquefier
- Absolute pressure relief valves for air transport
- Battery operated superconducting liquid level indicator
- Vacuum jacketed transfer lines in a variety of sizes.
- Dewar stingers in a variety of sizes 3/8" to 5/8" diameter dip tubes

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# Liquid Helium Transport/Storage Container Specifications

The International Cryogenics line of liquid helium transport/storage containers are designed for transporting, storing and dispensing liquid helium with assured safety. The standard containers may also be ordered with modifications such as larger neck openings, dual fill ports and absolute pressure relief valves for air transport. IC containers offer superior thermoshielding insulation system for minimum liquid helium loss rates. The result is quicker and more efficient cool-down.

All International Cryogenics liquid helium transport/storage container models and sizes shown below are manufactured at our Indianapolis, Indiana manufacturing facility. Our strict quality control governs every step of our manufacturing process to ensure years of trouble-free performance, fully backed by our 2-year vacuum warranty.

<b>Specifications</b>	<b>IC-30</b>	<b>IC-60</b>	<b>IC-100</b>	<b>IC-250</b>	<b>IC-500</b>
Model Number	22-7902	22-8916	22-8911	22-8922A	22-8952A
Capacity, Liters	36	70	110	275	550
Boil-off Rates	2.75%	1.75%	1.25%	1.0%	1.0%
Overall Height in. mm	44" 1,117mm	46" 1168mm	56" 1,422mm	69" 1,752mm	72" 1,829mm
*Overall Height with , Demountable Roller Base in. mm	48" 1,219mm	50" 1,270mm	60" 1,524mm	N/A N/A	N/A N/A
Body Diameter, in. mm	20" 508mm	24" 609mm	24" 609mm	32" 813mm	42" 1067mm
Empty Weight, lbs kg	110 lbs 50 kg	160 lbs 73 kg	190 lbs 86.5 kg	395 lbs 179.5 kg	675 lbs 307 kg
Empty Weight with , Demountable Roller Base lbs kg	125 lbs 57 kg	175 lbs 79.5 kg	205 lbs 93 kg	N/A N/A	N/A N/A
Transfer Line Fittings	3/8" or 1/2"			3/8", 1/2", 5/8", 3/4"	

For complete details on available accessories for our liquid helium transport and storage containers please see our **Transfer Lines / Stingers** page.



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# International Cryogenics, Inc.

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## LIQUID NITROGEN REFRIGERATORS

- 3.6 Liter to 50 Liter Capacity
- Locking tab
- Rugged construction
- 5-year vacuum warranty



### Features

Designed for the safe transport and storage of biological samples.

- **Increased capacity**
- **Lightweight aluminum construction**
- **Convenient specimen loading / unloading**
- **Greater necktube strength**
- **Greater efficiency**
- **Transparent lid, most models**

*See our Accessories page for details.*

### Options

- Low-level alarm
- Square racks for (RX) models
- Alternate canister sizes
- Measuring stick

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# REFRIGERATOR SPECIFICATIONS

For complete details on available accessories please see our Refrigerator Accessories page.

Model	IC-3R	IC-6R	IC-10R	IC-20R	IC-20RX	ARCTIC IC-22R	ARCTIC IC-22RX	IC-35R	IC-35RX	IC-38RX/6	IC-38RX/10	IC-50RX
LN2 Capacity, Liters	3.6	6	10	20	20	22	22	35	35	38	38	50
†Static Hold Time, Days	25	30	100	200	105	146	146	269	184	135	135	125
†Evap. Rate, Liters/day	.14	.2	.10	.10	.19	.15	.15	.13	.19	.28	.28	.4
††-Working Time Days / Weeks	14/2	18/3	62/9	126/18	65/9	112/16	112/16	168/24	112/16	84/12	84/12	78/11
<b>Dimensions</b>												
<u>Necktube</u> in. mm	2.25 57	2.25 57	2.25 57	2.25 57	3.75 95	2.62 66	2.62 66	2.25 57	3.75 95	5.0 127	5.0 127	3.75 95
<u>Outside Diameter</u> in. mm	8.75 222	8.75 222	11.25 286	15 381	15 381	15 381	15 381	18.5 470	18.5 470	18.5 470	18.5 470	18.5 470
<u>Height</u> in. mm	16.50 419	18.1 460	23 584	25.5 647	25.5 647	26.25 667	26.25 667	26 660	26 660	27.5 698	27.5 698	30.75 781
<b>Weight</b>												
<u>Empty</u> lb kg	7 3.5	7 3.5	12 5.5	24 11	24 11	22 10	22 10	31 14.5	31 14.5	31 14.5	31 14.5	38 17.5
<u>Full</u> lb kg	14 6.5	18 8.5	33 15	60 27.5	60 27.5	62 28	62 28	94 43	94 43	102 46.5	102 46.5	128 58.5
<b>Canisters</b>												
<u>Length, in.</u> mm	5 127	5 127	11 279	11 279	11 279	11 279	11 279	11 279	11 279	11 279	11 279	11 279
<u>Inside Diameter</u> in. mm	1.75 44	1.75 44	1.75 44	1.75 44	2.96 75	2.0 51	2.0 51	1.75 44	2.96 75	4.1 104	2.96 75	2.96 75
Number	6	6	6	6	6	3	6	6	6	6	10	6
<b>Capacity</b>												
.5 cc Straws on canes	330	330	660	660	2340	480	960	660	2340	4680	3900	2340
5cc Straws Bulk	990	990	1800	1800	5820	1356	2712	1800	5820	10,320	9700	5820
Vial 1.2 ml/2.0 ml	--	--	180	180	660	205	410	180	660	1320	1100	660

†Evaporation Rate and Hold time are nominal.

††Working Time is an arbitrary reference, to estimate container performance under normal operating conditions.

Straw capacity on canes: 10 Straws/cane for 11" canisters,  
5 Straws/cane for 5" canisters

Bulk: Two level goblets for 11"; one level for 5"

Vial capacity on canes: 5 vials/cane

Square racks, available for RX models



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## LIQUID NITROGEN STORAGE DEWARs

- 3.6 Liter to 50 Liter Capacity
- Rugged design
- Lasting performance
- 5-year vacuum warranty



25 Liter Ball Dewar

### Accessories

Designed for use with IC Liquid Nitrogen Storage Dewars

- **Roller Base** - facilitates mobility of larger dewars around laboratory
- **Withdrawal Device** - a safe and efficient method for precise draws of liquid nitrogen
- **Transfer Line** - 6-foot flexible transfer line improves safety in transferring liquid nitrogen from bulk storage containers
- **Dipper** - ladle for liquid withdrawal
- **Phase Separator**

*See our Accessories page for details.*

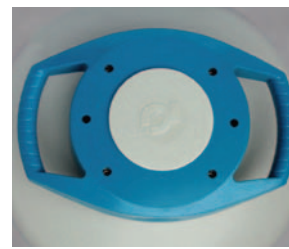
### Applications

- Research Laboratories
- Medical Laboratories
- Clinics
- Doctors' offices
- Pharmaceutical
- Industrial
- Veterinary
- Universities
- Commerical

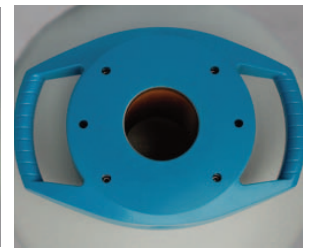
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# LN2 STORAGE DEWAR SPECIFICATIONS

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Top View with Neck Insert



Top View without Neck Insert

Model	IC-3D	IC-5D	IC-6D	IC-10D	IC-20D	IC-35D	IC-35DX	IC-50D
LN2 Capacity, Liters	3.6	5	6.1	10	20.1	35	35	50
Static Hold Time, Days	25	25	30	62	100	159	140	125
Evap. Rate, Liters/day	.14	.20	.20	.16	.20	.22	.25	.40
<b>Dimensions</b>								
<u>Necktube</u>								
in.	2.25	2.25	2.25	2.25	2.25	2.25	3.75	3.75
mm	57	57	57	57	57	57	95	95
<u>Outside Diameter</u>								
in.	8.75	8.75	8.75	11.25	15	18.5	18.5	18.5
mm	222	222	222	286	381	470	470	470
<u>Height</u>								
in.	16.25	15.75	18.1	23	25.5	26	26	30.75
mm	413	400	460	584	647	660	660	781
<b>Weight</b>								
<u>Empty</u>								
lb	6	6	7	12	23	31	31	38
kg	3	3	3.5	5.6	10.5	14.5	14.5	17.5
<u>Full</u>								
lb	13	15	18	33	60	94	94	128
kg	6	7	8.5	15	27.5	43	43	58.5



Roller base for larger dewars



Dippers



Liquid nitrogen withdrawal device



Phase separator



IC-20D LN2 NW Flange Dewar

For complete details on available accessories please see our Liquid Nitrogen Storage Dewar Accessories page.



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## NITROGEN VAPOR SHIPPING VESSELS



- Spill-free shipping
- Designed for ease of use
- Rugged construction
- 2-year vacuum warranty

### Features

Designed for the safe transport of biological samples in a vapor phase.

- Increased capacity
- Lightweight aluminum construction
- Convenient specimen loading / unloading
- Locking tabs for shipping
- Greater necktube strength
- Slant-top shipping containers

*See our Accessories page for details.*

### Applications

- Veterinary
- Sperm banks
- Medical Laboratories
- Research Laboratories

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# NITROGEN VAPOR SHIPPER SPECIFICATIONS

Model	IC-2VS	IC-4VS	IC-7VS	IC-20VS
LN2 Capacity, Liters	2.4	4.6	6.0	6.3
Static Hold Time, Days	17	32	26	28
Evap. Rate, Liters/day	.14	.14	.23	.22
<b>Dimensions</b>				
<u>Necktube</u>				
in.	2.25	2.25	3.75	3.75
mm	57	57	95	95
<u>Outside Diameter</u>				
in.	8.75	8.75	11.25	15
mm	222	222	286	381
<u>Height</u>				
in.	16.375	20.375	20.125	30
mm	416	517	511	762
<b>Weight</b>				
<u>Empty</u>				
lb	8	11	15	29.5
kg	4	5	7	13.5
<u>Full</u>				
lb	12.4	19	25	40
kg	5.5	9	11.5	18.5
<b>Canisters</b>				
<u>Length</u>				
in	5	11	11	11
mm	127	279	279	279
<u>Inside Dia</u>				
in	1.75	1.75	2.96	2.96
mm	44	44	75	75
Canisters	1	1	1	7
<b>Capacity</b>				
.5 cc Straws on canes	55	120	390	2730
.5 cc Straws bulk	165	300	969	6789
Vials 1.2 ml	N/A	30	110	770

Capacity: Vs - Vapor Shipper

Weights are determined without canisters

Straw capacity based upon: Cane - 10 straws/cane

Bulk - two levels in cups and goblets

Static hold time and evaporation rate are nominal.



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