

Cryogenics

Special Section

Cryogenics

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CS



Taylor-Wharton

Harsco

For more information please
contact our Technical Office
on 01342 826836.



232-046



232-049



232-013



232-050



232-047



232-048

Taylor-Wharton, LD Series Dewars

The LD Series dewars are designed for storing and dispensing small amounts of liquid nitrogen.

- Rugged construction - ribbed high strength aluminium body
- High performance - modern construction and advanced insulation materials assure high thermal efficiency
- Superior vacuum performance with super insulation provides maximum holding times
- 7 different models provide 6 different capacities to fit a wide range of industrial and laboratory applications
- 3 year warranty on vacuum
- Accessories include low pressure liquid withdrawal devices, tipping stands and roller bases on certain units. Please see pages 311 to 312.

232-051 shown with 238-093



232-051 shown with 238-094



Specifications

Model	LD4	LD5	LD10	LD25 ^{2,3,4}	Classic 25	LD35 ^{3,4}	LD50 ^{3,4}
Static holding time, days ¹	10	6	45	109	119	152	122
Normal evaporation rate L/day ¹	0.40	0.77	0.22	0.23	0.21	0.23	0.41
LN ₂ capacity, L	4	5	10	25	25	35	50
Weight							
Empty, kg	3.0	3.1	6.6	10.5	8.6	16.0	17.6
Full, kg	6.2	7.2	14.7	30.8	28.9	44.3	58.0
Neck diameter, mm	30	142	51	64	51	64	64
Overall height, mm	432	445	597	655	582	668	823
Overall diameter, mm	193	193	290	396	394	475	475

Cat. No.	232-046	232-049	232-050	232-051	232-013	232-047	232-048
Price	POA	POA	POA	POA	POA	POA	POA

Spares

Replacement							
Cap/neck core	238-099	238-101	238-102	238-104	238-097	238-095	238-095
Price	POA	POA	POA	POA	POA	POA	POA

1. Normal 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.

2. Tipping stand available see page 311.

3. Liquid withdrawal device (238-093) recommended for safe dispensing see page 312.

4. Safety carry truck available see page 311.



High Capacity LN₂ Refrigerators

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Order by fax ► 01342 826771 Website ► www.jencons.co.uk

Taylor-Wharton, HC and VHC Series Refrigerators

The HC Series refrigerators are designed for storing large quantities of a variety of materials at cryogenic temperatures. Temperatures generally range between -196°C at the liquid surface and -184°C under the closed necktube core.

- Rugged construction
- Large storage capacity
- Versatile storage system - convenient canister index locating ring and internal spider
- 5 different models providing holding times and capacities to fit a variety of storage needs
- HCL12 is designed for the storage of straws
- Models HC20, HC34, HC35 and VHC35 are designed for storage of samples in vials or straws
- Samples (1.2, 2.0 or 5.0ml vials) are held on canes stored in canisters. Straws can be stored in goblets in canisters
- For sample protection low liquid level alarms are available for use with the HC34, HC35 and VHC35 models, see page 303
- All units are supplied complete with canisters and neck core
- Roller bases are available for some models, see page 311
- 3 year warranty on vacuum



Specifications

Model	HCL12	HC20	HC34	HC35	VHC35
Static holding time, days ¹	60	87	200	130	130
Working time, days ²	37	54	125	81	81
Normal evaporation rate, L/day ¹	0.20	0.23	0.17	0.27	0.27
LN ₂ capacity, L	12	20	34	35	35
Weight					
Empty, kg	9.8	12.0	16.1	17.7	17.2
Full, kg	19.5	28.2	43.6	46.0	45.5
Neck diameter, mm	91	91	91	119	119
Overall height, mm	482	615	668	681	681
Overall dia. mm	396	396	478	478	478
Number of canisters	6	6	6	10	6 ³
Canister dimensions, mm	70x127	70x279	70x279	67x279	94x279
Vial capacity ⁴	—	684	684	1020	1260
Cat. No.	232-033	232-034	232-036	232-037	232-039
Price	POA	POA	POA	POA	POA

Spares

Neck core	238-068	238-071	238-075	238-078	238-079
Price	POA	POA	POA	POA	POA
Canisters 127mm	238-070	—	—	—	—
Price	POA	—	—	—	—
Canisters 278mm	—	238-072	238-076	238-080	238-081
Price	—	POA	POA	POA	POA

1. Normal 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.

2. Working time is an arbitrary, reference only value to estimate container performance under the actual operating conditions. Actual working time may vary widely depending on individual use patterns.

3. Optional 7th canister available to increase storage capacity by 23%

4. Capacity based on 1.2 or 2.0ml plastic vials, 12.5mm diameter (internal thread), on canes, 6 vials per cane, no cryosleeve.



232-030



232-044



232-045



232-045 shown
with 238-246



232-031



232-032



Taylor-Wharton, XT Series Refrigerators

The XT Series (extended time) cryogenic refrigerators are designed for long-term storage of a variety of materials at cryogenic temperature.

- Rugged construction
- Narrow neck design gives low evaporation rate and long holding times, for reduced running costs
- Versatile storage system - convenient canister index locating ring and internal spider
- All units are supplied complete with canisters and neck core
- XT13 and XT18 versions feature a lower profile for more convenient transport and storage. For use with storage of straws
- XT10, XT20 and XT34 are for use with samples in vials or straws
- Samples (1.2, 2.0 or 5.0ml vials) are held on canes stored in canisters. Straws can be stored in goblets in canisters
- 3 year warranty on vacuum
- Roller bases are available for some models, see page 311
- Low level alarms available on some models, please contact our Technical Office for details on 01342 826836.

Specifications

Model	XTL3	XTL8	XT10	XT20	XT34
Static holding time, days ¹	27	80	100	230	340
Working time, days ²	17	50	62	140	212
Normal evaporation rate, L/day ¹	0.11	0.10	0.10	0.09	0.10
LN ₂ capacity, L	3	8	10	20.7	34
Weight					
Empty, kg	3.3	8.9	7.5	11.8	15.8
Full, kg	5.7	15.4	15.6	28.6	43.3
Neck diameter, mm	51	51	51	51	51
Overall height, mm	437	483	597	655	668
Overall diameter, mm	193	396	290	396	478
No. of canisters ³	6	6	6	6	6
Canister dimensions (øxh), mm	38x127	38x127	38x279	38x279	38x279
Vial capacity ⁴	—	—	180	180	180
Cat. No.	232-030	232-044	232-045	232-031	232-032
Price	POA	POA	POA	POA	POA

Spares

Neck core	238-069	238-090	238-058	238-061	238-061
Price	POA	POA	POA	POA	POA
Canisters 127mm high	238-085	238-092	—	—	—
Price	POA	POA	—	—	—
Canisters 279mm high	—	—	238-246	238-060	238-060
Price	—	—	POA	POA	POA

1. Normal 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.

2. Working time is an arbitrary, reference only value to estimate container performance under the actual operating conditions. Actual working time may vary widely depending on individual use patterns.

3. Maximum number which refrigerator can hold. Canisters supplied with refrigerators unless otherwise specified.

4. Capacity based on 1.2 or 2ml plastic vials, 12.5mm dia. (internal thread), on canes, 6 vials per cane, no cryosleeve.

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Taylor-Wharton, LS Series Refrigerators

The LS series refrigerators are uniquely designed for large vial capacity in convenient box-type storage racks. The LS3000, LS4800 and LS6000 are available with controllers which provide automatic filling and alarm features. Controllers are a factory fitted option. Retrofitting is not possible.

- Dual benefit of large sample capacity and exceptionally low evaporation rates
- All units supplied complete with racks and boxes
- LS750 holds 25 vial boxes in 5 x 5 matrix
- LS3000, LS4800, LS6000 hold vial boxes in 10 x 10 matrix
- LS3000, LS4800 and LS6000 are available with two controller options, see below
- Rack system index location ring and internal spider allows easy location and quick retrieval of samples
- For sample protection low liquid level alarms are available on all units, see page 303
- 3 year warranty on vacuum
- Medical Device Directive MDD CE 93/42 class IIa models are available, see page 302

Specifications

Model	LS750	LS3000	LS4800	LS6000
Static holding time, days ¹	130	106	200	194
Working time, days ²	80	66	125	120
Normal evaporation rate, L/day ¹	0.27	0.76	0.65	0.84
LN ₂ capacity, L	35	81	130	165
Weight				
Empty, kg	17.7	31.8	40.9	55.0
Full, kg	46.0	97.4	146.1	186.4
Neck diameter, mm	119	216	216	216
Overall height, mm	681	731	892	991
Overall diameter, mm	478	683	683	683
Vial capacity ³	750	3000	4800	6000
Box Shape	square	square	square	square
Box Size, mm	76x76	127x127	127x127	127x127
Vials per box	25	100	100	100
Cat. No.	232-041	232-078	232-028	232-029
Price	POA	POA	POA	POA
With M255 economy controller*	—	232-107	232-109	232-085
Price	—	POA	POA	POA
With M505 controller*	—	232-108	232-110	232-086
Price	—	POA	POA	POA

Accessories

Low Level Alarm	238-066	238-298	238-056	238-106
Price	POA	POA	POA	POA
Roller Base	238-067	238-036	238-036	238-036
Price	POA	POA	POA	POA

1. Normal 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.

2. Working time is an arbitrary, reference only value to estimate container performance under the actual operating conditions. Actual working time may vary widely depending on individual use patterns.

3. 2.0ml vial size. 12.5mm O.D. (internal thread).

* See page 301 for details on controllers.

For details on Low Level alarms & Roller bases see pages 303 and 311.

For MDD-approved units, please see page 302.

232-041



232-078



232-029



232-021



232-018



232-060



232-061



Taylor-Wharton, K-Series Cryostorage Systems

The K Series cryogenic systems offer reliable liquid nitrogen storage with controllable temperatures down to -196°C. The systems are ideal for Liquid or Vapour Phase storage of samples.

The combination of automatic filling, alarms, easy access to stored product and the unique Temperature Gradient Suppression System give excellent Vapour Phase storage temperature control and recovery. For full automation of the 10K, 24K and 38K, a controller is required. Please see below for details and / or contact our Technical Office on 01342 826836.

- 3000 to 38,000 vial storage capacities
- Baxter and Gambro bag storage systems
- 96 tube format storage systems
- Fully automated, microprocessor based controller options on 10K, 24K and 38K
- Temperature Gradient Suppression system for improved Vapour Phase storage temperature (check models available)
- Medical Device Directive MDD CE 93/42 class IIa version available in 10K, 24K and 38K range, see page 302 for details
- New Vapour Phase insert available, see section on Inventory Control Systems

Model 3K

48 litre wide mouth container for easy access to pie shaped inventory control system. A low liquid level alarm is available, see catalogue item 238-059.

Models 10K and 24K

Large volume stainless steel vessels housed in durable powder coated, castor mounted cabinets. Hinged lockable lid and automatic fill connections.

Model 38K

Large capacity, rugged polished stainless steel vessel with 38,350 vial capacity. Automatic fill systems are easily mounted on the side of the vessel.

Specifications

Model	3K	10K	24K	38K
Static holding time, days ¹	19	33	52	74
Working time, days ²	12	20	32	46
Normal evaporation rate, L/day ¹	2.5	5	7	8
LN ₂ capacity, L	48	165 ⁴	365 ⁴	590 ⁴
Weight				
Empty, kg	19.1	111	184	256
Full, kg	56.7	243	474	733
Neck diameter, mm	356	533	787	991
Overall height, mm	754	1118	1118	1245
Overall diameter, mm	391	587x775 ⁵	864x965 ⁶	1067 ⁷
Vial capacity ³				
Liquid phase	3,726	10,400	24,050	38,350
Vapour phase	2,484	8,800	20,350	32,450
Cat. No.	232-021	232-018	232-060	232-061
Price	POA	POA	POA	POA

1. Normal 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.

2. Working time is an arbitrary, reference only value to estimate container performance under the actual operating conditions. Actual working time may vary widely depending on individual use patterns.

3. 2.0ml vial size. 12.5mm O.D (internal thread).

4. Liquid nitrogen capacity based on container full of liquid up to 51mm below the booted lid.

5. Maximum required clearance (with the lid open) is 1753mm. Depth with lid open is 864mm.

6. Maximum required clearance (with the lid open) is 1930mm. Depth with lid open is 1232mm.

7. Maximum required clearance (with the lid open) is 2286mm. Depth with lid open is 1397mm.

For MDD-approved units please see page 302. For controllers see page 301.

Get Totally Organised

With Custom Made Inventory Systems from Jencons-PLS

If you are looking for a practical and more economical way to utilise your limited general purpose or cryogenic freezer capacity then please contact us on 01342 826836.



Inventory systems can be custom-made for any make/model of freezer, alternatively we have a range of standard products, currently including:

- ☐ Vertical and Horizontal Storage Racks
- ☐ Aluminium Trays with or without divisions
- ☐ Test Tube Racks
- ☐ Bins
- ☐ Cryostorage Racks

JENCONS-PLS

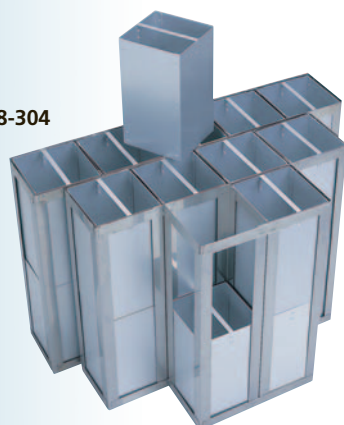


3K ICS

238-309



238-304



New

238-050



New

238-053

Taylor-Wharton, K-Series, Inventory Control Systems

Inventory Control Systems (ICS) for the K-Series are available to take vials, blood bags 96 tube format systems or straws in either Liquid or Vapour phase. Custom-made inventory systems can also be designed. Please contact our Technical Office on 01342 826836.

- 3K ICS available for liquid phase or vapour phase storage
- Lightweight anodised aluminium racks with optional dividers for 1.2 and 2.0ml vials

ICS for Model	Rack Shape	No. racks	Drawers per rack	Vials ¹ per drawer	Vial capacity
3K Vapour phase ²	Triangular	6	6 drawers	69	2,484
3K Liquid phase ²	Triangular	6	9 drawers	69	3,726

1. Based on 1.2 or 2.0ml vial size. 12.5mm O.D internal thread

2. Requires drawer dividers (order separately). Vapour phase 2 packs, Liquid phase 3 packs

Cat. No.	Description	Price
238-037	3K Vapour phase, no dividers	POA
238-038	3K Liquid phase, no dividers	POA
238-040*	Plastic dividers for 3K ICS (69 vials/drawer), pack of 18	POA

* Vapour phase 2 packs, liquid phase 3 packs.

Inventory Control Systems for 10K, 24K and 38K vessels

- New leaf spring design for easier removal of boxes. Each aperture has a leaf spring retaining the box, so there is no need for the external locating rod.
- New lightweight anodised aluminium racks with wide handle on top, containing 25 cell and 100 cell polycarbonate boxes for 1.2 or 2.0ml vial size. 12.5mm O.D (internal thread)

Cat. No.	Model	Storage Phase	No. of Racks	Shelves per Rack	Capacity	Price
238-296	10K	Vapour	4	7	11	8,800
238-297		Liquid	4	7	13	10,400
238-299	24K	Vapour	6	17	11	20,350
238-309		Liquid	6	17	13	24,050
238-310	38K	Vapour	6	28	11	32,450
238-302		Liquid	6	28	13	38,350

Gambro and Baxter Blood Bag Systems

- Stainless steel frame, aluminium boxes.

Cat. No.	Description	Price
238-303	Baxter Blood Bag System for 10K vessel	POA
238-304	Baxter Blood Bag System for 24K vessel	POA
238-305	Baxter Blood Bag System for 38K vessel	POA
238-000	Gambro Blood Bag System for 10K vessel	POA
238-306	Gambro Blood Bag System for 24K vessel	POA
238-312	Gambro Blood Bag System for 38K vessel	POA

Special systems can be manufactured to suit any requirement, please contact our Technical Office on 01342 826836.

Vapour Phase Insert Frame

The liquid tight insert contains a number of compartments that each holds one rack. Inserts are available for racks of various shapes and dimensions. The insert reaches all the way to the flat plate at the bottom of the liquid nitrogen vessel. When the vessel fills, the nitrogen level only rises in the space between the insert and the inner wall of the vacuum vessel.

- Storage of samples in Vapour phase
- Minimised risks of cross contamination of samples
- Increased storage capacity in Vapour phase
- Easier handling of racks

Cat. No.	Description	Price
238-050	Vapour phase insert for 7 10x10 racks in 10K, 9,100 vials ^{1 2}	POA
238-053	Vapour phase insert for 15 10x10 racks and 7 5x5 racks in 24K, 21,775 vials ^{1 2}	POA
238-054	Vapour phase insert for 26 10x10 racks and 4 5x5 racks in 38K, 35,100 vials ^{1 2}	POA

1. 1.2 or 2.0ml vial size. 12.5mm O.D (internal thread).

2. Racks must be ordered separately



LN₂ Controllers/Alarms

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Controllers for Taylor-Wharton K-Series

Taylor-Wharton Autofill Controllers

Two autofill controllers are available; the M505CE and M250 economy controller.

M505CE Liquid Nitrogen Level Controller

Microprocessor-based Liquid Nitrogen level controller with built in data logging, designed to fit the cabinet versions of the K series. The M505CE comprises the controller, wall mounted connector box and PSU, sensor assembly and connecting cables. Level monitoring and control is by the proven and reliable method of thermistors sensors.

- User programmable Temperature Control in Vapour Phase
- 8000 data logging events
- LCD Temperature and level display
- Fascia Panel RS232 connector on 10K and 24K
- Automatic level control
- Password Controlled Access
- Lid switch which controls automatic defogging and quick chill
- Simultaneous and delayed filling
- Manual fill stop / start
- Easy update of Firmware
- Printer output
- Remote alarm
- Language options
- Optional data download (Cryo-data) software
- 4 level monitoring points, extra low, normal, high and extra high
- Alarms for high temperature, sensor fault, failure of LN₂ supply, under fill/overflow, unauthorised access, lid left open
- Extra solenoid valve available
- 2-line 20 character LCD display
- Optional RS485, optional I/O PCB with maximum of seven relay outputs and optional analogue output PCB for e.g. temperature output
- Individual or central gas by-pass option



Cat. No.	Description	For	Price
238-295	M505CE Controller	10K, 24K	POA
238-307	M505KBCE Controller (boxed version)	38K	POA
238-329	M505CE Controller with double solenoid	10K and 24K	POA
238-382	Cryodata software	Downloading data from M505CE to PC, cable required	POA
238-374	Printer cable	Printing directly from M505CE controller	POA
238-375	PC cable	Required to download data from M505CE to PC	POA

M250 Economy Liquid Nitrogen Level Controller

The M250/M255 is an economical controller for those who do not require data logging or temperature control.

- Automatic level control
- Level display on four level LEDs
- 4 level monitoring points, extra low, normal, high and extra high
- Remote alarm contacts
- Manual fill stop/start
- Alarms for high temperature, sensor fault, failure of LN₂ supply, under fill/overflow, unauthorised access, lid left open
- Lid switch controls automatic defog and quick chill
- Optional simultaneous fill

Cat. No.	Description	For	Price
238-336	M250CE Economy controller	10K and 24K	POA
238-337	M255KB Economy controller (boxed version)	38K	POA



Taylor-Wharton, Medical Device Directive 93/42 Class IIa Systems

A Medical Device is defined in Directive (93/42/EEC) as; Any instrument, apparatus, appliance, material or other article, whether used alone or in combination, including the software necessary for the proper application, intended by the manufacturer to be used for human beings for the purpose of:

- Diagnosis, prevention, monitoring, treatment or alleviation of a disease, an injury or a handicap
- Investigation, replacement or modification of the anatomy or of a physiological process
- Control of conception

To comply with Medical Device Directive (MDD) CE 93 / 42 Taylor Wharton has introduced the CryoCE range; all Cryo CE systems are certified as Class IIa. Using the latest technologies in the existing LS, K and LABS series, along with the M505CE controller, the CryoCE range has been successfully approved. Certificates available on request.

For details on the M505 controller, please see page 301 and for specifications for the LS series, K series and LABS series, please see pages 297, 298 and 304 respectively.

Cat. No.	Description	Price
LS Series		
232-111	CryoCE LS3000 refrigerator with MDD-approval and controller	POA
232-112	CryoCE LS4800 refrigerator with MDD-approval and controller	POA
232-113	CryoCE LS6000 refrigerator with MDD-approval and controller	POA
K Series		
232-087	Model 10K CryoCE, stainless steel vessel in durable powder coated cabinet with MDD-approval and controller. Inventory system required	POA
232-088	Model 24K CryoCE, stainless steel vessel in durable powder coated cabinet with MDD-approval and controller. Inventory system required	POA
232-114	Model 38K CryoCE, stainless steel vessel with MDD-approval and controller. Inventory system required	POA
LABS Series		
232-106	CryoCE LABS 20K with MDD-approval and controller. Inventory system required	POA
232-101	CryoCE LABS 40K with MDD-approval and controller. Inventory system required	POA
232-099	CryoCE LABS 80K with MDD-approval and controller. Inventory system required	POA

New

539-290



DB1 EmbryoFreeze, Portable Freezer

DB1 EmbryoFreeze has been developed to meet the requirements of specialists working in both human and veterinary embryo transfer. This cost effective portable freezer can be used in most locations and is supplied with its own internal battery. It is easy to program and use, and has a throughput of up to 100 straws per cycle. The DB1 has no moving parts giving vastly improved reliability over other designs.

The straw plate is precisely controlled and the temperature is balanced against the cold liquid nitrogen chamber. The straw plate operates between -90°C and +150°C allowing high temperature sterilisation of the plate to take place. The DB1 includes automatic data logging of all freezer runs. The user has the choice of printing details and a graph or sending the log file to a computer or terminal.

- Stores up to 8 programs of up to 8 lines each with password protection
- Program options include: Temperature rate from 0.1°C to 5.0°C per min; timed hold from 1 to 99 mins; indefinite pause; freefall (maximum possible rate of temperature change) and program end
- Sterilising program holds straw plate at 125°C for 30 mins (user changeable)
- Freezer automatically switches on if LN₂ reservoir filled, to prevent unnecessary cooling of straw chamber
- Low LN₂ warning system
- Freezer cannot be switched off when running a program until the program has finished or been stopped and straws removed
- Fully integrated all in one unit

Specification

Temperature range, °C	-90 to +150
Power	240V ac, 12V dc or own internal rechargeable battery*
Dimensions (hxxwxd), mm	300x450x400

* Internal battery allows up to 3hrs freezing.

Cat. No.	Description	Price
539-290	DB1 EmbryoFreeze portable freezer supplied with rechargeable battery	POA

For details on accessories please contact our Technical Office on 01342 826836.



Alarms/Software

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Low Level Alarm

Low level alarm, easily fitted to any type or size of low pressure liquid nitrogen refrigerator, cryostat, vessel or dewar. It continuously monitors levels of LN₂ and gives visual and audible warnings when LN₂ levels fall below the level set by the sensor position. Vessel type and LN₂ height are required at the time of ordering.

- Independent warning of sensor damage
- Remote alarm connection to in-house monitoring systems
- Sensor mounting kit required
- Adjustable sensor position
- 15V power supply included

Cat. No.	Description	Price
238-059	Low LN ₂ alarm with special probe assembly ^{1,2}	POA
238-233	Mounting kit for low level alarm (required)	POA

1. Must be specified at time of ordering the refrigerator

2. Price includes factory fitting only. For information and pricing on fitting in the field please contact our Technical Office on 01342 826836.

Taylor-Wharton, Low Level Alarms

Low level alarms best suited for infrequently used refrigerators.

- Provides protection for valuable stored materials
- Audible and visible alarms indicate need for replenishment of LN₂ when approximately 25% of LN₂ capacity is remaining
- Remote alarm contacts permit connection to in-house alarm systems
- Audible alarm mute switch. Visible alarm continues until LN₂ is replenished. Safe, low voltage (12V) operation

Cat. No.	Description	For	Price	Cat. No.	Description	For	Price
238-063	Low level alarm	HC34	POA	238-298	Low level alarm	LS3000	POA
238-065	Low level alarm	HC35	POA	238-056	Low level alarm	LS4800	POA
238-066	Low level alarm	VHC35, LS750	POA	238-106	Low level alarm	LS6000	POA
238-062	Low level alarm	XT20, XT34	POA				

Sample Vision Software for efficient data archiving and localisation of samples

Sample Vision is one of the most sophisticated tools for sample stock control. It gives the exact location of each sample with any additional information you have entered. You can search through records for any combination of data. Combine search criteria for even more detailed results. Create your own 3-dimensional object, a liquid nitrogen vessel, ultra low freezer or storage cabinet in just a few minutes. Flexibility is key, so decide to store a vial, a straw or blood bag or any other sample. Continue designing the object by placing the samples in a box or holder. Next, put boxes or holders in racks or canisters and locate as many of these in the object you want to model. A shape builder helps you creating shapes like circles or pies. No restrictions apply to making combinations:

- MySQL database
- Search and select one or all samples from one or all batches
- Password locking of samples
- Runs in the web browser of your choice
- Extended number of searchable fields
- Use Windows 98, 2000 or XP, fast hard disk drives and a screen displaying 1024x784 pixels
- Ready for network and remote internet access
- Can be used with hand held barcode reader

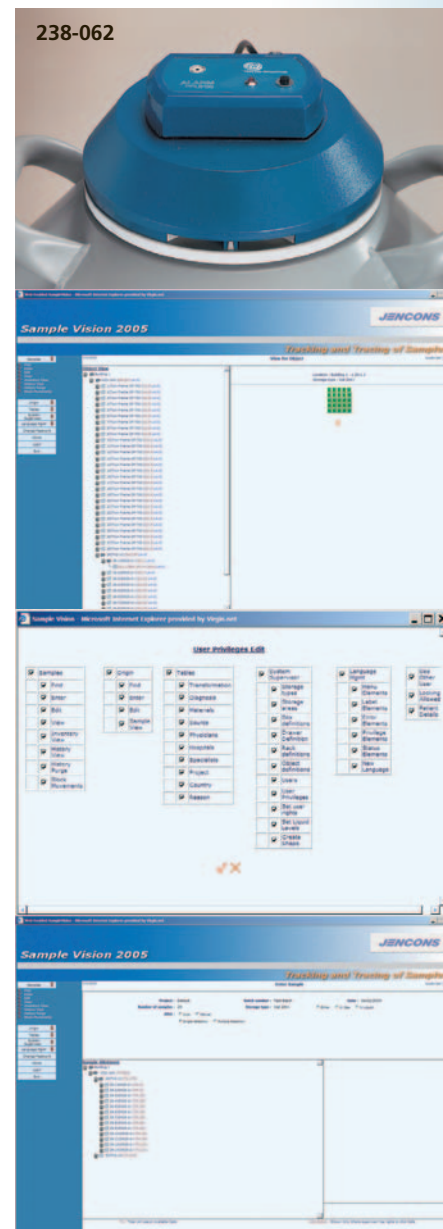
Cat. No.	Description	Price
238-057	Sample Vision software. Licence included for 10 users, 10 objects and 2 groups	POA
238-105	Help desk, 3hrs support/year via email or phone	POA

Please note: extra users, objects and work group licences are available.

238-059



238-062



New

LABS 20K



New

LABS 40K



LABS 80K



LABS 80K



Taylor-Wharton, LABS Vapour Phase Cryostorage

The LABS 20K, LABS 40K and LABS 80K freezers provide unique solutions to both short-term and long-term storage of large volumes of specimens. With a capacity of up to 80,000 2ml vials, a storage temperature near that of liquid nitrogen in the vapour phase at the top of the vessel and low nitrogen consumption, the LABS Series sets new industry benchmarks. The bearing-free easy-to-rotate turntable with aluminum dividers permits quick, convenient access to the stored material. The LABS 20K and LABS 40K have 4 low profile and lockable castors, whilst LABS 80K has 5.

- Near LN₂ temperature at top rack in vapour phase
- All stainless steel inner and outer container with full super insulation wrap
- Two-handle aluminum lid with durable polyurethane plug. Hinged and lockable
- Flat table-top convenient work surface
- One low rise, foldable sure grip step (working height less than a 10K)
- 'Easy-Turn' aluminium turntable - no bearings
- Can be manoeuvred using a forklift
- 5 year warranty on vacuum, 2 year warranty on controller
- Medical Device Directive MDD CE 93/42 class IIa versions available, see page 302

Specifications

Model	LABS 20K	LABS 40K	LABS 80K
Reference value evaporation rate ¹ , L/day	4.0	4.5	8.0
LN ₂ capacity below turntable, L	46	76	140
Weight, Empty/Full ² , kg	295/332	417/478	703/823
Neck diameter, mm	330	457	622
Overall/operating height, mm	1455/1080	1455/1080	1455/1080
Usable height, internal mm	762.0	762.0	762.0
Overall/working diameter, mm	864/750	1143/1029	1511/1397
Inventory control system specifications			
Number of racks ³ (13 shelves)	14, 127x127mm	30, 127x127mm	58, 127x127mm
Number of racks ⁴ (13 shelves)	4, 76x76mm	8, 76x76mm	12, 76x76mm
Vial capacity ⁵	19,500	41,600	79,300
Blood bag (Fenwall 4R9951)/ (Fenwall 4R9953)/(Fenwall 4R9955)	560/400/290	1204/820/590	2100/1505/1050
With M255 economy controller*	232-102	232-100	232-089
Price	POA	POA	POA
With M505 controller*	232-103	232-104	232-105
Price	POA	POA	POA

1. Reference value without the turntable. 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.

2. Includes the empty weight and LN₂ weight.

3. 127x127mm 100 cell box.

4. 76x76mm 25 cell box.

5. 2ml vial size; 12.5mm O.D. (internal thread).

* For full details on controllers, see page 301.

Vapour Phase Inventory Control System

- Lightweight anodised aluminium racks with wide handle on top containing, 25 cell and 100 cell polycarbonate boxes for 1.2 or 2.0ml vial size. 12mm O.D internal thread.
- New leaf spring design for easier removal of boxes. Each aperture has a leaf spring retaining the box, so there is no need for the external locating rod.

Cat. No.	Model	No. of racks 10x10	No. of racks 5x5	Shelves per rack	Capacity	Price
232-115	LABS 20K	14	4	13	19,500	POA
238-249	LABS 40K	30	8	13	41,600	POA
238-248	LABS 80K	58	12	13	79,300	POA



Dry Shippers

Order by phone ► 01342 826836 Order on-line ► www.ecomcat.co.uk
Order by fax ► 01342 826771 Website ► www.jencons.co.uk

Taylor-Wharton, Cryo Express Dry Shippers

Cryo Express 'dry shippers' are designed to transport a variety of materials safely at cryogenic temperatures. Storage temperature inside the shipping cavity remains at a minimum of -150°C until the liquid nitrogen evaporates from the absorbent material. If the unit is tipped over the absorbent material prevents a liquid spill.

- Advanced concept absorbent enables faster charging
- Complies with IATA regulations
- Optional storage accessories include a five shelf rack system for the CX500
- Hard shell shipping case has shock resistant foam liner and hinged lid to provide extra protection in transit
- Lockable lid
- Compact, lightweight design
- Optional data logger

Specifications

Model	CX100	CX500
Static holding time ¹ , days	24	14
Working time ² , days	21	7
Normal evaporation rate ¹ , litres/day	0.18	0.6
Absorbed LN ₂ , litres	4.4	6.4
Weight		
Empty, kg	5.3	13.6
Full, kg ³	8.9	18.8
Neck diameter, mm	71	216
Overall height, mm	467	683
Overall diameter, mm	234	391
Vial capacity ⁴	102	500

1. Normal 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
2. Working time is an arbitrary, reference only value to estimate container performance under the actual operating conditions. Actual working time may vary widely depending on individual use patterns. Based on absorbed LN₂ volume.
3. Without canisters or racks
4. 1.2 or 2.0ml vial size. 12.5mm O.D (internal thread). 6 vials per cane (no cryosleeve) / 100 vials per box.

Cat. No.	Description	Price
232-074	CX100 transportable LN ₂ refrigerator	POA
232-076	CX500 transportable LN ₂ refrigerator with shelf rack for 500 vials	POA
232-077	CX500 transportable LN ₂ refrigerator with blood bags rack	POA
Accessories		
238-086	Shipping enclosure for CX100	POA
238-089	Shipping enclosure for CX500	POA

Data Loggers for CX100 and CX500 Dry Shippers

Data loggers for the CX100 and CX500 refrigerators provide logging and non volatile storage of 4096 temperature measurements. The units comply with; 89/336/EEC (EMC Directive). RTCA D0160D Section 21.4, Radiated Emissions Cat B (for safe operation on board aircraft).

- Logging interval adjustable from 1 minute to 30 minutes
- Non-rechargeable lithium cell battery (minimum 5 year operation)
- PC interface for setting up, collection and analysis of data (PC cable and software required, but not supplied)
- Measuring range, -199°C to +40°C (accuracy) ±3°C)

Cat. No.	Description	For models	Price
238-047	M380CE Data logger, requires 238-049	CX100	POA
238-048	M385CE Data logger, requires 238-049	CX500	POA
238-049	M381CE PC cable, software and documentation on CD-ROM	CX100/CX500	POA

232-074



232-076



238-089



232-074

232-076

238-047



New

238-342



Universal Level Gauges for Pressurised Liquid Nitrogen Vessels

A range of simple and more-accurate replacements for float gauges, where precision and reliability is important.

- Easily fitted to any type or size of pressurised vessel using liquid nitrogen, oxygen, CO₂ or argon
- Analogue display to show exact liquid level ($\pm 2.5\%$)
- Supplied customised with correct adaptor and probe length to suit vessel
- Battery powered—when used as a 'stand alone' in a vessel
- All gauges and accessories are waterproof to IP67

Level Gauges for 'Stand Alone' Use

Suitable for any application where remote indications are not required.

- No mains wiring required
- Battery state indicator
- Simple push-button operation to show liquid level

Cat. No.	Description	Price
238-342	QCG200 Level gauge with adaptor and battery, for inert use	POA
238-343	QCG200 Level gauge with adaptor and battery, for oxygen use	POA

Important Note: Please state your vessel model when ordering the level gauge

238-344



Level Gauges with Remote Monitoring Option

Suitable for any application where an analogue display and/or audio-visual low level alarm is needed remotely from the monitored vessel.

- Continuous analogue display on the gauge head at the vessel when used with remote accessories (238-344 & 238-345)
- Simple push-button operation to show liquid level if used as a stand-alone unit (238-344 & 238-345)
- Remote units supplied pre-fitted with 10m cables as standard, simply plug into the side of the gauge head (238-350 & 238-348)
- Remote Display unit available to continuously display precise liquid levels within the vessel at a distance from the vessel (238-350)
- Remote Alarm unit available to give both audible and visual warning if liquid levels fall below levels defined by the user (238-348)
- Both modules can be fitted at the same time to one gauge by connecting through an interface unit (238-347)

Cat. No.	Description	Price
238-344	QCG240 Level gauge with adaptor and battery, for inert use	POA
238-345	QCG240 Level gauge with adaptor and battery, for oxygen use	POA
238-350	QRD240 Remote display unit with 10m cable	POA
238-348	QLA240 Remote alarm unit with 10m cable	POA
238-347	QIB240 Interface unit	POA

Important Note: Please state your vessel model when ordering the level gauge

238-350

238-348





Gauges/Monitors

Order by phone ► 01342 826836 Order on-line ► www.ecomcat.co.uk
Order by fax ► 01342 826771 Website ► www.jencons.co.uk

Oxygen Depletion Monitor

Protects against O₂ deficiency where personnel are at risk from nitrogen leakage.

- Audible and visual alarms on all modules to provide low and critically low oxygen warning
- Battery powered with 12 months continuous operation-separate low battery warnings
- No mains connection needed - simply screws to wall
- Optional battery power repeater module to provide LCD display locally and/or remotely
- Optional beacon and klaxon for very noisy operating environments

Cat. No.	Description	Price
238-346	QFM330 Base module, containing oxygen sensor, with battery	POA
238-351	QRD330 LCD repeater module with battery and 10m connecting cable	POA
238-349	Replacement sensor/battery pack for base module 238-346	POA
238-353	Replacement battery pack for LCD repeater module 238-351	POA
238-352	Beacon and Klaxon (mains powered)	POA



238-351

238-346

Personal Oxygen Monitor and Alarm

A personal compact oxygen monitor with LCD display for continuous monitoring of oxygen concentrations in surrounding air.

- LCD Display on top for optimal viewing by user and operational confirmation of continuous operation
- Warning alarm and low battery (service) alarm sited alongside LCD display for optimal visibility. Low battery alarm will alarm for several days continuously.
- Operates continuously for up to two years under normal ambient conditions - no need for re-charging
- Easily calibrated by user in fresh air using LCD display
- Small compact size 125x65x23mm approx. Lightweight unit – 200g approx.
- Supplied with cut off of LCD display when in alarm condition*
- Cannot be switched off - protects users at all times
- Belt/pocket clip provided
- Optional earpiece for noisy environments

The new QPM3200 is a personal oxygen monitor which monitors continuously the concentration of oxygen in the surrounding air and provides both visual and audible alarms should the detected concentration of oxygen fall below the pre-set low alarm level or above the pre-set high alarm level.

The QPM3200 has the advantages of an LCD display as standard and no ON/OFF switch which could potentially leave users at risk.

The QPM3200 contains a long life two year oxygen sensor and special built-in battery pack which allows the unit to operate continuously for at least two years under normal ambient conditions.

Replacement sensor/battery packs and service/calibration checks can be provided by Jencons-PLS as required.

The QPM3200 protects users from the potential hazard of nitrogen, argon, helium deficiencies in conjunction with oxygen enrichment.

* Unit can be supplied with continuous reading, but this must be specified at time of ordering.

Specification

Dimensions (lwxh), mm	125x65x23 – fits into breast pocket
Weight, g	200 (approx)
Fixings	Clip for pocket or belt mounting
Alarms	
	HIGH ALARM - flashing red LED and audible bleeper (normally set at 22%)
	LOW ALARM - flashing red LED and audible bleeper (normally set at 19%) Other alarm settings available
	Optional earpiece for noisy operating environments
Read-out	LCD display to 0.01
Calibration test	By simple adjustment in fresh air using LCD as reference point

Cat. No.	Description	Price
238-376	QPM3200 Personal oxygen monitor	POA
238-377	QPM3200RS Replacement sensor/battery pack and calibration	POA
238-378	QPM3200EA Earpiece	POA

For details on 12-month calibration/service please contact our Technical Office on 01342 826836.

238-376



232-011



232-012

Taylor-Wharton, XL Series, Laboratory Liquid Gas Cylinders

The XL series of low-pressure liquid gas cylinders are specifically designed for laboratory applications using LN₂.

The XL-160, XL-180-660 and XL-240 allow frequent usage and provide for larger on-site requirements. Ideal for use with K-Series refrigerators.

Versatility

The XL-120, XL-180-660 and XL-240 are available with or without pressure-building coil. All models, except the XL-160 are supplied on castors as standard. A square base is available for the XL-180-660 and the XL-240.

- Castor mounted for easy manoeuvrability (except XL-160)
- Polished heavy duty outer body
- Rugged transportable units
- 5 year vacuum warranty
- Approved according to Transportable Pressure Equipment Directive 1999/36 EC
- Non-magnetic wheels are available, please contact our Technical Office on 01342 826836 for details.

Specifications

Model	XL-70	XL-120	XL-160	XL-180-660*	XL-240*
Dimensions (dxh), mm	508x1065	508x1300	508x1464	660x1280	660x1510
Weight (empty), kg					
Models without pressure building	N/A	82	104	116	137
Models with pressure building	71	82	104	116	137
Usable capacity, litres	70	120	160	180	240
Normal evaporation rate, %/day					
Nitrogen	3.1	2.2	1.5	1.3	1.4
Pressure relief valve, bar	22 psig/1.5 bar (all models)				
Warranty on vacuum, years	5	5	5	5	5

* The XL-180-660 and XL-240 are available with a square base.

238-370



Cat. No.	Description	Price
232-090	XL-70PB Low pressure liquid gas cylinder with pressure building	POA
232-092	XL-120 Low pressure liquid gas cylinder without pressure building	POA
232-091	XL-120PB Low pressure liquid gas cylinder with pressure building	POA
232-011	XL-160 Low pressure liquid gas cylinder without pressure building	POA
232-093	XL-180-660 Low pressure liquid gas cylinder without pressure building	POA
232-094	XL-180-660PB Low pressure liquid gas cylinder with pressure building	POA
232-095	XL-240 Low pressure liquid gas cylinder without pressure building	POA
232-012	XL-240PB Low pressure liquid gas cylinder with pressure building	POA
232-096	Square base for XL-180-660 and XL-240*	POA

* Must be specified at time of ordering (not retrofittable).

Accessories

Cat. No.	Description	Price
238-019	Transfer hose 1.2 metres	POA
238-014	Transfer hose 1.8 metres	POA
238-015	Model 80 phase separator 35x57mm long	POA
238-017	Model 82 phase separator 25x27mm long (for use with narrow neck containers)	POA

Cylinder Transport Trolleys for XL Series Suitable for XL-160.

Cat. No.	Description	Price
238-370	Cylinder transport trolley, required for XL-160	POA

EXCLUSIVE
distributor in
the UK for
40 years



LN₂ Cylinders

Order by phone ► 01342 826836 Order on-line ► www.ecomcat.co.uk
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Taylor-Wharton, XL Series, Medium and High Pressure Vessels for Liquid or Gaseous LN₂, O₂ and Argon

XL-45, XL-50, XL-45HP, XL-55HP and XL-65HP

Stainless steel vessels for supply of liquid or gaseous nitrogen, argon or oxygen at medium or high pressures up to 20 bar. Built-in pressure raising system with vaporiser. Supplied to the requirements of the TPED (Transportable Pressure Equipment Directive).

- New improved NER on liquid cylinder
- Economiser circuit conserves gas during periods of low demand
- Liquid fill, vent and gas service valves, pressure gauge and over-pressure safety relief devices
- Float-type contents gauge with magnetically coupled indicator
- Low-loss holding capabilities
- For gas or liquid dispensing

NB: All require trolley (238-370) for transportation with the exception of XL-65HP which has built-in castors.



Specifications

Model	XL-45	XL-45HP	XL-50	XL-55HP	XL-65HP
Dimensions (dxh), mm	508x1562	508x1559	508x1614	508x1764	660x1476
Weight (empty), kg	133	151	139	164	201
Usable capacity, litres	180	176	188	208	247
Normal evaporation rate, % per day					
Oxygen	1.2%	1.4%	1.4%	1.2%	1.0%
Nitrogen	1.8%	2.0%	1.7%	1.97%	1.6%
Argon	1.1%	1.2%	1.1%	1.2%	1.0%
Gas withdrawal rate, m ³ /hr @NTP (@STP)					
Oxygen	9.2	9.2	9.2	9.2	9.2
Nitrogen	9.2	9.2	9.2	9.2	9.2
Argon	9.2	9.2	9.2	9.2	9.2
Pressure building, regulator setting, bar	8.6	20.7	8.6	20.7	20.7
Pressure relief valve, bar	15.9	24	15.9	24	24
Cat. No.	232-006	232-064	232-010	232-070	232-071
Price	POA	POA	POA	POA	POA

Cylinder Transport Trolleys for XL Series

Suitable for all cylinders except XL-65HP.

Cat. No.	Description	Price
238-370	Cylinder transport trolley	POA

238-370



EXCLUSIVE
distributor in
the UK for
40 years

Jencons Project Support



Our Projects Team provides specialist support for customer projects ranging from small systems to full-scale laboratory refurbishments.

For many of our customers, a new lab build or refurbishment project is not a regular event and invariably it is carried out in parallel with their existing responsibilities.

Our Projects Team have the experience to help you plan and deliver your project, including the supply of high quality equipment and training as well as liaising with any other specialist teams.

We believe that close communication is paramount before a project is undertaken. Our Project Team has experience in liaising with clients; consultants, architects and builders attending meetings ensuring specifications are correct including all safety requirements.

No matter how large or small, each project requirement will be managed with expertise, enthusiasm and a fine eye to detail, we can provide:

- Site Surveys
- Total laboratory refurbishment
- Upgrading of existing facilities
- Cryogenic refrigeration systems
- Supply and installation of bulk LN₂ tanks
- Oxygen/CO₂ monitoring systems
- Vacuum pipelines
- Insulated copper pipelines
- Gas vent systems
- Flooring
- Temperature cycle systems
- Security equipment
- Design and manufacture of 'specials' e.g. thermal plates
- CAD drawings
- Ventilation systems
- Training on product/systems
- An on-site Project Manager to liaise with contractors

We have many reference sites for both our project work and service contracts throughout the country. We would have no hesitation in providing details of our satisfied customers on request.

Jencons and the UK Biobank Project

Jencons-PLS has won a groundbreaking contract to supply the UK Biobank project with specialist cryogenic equipment and services.

The UK Biobank Project embodies the world's largest study of the role of nature and nurture in health and disease, and is set to create more than 14 million samples for potential future analysis. An important aspect of the project is how these samples are handled and stored. Jencons-PLS Project Team has been working closely with the Directors of the project on the design and specification of what will be one of the largest liquid nitrogen storage facilities for human samples in Europe.

The Turnkey package provided by Jencons, includes design, project management, supply and implementation of all the cryogenic storage requirement including Bulk Tanks, Super-Insulated Vacuum Lines and Taylor Wharton LABS 80K high capacity long term storage vessels and ICS and all local and remote software.

"Jencons have brought their specialist knowledge of cryogenic engineering and their project and supplier management skills to deliver this project on time and to budget"

Tim Peakman, Acting Chief Executive Officer, UK Biobank



To contact our Projects Team:

Tel: 01525 215510 Fax: 01525 215527

Email: projects@jencons.co.uk



Trolleys

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Safety Carry Truck/Trolley

This universal truck allows safer transport of liquid nitrogen dewars and refrigerators accommodating most popular makes of dewars and refrigerators up to 50 litres. Its tubular steel construction and wheels with robust pneumatic tyres make this truck both strong and manoeuvrable. The carry truck secures dewars / refrigerators with a novel latching post for improved stability. The Safety Carry Truck is ideal for the transportation of all LD10, Classic 25, LD25, LD35, LD50 Taylor Wharton dewar/refrigerator models as well as similar capacity dewars from other manufacturers.

Specifications

Material	Tubular Steel
Maximum Load, kg	140
Maximum diameter of vessel accommodated, mm	480
Dimensions, (h x w x d), mm	1110 x 547 x 248
Weight, kg	8
Wheel Size (dia x w), mm	220 x 65

Cat No	Description	Price
238-010	Safety carry truck	POA

Cylinder Transport Trolleys for XL Series

Available for XL160 and other similar cylinders.

For details of the XL Series, please refer to page 308.

Cat. No.	Description	Price
238-370	Cylinder transport trolley	POA

Jencons, Liquid-Dispensing Tip-Truk

Designed for the safe transport and pouring of LN₂ from all Taylor-Wharton LD-Series dewar models (25 and 35 litres). The dewar sits in a cradle sling secured by a strong clamping arm. The wide, square, castor-mounted base provides stability and complete manoeuvrability. Two locking castors permit safe pouring.

Cat. No.	Description	Price
238-011	Tip-Truk for all LD25 dewar models	POA
238-012	Tip-Truk for all LD35 dewar models	POA

Liquid Dispensing

Mobile tipping stand for the LD25 Series and Classic 25 liquid dewars for safe dispensing of LN₂ into small containers.

Cat. No.	Description	Price
238-094	Tipping stand for LD25 Series dewar	POA

Roller Base

This sturdy aluminium 5 wheel dolly enables you to move refrigerators and dewars easily and safely.

Cat. No.	For use with	Price
238-091	LD25, HCL12, HC20, XTL8, XT20, 3K	POA
238-067	LD35, LD50, HC34, HC35, VHC35, XT34, LS750	POA
238-036	LS4800, LS3000, LS6000	POA
232-016	Classic 25 dewars	POA



238-010

238-370



238-011



238-091



238-094



Measuring Rod

A calibrated plastic measuring rod to clearly show the LN₂ level of a dewar in inches and millimetres.

Cat. No.	Description	Price
238-096	Measuring rod	POA

LN₂ Dipper

Safe and convenient dipper for removing small quantities (11ml) of LN₂ from dewars or refrigerators.

Cat. No.	Description	Price
238-103	LN ₂ dipper	POA

Transfer Hoses for LN₂

Flexible, stainless steel hoses, 12mm nominal bore, are available in 1.2 and 1.8m lengths to fit XL cylinders and liquid withdrawal devices.

Cat. No.	Description	Price
238-019	Transfer hose 1.2m length	POA
238-014	Transfer hose 1.8m length	POA

Liquid Withdrawal Device and Phase Separators

The liquid withdrawal device enables the LD25, LD35 or the LD50 to conveniently transfer LN₂ at rates up to 8 litres per minute. The low pressure 0.7bar/69 kPa relief valve assures safe dispensing through a phase separator, eliminates the turbulence and significantly reduces the losses that sometimes occur when transferring pressurised cryogenic liquids to open containers.

Cat. No.	Description	Price
238-093	Liquid withdrawal device with phase separator	POA
238-019	1.2 m transfer hose for fitting to above 238-093	POA
238-014	1.8 m transfer hose for fitting to above 238-093	POA
238-015	Model 80 phase separator 35dia.x57mm long	POA
238-017	Model 82 phase separator 25dia.x25mm long	POA



Waterproof Cryogloves

Developed for laboratory use to provide protection down to -160°C against freezer burns and frost bite. For high temperature work, protection is given to handling objects up to 150°C. Manufactured from a highly efficient Poly-olefin insulation with an outer nylon skin which is laminated to a micro porous film. This makes the gloves very flexible in use. In addition, all the seams are double stitched for added strength and long life stress areas are triple stitched.

These gloves are essential for low temperature work, including the handling of dry ice. All these gloves are waterproof, which is recommended for retrieving materials from liquid nitrogen atmospheres. The gloves must not be immersed in liquid nitrogen, worn near an open flame or in a hazardous area in which ignition could occur.

Cat. No.	Description	Size	Pack	Price
211-012	Cryogloves, mid-arm length	Medium	1 pair	POA
211-011	Cryogloves, mid-arm length	Large	1 pair	POA
211-013	Cryogloves, mid-arm length	Extra large	1 pair	POA
211-251	Cryogloves, shoulder length	Medium	1 pair	POA
211-250	Cryogloves, shoulder length	Large	1 pair	POA
211-252	Cryogloves, shoulder length	Extra large	1 pair	POA

Cryo-Aprons

Essential for user-protection whilst handling low temperature liquids. Aprons are manufactured from the same material as Cryogloves, and have fully-adjustable straps.

Cat. No.	Description	Size	Length, mm	Price
211-009	Cryo-Apron	Small	910	POA
211-008	Cryo-Apron	Medium	1060	POA
211-007	Cryo-Apron	Large	1210	POA

Faceshield

A protective anti-splash faceshield recommended where the possibility of excessive boiling, spraying or splashing of low temperature liquids is a hazard.

Cat. No.	Description	Price
610-015	Faceshield	POA





Vials

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Simport, Cryovials®

A range of polypropylene, round bottom and self-standing cryogenic vials for storing biological material in the vapour phase of liquid nitrogen down to -196°C. The tubes have thick walls, making them almost unbreakable, yet retain excellent clarity for sample visibility. The ribbed caps have a super fast thread design that allows tightening or removal with a mere 1¼ turn. Tubes are provided with a white marking area for sample identification, can be colour coded by using a Capinserts™ (see page 315) and are compatible with most storage systems. The round bottom vials can be centrifuged and the self-standing vials have universal locking bases. Vials are sterilized by gamma radiation and are packaged in unique tamperproof, resealable, safety-lock bags of 100. Autoclavable.

Cryovials with a lip seal design and external threads

External threads on the tube and internal threads on the cap, which has a long skirt, enable one handed aseptic methods and limit possible contamination. A specially designed lip inside the cap ensures a leakproof seal, even at very low temperatures.

Cat. No.	Volume, ml	Dimensions (dia)xh, mm	Shape	Pack	Price
238-500	1.2	12.5x41	Self-standing	1000	POA
238-501	2	12.5x46	Round bottom ¹	1000	POA
238-502	2	12.5x48	Self-standing	1000	POA
238-503	3	12.5x70	Self-standing	1000	POA
238-504	4	12.5x76	Self-standing	1000	POA
238-505	5	12.5x90	Self-standing	1000	POA

1. Can be centrifuged up to 17,000g.

Cryovials with a silicone washer seal and external threads

These are the same tubes as above, with the addition of a silicone seal fitted inside the cap to ensure a positive seal at any temperature, even the very lowest cryogenic temperatures.

Cat. No.	Volume, ml	Dimensions (dia)xh, mm	Shape	Pack	Price
238-506	1.2	12.5x43	Self-standing	1000	POA
238-507	2	12.5x48	Round bottom ²	1000	POA
238-508	2	12.5x49	Self-standing	1000	POA
238-509	3	12.5x72	Self-standing	1000	POA
238-510	4	12.5x76	Self-standing	1000	POA
238-511	5	12.5x93	Self-standing	1000	POA
238-512	10	17x84	Self-standing ³	500	POA

2. Can be centrifuged up to 17,000g. 3. Polyethylene cap. Supplied in bags of 50.

Cryovials with a silicone washer seal and internal threads

These tubes have an internal thread, with an externally threaded cap and the same silicone seal as above.

Cat. No.	Volume, ml	Dimensions (dia)xh, mm	Shape	Pack	Price
238-513	1.2	12.5x41	Self-standing	1000	POA
238-514	2	12.5x48	Self-standing	1000	POA
238-515	2	12.5x48	Round bottom ⁴	1000	POA
238-516	4	12.5x70	Round bottom ⁴	1000	POA
238-517	4	12.5x72	Self-Standing	1000	POA
238-518	5	12.5x90	Round bottom ⁴	1000	POA

4. Can be centrifuged up to 14,000g

Nalgene, Cryovials

Polypropylene, self standing vials for cryogenic storage in the vapour phase of LN₂. The vial's external thread prevents contamination from the cap. The HDPE, deep skirted cap gives a positive seal without an 'O' ring and allows single handed aseptic technique using the Nalgene cryovial holder (see page 314). The vials have a white marking area, fill line and graduations. Supplied sterile with fitted cap. Non-cytotoxic and non-pyrogenic.

Cat. No.	Volume, ml	Dimensions (dia)xh, mm	Shape	Pack	Price
103-023	1.2	13.5x38	Self-standing	500	POA
103-019	2.0	13.5x48	Self-standing	500	POA
103-021	5.0	13.5x92	Self-standing	250	POA

It is recommended that tubes are not used for storage in the liquid phase of liquid nitrogen unless they are correctly sealed in CryoFlex™. See page 315.

New

238-500 to 238-505
Capinserts sold separately



New

238-506 to 238-511
Capinserts sold separately



New

238-512



New

238-513 to 238-518
Capinserts sold separately



New

238-002

238-263

238-262



System 100

238-264

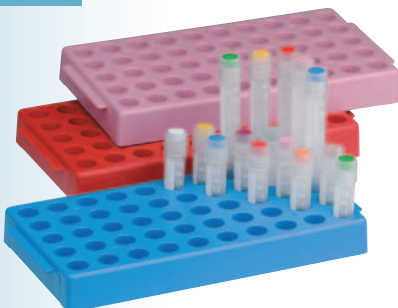
238-265

238-264 with 238-263

238-026

New

238-531 to 238-533



Nalgene, Sterile Specimen Cryogenic Vial, PP

Designed for the storage of solid specimens, this wide mouth, shoulderless vial allows easy access to the sample with forceps. Suitable for use in mechanical freezers only. Certified non-cytotoxic, non-pyrogenic and sterile. Supplied with a linerless HDPE screw cap.

Cat. No.	Description	Volume, ml	Dims.* (dia) x h, mm	Pack	Price
238-002	Sterile specimen cryogenic vial	15	33x47	75	POA

* With cap.

Nalgene, System 100 Cryoware

A system designed to increase storage space by 23% over boxes that hold 81 vials. It consists of:

- 1.0 and 1.5ml cryogenic vials with gasket that can be centrifuged to 8000xg
- 25 place holder with increased spacing around the holes
- Storage box for holding 100 vials

System 100 Cryogenic Vials

Innovative self-standing, polypropylene vials for increased storage capacity in mechanical and vapour phase freezers. The polypropylene cap contains a silicone gasket for a leakproof performance in a micro-centrifuge (max 8000x g) and during shipment or transport. Vials are externally threaded for aseptic technique and have a white marking area, graduations and fill line. They are radiation sterilised, non-cytotoxic and non-pyrogenic. Packaged 25/bag.

Cat. No.	Description	Volume, ml	Dims. (dia) x h, mm	Pack	Price
238-262	System 100 cryogenic vials	1.0	12x38	500	POA
238-263	System 100 cryogenic vials	1.5	12x48	500	POA

System 100 Cryogenic Vial Holder

Designed to enable single handed vial manipulation, the bottom of each well interlocks with the base of the vial. Spacing around each hole is large and the holes are staggered for easy handling and viewing of vial contents. Made of polycarbonate and autoclavable.

Cat. No.	Description	Capacity	Dims. (l x w x h), mm	Pack	Price
238-264	System 100 cryogenic vial holder	25 vials	197x102x22	1	POA

System 100 CryoBox

Designed for ultra-low temperature storage of one hundred System 100 cryogenic vials or other similar sized externally threaded vials and most internally threaded vials. The polycarbonate box has a usable temperature range from -196°C to +121°C and is autoclavable. A permanent numerical grid system is printed on the transparent lid for inventory purposes, allowing a clear view of contents, and is keyed to prevent misalignment. Fits into most existing stainless steel racks.

Cat. No.	Description	Array	Dims. (l x w x h), mm	Pack	Price
238-265	System 100 CryoBox	10x10	133x133x52	10	POA

It is recommended that tubes are not used for storage in the liquid phase of liquid nitrogen unless they are correctly sealed in CryoFlex™. See page 315.

Nalgene, Cryovials Rack/Holder

A white polycarbonate moulded rack with wells to hold 50 cryovials in 5 rows of 10. The wells interlock with self-standing cryovial bases for one-handed cap removal. It has an alphanumeric well index to identify samples and rubber feet for stability. Stackable and autoclavable.

Cat. No.	Description	Capacity	Dims. (l x w x h), mm	Pack	Price
238-026	Cryovial rack	50 vials	200x100x30	1	POA

Simport, Cryovial Workstation Rack

This stackable polypropylene rack holds up to 50 cryogenic vials. Any self-standing cryovials with universal locking bases will lock into it and will not turn, enabling one handed opening and closing of their caps. Each position is identified with an alphanumeric index. Strong handles are affixed at either end for easy carrying and it is supported by five anti-skid rubber feet.

Dimensions (l x w x h), mm: 250x200x100

Cat. No.	Colour	Pack	Price	Cat. No.	Colour	Pack	Price
238-531	Blue	4	POA	238-533	Lilac	4	POA
238-532	Red	4	POA				



Vial Accessories

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Order by fax ► 01342 826771 Website ► www.jencons.co.uk

Nalgene, Cap Colour Coders for Cryovials

Coloured polystyrene discs that fit the recesses in cryovial caps. Their flat surface permits addition of written identification marks.

Cat. No.	Colour	Pack	Price	Cat. No.	Colour	Pack	Price
103-034	White	100	POA	103-029	Green	100	POA
103-037	Yellow	100	POA	103-033	Red	100	POA
103-028	Blue	100	POA				

Simport, Capinserts™ for Cryovials

These colour coded inserts fit precisely into the Simport cryovial caps for colour identification.

Cat. No.	Colour	Pack	Price	Cat. No.	Colour	Pack	Price
238-519	White	500	POA	238-525	Grey	500	POA
238-520	Blue	500	POA	238-526	Lilac	500	POA
238-521	Red	500	POA	238-527	Orange	500	POA
238-522	Green	500	POA	238-528	Violet	500	POA
238-523	Yellow	500	POA	238-529	Pink	500	POA
238-524	Tan	500	POA	238-530	Assorted ¹	500	POA

1. Five bags of 100 each of white, blue, red, green and yellow

Nunc™, CryoFlex™

CryoFlex™ is a polyethylene tube that can be used to provide extra safety when freezing hazardous samples or storing in liquid nitrogen. Cryotubes are placed inside the CryoFlex™, which is gently heated to seal in the cryotube.

It is recommended that tubes are not used for storage in the liquid phase of liquid nitrogen unless they are correctly sealed in CryoFlex™.

Cat. No.	Description	External Dimensions (Lxdia), mm	Pack	Price
238-009	CryoFlex™	500x14	15	POA

CryoCanes

Aluminium canes with clips to hold cryovials. For use with 278mm high canister in Taylor-Wharton HC, VHC or XT series refrigerators or 'CryoPak' shipping containers. Capacity for six 1.2ml or 2.0ml cryovials or three 5.0ml cryovials.

Cat. No.	Description	Pack	Price
238-052	Cryocanes	10	POA

Nalgene, CryoCanes™ Colour Coders

Coloured aluminium tabs to fit onto the end of the CryoCane™ to identify the batch of vials. A flat writing surface permits the addition of written identification marks.

Cat. No.	Colour	Pack	Price	Cat. No.	Colour	Pack	Price
238-027	Blue	100	POA	238-030	White	100	POA
238-028	Green	100	POA	238-031	Yellow	100	POA
238-029	Red	100	POA				

Nalgene, CryoSleeves™

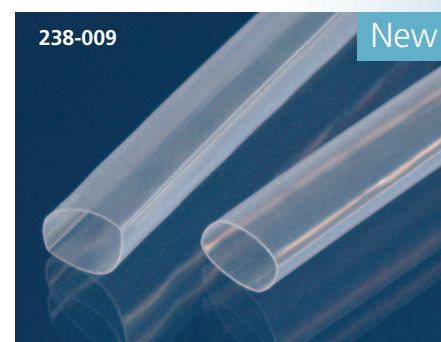
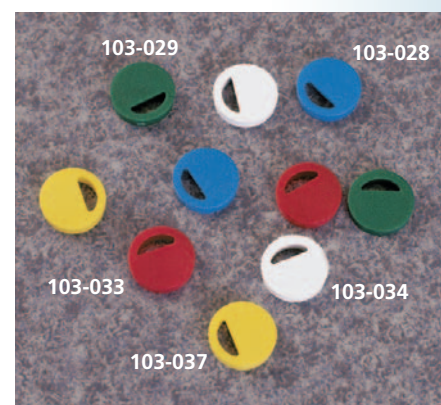
Clear PVC sleeve encloses vials on CryoCanes™ for extra security. Samples are visible for identification. Fits most canes. CryoSleeves™ will not shred or tear, even after repeated use.

Cat. No.	Description	Pack	Price
238-032	Cryosleeves	100	POA

Cryotubes

Cardboard tubes for CryoCanes™. A less durable but economical alternative to CryoSleeves™ (see above). Aluminium tube with viewing slot, holds cryovials without cane. Locking cap features flat writing area for identification marks. Holds six 1.2 or 2.0ml cryovials or three 5.0ml cryovials.

Cat. No.	Description	Pack	Price
238-039	Cryotube, cardboard	100	POA
238-051	Cryotube, aluminium	10	POA

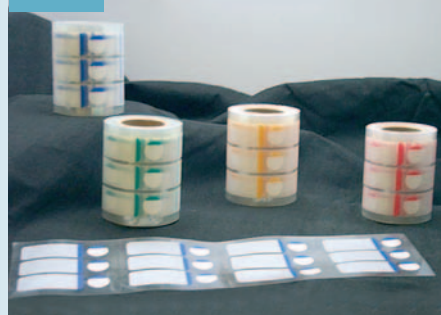




238-034

New

238-001 to 238-006



New

412-313

412-121



New

412-119 to 412-286



Nalgene, Cryoware Markers

These markers permanently mark cloth, cardboard and plastic. They are smudge-proof and the ink does not fade at ultra-low temperatures. They have extra fine points and are supplied in a pack of 4 assorted colours; red, green, blue and black.

Cat. No.	Description	Pack	Price
238-034	Cryoware marker set	4	POA

Nalgene, Cryoware Labels

Specifically designed for ultra-low temperatures, these durable, cloth labels adhere to plastic and cardboard and will not peel or shrink. They accept marking with ball-point pen. Supplied in packs of 10 sheets with 20 labels per sheet.

Cat. No.	Description	Dimensions (lxw), mm	Pack	Price
238-033	Cryoware labels, 20 labels per sheet	50.8x25.4	10	POA

MicroMate™ Labels

These labels fit 1.5 ml centrifuge tubes and will endure extreme temperatures, autoclaving, PCR cycling in oil and will not come off in rotors, cyclers or racks. They are supplied as 500 label sets per roll, each set comprising one circular top label and one rectangular side label, both with a colour coding strip. The labels are perforated after every 3 sets. The matt surface is suitable for writing on with pencil, pen or marker. Available in four colours and supplied in convenient white paper board dispenser boxes.

Cat. No.	Description	Colour	Pack	Price
238-001	MicroMate Labels	Green	500	POA
238-003	MicroMate Labels	Blue	500	POA
238-004	MicroMate Labels	Yellow	500	POA
238-005	MicroMate Labels	White	500	POA
238-006	MicroMate Labels	Red	500	POA

Tough-Tag™ Cryo-Babies™ and Cryo-Tags™

Pre-cut, peel-off labels designed for cryogenic temperatures. They are made of chemically inert polyester with a strong adhesion to all plastic and other materials. They will withstand freezing to -196°C, boiling water baths at 100°C and dry heat to 150°C without cracking, peeling or degrading. They will also withstand brief contact with organic solvents and caustic agents. Tough-Tag Cryo-Babies are for the labelling of microcentrifuge tubes and cryogenic vials. Large Tough-Tag Cryo-Tags are ideal for identifying test tubes, bottles, flasks, vials and freezer boxes.

Cat. No.	Description	Colour	Dimensions (lxw), mm	Pack	Price
412-121	Tough-Tag Cryo-Babies, roll	White	32.5x12.5	1000	POA
412-313	Tough-Tag Cryo-Tags, roll	White	38x19	1000	POA

Tough-Spots™

Pre-cut, peel-off strong adhesive spots for microcentrifuge, centrifuge, sample and test tube tops. Tough-Spots withstand cryogenic storage to -196°C. They are chemically inert and can be used in boiling water baths at +100°C and dry heat to +150°C without cracking, peeling or degrading.

Cat. No.	Colour	Dia., mm	Pack	Price	Cat. No.	Colour	Dia., mm	Pack	Price
412-119	White	9.5	1000	POA	412-290	Blue	12.5	1000	POA
412-281	Blue	9.5	1000	POA	412-291	Green	12.5	1000	POA
412-282	Green	9.5	1000	POA	412-292	Red	12.5	1000	POA
412-283	Red	9.5	1000	POA	412-293	Yellow	12.5	1000	POA
412-284	Yellow	9.5	1000	POA	412-294	Lilac	12.5	1000	POA
412-285	Lilac	9.5	1000	POA	412-295	Orange	12.5	1000	POA
412-286	Orange	9.5	1000	POA	412-296	Pink	12.5	1000	POA
412-287	Pink	9.5	1000	POA	412-297	White	19	500	POA
412-289	White	12.5	1000	POA	412-298	White	25	500	POA



Labelling/Storage Boxes

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Laser Cryo-Babies™ and Cryo-Tags™

Chemically inert, polyester labels with strong adhesion to plastic and other materials, designed for printing on with laser or inkjet printers. They withstand freezing to -196°C (for both vapour and liquid phase nitrogen), boiling water baths at 100°C, dry heat to 150°C and also brief contact with organic solvents and caustic agents. The labels resist water soaking at room temperature and water vapour at 35°C for at least 24 hours. Laser Cryo-Babies are for labelling microcentrifuge tubes and cryogenic vials. Large Laser Cryo-Tags are ideal for identifying test tubes, bottles, flasks, vials and freezer boxes. Printer set-up instructions included. 20 sheets per pack.

Cat. No.	Colour	Dimensions (lxw), mm	Pack	Price	Cat. No.	Colour	Dimensions (lxw), mm	Pack	Price
Laser Cryo-Babies™									
412-314	White	24x13	2380	POA	412-321	Blue	33x13	1700	POA
412-315	Blue	24x13	2380	POA	412-322	Green	33x13	1700	POA
412-316	Green	24x13	2380	POA	412-323	Orange	33x13	1700	POA
412-317	Orange	24x13	2380	POA	412-324	Red	33x13	1700	POA
412-318	Red	24x13	2380	POA	412-325	Yellow	33x13	1700	POA
412-319	Yellow	24x13	2380	POA	412-326	White	29x44	840	POA
412-320	White	33x13	1700	POA	412-327	White	67x25	600	POA
Laser Cryo-Tags™									
412-328	White	38x19	1200	POA	412-335	Blue	43x19	1040	POA
412-329	Blue	38x19	1200	POA	412-336	Green	43x19	1040	POA
412-330	Green	38x19	1200	POA	412-337	Orange	43x19	1040	POA
412-331	Orange	38x19	1200	POA	412-338	Red	43x19	1040	POA
412-332	Red	38x19	1200	POA	412-339	Yellow	43x19	1040	POA
412-333	Yellow	38x19	1200	POA	412-340	White	76x51	240	POA
412-334	White	43x19	1040	POA	412-341	White	216x279	20	POA

Laser Tough-Spots™

Laser Tough-Spots are ideal for labelling microcentrifuge, centrifuge, sample and test tube tops. They withstand conventional and cryogenic storage conditions to -196°C for both vapour and liquid phase nitrogen. They are chemically inert and can be used in boiling water baths at +100°C and dry heat to +150°C. They resist water soaking at room temperature and water vapour at 35°C for at least 24 hours. Compatible with laser or inkjet printers with printer set-up information included. 20 sheets per pack.

Cat. No.	Colour	Diameter mm	Pack	Price	Cat. No.	Colour	Diameter mm	Pack	Price
412-299	White	9.5	3840	POA	412-306	Blue	12.5	3840	POA
412-300	Blue	9.5	3840	POA	412-307	Green	12.5	3840	POA
412-301	Green	9.5	3840	POA	412-308	Orange	12.5	3840	POA
412-302	Orange	9.5	3840	POA	412-309	Red	12.5	3840	POA
412-303	Red	9.5	3840	POA	412-310	Yellow	12.5	3840	POA
412-304	Yellow	9.5	3840	POA	412-311	White	19	2160	POA
412-305	White	12.5	3840	POA	412-312	White	25	1260	POA

Nalgene, Cryoboxes™

White polycarbonate boxes with transparent lids and dividers for storage between -196°C to +121°C of both internally and externally threaded 1.2, 2.0 and 5.0ml cryogenic vials. Durable, economical alternatives to cardboard storage boxes. Ideal for use in mechanical or LN₂ freezers. Boxes accept writing with markers designed for ultra-low temperatures. Moulded-in numerical grid system, showing numbers on box and corresponding numbers printed in blue on lid. Useful as sturdy, reusable mailers for vials.

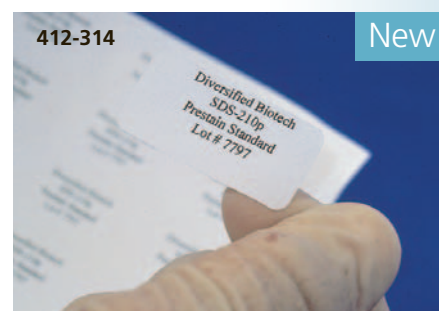
Cat No	Description	For cryovials	Capacity	Dimensions (lxwxh), mm	Pack	Price
238-023	Cryobox	1.2 and 2.0	25	76x76x51	8	POA
238-024	Cryobox	1.2 and 2.0	81	133x133x51	4	POA
238-025	Cryobox	5.0	81	133x133x95	4	POA

Nalgene, Autoclavable Storage Box

Sturdy, durable, polycarbonate box with a transparent PC lid for storage of various sizes of vials, bottles and bags in a wide range of environments (-196°C to +121°C).

Cat. No.	Description	Dimensions (lxwxh), mm	Pack	Price
238-007	Autoclavable storage box	133x133x51	4	POA

412-314



New

412-299



New

412-300 to 412-304



New

238-024

238-025



238-023

238-007



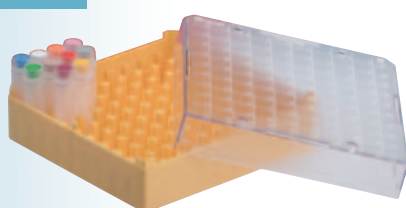
New

556-366



New

556-363



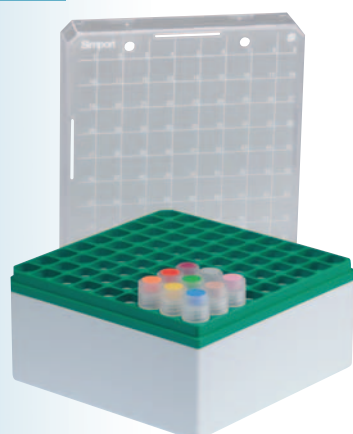
New

556-368



New

556-373



Simport, Cryostore™ Storage Boxes, Polycarbonate

Made from extra strong polycarbonate, these durable cryogenic storage boxes are designed to be used at temperatures between -196°C and +121°C and are autoclavable at 120°C, 15psi (1 bar) for 20 minutes. Different models are available to accommodate either 25, 81 or 100 cryovials from 1.2 to 5ml.

A transparent cover allows the user to see the contents of the box and is keyed to the base to prevent misalignment. Printed with a series of numbered squares, the surface accepts writing with markers for inventory control. Boxes are colour coded, either with coloured grids on the 25 and 81 place boxes, or coloured bases with the 100 place boxes. An innovative vial picker is supplied with each box to facilitate easy removal of vials. A metal stand is available separately that holds the storage boxes at an angle for easier access to tubes.

25 Place Cryostore for 1-2ml Cryovials

Cat. No.	Description	For Cryovials ml	Capacity Cryovials	Dimensions (lwxh), mm	Colour	Pack	Price
556-364	Cryostore™ storage box	1–2	25	76x76x52	Blue	48	POA
556-365	Cryostore™ storage box	1–2	25	76x76x52	Green	48	POA
556-366	Cryostore™ storage box	1–2	25	76x76x52	Red	48	POA
556-367	Cryostore™ storage box	1–2	25	76x76x52	Yellow	48	POA

100 Place Cryostore for 1-2ml Cryovials

Cat. No.	Description	For Cryovials ml	Capacity Cryovials	Dimensions (lwxh), mm	Colour	Pack	Price
556-360	Cryostore™ storage box	1–2	100	133x133x52	Blue	24	POA
556-361	Cryostore™ storage box	1–2	100	133x133x52	Green	24	POA
556-362	Cryostore™ storage box	1–2	100	133x133x52	Red	24	POA
556-363	Cryostore™ storage box	1–2	100	133x133x52	Yellow	24	POA

81 Place Cryostore for 1-2ml Cryovials

Cat. No.	Description	For Cryovials ml	Capacity Cryovials	Dimensions (lwxh), mm	Colour	Pack	Price
556-368	Cryostore™ storage box	1–2	81	133x133x52	Blue	24	POA
556-369	Cryostore™ storage box	1–2	81	133x133x52	Green	24	POA
556-370	Cryostore™ storage box	1–2	81	133x133x52	Red	24	POA
556-371	Cryostore™ storage box	1–2	81	133x133x52	Yellow	24	POA

81 Place Cryostore for 3-4ml Cryovials

Cat. No.	Description	For Cryovials ml	Capacity Cryovials	Dimensions (lwxh), mm	Colour	Pack	Price
556-372	Cryostore™ storage box	3–4	81	133x133x81	Blue	12	POA
556-373	Cryostore™ storage box	3–4	81	133x133x81	Green	12	POA
556-374	Cryostore™ storage box	3–4	81	133x133x81	Red	12	POA
556-375	Cryostore™ storage box	3–4	81	133x133x81	Yellow	12	POA

81 Place Cryostore for 3-5ml Cryovials

Cat. No.	Description	For Cryovials ml	Capacity Cryovials	Dimensions (lwxh), mm	Colour	Pack	Price
556-376	Cryostore™ storage box	3–5	81	133x133x95	Blue	10	POA
556-377	Cryostore™ storage box	3–5	81	133x133x95	Green	10	POA
556-378	Cryostore™ storage box	3–5	81	133x133x95	Red	10	POA
556-379	Cryostore™ storage box	3–5	81	133x133x95	Yellow	10	POA

Accessories

Cat. No.	Description	Pack	Price
556-396	Metal stand for Cryostore™ storage boxes	1	POA



Storage Boxes

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Order by fax ► 01342 826771 Website ► www.jencons.co.uk

MicryoPlus® Storage Boxes for Cryogenic Applications, Polycarbonate

MicryoPlus® polycarbonate cryogenic storage boxes are suitable for use for LN₂ storage and are compatible with most types of cryogenic and freezer storage towers. The boxes accept all brands of cryogenic vial and are stackable.

Dimensions (l x w x h), mm: 130 x 130 x 50

100 Section Box for Regular Cryogenic Vials

Accepts 100 regular, internally threaded 1/1.2ml and 2ml cryogenic vials, 12/12.5mm diameter. Box lids have an alignment feature and drain vents.

Cat. No.	Description	Cryovial Dia., mm	Capacity	Pack	Price
556-295	MicryoPlus storage box for regular cryovials	12/12.5	100	5	POA

100 Section Box for Small Diameter Cryogenic Vials

A 100 section box with a white insert for holding smaller diameter vials and tubes of 10/10.5mm diameter. Box lids have alignment feature and drain vents.

Cat. No.	Description	Cryovial Dia., mm	Capacity	Pack	Price
556-294	MicryoPlus storage box for small cryovials	10/10.5	100	5	POA

Box with 81 Place Removable Rack

The 81 place removable rack accepts both externally and internally threaded 1/1.2ml and 2ml cryogenic vials. This is also suitable for a variety of other 12mm diameter tubes and vials.

Cat. No.	Description	Cryovial Dia., mm	Capacity	Pack	Price
556-296	MicryoPlus storage box for regular cryovials	12	81	5	POA

Storage Box with Clear Lid

This stackable box has an alignment feature and drain vents. Suitable for freezer and LN₂ storage.

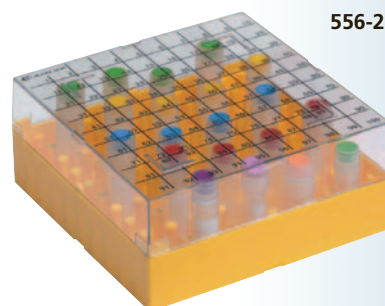
Cat. No.	Description	Pack	Price
556-293	Polycarbonate box (base and lid only)	5	POA

Cryobox for Liquid Nitrogen Storage, Polycarbonate

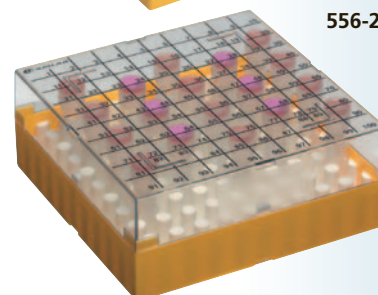
These cryoboxes hold 81 samples and have a standard footprint compatible with LN₂ inventory systems. They accommodate most types of 1–2ml cryovials, both internally and externally threaded, and are suitable for use between -196 to +121°C. They have drain slots/air vents, a lid position feature and are printed with a numeric sample reference grid. The boxes are stackable and available in a selection of colours or a mixed pack of one of each colour. Can be autoclaved at 121°C for 20 minutes.

Cat. No.	Description	For Cryovials, ml	Colour	Pack	Price
556-348	Polycarbonate cryobox	1-2	Blue	5	POA
556-349	Polycarbonate cryobox	1-2	Green	5	POA
556-350	Polycarbonate cryobox	1-2	Orange	5	POA
556-351	Polycarbonate cryobox	1-2	White	5	POA
556-352	Polycarbonate cryobox	1-2	Yellow	5	POA
556-353	Polycarbonate cryobox	1-2	Mixed	5	POA

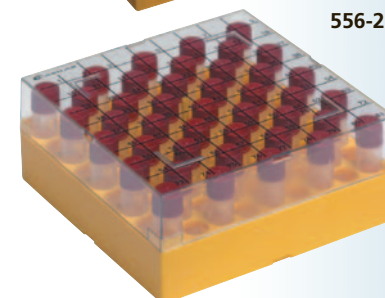
556-295



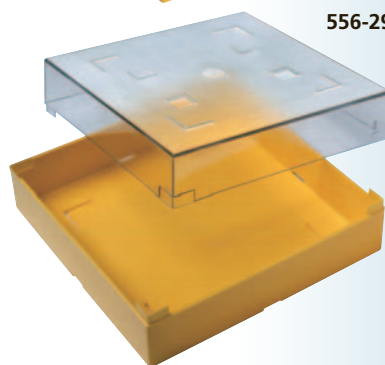
556-294



556-296

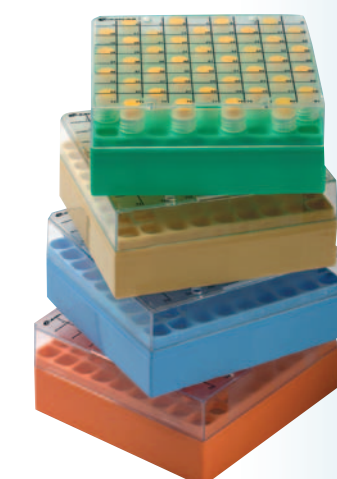


556-293



556-348 to 556-353

New



238-259



Nalgene, Polycarbonate Labtop Coolers

Convenient, cost-effective alternative for keeping PCR reagent, enzymes and other biochemical reagents cool while on the bench. Also gives protection from temperature fluctuation, defrost cycles or power failure in the freezer (-135°C). Holds up to 2.0ml tubes with inserts to convert any of the tube holes to accept 0.5ml microcentrifuge tubes. Break-resistant and stackable. Rubber feet.

Specifications

Lid type	Clear	White	Clear	White
Lower section	Blue PC	Blue PC	Green PC	Green PC
Array	3x4	4x8	3x4	4x8
Capacity	12 tubes	32 tubes	12 tubes	32 tubes
Temperature Range, °C	-15	-15	<1	<1
Holding time, hours	1	2	3.5	5
No. of inserts	16	16	16	16
Dimensions (lxwxh), mm	151x108x125	243x157x146	151x108x125	243x157x146
Weight, g	680	2040	680	2040
Cat. No.	238-258	238-259	238-260	238-261
Price	POA	POA	POA	POA

238-257



Nalgene, Quick Chill™ Unit

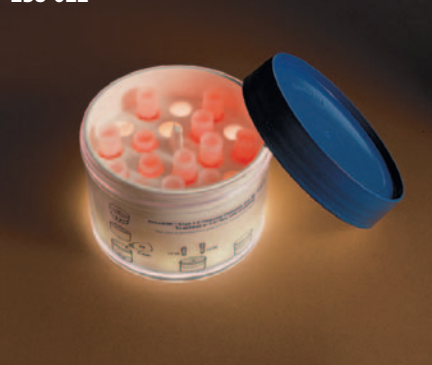
A unique container that can rapidly and repeatedly chill biological samples for use in molecular biology applications (i.e. ethanol precipitation of DNA/RNA samples).

The Quick Chill unit chills up to 2ml of alcohol-based solutions to -20°C in less than 3 minutes, or up to 2ml of water based solutions to 0°C in less than 4 minutes. Moulded of durable polycarbonate and prefilled with a non-toxic insulating solution, the Quick Chill can be used repeatedly on the bench for up to 45 minutes after removal from the freezer.

Holds twelve 1.5 or 0.5ml microcentrifuge tubes in a 3x4 array. No direct contact between tubes and insulating solution. Break-resistant and stackable.

Cat. No.	Description	Price
238-257	Quick Chill™ unit	POA

238-022



Nalgene, 'Mr Frosty' Cryofreezing Container

- Low cost, non-mechanical freezing unit for controlled rate freezing of biological samples
- Provides critical, repeatable 1°C per minute cooling rate for successful cryopreservation
- Eliminates unreliable, improvised methods using polystyrene foam (styrofoam) boxes
- Polycarbonate container is supplied with foam insert, lid and moulded HDPE vial holder
- Vial holder floats in water bath for thawing samples after storing
- Requires Iso-Propyl alcohol (Propan-2-ol), not supplied and access to -70°C ultra-low freezer

Cat. No.	Description	Price
238-022	Cryofreezing container for 1.2ml or 2ml vials	POA

682-454



682-453



Lab Tower Polycarbonate Storage System

The Lab Tower is a small footprint, multi-level storage rack/inventory system for the tiered accommodation of 1.5ml conical micro tubes, cryogenic vials and other tubes up to 12mm o.d. (max. height of 55mm). The removable racks each hold 81 tubes (9x9) and have embossed alphanumeric to aid sample identification.

The Lab Tower units and racks are manufactured in polycarbonate, which has a high degree of chemical resistance, combined with excellent high/low temperature characteristics (-196 to +121°C). The complete system can, therefore, also be utilised for cryogenic storage or wet/dry incubation applications. Towers and racks may also be sterilised.

Cat. No.	Description	Pack	Price
682-453	5 level polycarbonate Lab Tower set complete with racks	1	POA
682-456	5 level polycarbonate Lab Tower only	1	POA
682-454	8 level polycarbonate Lab Tower set complete with racks	1	POA
682-457	8 level polycarbonate Lab Tower only	1	POA
682-455	10 level polycarbonate Lab Tower set complete with racks	1	POA
682-458	10 level polycarbonate Lab Tower only	1	POA

For more details on the Lab Tower Storage System please see page 786.



Dewars

Order by phone ► 01342 826836 Order on-line ► www.ecomcat.co.uk
Order by fax ► 01342 826771 Website ► www.jencons.co.uk

VacSeal, All Stainless Steel Dewars

A range of unbreakable stainless steel dewars, resistant to vibration, impact or shock. These units are safe and easy to use for the storage of liquid oxygen, liquid nitrogen and other low-temperature liquid gases. The stainless steel inner and outer are light and compact. All supplied with a lid and detachable carrying handle, except 238-115, which does not have a handle.

Cat. No.	Capacity L	Diameter Inner, mm	Outer mm	Tube depth Inner, mm	Outer mm	Price
238-115	0.5	65	87	180	204	POA
238-111	1.0	85	107	206	232	POA
238-112	1.0	100	122	157	177	POA
238-113	2.0	100	122	285	313	POA
238-114	3.0	185	200	160	190	POA
238-116	6.0	185	200	270	300	POA

Vac-Seal, Glass Dewars with Steel Containers

Glass Dewars with Blue Mild Steel or Stainless Steel Finish Containers

A superbly engineered, hand-made range of glass vacuum dewars with a choice of protective carrying containers and special features.

The fully silvered borosilicate glass inner flask is manufactured to a precise tolerance. All protective containers are fitted with a comfortable swing-over carrying handle, an insulated lid and a cushioned base.

All vac-seal dewars are suitable for storage of liquid gases and solid CO₂. However, not every model should be used for transportation purposes. To identify a model suitable for your needs see the check-list that follows:

Blue Metal Cased Glass Dewars

Cat No.	Vented lid	Clamps on lid	Suitable for transportation
238-130	No	No	No
238-133	No	No	No
238-136	No	No	No
238-131	Yes	Yes	Yes
238-134	Yes	Yes	Yes
238-137	Yes	Yes	Yes

Stainless Steel Cased Glass Dewars

Cat No.	Vented lid	Clamps on lid	Suitable for transportation
238-147	Yes	Yes	Yes
238-150	Yes	Yes	Yes
238-153	Yes	Yes	Yes

Cat. No.	Description	Capacity L	Height w/handle, mm	Height w/o handle, mm	Diameter mm	Price
Blue Metal Cased Glass Dewars						
238-130	Dewar with lid	1.0	330	245	120	POA
238-133	Dewar with lid	2.0	350	270	145	POA
238-136	Dewar with lid	4.5	470	343	185	POA
238-131	Dewar with lid and clips	1.0	330	245	120	POA
238-134	Dewar with lid and clips	2.0	350	270	145	POA
238-137	Dewar with lid and clips	4.5	470	343	185	POA
Stainless Steel Cased Glass Dewars						
238-147	Dewar with lid and clips	1.0	330	245	120	POA
238-150	Dewar with lid and clips	2.0	350	270	145	POA
238-153	Dewar with lid and clips	4.5	470	343	185	POA

Nalgene HDPE, Dewar Flasks, Polyethylene-coated handle

Shatterproof. For short-term storage of ice water, dry ice-solvent and liquid nitrogen. Chemically resistant HDPE double walls are filled with CFC-free urethane foam and withstand temperatures from -196°C to +100°C. Vented, insulated cover. All sizes feature moulded-in ribs, cover securing tabs, pour spout and bottom grip area for added safety when held. Convenient handle on 1, 2 and 4 litre sizes.

Cat. No.	Description	Capacity, L	Pack	Price
238-322	4150 Dewar flask, with handle	1	1	POA
238-323	4150 Dewar flask, with handle	2	1	POA
238-324	4150 Dewar flask, with handle	4	1	POA
238-325	4150 Dewar flask	10	1	POA

