

# Smoothie™ 1 ml–25ml Pipette Fillers

The newest addition to our range of pipette fillers, the Jencons Smoothie™ is exceptionally smooth in action, simple to use and flexible in application, eliminating the need to use a range of different sized pipette fillers for a variety of volumes dispensed.

You can choose from a range of five fabulous colours each impregnated with its own subtle fragrance: Vanilla, Banana, Blueberry, Strawberry or Lemon & Lime\*.

- ⊗ Comfortable and simple to use
- ⊗ Smooth and controllable thumb action
- ⊗ Precise and accurate pipetting
- ⊗ Compatible with blow-out, TD (to deliver) or gravity dispense pipettes
- ⊗ Fits pipettes from 1–25ml
- ⊗ Removable and autoclavable silicone pipette holder
- ⊗ Acrylic stand available accommodating up to five Smoothies
- ⊗ Three year warranty

The Smoothie's unique range selector allows you to select from two dispense resolutions for maximum accuracy. One range setting delivers fast filling with optimal accuracy when used with 10ml to 25ml pipettes, the other setting is for use with pipettes from 1ml to 10ml where accuracy of fill can sometimes be difficult to control.

Cat. No.	Description	Colour
475-360	Vanilla Smoothie™ pipette filler	White and blue
475-361	Strawberry Smoothie™ pipette filler	Red and green
475-362	Banana Smoothie™ pipette filler	Yellow and grey
475-363	Lemon & Lime Smoothie™ pipette filler	Green and yellow
475-364	Blueberry Smoothie™ pipette filler	Blue and purple
475-002	Stand for five Smoothie™ pipette fillers	Clear acrylic
266-004	Replacement silicone pipette holder	

\* Over a period of time the fragrance will gradually dissipate.

## NEW



475-361



475-362



475-363



475-364



475-002



475-360

# Safetypette™ Pipette Filler

A simple yet controllable pipette filler, the Safetypette™ is designed to give superior pipetting control to left and right-handed users. The lightweight Safetypette™ sits comfortably in the hand, enabling smooth control in both aspirating and dispensing, using 1ml to 100ml pipettes. Simply squeeze the silicone bulb and the thumb lever controls both the aspirate and dispense modes. Incorporates central button to blow out residual liquid in blow-out pipettes. Supplied with three additional coloured pipette cones.

- ⊗ Comfortable and simple to use
- ⊗ Precise pipetting control
- ⊗ Robust and lightweight
- ⊗ Large capacity bulb
- ⊗ Compatible with blow-out pipettes
- ⊗ Simple thumb button operation
- ⊗ Uses replaceable standard membrane filter
- ⊗ Autoclavable silicone pipette holder
- ⊗ Supplied with integral 0.45µm filter and coloured pipette cones for safety colour coding in white, mint, mauve and pink
- ⊗ Easily maintained and cleaned
- ⊗ Three year warranty



Button to expel residual liquid when using blow-out pipettes.



Comfortable to use



Supplied with integral but replaceable 0.45µm filter



Cat. No.	Description	Pack
475-102	Safetypette™ pipette filler with integral 0.45µm filter and coloured pipette cones set	–
266-004	Replacement silicone pipette holder	1
266-003	Replacement filter set 0.45µm	5
266-089	Replacement filter set 0.2µm	5
266-090	Replacement sterile filter 0.2µm	1

# Safetypette™ Pro Pipette Filler

The Safetypette™ Pro is a unique design of pipette filler with an ultra-squeezeable bulb to provide smooth, manual pipetting control in both aspirating and dispensing, using 1ml to 100ml pipettes.

Simply squeeze the large silicone bulb and the thumb lever controls both the aspirate and dispense modes, with a button to blow-out residual contents of pipette if required.

- ⊗ Comfortable and simple to use
- ⊗ Precise pipetting control
- ⊗ Robust and lightweight
- ⊗ Large capacity bulb
- ⊗ Compatible with blow-out pipettes
- ⊗ Simple thumb button operation
- ⊗ Uses integral 0.45µm, replaceable membrane filter to ensure liquid is not accidentally drawn into the unit
- ⊗ Autoclavable silicone pipette holder
- ⊗ Three year warranty



Button to expel residual liquid when using blow-out pipettes



Comfortable to use



Supplied with integral but replaceable 0.45µm filter



Cat. No.	Description	Pack
475-155	Safetypette™ Pro pipette filler with integral 0.45µm filter	1
266-004	Replacement silicone pipette holder	1
266-003	Replacement filter set 0.45µm	5
266-089	Replacement filter set 0.2µm	5
266-090	Replacement sterile filter 0.2µm	1

# Powerpette® Plus Pipette Controllers

The Powerpette® Plus offers a unique combination of features to give you precision fingertip control in a classic streamlined design, suitable for users with large or small hands. The pipette holder is designed at an angle ideal for use within a laminar flow or biological safety cabinet.

Powerpette® Plus has 3 aspirate & dispense modes. High and low settings both have variable speed, controlled through comfortable finger triggers. Gravity dispense mode is designed for use with TD (To Deliver) pipettes.

- Ⓞ Allows 8 hours of continuous use
- Ⓞ 'Low battery' light
- Ⓞ Supplied with 0.45µm and 0.2µm hydrophobic filters, as standard
- Ⓞ Environmentally friendly nickel metal hydride battery
- Ⓞ Suitable for all types of pipettes 1–100ml
- Ⓞ CE marked
- Ⓞ Three year warranty



## Powerpette® Plus Pipette Controller

Powerpette® Plus comes in a choice of six colours: blue-green, mint, mauve, pink, yellow and classic grey. Powerpettes can be colour-coded—for user, for application or for location.

### Specifications

Batteries	2x1.2V nickel metal hydride
Battery service life	8 hours continuous use
Charger	75mA/h for 16 hours
Overall weight	180g without stand/wall bracket
Filter, µm	Hydrophobic 0.45 or 0.2
Case material	ASA
Nosecone material	Polypropylene
Pipette holder	Silicone
Pipette types, ml	Plastic or Glass 1–100



266-065



266-061



266-053



266-049



266-000



266-057

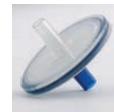
Cat. No.	Description	Colour
266-000	Powerpette® Plus pipette controller	Grey
266-061	Powerpette® Plus pipette controller	Blue-green
266-065	Powerpette® Plus pipette controller	Mint
266-057	Powerpette® Plus pipette controller	Mauve
266-053	Powerpette® Plus pipette controller	Pink
266-049	Powerpette® Plus pipette controller	Yellow

\* These catalogue numbers refer to units supplied with a charger fitted with a standard UK plug. The Powerpettes are also available with Euro, US, Japanese, Indian, Australian/NZ chargers. Please specify when ordering.

### Features



Comfortable concave finger triggers



Supplied with integral but replaceable 0.45µm filter



High speed, low speed and gravity dispense settings



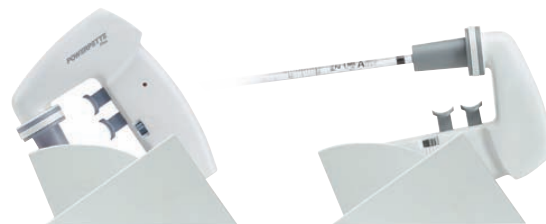
A rugged wall bracket is available as an accessory. It is supplied complete with fixing screws and adhesive pad for wall, shelf or safety cabinet fixing.

### Accessories

Cat. No.	Description	Pack
266-003	Replacement filter set 0.45µm	5
266-089	Replacement filter set 0.2µm	5
266-004	Replacement silicone pipette holder	1
266-005	Replacement nose cone (grey)**	1
266-126	Replacement bench stand	1
266-090	Sterile filter 0.2µm	1
266-138	Wall bracket complete with fixing screws and adhesive pad	1
266-147	Spare NiMH 1.2V battery set	1

\*\* Other colours available, please specify when ordering otherwise grey is sent.

The Powerpette® Plus is fitted with a 0.45µm filter and supplied complete with charger, two spare hydrophobic filters (1x0.45µm and 1x0.2µm), bench stand and instruction manual.



The bench stand for the Powerpette® Plus can be used to house the controller with or without a pipette in place. The controller can be charged in either position.

# Powerpette® Turbo Pipette Controller

- ⊗ Fills 25ml pipette in under 3 seconds on its fastest setting
- ⊗ Rechargeable during use
- ⊗ 3 aspirate & dispense modes. High and low settings both have variable speed. Gravity dispense mode is designed for use with TD (To Deliver) pipettes
- ⊗ Powerful pump
- ⊗ Supplied with 2 filters and 2 position bench stand
- ⊗ Environmentally friendly nickel metal hydride battery
- ⊗ Comfortable concave triggers
- ⊗ Autoclavable pipette holder
- ⊗ 'Low battery' light
- ⊗ 4 hours of continuous use
- ⊗ Suitable for all types of pipettes 1–100ml
- ⊗ CE marked
- ⊗ Three year warranty



## Powerpette® Turbo, Pipette Controller

One of the lightest pipette controllers you can buy, the Powerpette® Turbo offers a powerful performance in a streamlined pistol grip shape. The extra powerful yet quiet motor speeds up large volume pipetting, filling 25ml pipettes in less than 3 seconds. The unit fits the hand perfectly with the pipette holder at an angle ideal for use within a laminar flow or biological safety cabinet.

The bench stand supplied enables the Powerpette® Turbo to be parked in an upright position or with a pipette fitted.

A rugged wall bracket (266-138) is also available as an accessory. It is supplied complete with fixing screws and adhesive pad for wall, shelf or safety cabinet fixing.

## Specifications

Batteries	2x1.2V nickel metal hydride
Battery service life	4 hours continuous use
Charger	75mA/h for 16 hours
Overall weight	180g without stand/wall bracket
Filter, µm	Hydrophobic 0.45 or 0.2
Case material	ASA
Nosecone material	Polypropylene
Pipette holder	Silicone
Pipette types, ml	Plastic or Glass 1–100

Cat. No.	Description
266-130	Powerpette® Turbo pipette controller*

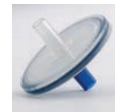
Powerpette® Turbo is fitted with a 0.45µm filter and supplied complete with AC adaptor, two spare hydrophobic filters (1x 0.45µm and 1x 0.2µm), bench stand and instruction manual.

\* This catalogue number refers to units supplied with a charger fitted with a standard UK plug. Powerpettes with chargers fitted with USA, Japanese and European plugs are also available; please specify with your order.

## Features



Comfortable concave finger triggers



Supplied with integral but replaceable 0.45µm filter



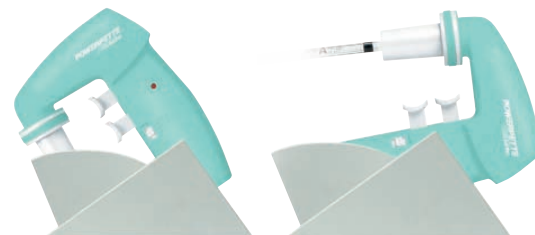
A rugged wall bracket is available as an accessory. It is supplied complete with fixing screws and adhesive pad for wall, shelf or safety cabinet fixing.



High speed, low speed and gravity dispense settings

## Accessories

Cat. No.	Description	Pack Size
266-003	Replacement filter set 0.45µm	5
266-089	Replacement filter set 0.2µm	5
266-004	Replacement silicone pipette holder	1
266-090	Sterile filter 0.2µm	1
266-126	Replacement bench stand	1
266-138	Wall bracket complete with fixing screws and adhesive pad	1
266-147	Spare NiMH 1.2V battery set	1



The bench stand for the Powerpette® Turbo can be used to house the controller with or without a pipette in place. The controller can be charged in either position.

# Powerpette® Pro Pipette Controller

- ⊗ Fills a 25ml pipette in under 3 seconds on its fastest setting
- ⊗ Rechargeable during use
- ⊗ Powerful pump
- ⊗ 'Low battery' light
- ⊗ Environmentally friendly nickel metal hydride battery
- ⊗ Suitable for all types of pipettes 1–100ml
- ⊗ Unique stand suitable for bench or wall mounting
- ⊗ CE marked
- ⊗ Three year warranty





## Powerpette® Pro Pipette Controllers

The latest addition to the Powerpette® family of pipette controllers, the Powerpette® Pro fits the hand comfortably with the pipette holder at an angle ideal for use within a laminar flow or microbiological safety cabinet.

The Powerpette® Pro pipette controller delivers efficient performance with a powerful yet quiet motor to speed up large volume pipetting.

The Powerpette's mode selection switch enables selection of high or low modes both allowing variable aspirate and dispense speeds (with blow out). The gravity dispense mode is designed for use with TD (To Deliver) pipettes. The speed of suction and dispensing is controlled through the concave finger triggers, designed to provide a comfortable and positive grip and to require the minimum of effort.

The Powerpette® Pro is supplied with 0.45µm and 0.2µm hydrophobic filters, as standard, for effective protection against airborne contamination of the unit during aspiration and of your samples during dispensing.

## Specifications

Batteries	2x1.2V nickel metal hydride
Battery service life	4 hours continuous life
Charger	75mA/h for 16 hours
Overall weight	180g without stand/wall bracket
Filter, µm	Hydrophobic 0.45 or 0.2
Case material	ASA
Nosecone material	ASA
Pipette holder	Silicone
Pipette types, ml	Plastic or Glass 1–100

Cat. No.	Description
266-185	Powerpette® Pro pipette controller*

The Powerpette® Pro is fitted with a 0.45µm filter and supplied complete with charger, two spare hydrophobic filters (1x0.45µm and 1x0.2µm) bench stand/wall bracket and instruction manual.

\* This catalogue number refers to units supplied with a charger fitted with a standard UK plug. Powerpettes with chargers fitted with USA, Japanese and European plugs are also available; please specify with your order.

## Features



High speed, low speed and gravity dispense settings



Supplied with integral but replaceable 0.45µm filter



Comfortable concave finger triggers



Rechargeable during use

## Accessories

Cat. No.	Description	Pack Size
266-003	Replacement filter set 0.45µm	5
266-089	Replacement filter set 0.2µm	5
266-004	Replacement silicone pipette holder	1
266-090	Sterile filter 0.2µm	1
266-186	Spare bench stand for Powerpette® Pro	1
475-156	Replacement nose cone white	1



The bench stand for the Powerpette® Pro can be used to house the controller with or without a pipette in place. The controller can be charged in either position.

# Powerpette® Pipette Controllers

The Powerpette® offers a unique combination of features to give you precision fingertip control in a streamlined design, suitable for users with large or small hands. Unique mode-selection switch enables selection of high or low modes both with variable aspirate and dispense speeds, controlled through comfortable finger triggers (with blow out). Gravity dispense mode is designed for use with TD (To Deliver) pipettes.

- ⊗ Allows 8 hours of normal use
- ⊗ 'Low battery' light
- ⊗ Supplied with 0.45µm and 0.2µm hydrophobic filters
- ⊗ Environmentally friendly nickel metal hydride battery
- ⊗ Suitable for all types of pipettes 1–100ml
- ⊗ CE marked
- ⊗ Three year warranty



## Powerpette® Pipette Controller

The Powerpette® comes in a choice of six colours: blue-green, mint, mauve, pink, yellow and classic grey. Powerpettes can be colour-coded—for user, for application or for location.

### Specifications

Batteries	2x1.2V nickel metal hydride
Battery service life	8 hours normal use
Charger	75mA/h for 16 hours
Overall weight	180g without stand/wall bracket
Filter, µm	Hydrophobic 0.45 or 0.2
Case material	ASA
Nosecone material	Polypropylene
Pipette holder	Silicone
Pipette types, ml	Plastic or Glass 1–100



266-007

266-077

266-069

266-085

266-073

Cat. No.	Description	Colour
266-007	Powerpette pipette controller*	Grey
266-081	Powerpette pipette controller*	Blue-green
266-085	Powerpette pipette controller*	Mint
266-077	Powerpette pipette controller*	Mauve
266-073	Powerpette pipette controller*	Pink
266-069	Powerpette pipette controller*	Yellow

\* This catalogue number refers to units supplied with a charger fitted with a standard UK plug. Powerpettes with chargers fitted with USA, Japanese and European plugs are also available; please specify with your order.

### Features



Comfortable concave finger triggers



High speed, low speed and gravity dispense settings



Rechargeable during use



Supplied with integral but replaceable 0.45µm filter

### Accessories

Cat. No.	Description	Pack
266-003	Replacement filter set 0.45µm	5
266-089	Replacement filter set 0.2µm	5
266-004	Replacement silicone pipette holder	1
266-005	Replacement nose cone (grey)**	1
266-090	Sterile filter 0.2µm	1
266-138	Wall bracket complete with fixing screws and pad	1
266-147	Spare NiMH 1.2V battery set	1
266-014	Spare bench stand	1

\*\* Other colours available; please specify when ordering, otherwise grey is sent.

The Powerpette® is fitted with a 0.45µm filter and supplied complete with charger, two spare hydrophobic filters (1x0.45µm and 1x0.2µm), bench stand, wall bracket and instruction manual.



# Powerpette® Digital Pipette Controller

The Powerpette® Digital represents an entirely new concept in liquid handling, with all the features of existing pipette fillers and more.

With Powerpette® Digital, pipette filling is under microprocessor-control with programmable functions such as multi-dispensing controlled via the keypad and LCD display. The Jencons Powerpette® Digital requires no calibration and can be used as a macro-pipettor and a dispenser, either with disposable tips or as a pipetting aid with all types of graduated and ungraduated pipettes from 1 to 25ml.

Powerpette® Digital also allows the programming of variable aspirate and dispense speeds for optimum precision for liquids of different viscosities.

Its lightweight, smooth shape and rotatable pipette adaptor head make the Powerpette® Digital ideal for left handed and right handed users, and all pipetting applications.

Powerpette® Digital performs pipetting, multiple dispensing and sequenced dispensing. In all these modes, aspiration, dispensing, speed and volume are all under the control of the microprocessor. The user simply presses the operating button and the Powerpette® Digital does the rest.

In the continuous user-controlled pipetting mode, aspiration, dispensing and speed are controlled by the user via the operating buttons, whilst the precise volume required is programmed by the user but controlled by the unit.

Three year warranty.



## Powerpette® Digital Pipette Controller

### Performance Specifications

5ml Sealtip	Inaccuracy	Imprecision
P-mode 0.5ml	4.2%	0.60%
P-mode 5ml	1.00%	0.20%
d-mode 10x0.5ml	1.70%	1.50%
5ml performance tests were carried out with a Jencons-PLS 5ml Sealtip		
25ml Pipette	Inaccuracy	Imprecision
P-mode 2ml	1.40%	0.60%
P-mode 25ml	0.40%	0.30%
d-mode 10x2.5ml	1.00%	1.50%
25ml performance tests were carried out with a Sterilin 25ml plastic pipette.		

All performance tests were carried out using a corresponding range setting. Performance specifications were measured according to ISO 8655.

### Technical Specification

Batteries	4x666mAh NiCd
Battery service life	greater than 2000 dispensings
Charger	9V/200mA, available in UK/Euro/US/Japanese versions*
Overall weight	280g without charging stand
Filter, µm	Hydrophobic 0.45 or 0.2
Case material	ABS
Nosecone material	Polypropylene
Pipette holder	Silicone
Pipette types, ml	Plastic or Glass 1–25

Cat. No.	Description	Colour
266-010	Powerpette® Digital pipette controller*	grey

The Powerpette® Digital is fitted with a 0.45µm filter and supplied complete with charging stand, AC adaptor, two spare 0.45µm hydrophobic filters, one nosecone/adaptor to accommodate all 1–25ml pipettes, another nosecone/adaptor to accommodate 5ml pipette tips and an instruction manual.



Large LCD shows all programmable functions



Rotatable pipette adaptor head makes Powerpette Digital suitable for left or right handed users

### Accessories

Cat. No.	Description	Pack
266-012	Replacement silicone pipette holder	1
266-013	Replacement nose cone	1
266-003	Replacement filter set 0.45µm	5
266-089	Replacement filter set 0.2µm	5
266-090	Sterile filter 0.2µm	1
490-044	1–5ml Sealtip pipette tips	100
266-091	1–10ml Sealtip pipette tips	100

\* This catalogue number refers to units supplied with a charger fitted with a standard UK plug. Powerpettes with chargers fitted with USA, Japanese and European plugs are also available; please specify with your order.

# Zippette™ Classic Bottle-top Dispensers

- ⊗ All wetted parts are fully autoclavable at 121°C, 2 bar
- ⊗ New spring-lock cursor design ensures fine adjustment for exact and reproducible dispensing
- ⊗ Easily removable PTFE piston for cleaning and smooth action
- ⊗ Borosilicate glass barrel protected with a transparent polypropylene sleeve
- ⊗ Easy to adjust calibration mechanism
- ⊗ Precision valve mechanism ensures easy priming and minimum waste with no leakage back into the reservoir – the Zippette™ stays fully primed all day
- ⊗ Optional safe anti-tip amber glass reservoirs with side filler neck
- ⊗ Chemically resistant liquid pathway
- ⊗ Anti-drip tap
- ⊗ Three year warranty



## Zippette™ Classic Bottle-top Dispenser

Available in five fully adjustable sizes 2.5ml, 5ml, 10ml, 30ml and 50ml. The autoclavable Zippette™ variable volume bottle-top dispenser has an accuracy of delivery within  $\pm 0.3\%$  on maximum delivery and a precision better than 0.1% CV.

All models are fitted with an anti-drip safety valve, a feature which guards against drips when the Zippette™ is not in use. A fine adjustment mechanism allows for even greater reproducibility for repeat dispensing whilst the new right-angled delivery spout ensures accurate dispensing into narrow neck containers.

Manufactured to ISO9001:2000 quality system standards, each unit is supplied with an individual calibration certificate.

Unlike other bottle-top dispensers, the Zippette's glass barrel can be disassembled from the pedestal for thorough cleaning. This also ensures that, in the unlikely event of damage, you can replace individual parts rather than have to buy a new dispenser.

Cat. No.	Description	Max. vol., ml	Incr., ml
263-000	Zippette™ bottle-top dispenser	2.5	0.05
263-001	Zippette™ bottle-top dispenser	5	0.1
263-002	Zippette™ bottle-top dispenser	10	0.2
263-003	Zippette™ bottle-top dispenser	30	1.0
263-004	Zippette™ bottle-top dispenser	50	1.0

Please note that the Zippette™ is not supplied with a reservoir. It has a standard 30mm neck fitting and is supplied with 38, 40 and 45mm bottle neck adaptors.

### Features



#### Extendable Delivery Jet

A new optional PTFE extendable delivery jet gives versatility to your dispensing.

The delivery jet stylus slots into the right-angled spout for 'hands-off' use.



Fine adjustment slot on cap allows for user calibration



New cursor design for even greater precision on volume

### Accessories

Cat. No.	Description
263-058	Extendable delivery jet
262-140	Spare 33mm threaded polypropylene bottle adaptor
262-129	Spare 38mm threaded polypropylene bottle adaptor
262-128	Spare 40mm threaded polypropylene bottle adaptor
262-130	Spare 45mm threaded polypropylene bottle adaptor
262-085	Funnel with offset stem for filling reservoir side neck

### Anti-tip Reservoirs

Cat. No.	Description	Capacity, litres
262-086	Amber squat reservoir with side filler neck	1.4
262-103	Amber squat reservoir with side filler neck	2.5
262-087	Amber Winchester reservoir with side filler neck	2.5
262-096	Clear glass reservoir with plastic coating and finger-grip handle (single neck)	2.5
262-097	Amber glass reservoir with plastic coating, finger-grip handle and adaptor (single neck)	4.5



# Zippette Pro™ Bottle-top Dispenser

- ⊗ Dispense volume is simply adjusted by turning the top knob to move the cursor to the desired volume setting
- ⊗ All wetted parts are fully autoclavable at 121°C, 2 bar
- ⊗ Spring-loaded Zippette Pro™ requires no priming, you just press to deliver and the dispenser refills itself
- ⊗ Easily removable PTFE piston for smooth action and easy cleaning
- ⊗ Safety pedestal valve allows the Zippette Pro™ to be turned off to prevent accidental delivery, whilst ensuring it is drip-free
- ⊗ Convenient right-angled spout design
- ⊗ Borosilicate glass barrel protected with a transparent polypropylene sleeve
- ⊗ Safe anti-tip amber glass reservoirs with side filler neck available as an option
- ⊗ Chemically resistant liquid pathway
- ⊗ Bubble-free dispensing
- ⊗ Three year warranty





## Zippette Pro™ Bottle-top Dispenser

The Zippette Pro™ is a variable volume bottle-top dispenser of 0–30ml capacity, with an accuracy of delivery within  $\pm 0.3\%$  on maximum delivery and a precision better than 0.1% CV.

Zippette Pro™ is available in two configurations. It can be used as a simple manually primed unit or, once fitted with the supplied spring, converted to a fully self-priming dispenser.

Each unit is manufactured to ISO9001:2000 quality system standards and is supplied with an individual calibration certificate.

Unlike other bottle-top dispensers, the Zippette Pro's glass barrel can be disassembled from the pedestal for thorough cleaning. This also ensures that, in the unlikely event of damage, you can replace the glass barrel as a spare part rather than have to buy a new dispenser.

Cat. No.	Description	Increment, ml
263-027	Zippette Pro™ 0–30ml, self-priming, bottle-top dispenser	1.0

Please note that the Zippette Pro™ is not supplied with reservoir. It has a standard 30mm neck fitting and is supplied with 38, 40 and 45mm bottle neck adaptors.

### Features



#### Extendable Delivery Jet

A new optional PTFE extendable delivery jet gives versatility to your dispensing.

The delivery jet stylus slots into the right-angled spout for 'hands-off' use.



Dispense volume simply adjusted by turning top button



Safety pedestal valve prevents drips

### Accessories

Cat. No.	Description
263-058	Extendable delivery jet
262-140	Spare 33mm threaded polypropylene bottle adaptor
262-129	Spare 38mm threaded polypropylene bottle adaptor
262-128	Spare 40mm threaded polypropylene bottle adaptor
262-130	Spare 45mm threaded polypropylene bottle adaptor
262-085	Funnel with offset stem for filling reservoir side neck

### Anti-tip Reservoirs

Cat. No.	Description	Capacity, litres
262-086	Amber squat reservoir with side filler neck	1.4
262-103	Amber squat reservoir with side filler neck	2.5
262-087	Amber Winchester reservoir with side filler neck	2.5
262-096	Clear glass reservoir with plastic coating and fingergrip handle (single neck)	2.5
262-097	Amber glass reservoir with plastic coating, fingergrip handle and adaptor (single neck)	4.5



# Zippette Digital™ Bottle-top Dispenser

- ⊗ Chemically resistant liquid pathway allows a wide range of liquids to be safely dispensed
- ⊗ Large digital volume display for easy and precise volume setting
- ⊗ Display resolution of 0.1 ml
- ⊗ Spring-loaded Zippette Digital™ requires no priming, you just press to deliver and this dispenser refills itself
- ⊗ All wetted parts are fully autoclavable at 121°C, 2 bar
- ⊗ Quickly removable PTFE piston for cleaning and smooth action
- ⊗ Safety pedestal valve allows the Zippette Digital™ to be turned off to prevent accidental delivery
- ⊗ Simple user calibration via front panel buttons
- ⊗ Safe and convenient right-angled spout design
- ⊗ Borosilicate glass barrel protected with a transparent polypropylene sleeve
- ⊗ Safe anti-tip amber glass reservoirs with side filler neck option
- ⊗ Auto-off function - Zippette Digital™ will switch to 'sleep' mode after 3 minutes of inactivity
- ⊗ Bubble-free dispensing
- ⊗ Three year warranty



## Zippette Digital™ Bottle-top Dispenser

A unique dispenser offering the very best in accuracy and repeatability. The Zippette Digital™ is a variable volume bottle-top dispenser of 0–30ml capacity, with an accuracy of delivery within  $\pm 0.3\%$  on maximum delivery and a precision better than 0.1% CV.

Zippette Digital™ is available in two configurations. It can be used as a simple manually primed unit or, once fitted with the supplied spring, converted to a fully self-priming dispenser.

The Zippette Digital™ has an easy-to-read LCD and is fitted with an anti-drip safety valve. Volumes are simply adjusted by turning the top knob, activating the digital LCD to the desired volume setting. Each unit is manufactured to ISO9001:2000 quality system standards and is supplied with an individual calibration certificate.

Unlike other bottle-top dispensers, the Zippette Digital's glass barrel can be disassembled from the pedestal for thorough cleaning. This also ensures that, in the unlikely event of damage, you can replace the glass barrel as a spare part rather than have to buy a new dispenser.

Cat. No.	Description	Increment, ml
263-029	Zippette Digital™ 0–30ml dispenser	0.1

Please note that the Zippette Digital™ is not supplied with a reservoir. It has a standard 30mm neck fitting and is supplied with 38, 40 and 45mm bottle neck adaptors.

### Features



#### Extendable Delivery Jet

A new optional PTFE extendable delivery jet gives versatility to your dispensing.

The delivery jet stylus slots into the right-angled spout for 'hands-off' use.



Dispense volume simply adjusted by turning top knob



Large LCD screen shows specific volume to be dispensed

### Accessories

Cat. No.	Description
263-058	Extendable delivery jet
262-140	Spare 33mm threaded polypropylene bottle adaptor
262-129	Spare 38mm threaded polypropylene bottle adaptor
262-128	Spare 40mm threaded polypropylene bottle adaptor
262-130	Spare 45mm threaded polypropylene bottle adaptor
262-085	Funnel with offset stem for filling reservoir side neck

### Anti-tip Reservoirs

Cat. No.	Description	Capacity, litres
262-086	Amber squat reservoir with side filler neck	1.4
262-103	Amber squat reservoir with side filler neck	2.5
262-087	Amber Winchester reservoir with side filler neck	2.5
262-096	Clear glass reservoir with plastic coating and fingergrip handle (single neck)	2.5
262-097	Amber glass reservoir with plastic coating, fingergrip handle and adaptor (single neck)	4.5



# Digitrate™ Digital Burettes

- ③ Accuracy within  $\pm 0.2\%$ , precision better than 0.1% resolution 0.01ml
- ③ Continuous display of volume dispensed with zero reset feature for multiple titrations
- ③ Simple user calibration and factory reset for ISO 9000 & GLP requirements
- ③ Visible borosilicate glass barrel protected with a transparent polypropylene sleeve allows inspection of liquid before dispensing
- ③ Optional safe anti-tip amber glass reservoirs with side filler neck
- ③ Chemically resistant and autoclavable liquid pathway
- ③ Bubble-free dispensing
- ③ Three year warranty

Digitrate's head can be conveniently rotated 360° for operator safety and comfort, whilst the see-through barrel ensures bubble-free titration. When left unattended, Digitrate™ will automatically switch off without losing the previous titrated volume. The Digitrate™ does not drip when in static mode.



## Digitrate™ Digital Burettes, 30 and 50ml

The safety pedestal valve allows the Digitrate fluid path to be turned off manually to prevent accidental delivery. Its right-angled spout is also designed to enhance safety in use, particularly when dispensing into narrow neck containers.

Digitrate's robust outer casing does not move during the priming or dispensing sequences whilst its PTFE plunger and borosilicate glass barrel allows dispensing of aqueous solutions and some aggressive liquids. See [www.jencons.com](http://www.jencons.com) for details of chemical compatibility. Additionally, the Digitrate's glass barrel can be disassembled from the pedestal for thorough cleaning. This also ensures that in the unlikely event of damage, you can replace the glass barrel as a spare part rather than have to buy a new digital burette.

### Portability

Digitrate™ is powered by a 3.6V lithium battery giving a minimum life of 60,000 three-minute titrations. Automatic low battery voltage is indicated on the large easy-to-read LCD display.

### Sterilisation/Autoclaving

Digitrate's liquid-path parts are easily disassembled for sterilisation or autoclaving at 121°C, 2 bar.

### Quality

Each Digitrate™ is manufactured to an accredited quality system; ISO 9001:2000. A calibration certificate complete with the unit's serial number is supplied with each unit. Digitrates are CE marked. Digitrate™ can be calibrated in your own laboratory to suit local conditions or where viscous liquids are to be titrated.

Cat. No.	Description	Max. vol, ml
182-000	Digitrate™ (c/w 33, 38, & 45mm adaptors)	30
182-001	Digitrate™ (c/w 33, 38, & 45mm adaptors)	50

Digitrate™ has a standard 30mm neck fitting and is supplied with 33, 38 and 45mm bottle neck adaptors.

### Features



#### Extendable Delivery Jet

A new optional PTFE extendable delivery jet gives versatility to your dispensing.

The delivery jet stylus slots into the right-angled spout for 'hands-off' use.



Continuous LCD display of volume dispensed with zero reset



Safety pedestal valve prevents drips

### Accessories

Cat. No.	Description
263-058	Extendable delivery jet
262-140	Spare 33mm threaded bottle adaptor
262-129	Spare 38mm threaded bottle adaptor
262-128	Spare 40mm threaded bottle adaptor
262-130	Spare 45mm threaded bottle adaptor
262-085	Funnel with offset stem for filling reservoir side neck

### Anti-tip Reservoirs

Cat. No.	Description	Capacity, litres
262-086	Amber squat reservoir with side filler neck	1.4
262-103	Amber squat reservoir with side filler neck	2.5
262-087	Amber Winchester reservoir with side filler neck	2.5
262-096	Clear glass reservoir with plastic coating and finger-grip handle (single neck)	2.5
262-097	Amber glass reservoir with plastic coating, finger-grip handle and adaptor (single neck)	4.5



# Digitrate Pro™ Digital Burettes

- ⊗ Accuracy within  $\pm 0.2\%$ , precision better than  $0.1\%$  resolution  $0.01\text{ml}$ ,
- ⊗ Continuous display of volume dispensed with zero reset feature for multiple titrations
- ⊗ Simple user calibration and factory reset for ISO 9000 & GLP requirements
- ⊗ Visible borosilicate glass barrel protected with a transparent polypropylene sleeve allows inspection of liquid before dispensing
- ⊗ Safe anti-tip amber glass reservoirs with side filler neck as an option
- ⊗ Minimum increment  $0.01\text{ml}$
- ⊗ Chemically resistant and autoclavable liquid pathway
- ⊗ Bubble-free dispensing
- ⊗ Three year warranty

The Digitrate Pro's head can be conveniently rotated  $360^\circ$  for operator safety and comfort, whilst the see-through barrel ensures bubble-free titration. When left unattended, Digitrate Pro™ will automatically switch off without losing the previous titrated volume. The Digitrate Pro™ does not drip when in static mode.



## Digitrate Pro™ Digital Burettes, 30 and 50ml

The streamlined Digitrate Pro™ digital burette, delivers accurate, precise and convenient bottle-top titration.

### Optimum operator safety

A new safety pedestal valve allows the Digitrate Pro™ fluid path to be turned off manually to prevent accidental delivery. Its right-angled spout is also designed to enhance safety in use.

Digitrate's robust outer casing does not move during the priming or dispensing sequences whilst its PTFE plunger and borosilicate glass barrel allows dispensing of aqueous solutions and some aggressive liquids.

### Portability

Digitrate Pro™ is powered by a 3.6V lithium battery giving a minimum life of 60,000 three-minute titrations. Automatic low battery voltage is indicated on the large easy-to-read LCD window.

### Sterilisation/Autoclaving

Digitrate's liquid-path parts are easily disassembled for sterilisation or autoclaving at 121°C, 2 bar.

### Quality

Each Digitrate Pro™ is manufactured to an accredited quality system; ISO 9001:2000. A calibration certificate complete with the unit's serial number is supplied with each unit. Digitrates are CE marked.

Cat. No.	Description	Max. volume, ml
182-025	Digitrate Pro™ (with 33, 38, and 45mm adaptors)	30
182-026	Digitrate Pro™ (with 33, 38, and 45mm adaptors)	50

Digitrate Pro™ has a standard 30mm neck fitting and is supplied with 33, 38 and 45mm bottle neck adaptors.

### Features



#### Extendable Delivery Jet

A new optional PTFE extendable delivery jet gives versatility to your dispensing.

The delivery jet stylus slots into the right-angled spout for 'hands-off' use.



Safety pedestal valve prevents drips



Continuous LCD display of volume dispensed with zero reset

### Accessories

Cat. No.	Description
263-058	Extendable delivery jet
262-140	Spare 33mm threaded bottle adaptor
262-129	Spare 38mm threaded bottle adaptor
262-128	Spare 40mm threaded bottle adaptor
262-130	Spare 45mm threaded bottle adaptor
262-085	Funnel with offset stem for filling reservoir side neck

### Anti-tip Reservoirs

Cat. No.	Description	Capacity, litres
262-086	Amber Squat Reservoir with side filler neck	1.4
262-103	Amber Squat Reservoir with side filler neck	2.5
262-087	Amber Winchester Reservoir with side filler neck	2.5
262-096	Clear glass Reservoir with plastic coating and finger-grip handle (single neck)	2.5
262-097	Amber glass Reservoir with plastic coating, finger-grip handle and adaptor (single neck)	4.5



Adaptors

# Repette Multi-Dispenser

- ⊗ Supplied complete with adaptor for 25ml and 50ml tips
- ⊗ Easy single-handed operation and volume setting
- ⊗ Lightweight (approximately 100g) yet robust
- ⊗ 8 tip sizes, to dispense from 1  $\mu$ l to 5000  $\mu$ l
- ⊗ Ideal for dispensing aqueous and viscous liquids
- ⊗ Aseptic dispensing with the optional range of sterile dispenser tips
- ⊗ DIN EN ISO 86551 compliant





## Repette, Multi-dispenser

This easy-to-use positive displacement pipettor/dispenser allows rapid, precise and accurate dispensing, up to 48 times in succession, without refilling.

### Repette Accuracy/Precision Values

Adjustment on Repette	Dosing Volume					Imprecision %	Inaccuracy %
	1	2	3	4	5		
Number of Steps	48	23	15	11	8		
0.05ml	1µl	2µl	3µl	4µl	5µl	<5	<±2.5
0.50ml	10µl	20µl	30µl	40µl	50µl	<0.7	<±0.8
1.25ml	25µl	50µl	75µl	100µl	125µl	<0.5	<±0.8
2.50ml	50µl	100µl	150µl	200µl	250µl	<0.4	<±0.8
5.00ml	100µl	200µl	300µl	400µl	500µl	<0.3	<±0.4
12.50ml	250µl	500µl	750µl	1000µl	1250µl	<0.3	<±0.3
25.00ml	500µl	1000µl	1500µl	2000µl	2500µl	<0.3	<±0.2
50.00ml	1000µl	2000µl	3000µl	4000µl	5000µl	<0.2	<±0.2

Cat. No.	Description
488-000	Repette including adaptor for 25ml and 50ml syringe tips
488-001	Spare adaptor for 25ml and 50ml syringe tips

### Repette Dispenser Tips

Cat. No. standard	Cat. No. sterile	Size, ml	Pack standard	Pack sterile*
488-002	488-019	0.05	100	100
488-003	488-004	0.5	100	100
488-005	488-006	1.25	100	100
488-007	488-008	2.5	100	100
488-009	488-010	5.0	100	100
488-011	488-012	12.5	100	100
488-013	488-014	25	50	25
488-015	488-016	50	25	25

\* Individually packed



# Repette Borosilicate Glass Syringe Tips for Combinatorial Chemistry

Jencons, working closely with a major pharmaceutical company, has developed a unique PTFE plunger and borosilicate glass for repeat dispensing of corrosive liquids that would otherwise destroy standard polypropylene syringe and tip systems. This PTFE plunger and glass syringe is particularly effective when dispensing accurate doses of Trifluoroacetic acid (TFA), often used in combinatorial chemistry procedures.

The autoclavable, borosilicate glass barrel is precision engineered to exacting tolerances ensuring a dispensing accuracy previously unattainable when using standard manual pipetting techniques. Both PTFE piston and glass barrel are not affected by use with TFA, thus eliminating any deterioration of the materials or contamination of the acid during the dispensing process.

The Repette glass barrel, together with PTFE plunger, can be cleaned for repeat use. Each Repette dispenser is supplied without the syringe system, which should be ordered separately depending on requirements. Accuracy / Precision of glass syringes is as achieved with polypropylene syringes, please see specifications on the previous page.



Cat. No	Description
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489-000	Repette 25ml borosilicate glass syringe and PTFE plunger assembly c/w PTFE collar and polypropylene screw cap
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489-003	Repette 50ml borosilicate glass syringe and PTFE plunger assembly c/w PTFE collar and polypropylene screw cap
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Spare glass syringes, PTFE plungers, collars and polypropylene screw caps are available on request.

# MicroZippette™ Hand-held Dispensers

The MicroZippette™ is a spring-loaded, self-priming, hand-held dispenser. Ideal for rapid multi-dispensing of reagents as an alternative to micropipettors. Four dual fixed volume models are available: 100/250µl, 500/750µl, 500/1000µl and 1000/2000µl.

- ⊗ Inaccuracy ±1%, imprecision 0.2%
- ⊗ Positive lock volume adjustment
- ⊗ Excellent precision and accuracy
- ⊗ May be conveniently stored in a refrigerator
- ⊗ Chemically resistant fluid pathway
- ⊗ Supplied complete with dispense tube, intake tube and plastic coated safety bottle
- ⊗ Fully autoclavable
- ⊗ Three year warranty



Cat. No.	Description
268-005	MicroZippette™ 100 and 250µl volumes supplied with bottle
268-006	MicroZippette™ 500 and 750µl volumes supplied with bottle
268-029	MicroZippette™ 500 and 1000µl volumes supplied with bottle
268-007	MicroZippette™ 1000 and 2000µl volumes supplied with bottle

# Sealpette™ Variable Volume Single Channel Manual Pipettors

- ⊗ Robust lightweight design
- ⊗ Slimline tip ejector allows pipetting into narrow tubes
- ⊗ Smooth plunger action
- ⊗ High degree of accuracy and precision
- ⊗ Easy maintenance and calibration with tool supplied
- ⊗ CE marked
- ⊗ Three year warranty



## Sealpette™, Variable Volume Single Channel Manual Pipettors

A range of eight specially designed, variable volume pipettors. Volume adjustment is easily obtained by turning the light, but positive, thumb-activated plunger mechanism. The selected volume is shown on the large, clear display on the hand grip. Eight models cover the volume range from 0.1 µl to 5000 µl. The 480-000NM is a special pipettor - it uses an ultra-microvolume tip for microvolume pipetting and is also supplied with a tip ejector collar that allows the pipettor to be used with the larger 300 µl Sealpetts.

Cat. No.	Volume, µl	Incr, µl	Test Volume, µl	Inacc. (±%)	Impr. (±%)
480-079	0.1–2.5	0.05	2.5/1.25/0.25	2.50/3.00/12.0	2.00/3.00/6.00
480-000NM	0.5–10	0.1	10/5/1	1.00/1.50/2.50	0.80/1.50/1.50
480-080	2–20	0.5	20/10/2	0.90/1.20/3.00	0.40/1.00/2.00
480-001	5–50	0.5	50/25/5	0.60/0.90/2.00	0.30/0.60/2.00
480-081	10–100	1.0	100/50/10	0.80/1.00/3.00	0.15/0.40/1.50
480-082	20–200	1.0	200/100/20	0.60/0.80/3.00	0.15/0.30/1.00
480-083	100–1000	5.0	1000/500/100	0.60/0.70/2.00	0.20/0.25/0.70
480-004	1–5 ml	50.0	5000/2500/1000	0.50/0.60/0.70	0.15/0.30/0.30

### Calibration and Quality Control

Sealpettes are calibrated according to ISO/DIS 8655. Each pipettor passes a stringent quality control programme and is supplied with its own certificate, detailing its serial number, accuracy and precision.

### Replaceable Tip Cone Filters

The Sealpette™ 'tip cone' is supplied with a standard filter for protection against pipettor contamination by aerosol or over-pipetting. There are two types of replacement filter available; The Standard filter for general applications and the Plus filter for more demanding applications such as molecular biology, cell culture, bacterial and virological work.

1. In all except the 0.1–2.5 µl and 0.5–10 µl models.

Cat. No.	Description	Fits Pipettors	Pack
490-115	Standard filter	480-080, 480-001	50
490-117	Standard filter	480-081, 480-082	50
490-054	Standard filter	480-083	50
490-051	Standard filter	480-004	50
490-116	Plus filter	480-080, 480-001	50
490-118	Plus filter	480-081, 480-082	50
490-119	Plus filter	480-083	50
490-120	Plus filter	480-004	50



Easy maintenance with tool provided



Replaceable tip cone filters

### Pipettor Tips

Please see pages 38 to 40 for suitable tips for the Sealpette™ pipettors.

# Sealpette™ Fixed Volume Single Channel Manual Pipettors

- ⊗ Robust lightweight design
- ⊗ Smooth plunger action
- ⊗ Compatible with a wide range of tips
- ⊗ High degree of accuracy and precision
- ⊗ Economical pipettors for routine tasks
- ⊗ CE marked
- ⊗ Three year warranty



## Sealpette™, Fixed Volume Single Channel Manual Pipettors

A range of fixed volume pipettors, ideally suited to the pipetting needs of educational, medical, research and industrial laboratories. Twelve models cover the range from 5µl to 5000µl. These are the ideal solution for laboratories carrying out routine, repetitive pipetting, with a high degree of accuracy and precision.

Cat. No.	Volume, µl	Test Volume, µl	Inaccuracy (±%)	Imprecision (±%)
480-005NM	5	5	1.30	1.20
480-006NM	10	10	0.80	0.80
480-007	20	20	0.60	0.50
480-008	25	25	0.50	0.30
480-009	50	50	0.50	0.30
480-010	100	100	0.50	0.30
480-011	200	200	0.40	0.20
480-012	250	250	0.40	0.20
480-013	500	500	0.30	0.20
480-014	1000	1000	0.30	0.20
480-015	2000	2000	0.30	0.15
480-016	5000	5000	0.30	0.15

### Replaceable Tip Cone Filters

The Sealpette™ tip cone is supplied with a standard filter for protection against pipettor contamination by aerosol or over-pipetting. There are two types of replacement filter available; The Standard filter for general applications and the Plus filter for more demanding applications such as molecular biology, cell culture, bacterial and virological work. Please note that filters need to be replaced regularly.

Cat. No.	Description	Fits Pipettors	Pack
490-115	Standard filter	480-007, 480-008, 480-009	50
490-117	Standard filter	480-010, 480-011	50
490-054	Standard filter	480-012, 480-013, 480-014	50
490-051	Standard filter	480-015, 480-016	50
490-116	Plus filter	480-007, 480-008, 480-009	50
490-118	Plus filter	480-010, 480-011	50
490-119	Plus filter	480-012, 480-013, 480-014	50
490-120	Plus filter	480-015, 480-016	50



### Sealpette™ Acrylic Pipettor Bench Rack

Designed for multi-channel and single volume pipettors. Holds 6 multi-channel or 18 single-channel pipettors. Acrylic.

Cat. No.	Description
481-116	Sealpette™ acrylic bench rack

### Sealpette™ Pipettor Carousel Stand

This pipettor stand is designed to hold six single channel pipettors. Manufactured in white plastic.

Cat. No.	Description
481-114	Pipettor carousel, white plastic



Replaceable tip cone filters



Wide range of tips available

### Calibration and Quality Control

Sealpettes are calibrated according to ISO/DIS 8655. Each pipettor passes a stringent quality control programme and is supplied with its own certificate, detailing its serial number, accuracy and precision.

### Pipettor Tips

Please see pages 38 to 40 for suitable tips for the Sealpette™ pipettors.

# Sealpette™ Variable Volume Multi-channel Manual Pipettors

- ⊗ Perfect tip sealing
- ⊗ Excellent tip alignment
- ⊗ Minimum pressure required to load tips
- ⊗ Dispense head will rotate through 360° to give the user the most comfortable working angle
- ⊗ Unique staggered tip-eject bar ensures easy tip ejection
- ⊗ Compatible with a wide range of tips
- ⊗ Easy maintenance and calibration, with tool supplied
- ⊗ CE marked
- ⊗ Three year warranty





## Sealpette™, Variable Volume Multi-channel Manual Pipettors

The Sealpette™ multi-channel range features six models covering the volume range 0.5µl–300µl in 8- and 12-channel versions. The multi-channel Sealpettes have all the advantages of the single channel models, plus additional features designed to make pipetting into microplates easier, safer and more accurate.

The 0.5–10µl 12-channel model is designed for PCR, cloning, sequencing and other microassays.

### Calibration and Quality Control

Sealpettes are calibrated according to ISO/DIS 8655 recommendations. Each pipettor has to complete a stringent quality control programme of testing and calibration and is supplied with its own certificate detailing its serial number, accuracy and precision. In this way the excellent performance of every Sealpette™ is guaranteed and documented.

Cat. No.	Channels	Volume, µl	Incr, µl	Test Vol., µl	Inacc. (±%)	Impr. (±%)
480-042	8	0.5–10	0.1	10/5/1	1.50/2.50/4.00	1.50/2.50/4.00
480-019	8	5–50	0.5	50/25/5	1.00/1.50/3.00	0.50/1.00/2.00
480-091	8	50–300	5.0	300/150/50	0.70/1.00/1.50	0.25/0.50/0.80
480-084	12	0.5–10	0.1	10/5/1	1.50/2.50/4.00	1.50/2.50/4.00
480-021	12	5–50	0.5	50/25/5	1.00/1.50/3.00	0.50/1.00/2.00
480-093	12	50–300	5.0	300/150/50	0.70/1.00/1.50	0.25/0.50/0.80

### Replaceable Tip Cone Filters

The Sealpette™ tip cone<sup>1</sup> is supplied with a standard filter for protection against pipettor contamination by aerosol or over-pipetting. The replaceable filters minimise all possible contamination of the internal components of your Sealpette™, even in the event of over-pipetting, by acting as a final barrier. Please note that filters need to be replaced regularly.

1. In all except the 0.5–10µl models.

Cat. No.	Description	Fits Pipettors	Pack
490-121	Standard filter	480-019, 480-091, 480-021, 480-093	50



Dispensing head rotates for convenience



Sequential tip ejection

### Pipettor Tips

Please see pages 38 to 40 for suitable tips for the Sealpette™ pipettors.

# Sealpette™ Pro Variable Volume Single Channel Manual Pipettors

- ⊙ Fully autoclavable
- ⊙ Tip cone filters and tip ejection by pressing the operating button
- ⊙ Thermal insulation of internal components
- ⊙ Fast and light volume adjustment with small increments and locking button
- ⊙ For both right- and left-handed use
- ⊙ Clear and easy-to-read display
- ⊙ Personal identification with an ID tag
- ⊙ Easy maintenance with one multi-purpose tool: calibration (standard hexagon key), opening tool for the ID window, opening tool for tubes
- ⊙ Three year warranty



## Sealpette™ Pro, Variable Volume Single Channel Manual Pipettors

A range of variable volume autoclavable pipettors from 0.5µl to 5000µl. They are robust yet light in weight and feature very low tip ejection and pipetting forces.

### Accurate and Precise

To ensure accuracy and precision these pipettors are individually calibrated and supplied with a quality control certificate.

### Fully Autoclavable

The Sealpette™ Pro pipettor is fully autoclavable (20 minutes at 121°C) without the need for re-calibration. These pipettors meet appropriate DIN/ISO standards. Each instrument passes stringent control procedures in accordance with ISO/DIS 8655 and bears its own QC certificate.

Cat. No.	Volume, µl	Incr, µl	Test Volume µl	Inacc. (±%)	Impr. (±%)
480-095	0.5–10	0.01	10/5/1/0.5	1.00/1.50/2.50/5.00	0.60/1.00/1.50/4.00
480-039	2–20	0.02	20/10/2	0.90/1.20/3.00	0.40/1.00/2.00
480-096	10–100	0.1	100/50/10	0.80/1.00/2.00	0.15/0.40/1.00
480-097	20–200	0.2	200/100/20	0.60/0.80/2.00	0.15/0.30/0.80
480-098	100–1000	1	1000/500/100	0.60/0.70/1.50	0.20/0.25/0.70
480-099	500–5000	10	5000/2500/500	0.50/0.60/1.50	0.15/0.30/0.60

### Sealpette™ Pro Stands

The special carousel stand holds a complete set of Sealpette™ Pro pipettors covering the volume range 0.5µl to 5000µl. The linear stand allows the pipettors to be placed on both sides of the stand and will hold up to 7 Sealpette™ Pro pipettors on one side or 11 using both sides.

Cat No	Description
481-123	Carousel pipettor stand
481-122	Linear stand



481-122 (a carousel stand is also available see page 37)



### Replaceable Tip Cone Filters

The Sealpette™ Pro tip cone<sup>1</sup> is supplied with a standard filter for protection against pipettor contamination by aerosol or over-pipetting. The replaceable filters minimise all possible contamination of the internal components of your Sealpette™, even in the event of over-pipetting by acting as a final barrier. Please note that filters need to be replaced regularly.

There are two types of replacement filter available; The Standard filter for general applications and the Plus filter for more demanding applications such as molecular biology, cell culture, bacterial and virological work.

1. In all except the 0.5–10µl model.

Cat. No.	Description	Fits Pipettor
490-121	Standard tip cone filter	480-039
490-115	Standard tip cone filter	480-096
490-117	Standard tip cone filter	480-097
490-054	Standard tip cone filter	480-098
490-051	Standard tip cone filter	480-099
490-116	Plus tip cone filter	480-096
490-118	Plus tip cone filter	480-097
490-119	Plus tip cone filter	480-098
490-120	Plus tip cone filter	480-099

All supplied in packs of 50.

### Pipettor Tips

Please see page 41-43 for suitable tips for the Sealpette™ Pro.

# Sealpette™ Pro Variable Volume Multi-channel Manual Pipettors

- ⊙ Fully autoclavable
- ⊙ Very low pipetting forces needed
- ⊙ Tip cone filters and tip ejection by pressing the operating button
- ⊙ Thermal insulation of internal components
- ⊙ Fast and light volume adjustment with small increments
- ⊙ For both right- and left-handed use
- ⊙ Clear and easy-to-read display
- ⊙ Personal identification with an ID tag
- ⊙ 8- and 12-channel pipettors available
- ⊙ Opti-load tip mounting mechanism for correct tip sealing
- ⊙ Easy maintenance with one multi-purpose tool: calibration (standard hexagon key), opening tool for the ID window, opening tool for tubes
- ⊙ Three year warranty



## Sealpette™ Pro, Variable Volume Multi-channel Manual Pipettors

A range of variable volume autoclavable pipettors from 0.5µl to 300µl. They are robust yet light in weight and feature very low tip ejection and pipetting forces.

### Accurate and Precise

To ensure accuracy and precision these pipettors are individually calibrated and supplied with a quality control certificate.

### Fully Autoclavable

The Sealpette™ Pro pipettor is fully autoclavable (20 minutes at 121°C) without the need for re-calibration. These pipettors meet appropriate DIN/ISO standards. Each instrument passes stringent control procedures in accordance with ISO/DIS 8655 and bears its own QC certificate.

Cat. No.	Channels	Volume, µl	Incr, µl	Test Vol, µl	Inaccuracy (±%)	Imprecision (±%)
480-190	8	0.5–10	0.01	10/5/1	1.50/2.50/4.00	1.00/2.50/4.00
480-191	8	5–100	0.10	100/50/10	0.70/1.00/3.00	0.25/0.70/1.50
480-192	8	30–300	0.20	300/150/30	0.60/1.00/2.00	0.25/0.50/1.00
480-193	12	0.5–10	0.01	10/5/1	1.50/2.50/4.00	1.00/2.50/4.00
480-194	12	5–100	0.10	100/50/10	0.70/1.00/3.00	0.25/0.70/1.50
480-195	12	30–300	0.2	300/150/30	0.60/1.00/2.00	0.25/0.50/1.00

### Replaceable Tip Cone Filters

The Sealpette™ Pro tip cone<sup>1</sup> is supplied with a standard filter for protection against pipettor contamination by aerosol or over-pipetting. The replaceable filters minimise all possible contamination of the internal components of your Sealpette™, even in the event of over-pipetting by acting as a final barrier. Please note that filters need to be replaced regularly.

There are two types of replacement filter available; The Standard filter for general applications and the Plus filter for more demanding applications such as molecular biology, cell culture, bacterial and virological work.

1. In all except the 0.5–10µl models.

Cat. No.	Description	Pipettors Vol., µl	Fits Pipettors	Pack
490-115	Standard tip cone filter	20-50	480-191, 480-194	50
490-117	Standard tip cone filter	10-200	480-192	50
490-116	Plus tip cone filter	20-50	480-191, 480-194	50
490-118	Plus tip cone filter	10-200	480-192	50



481-123 (a linear stand is also available see page 35)

### Sealpette™ Pro Stands

The special carousel stand holds a complete set of Sealpette™ Pro pipettors covering the volume range 0.5µl to 5000µl. The linear stand allows the pipettors to be placed on both sides of the stand and will hold up to 7 Sealpette™ Pro pipettors on one side or 11 using both sides. For more details on the Sealpette™ Pro Linear stand see page 35.

Cat No	Description
481-123	Carousel pipettor stand
481-122	Linear stand

### Pipettor Tips

Please see pages 41-43 for suitable tips for the Sealpette™ Pro.

# Sealtips for Sealpette™ Pipettors

A comprehensive range of Superfine, Economy and Filter tips are available for use with Jencons' Sealpette™ range of pipettors. They are available racked or loose. Electron beam pre-sterilised versions are also available.

- ④ Manufactured from premium grade polypropylene
- ④ Fully autoclavable
- ④ Non-wettable material ensures optimum precision and accuracy
- ④ Precision formed to eliminate any microscopic flash or irregularity
- ④ All racked tips are certified DNase, RNase & endotoxin free

To help you select tips for your Sealpette™ pipettor please refer to the Sealtip selector table opposite. The following pages also provide the Sealtip ordering information along with images of each tip type.

Samples of all tips are available for evaluation; please contact us on +44 (0)1342 337447.











## Sealtip Selector Table for Sealpette™ Pipettors

Cat. No.	Description	Vol. Range, µl	Suitable Tips
480-079	Variable volume, single channel	0.1–2.5	B, N, O
480-000NM	Variable volume, single channel	0.5–10	A, B, C, N, O, P
480-080	Variable volume, single channel	2–20	A, C, P, Q
480-001	Variable volume, single channel	5–50	A, C, E, Q
480-081	Variable volume, single channel	10–100	A, C, E, Q, R, S, T
480-082	Variable volume, single channel	20–200	A, C, E, S, T
480-083	Variable volume, single channel	100–1000	F, G, V
480-004	Variable volume, single channel	1000–5000	K, L
480-042	Variable volume, 8-channel	0.5–10	B, N, O
480-019	Variable volume, 8-channel	5–50	C, E, Q, R, S, T
480-091	Variable volume, 8-channel	50–300	E, T
480-084	Variable volume, 12-channel	0.5–10	B, N, O
480-021	Variable volume, 12-channel	5–50	C, E, Q, R, S, T
480-093	Variable volume, 12-channel	50–300	E, T

Cat. No.	Description	Vol. Range, µl	Suitable Tips
480-005NM	Fixed volume, single channel	5	A, B, C, N, O, P
480-006NM	Fixed volume, single channel	10	A, B, C, N, O, P
480-007	Fixed volume, single channel	20	A, C, E, P, Q
480-008	Fixed volume, single channel	25	A, C, E, Q
480-009	Fixed volume, single channel	50	A, C, E, Q
480-010	Fixed volume, single channel	100	A, C, E, Q, R, S, T
480-011	Fixed volume, single channel	200	A, C, E, S, T
480-012	Fixed volume, single channel	250	A, G, U, V
480-013	Fixed volume, single channel	500	F, G, U, V
480-014	Fixed volume, single channel	1000	F, G, V
480-015	Fixed volume, single channel	2000	K, L
480-016	Fixed volume, single channel	5000	K, L










For ordering details please see below and overleaf.

## Superfine and Economy Tips

Cat. No.	Tip Ref.	Volume Range, µl	Length, mm	Description	Sterile	Pack Type	Pack	Image (not to scale)
490-014	A	0.5–250	51.1	Economy	—	Loose	1000	
490-038	B	0.2–10	31.5	Superfine	—	Rack	10x96	
490-211	B	0.2–10	31.5	Superfine	✓	Rack	10x96	
490-039	B	0.2–10	31.5	Superfine	—	Loose	1000	
490-040	C	0.5–300	51	Superfine	—	Rack	10x96	
490-215	C	0.5–300	51	Superfine	✓	Rack	10x96	
490-041	C	0.5–300	51	Superfine	—	Loose	1000	
490-057	E	5–350	51	Superfine	—	Rack	10x96	
490-219	E	5–350	51	Superfine	✓	Rack	10x96	
490-058	E	5–350	51	Superfine	—	Loose	1000	
490-015	F	200–1000	70	Economy	—	Loose	1000	
490-042	G	10–1000	71.5	Superfine	—	Rack	10x96	
490-223	G	10–1000	71.5	Superfine	✓	Rack	10x96	
490-043	G	10–1000	71.5	Superfine	—	Loose	400	
490-045	K	100–5000	150	Economy	—	Loose	1000	
490-044	L	100–5000	150	Superfine	—	Loose	100	

## Sealtips for Sealpette™ Pipettors, continued...

## Filter Tips

Image (not to scale)	Cat. No.	Tip Ref.	Volume Range, $\mu\text{l}$	Length, mm	Description	Sterile	Pack Type	Pack
	490-232	N	0.1–10	32	Filter	✓	Rack	10x96
	490-234	O	0.1–10	46	Filter	✓	Rack	10x96
	490-236	P	0.5–20	51	Filter	✓	Rack	10x96
	490-237	Q	2–100	51	Filter	✓	Rack	10x96
	490-239	R	2–120	51	Filter	✓	Rack	10x96
	490-241	S	5–200	51	Filter	✓	Rack	10x96
	490-243	T	5–300	52.5	Filter	✓	Rack	10x96
	490-244	U	10–500	78	Filter	✓	Rack	10x100
	490-246	V	50–1000	78	Filter	✓	Rack	10x100

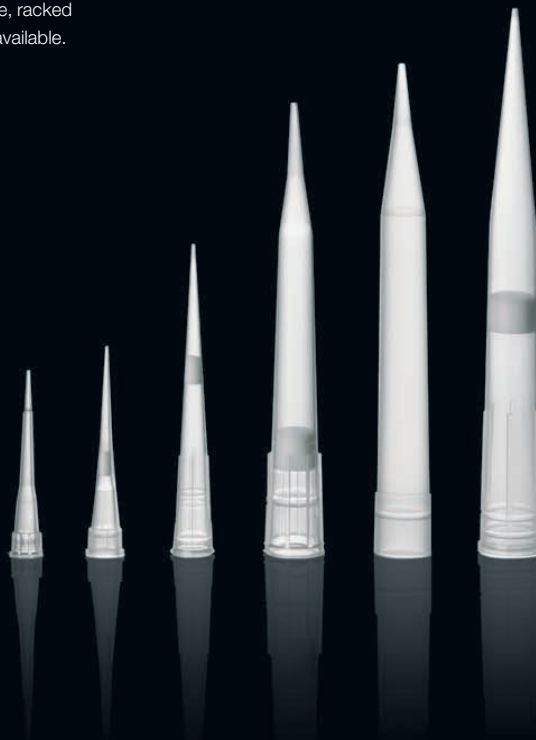
For pipettor compatibility please see page 39



# Sealtips for Sealpette™ Pro Pipettors

A comprehensive range of Superfine and Filter tips for use with Jencons' Sealpette™ Pro range of pipettors are available, racked or loose. Electron beam pre-sterilised versions are also available.

- ⊗ Manufactured from premium grade polypropylene, autoclavable and precision formed
- ⊗ Non-wettable material ensures optimum precision and accuracy
- ⊗ Precision formed to eliminate any microscopic flash or irregularity
- ⊗ All racked tips are certified DNase, RNase & Endotoxin free



To help you select tips for your Sealpette™ Pro pipettor please refer to the Sealtip selector table overleaf.






## Sealtip Selector Table for Sealpette™ Pro Pipettors

Cat. No.	Description	Vol. Range, µl	Suitable Tips
480-095	Sealpette Pro, single channel	0.5–10	B, N, O
480-039	Sealpette Pro, single channel	2–20	C, P
480-096	Sealpette Pro, single channel	10–100	C, E, Q, R
480-097	Sealpette Pro, single channel	20–200	C, E, S, T
480-098	Sealpette Pro, single channel	100–1000	G, V
480-099	Sealpette Pro, single channel	500–5000	L

Cat. No.	Description	Vol. Range, µl	Suitable Tips
480-190	Sealpette Pro, 8-channel	0.5–10	B, N, O
480-191	Sealpette Pro, 8-channel	5–100	C, E, Q, R
480-192	Sealpette Pro, 8-channel	30–300	E, T
480-193	Sealpette Pro, 12-channel	0.5–10	B, N, O
480-194	Sealpette Pro, 12-channel	5–100	C, E, Q, R
480-195	Sealpette Pro, 12-channel	30–300	E, T

For ordering details please see below and right.









## Superfine Tips

Image (not to scale)	Cat. No.	Tip Ref.	Volume Range, µl	Length, mm	Description	Sterile	Pack Type	Pack
	490-038	B	0.2–10	31.5	Superfine	—	Rack	10x96
	490-211	B	0.2–10	31.5	Superfine	✓	Rack	10x96
	490-039	B	0.2–10	31.5	Superfine	—	Loose	1000
	490-040	C	0.5–300	51	Superfine	—	Rack	10x96
	490-215	C	0.5–300	51	Superfine	✓	Rack	10x96
	490-041	C	0.5–300	51	Superfine	—	Loose	1000
	490-057	E	5–350	51	Superfine	—	Rack	10x96
	490-219	E	5–350	51	Superfine	✓	Rack	10x96
	490-058	E	5–350	51	Superfine	—	Loose	1000
	490-042	G	10–1000	71.5	Superfine	—	Rack	10x96
	490-223	G	10–1000	71.5	Superfine	✓	Rack	10x96
	490-043	G	10–1000	71.5	Superfine	—	Loose	400
	490-044	L	100–5000	150	Superfine	—	Loose	100

For pipettor compatibility please see table above.

## Sealtips for Sealpette™ Pro Pipettors, continued...

## Filter Tips

Cat. No.	Tip Ref.	Volume Range, $\mu$ l	Length, mm	Description	Sterile	Pack Type	Pack	Image (not to scale)
490-232	N	0.1–10	32	Filter	✓	Rack	10x96	
490-234	O	0.1–10	46	Filter	✓	Rack	10x96	
490-236	P	0.5–20	51	Filter	✓	Rack	10x96	
490-237	Q	2–100	51	Filter	✓	Rack	10x96	
490-239	R	2–120	51	Filter	✓	Rack	10x96	
490-241	S	5–200	51	Filter	✓	Rack	10x96	
490-243	T	5–300	52.5	Filter	✓	Rack	10x96	
490-246	V	50–1000	78	Filter	✓	Rack	10x100	

For pipettor compatibility please see table opposite

# Accurette™ Variable Volume Single Channel Manual Pipettors

- ⊙ Robust and lightweight design
- ⊙ Comfortable to use with a smooth plunger
- ⊙ Smooth tip ejection
- ⊙ Small increments
- ⊙ Fast and positive volume adjustment
- ⊙ Clear and easy-to-read display
- ⊙ Three year warranty



## Accurette™, Variable Volume Single Channel Manual Pipettors

The Jencons Accurette™ is an economical variable volume pipettor for all your routine pipetting tasks. The range comprises six units covering a volume range from 1 µl to 5000 µl.

### Accurate and Precise

To ensure accuracy and precision these pipettors are individually calibrated and supplied with a quality control certificate.

Cat. No.	Vol., µl	Incr., µl	Test Vol., µl	Inacc.(±%)	Impr.(±%)
480-200	1–10	0.1	10	1.5	0.8
			5	2.0	1.0
			1	4.0	2.5
480-201	2–20	0.1	20	2.0	0.8
			10	2.0	1.0
			2	5.0	1.5
480-202	20–100	1	100	1.2	0.3
			50	1.2	0.5
			20	2.0	1.0
480-203	50–200	1	200	1.0	0.5
			100	1.0	0.7
			50	2.0	1.0
480-204	100–1000	10	1000	0.9	0.28
			500	0.9	0.4
			100	1.5	0.8
480-205*	1000–5000	10	5000	0.7	0.2
			2000	0.7	0.3
			1000	1.1	0.4

\* Please note 480-205 has no tip ejector.



### Accurette™ Pipettor Stand

The Accurette™ carousel stand easily accommodates a complete set of Accurettes. Holding up to seven Accurette™ pipettors, neatly and securely.

Cat. No.	Description
480-240	Accurette™ carousel stand

### Accurette™ Pipette Tips

The following tips are recommended for use with the Accurette™ pipettor. All Accurette™ tips are available loose in bulk packs.

- ⊙ Manufactured from premium grade polypropylene
- ⊙ Fully autoclavable
- ⊙ Non-wettable material ensures optimum precision and accuracy
- ⊙ Precision formed to eliminate any microscopic flash or irregularity
- ⊙ Manufactured and packed in a dust free environment to the highest quality standards

Cat. No.	Vol., µl	Colour	Fits Pipettors	Pack
480-206	10	White	480-200	1000
480-207	200	Yellow	480-201, 480-202, 480-203	1000
480-208	1000	Blue	480-204	1000
480-209	5000	White	480-205	250

Accurettes can also be used with tips from other manufacturers, including Biohit, Gilson, Sorenson, Alpha and FinnpiPETTE.

# Accumax™ Single Channel Manual Pipettors

- ⊗ Colour coded for easy identification
- ⊗ Specifications conform to DIN12650 and EN-ISO 8655 standards
- ⊗ Easy volume setting by turning the plunger
- ⊗ Click stop digital system for volume setting
- ⊗ High accuracy and precision
- ⊗ Lightweight with a soft plunger movement to provide comfort and minimise hand fatigue
- ⊗ Two step plunger operation allows 'reverse pipetting' technique.
- ⊗ Easy to maintain and re-calibrate with tool kit provided
- ⊗ Durable and autoclavable tip cone with high resistance to shock and chemical corrosion
- ⊗ Each pipette is supplied with individual serial number and calibration report
- ⊗ One year warranty



## Accumax™, Single Channel Manual Pipettors

The Jencons Accumax™ range includes both variable and fixed volume pipettors with a wide range of volumes.

### Accumax™ Variable Volume Pipettors

Cat. No.	Volume, µl	Incr., µl	Test Vol., µl	Inacc. (±%)	Impr. (±%)	Colour	Suitable tips
480-300	0.5–10	0.1	10/1	1/2.5	0.8/1.5	Pink	A, B, C, N, O, P
480-306	2–20	0.1	20/2	0.9/2.5	0.4/1.5	Pink	A, C, P, Q
480-301	5–50	0.5	50/5	0.5/2.0	0.3/2.0	Yellow	A, C, E, Q
480-304	10–100	1.0	100/10	0.8/3.0	0.15/1.5	Blue	A, C, E, Q, R, S, T
480-307	20–200	1.0	200/20	0.6/0.8	0.15/0.4	Lilac	A, C, E, S, T
480-302	50–200	1.0	200/50	0.6/1.0	0.15/0.4	Lilac	A, C, E, S, T
480-305	100–1000	5.0	1000/100	0.6/2.0	0.2/0.7	Orange	F, G, V
480-303	200–1000	5.0	1000/200	0.6/0.9	0.2/0.3	Orange	F, G, V
480-308	1000–5000	50.0	5000/1000	0.5/0.7	0.15/0.3	Green	K, L

### Accumax™ Fixed Volume Pipettors

Cat. No.	Volume, µl	Test Vol., µl	Inacc. (±%)	Impr. (±%)	Colour	Suitable tips
480-309	5	5	1.3	1.2	Pink	A, B, C, N, O, P
480-310	10	10	0.8	0.8	Pink	A, B, C, N, O, P
480-311	20	20	0.6	0.5	Yellow	A, C, E, P, Q
480-312	25	25	0.5	0.3	Yellow	A, C, E, Q
480-313	50	50	0.5	0.3	Blue	A, C, E, Q
480-314	100	100	0.5	0.3	Lilac	A, C, E, Q, R, S, T
480-315	200	200	0.4	0.2	Lilac	A, C, E, S, T
480-316	250	250	0.4	0.2	Orange	A, G, U, V
480-317	500	500	0.3	0.2	Orange	F, G, U, V
480-318	1000	1000	0.3	0.2	Green	F, G, V
480-319	2000	2000	0.3	0.2	Green	K, L
480-320	5000	5000	0.3	0.2	Green	K, L



### Pipettor Stands

These attractive acrylic stands ensure the safe and convenient storage of your Accumax™ pipettors.

Cat. No.	Description
480-321	Stand for 4 Accumax™ pipettors
480-322	Stand for 6 Accumax™ pipettors

Please see pages 54-55 for tips for Accumax™ pipettors.

# Accumax™ Multi-channel Manual Pipettors

NEW

- ⊗ 8-channel and 12-channel variable volume pipettors covering a wide range of volumes
- ⊗ Consistent sample loading
- ⊗ Compatible with most types of tips
- ⊗ Soft force tip loading and ejection
- ⊗ One hand tip ejection
- ⊗ Leak-free sealing of tip
- ⊗ Manifold can rotate 360°C for easy right or left hand operation
- ⊗ Easily removable and fully autoclavable manifold
- ⊗ Acrylic stand available
- ⊗ One year warranty





## Accumax™ Multi-channel Manual Pipettors

8-channel and 12-channel variable volume pipettors covering a wide range of volumes

### Accumax™ 8-Channel Variable Volume Pipettors

Cat. No.	Channels	Volume Range, $\mu\text{l}$	Incr. $\mu\text{l}$	Test Vol., $\mu\text{l}$	Inacc. ( $\pm\%$ )	Impr. ( $\pm\%$ )	Colour	Suitable tips
480-357	8	0.5-10	0.1	10	1.5	1.5	Pink	B, C, N, O, P
				5	2.5	2.5		
				1	3.5	3.5		
480-358	8	5-50	0.5	0	1	0.7	Yellow	C, E, Q
				25	1.5	1		
				5	3	2		
480-359	8	10-100	1	100	0.9	0.25	Blue	A, C, E, Q, R, S, T
				50	1	0.4		
				10	1.5	0.75		
480-360	8	20-200	1	200	0.9	0.25	Violet	A, C, E, S, T
				100	1	0.4		
				20	1.5	0.75		
480-361	8	30-300	1	300	0.8	0.25	Orange	A, C, E, T
				150	1	0.4		
				30	1.5	0.75		

### Accumax™ 12-Channel Variable Volume Pipettors

Cat. No.	Channels	Volume Range, $\mu\text{l}$	Incr. $\mu\text{l}$	Test Vol., $\mu\text{l}$	Inacc. ( $\pm\%$ )	Impr. ( $\pm\%$ )	Colour	Suitable tips
480-362	12	0.5-10	0.1	10	1.5	1.5	Pink	B, C, N, O, P
				5	2.5	2.5		
				1	3.5	3.5		
480-363	12	5-50	0.5	50	1	0.7	Yellow	C, E, Q
				25	1.5	1		
				5	3	2		
480-364	12	10-100	1	100	0.9	0.25	Blue	A, C, E, Q, R, S, T
				50	1	0.4		
				10	1.5	0.75		
480-365	12	20-200	1	200	0.9	0.25	Violet	A, C, E, S, T
				100	1	0.4		
				20	1.5	0.75		
480-366	12	30-300	1	300	0.8	0.25	Orange	A, C, E, T
				150	1	0.4		
				30	1.5	0.75		



### Pipettor Stand

An acrylic stand is available which accommodates one of either an 8-channel or 12-channel Accumax™ pipettor.

Cat. No.	Description
480-409	Stand for one multi channel Accumax™ pipettor

# Accumax A™ Variable Volume, Single Channel, Manual, Fully Autoclavable Pipettors

The Accumax A™ range includes both variable volume and fixed volume pipettors covering a wide range of volumes. All pipettors in the range are autoclavable and do not require re-calibration after autoclaving.

- ⊗ Fully autoclavable
- ⊗ Does not require re-calibration after autoclaving
- ⊗ Colour coded for easy identification
- ⊗ Specifications conform to DIN12650 and EN-ISO 8655 standards
- ⊗ Easy volume setting by turning the plunger
- ⊗ Click stop digital system for volume setting
- ⊗ High accuracy and precision
- ⊗ Ergonomic and lightweight with a soft plunger movement to provide comfort and minimise hand fatigue
- ⊗ Two step plunger operation allows 'reverse pipetting' technique useful for pipetting certain liquids
- ⊗ Calibration report included with every pipettor
- ⊗ Three year warranty



NEW

## Accumax A™ Variable Volume, Single Channel, Manual, Fully Autoclavable Pipettors

Cat. No.	Volume Range, µl	Incr. µl	Test Vol., µl	Inacc. (±%)	Impr. (±%)	Top Colour	Suitable tips
480-324	0.5-10	0.1	1/10	2.5/1.0	1.5/0.8	Red	B, C, N, O, P
480-325	5-50	0.5	5/50	2.0/0.6	2.0/0.3	Yellow	C, E, Q
480-326	50-200	1	50/200	1.0/0.6	0.4/0.15	Blue	A, C, E, S, T
480-327	200-1000	5	200/1000	0.9/0.6	0.3/0.2	Orange	F, G, V
480-328	10-100	0.5	10/100	3.0/0.8	1.5/0.15	Blue	A, C, E, Q, R, S, T
480-329	100-1000	5	100/1000	2.0/0.6	0.7/0.2	Orange	F, G, V
480-330	2-20	0.1	2/20	2.0/1.8	0.8/0.6	Red	C, P, Q
480-331	20-200	1	20/200	0.6/0.5	0.6/0.15	Blue	A, C, E, S, T
480-332	1000-5000	50	1000/5000	0.7/0.5	0.3/0.15	Green	K, L
480-333	500-5000	50	500/5000	0.7/0.5	0.3/0.15	Green	K, L, V

Fixed volume Accumax A™ autoclavable pipettors are available on request. Please contact our Technical Office for more details on +44 (0) 1342 337447.



### Pipettor Stands

These attractive acrylic stands ensure the safe and convenient storage of your Accumax™ pipettors.

Cat. No.	Description
480-321	Stand for 4 Accumax™ pipettors
480-322	Stand for 6 Accumax™ pipettors

## Accumax Jr. Mini Pipettes

The Accumax Jr. range of mini pipettes provide a cost effective solution to fixed volume pipetting. The range is available in 5, 10, 20, 25, 50 and 100µl fixed volumes which are easy to identify due to colour coding.

- ⊗ Low price, accurate and precise
- ⊗ Two stop plunger ensures last drop dispensing
- ⊗ Fully autoclavable
- ⊗ Colour coded for easy volume identification
- ⊗ Minimum size with maximum accuracy
- ⊗ Smart tip cone design allows perfect fit for 200µl as well as 20µl tips
- ⊗ Available in 5, 10, 20, 25, 50 and 100µl fixed volumes



Cat. No.	Description	Volume µl	% Inaccuracy (±)	% Imprecision (±)	Colour
480-367	Accumax Jr. mini pipette	5	1.3	1.2	Red
480-368	Accumax Jr. mini pipette	10	0.8	0.8	Pink
480-369	Accumax Jr. mini pipette	20	0.6	0.5	Green
480-370	Accumax Jr. mini pipette	25	0.5	0.3	Green
480-371	Accumax Jr. mini pipette	50	0.5	0.3	Purple
480-372	Accumax Jr. mini pipette	100	0.5	0.3	Orange

# NEW

# Accumax A™, Variable Volume, Multi-channel, Manual, Fully Autoclavable Pipettors

The Accumax A™ multichannel range includes both 8-channel and 12-channel variable volume pipettors covering a wide range of volumes. All pipettors in the range are autoclavable and do not require re-calibration after autoclaving.

- ⊗ Consistent sample loading
- ⊗ Compatible with most types of tips
- ⊗ Soft force tip loading and ejection
- ⊗ One hand tip ejection
- ⊗ Leak-free sealing of tip
- ⊗ Manifold can rotate 360° for easy right or left hand operation
- ⊗ Easily removable manifold
- ⊗ Three year warranty

NEW



## Accumax A™, Variable Volume, Multi Channel, Manual, Fully Autoclavable Pipettors

### Accumax A™, 8-Channel Pipettors

Cat. No.	Channels	Volume Range, $\mu\text{l}$	Incr. $\mu\text{l}$	Test Vol., $\mu\text{l}$	Inacc. ( $\pm\%$ )	Impr. ( $\pm\%$ )	Colour	Suitable tips
480-347	8	0.5-10	0.1	10	1.5	1.5	Pink	B, C, N, O, P
				5	2.5	2.5		
				1	3.5	3.5		
480-348	8	5-50	0.5	0	1	0.7	Yellow	C, E, Q
				25	1.5	1		
				5	3	2		
480-349	8	10-100	1	100	0.9	0.25	Blue	A, C, E, Q, R, S, T
				50	1	0.4		
				10	1.5	0.75		
480-350	8	20-200	1	200	0.9	0.25	Violet	A, C, E, S, T
				100	1	0.4		
				20	1.5	0.75		
480-351	8	30-300	1	300	0.8	0.25	Orange	A, C, E, T
				150	1	0.4		
				30	1.5	0.75		

### Accumax A™, 12-Channel Pipettors

Cat. No.	Channels	Volume Range, $\mu\text{l}$	Incr. $\mu\text{l}$	Test Vol., $\mu\text{l}$	Inacc. ( $\pm\%$ )	Impr. ( $\pm\%$ )	Colour	Suitable tips
480-352	12	0.5-10	0.1	10	1.5	1.5	Pink	B, C, N, O, P
				5	2.5	2.5		
				1	3.5	3.5		
480-353	12	5-50	0.5	50	1	0.7	Yellow	C, E, Q
				25	1.5	1		
				5	3	2		
480-354	12	10-100	1	100	0.9	0.25	Blue	A, C, E, Q, R, S, T
				50	1	0.4		
				10	1.5	0.75		
480-355	12	20-200	1	200	0.9	0.25	Violet	A, C, E, S, T
				100	1	0.4		
				20	1.5	0.75		
480-356	12	30-300	1	300	0.8	0.25	Orange	A, C, E, T
				150	1	0.4		
				30	1.5	0.75		



### Pipettor Stand

An acrylic stand is available which accommodates one multi channel Accumax™ pipettor either 8-channel or 12-channel.

Cat. No.	Description
480-409	Stand for one multi channel Accumax™ pipettor

# Tips for Accumax™ Pipettors

A comprehensive range of Superfine, Economy and Filter tips are available for use with the Accumax™ range of pipettors. They are available racked or loose.

Electron beam pre-sterilised versions are also available. They are manufactured from premium grade, autoclavable polypropylene, a non-wettable material ensuring optimum precision and accuracy. All racked tips are certified DNase, RNase & endotoxin free.

To help you select tips for your Accumax™ pipettors please refer to the tip selector tables on the product pages 46-53 and the ordering table below and opposite.












## Superfine and Economy Tips

Image (not to scale)	Cat. No.	Tip Ref.	Volume Range, µl	Length, mm	Description	Sterile	Pack Type	Pack
	490-014	A	0.5–250	51.1	Economy	—	Loose	1000
	490-038	B	0.2–10	31.5	Superfine	—	Rack	10x96
	490-211	B	0.2–10	31.5	Superfine	✓	Rack	10x96
	490-039	B	0.2–10	31.5	Superfine	—	Loose	1000
	490-040	C	0.5–300	51	Superfine	—	Rack	10x96
	490-215	C	0.5–300	51	Superfine	✓	Rack	10x96
	490-041	C	0.5–300	51	Superfine	—	Loose	1000
	490-057	E	5–350	51	Superfine	—	Rack	10x96
	490-219	E	5–350	51	Superfine	✓	Rack	10x96
	490-058	E	5–350	51	Superfine	—	Loose	1000
	490-015	F	200–1000	70	Economy	—	Loose	1000
	490-042	G	10–1000	71.5	Superfine	—	Rack	10x96
	490-223	G	10–1000	71.5	Superfine	✓	Rack	10x96
	490-043	G	10–1000	71.5	Superfine	—	Loose	400
	490-045	K	100–5000	150	Economy	—	Loose	1000
	490-230	L	100–5000	150	Superfine	3	Rack	50
	490-044	L	100–5000	150	Superfine	—	Loose	100

## Tips for Accumax™ Pipettors, continued...

## Filter Tips

Cat. No.	Tip Ref.	Volume Range, µl	Length, mm	Description	Sterile	Pack Type	Pack	Image (not to scale)
490-232	N	0.1–10	32	Filter	✓	Rack	10x96	
490-234	O	0.1–10	46	Filter	✓	Rack	10x96	
490-236	P	0.5–20	51	Filter	✓	Rack	10x96	
490-237	Q	2–100	51	Filter	✓	Rack	10x96	
490-239	R	2–120	51	Filter	✓	Rack	10x96	
490-241	S	5–200	51	Filter	✓	Rack	10x96	
490-243	T	5–300	52.5	Filter	✓	Rack	10x96	
490-244	U	10–500	78	Filter	✓	Rack	10x100	
490-246	V	50–1000	78	Filter	✓	Rack	10x100	

For pipettor compatibility please see pages 46-53.



## Radiation Shields for Sealpette™ Pipettors

The range of manual Sealpettes can be used with these 10mm thick B-Safe Beta shields [32P] and 12mm thick lead impregnated Gamma shields [125I]. Both fit snugly to the pipettor, helping to protect the hand during the dispensing sequence.

### Beta shields

Cat. No.	Description
526-055	Beta Shield to fit Sealpette™ 0.5 – 10µl, 5–50µl and 50–200µl
526-056	Beta Shield to fit Sealpette™ 200 – 1000µl
526-057	Beta Shield to fit Sealpette™ 1 – 5ml

### Gamma shields

Cat. No.	Description
526-058	Gamma Shield to fit Sealpette™ 0.5–10µl, 5–50µl and 50–200µl
526-059	Gamma Shield to fit Sealpette™ 200–1000µl
526-060	Gamma Shield to fit Sealpette™ 1–5ml

## 8-Channel Pipette Reservoirs

- ⊗ Low volume reservoir for use with any 8 channel micropipette
- ⊗ 10ml maximum volume
- ⊗ Manufactured in polypropylene
- ⊗ Reservoirs are graduated to 8ml

Cat. No.	Colour	Dimensions (lxwxh), mm	Pack
490-081	Natural	90x20x20	50
490-080	Blue	90x20x20	50
490-082	Yellow	90x20x20	50

## Contaminated Pipette Tip Boxes

Available in clear acrylic for 32P Beta emissions and lead impregnated acrylic for Gamma 125I iodine emissions. Designed with hinged lid and tip port with small hinged lid for safe disposal of single or multi-channel pipette tips. For bags see page 142.

Cat. No.	Description	External (hxwxh), mm	Internal (hxwxh), mm
526-032	Beta box	150x150x150	130x130x130
526-113	Beta box	350x150x150	330x130x130
526-122	Beta multi-channel tip box	150x150x150	130x130x130
526-031	Gamma box	150x150x150	126x126x126
526-123	Gamma multi-channel tip box	150x150x150	126x126x126



# Own Label Liquid Handling

Jencons Scientific is the UK's largest manufacturer of hand-held and bench-top liquid handling products. As a manufacturer we are able to own-label and customise many of our products enabling us to supply a complete liquid handling range, in your colours within just a few weeks. Small quantity printing ensures that your stock investment can be kept to a minimum whilst allowing a complete product range launch with a low inventory and virtually no research and development cost.

The products detailed here can be available with your brand within 10 weeks. Products can be supplied in plain boxes or custom printed cartons complete with instruction manuals.

Existing own label products are sold into the following areas

- ⊗ Large catalogue houses
- ⊗ Scientific laboratory suppliers
- ⊗ Diagnostic companies
- ⊗ Manufacturers of Safety Cabinets (pipette controllers)
- ⊗ Private hospital groups
- ⊗ Other major liquid handling companies



Many well-known manufacturers and large suppliers use this service from Jencons to extend their brand and product range and enter new market segments. We supply from as little as 100 pieces upwards with guarantees of quality and delivery time.

Please e-mail us for more details on [export@jencons.co.uk](mailto:export@jencons.co.uk) and send us your requirements together with artwork and Pantone colours. Contact us on +44 (0)1342 337474 for more information.

# Perimatic Premier Pump Dispenser

The Perimatic range of peristaltic pump dispensers are designed for rapid but controlled filling of a variety of containers without splashing or frothing.



- ① Microprocessor calibration
- ② Memory to store calibration values, volumes and set-ups for various tubing sizes
- ③ Dispense speed control handles most liquids
- ④ XY module interface, see page 62-63
- ⑤ Preprogrammed user selectable languages
- ⑥ Manual dispensing by hand or footswitch
- ⑦ Automatic dispensing with interval timer
- ⑧ Sequential slow/fast/slow dispensing

## Perimatic Premier

The Perimatic Premier is a heavy-duty, microprocessor-controlled precision dispensing pump, ideally suited for rapidly and reproducibly filling a variety of containers including, vials, bottles, test tubes and Petri dishes.

The Premier achieves its high performance due to its precision rotor and pinch valve design. The Perimatic Premier is particularly suited to media dispensing as its 'stand-by' mode ensures constant recirculation of the reservoir contents, thereby keeping the media in suspension when not actively dispensing.

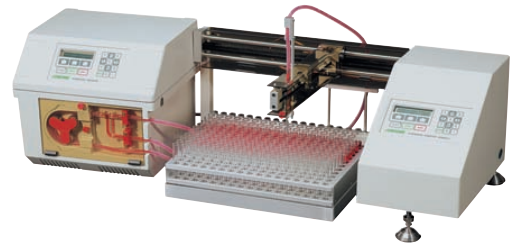
## Specification

Dispensing range, ml	0.5 to 9999.9
Accuracy	±1.0% for volumes over 20ml
Repeatability	<1%
Max./Min. tube bore, mm	8/3
Tube wall thickness, mm	2
Pumping rate <sup>1</sup> , ml/sec	2.1 to 33.3
Power (Dual selectable voltage)	220-240V/110V-120V 50/60Hz, 150W
Dimensions (lxwxh), mm	310x360x320
Weight, kg	16

Cat. No.	Description
256-005	Perimatic Premier pump dispenser

Supplied with three sets of tubing assemblies and footswitch.

1. Dependant upon tube bore and selected speed. Data is based on dispensing water at 21°C.



The Perimatic Premier can be used with an accessory robotic module designed to automate the filling of multiple containers by precision XY positioning of its stainless steel delivery nozzle, in any number of programmable fill patterns. See pages 62-63.

### Premier Silicone Tubing Assemblies

Cat. No.	IDxOD, mm
256-031	3x7
256-032	5x9
256-033	8x12

### Spare Silicone Tubing

Cat. No.	IDxOD, mm	Pack <sup>2</sup>
686-203	3x7	1m
686-210	5x9	1m
686-216	8x12	1m

2. Available in lengths of up to 20m. For more details please contact us on +44 (0)1342 337447.

### Accessories

Cat. No.	Description	Diameter, mm
256-113	Stainless steel delivery nozzle	3
256-114	Stainless steel delivery nozzle	5
256-115	Stainless steel delivery nozzle	8
256-050	Spare footswitch for Perimatic Premier dispenser	

# Perimatic GP Pump Dispenser

The Perimatic range of peristaltic pump dispensers are designed for rapid but controlled filling of a variety of containers without splashing or frothing.

- ⊗ Microprocessor calibration
- ⊗ Memory to store calibration values, volumes and set-ups for various tubing sizes
- ⊗ Dispense speed control handles most liquids
- ⊗ XY module interface, see page 62-63
- ⊗ Preprogrammed user selectable languages
- ⊗ Manual dispensing by hand or footswitch
- ⊗ Automatic dispensing with interval timer
- ⊗ Sequential slow/fast/slow dispensing



## Perimatic GP

The Perimatic GP represents a lower cost alternative to the Premier yet still offers many of its attractive features. Can also be used as a transfer pump in forward or reverse mode.

### Specification

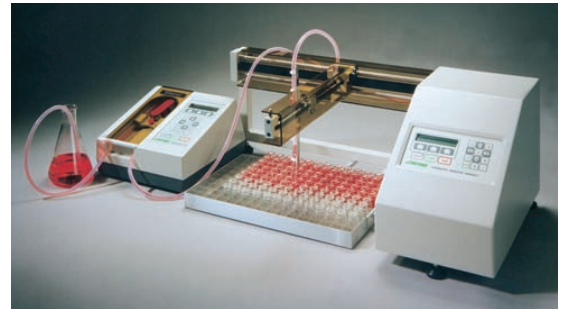
Dispensing range, ml	0.5 to 9999.9
Accuracy	±1.0% for volumes over 20ml
Repeatability	<1%
Max./Min. tube bore, mm	8/3
Tube wall thickness, mm	2
Pumping rate <sup>1</sup> , ml/sec	2.1 to 22.0
Power	220–240V/110V–120V
(Dual selectable voltage)	50/60Hz, 90W
Dimensions (lxwxh), mm	310x360x320
Weight, kg	7

Cat. No.	Description
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256-026	Perimatic GP pump dispenser
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Supplied with three sets of tubing assemblies and footswitch.

1. Dependant upon tube bore and selected speed. Data is based on dispensing water at 21°C.



The Perimatic GP can be used with an accessory robotic module designed to automate the filling of multiple containers by precision XY positioning of its stainless steel delivery nozzle, in any number of programmable fill patterns. See pages 62-63.

### Premier Silicone Tubing Assemblies

Cat. No.	IDxOD, mm
256-027	3x7
256-028	5x9
256-029	8x12

### Spare Silicone Tubing

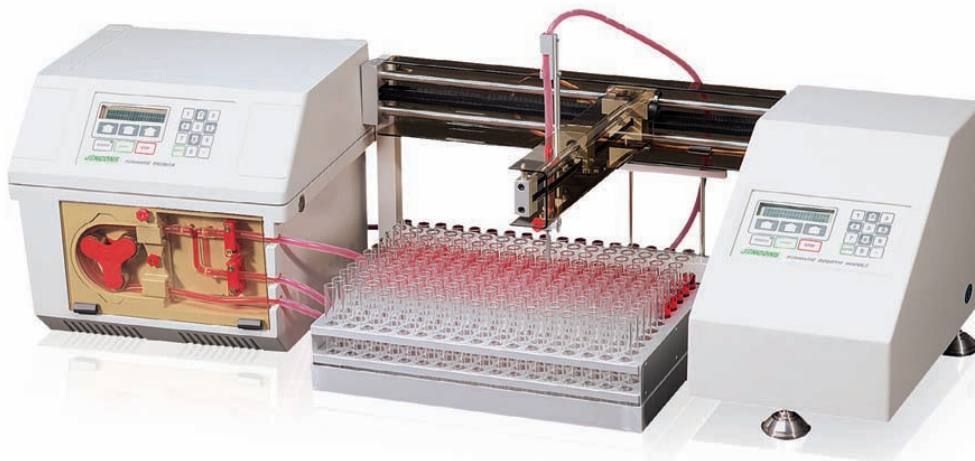
Cat. No.	IDxOD, mm	Pack <sup>2</sup>
686-203	3x7	1m
686-210	5x9	1m
686-216	8x12	1m

2. Available in lengths of up to 20m. For more details please contact us on +44 (0)1342 337447.

### Accessories

Cat. No.	Description	Diameter, mm
256-113	Stainless steel delivery nozzle	3
256-114	Stainless steel delivery nozzle	5
256-115	Stainless steel delivery nozzle	8
256-050	Spare footswitch for Perimatic GP dispenser	

# Perimatic, Robotic XY Module



- ⊗ Microprocessor-controlled
- ⊗ New 'Settle Delay' ensures the nozzle comes to a complete standstill prior to dispensing
- ⊗ New tray guide is now adjustable to enhance position accuracy
- ⊗ Menu-driven LCD for fast programme changes
- ⊗ New 'Drip Delay' ensures any drips are contained before the X-Y moves to its next position
- ⊗ Preprogrammed user-selectable languages in English, French, German, Italian and Spanish
- ⊗ Manufactured to BSEN ISO 9002
- ⊗ A wide range of tube/bottle racks available; see accessories
- ⊗ Adjustable legs allow XY filling of test tubes up to 200mm high
- ⊗ Stainless steel precision dispense nozzles

## Perimatic, Robotic XY Module

The Perimatic Robotic XY Module has been designed to automate the filling of a wide range of containers in conjunction with the Perimatic range of liquid dispensers.

These containers can be filled in straight rows or in 'honeycomb' pattern. The system can be programmed to memorise up to 50 fill patterns.

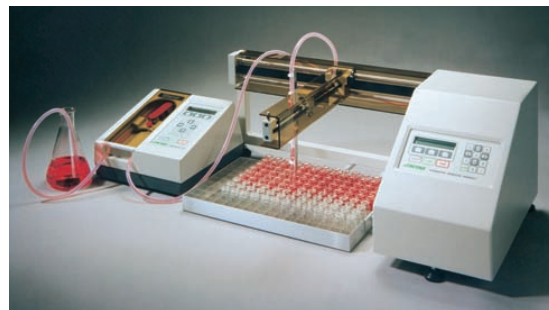
### Specification

Speed, mm/sec	120 (max) excluding acceleration and deceleration times
Fill area, mm	400x245 (from fill nozzle centres)
Resolution, mm	Typically 0.25
Accuracy, mm	0.3*
Drip delay, second	0–9.9 seconds in 0.1 second increments
Settle delay, second	0.0 to 9.9
Fill points	99(X) and 99(Y)
Memory	Non-volatile. Stores up to 50 fill patterns
Input ports	RS232 interface (Baud rate selectable). Connector to Perimatic dispenser
Float switch	Inhibits dispensing if reservoir is dry
Electrics	220–240V and 110–120V (selectable) 50/60Hz; 40W
Dimensions (lwxwxh), mm	735x385x280 without dispensing unit
Weight, kg	14

\* Accuracy is dependent on the weight of the tube set on the arm assembly and can range from 0.3 to 4mm across the whole fill area.

Cat. No.	Description
256-065	Perimatic XY Module
256-068	Perimatic Premier with XY Module
256-069	Perimatic GP with XY Module

The Perimatic XY is supplied complete with 3, 5 and 8mm stainless steel dispense nozzles.



### Aluminium Sectioned Trays for Vials, Bottles and Tubes

We can manufacture customised racks for all types of containers - vials, bottles or tubes. Please contact us on +44 (0)1342 337447 for more details.

# Millennium 500 Microplate Filler



- ⊗ Accurate dispensing using a precision peristaltic pump
- ⊗ Unique open construction for easy integration with robotic systems
- ⊗ Optional aerosol protection cover
- ⊗ Up to 25 user-programmable protocols
- ⊗ Optional liquid level sensing in reagent reservoirs with audible and visual warning system
- ⊗ Quiet in operation
- ⊗ Extremely easy to clean and maintain; tubing replacement within seconds
- ⊗ RS232 port for robotic integration
- ⊗ 8 & 16 individual channel head configuration
- ⊗ Head and entire liquid path is easy to disassemble for cleaning & autoclaving
- ⊗ Reagent recovery feature eliminates any wastage of reagents
- ⊗ Works directly with any reagent reservoir supplied by the user
- ⊗ Easy to read, back illuminated full alpha numeric display
- ⊗ Operates on 12V DC, supplied via an external switch mode power supply, for enhanced operational safety
- ⊗ Moving dispense head allows accurate filling from any height



## Jencons, Millennium 500 Microplate Filler

The Millennium 500 is a unique processor for filling 96- and 384-well microplates.

It is designed to provide fast and reliable microplate filling with high precision and repeatability, along with the flexibility to accommodate various customised requirements. Up to two different reagents can be filled simultaneously or sequentially with a user adjustable incubation period between the fill sessions.

The Millennium 500 is primarily designed to fill a 96-well or a 384-well microplate but can be configured (at the time of production) for deep-well microplates and tubes.

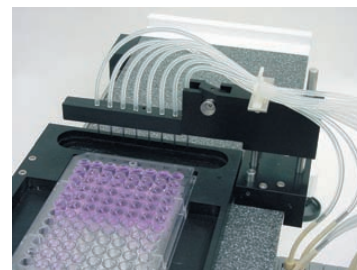
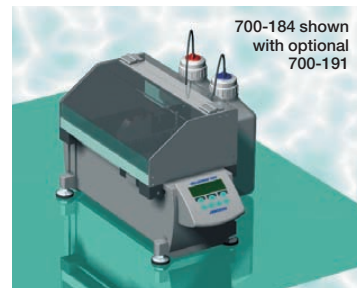
### Specification

Operating voltage/Hz	100–240V/50–60Hz
Max current requirement, VA	52
Dispense reservoir	user specified
Precision	CV $\leq$ 3% @ 300 $\mu$ l per well
Dispensing volume <sup>†</sup>	5–400 $\mu$ l in 2 $\mu$ l increments
Speed, sec.	18*
Dimensions complete system (wxdxh), mm	320x520x280
Weight of complete system, kg	6.0

\* To fill a 96-well plate using an 8-channel filler, 300 $\mu$ l per well.

† Other volume ranges are available, eg. a unit configured to fill volumes from 25–1,000 $\mu$ l in 25 $\mu$ l increments can be supplied, if specified at the time of ordering. Please contact us on +44 (0)1342 337447.

Cat. No.	Description
700-184	Millennium 500 8-channel microplate filler for 96-well plates
700-197	Millennium 500 16-channel microplate filler for 96-well plates
700-226	Millennium 500 16-channel microplate filler for 384-well plates
700-191	Aerosol cover
700-192	Optional liquid level sensing



# Millennium 1000 Microplate Washer Filler



- ⊗ Accurate dispensing precision and low residual volumes
- ⊗ Optional aerosol protection cover
- ⊗ Unique open construction for easy integration with robotic systems
- ⊗ Plate sweep for the lowest residual volumes
- ⊗ Up to 25 user-programmable wash protocols
- ⊗ Extremely easy to clean and maintain
- ⊗ Liquid level sensing in wash and waste reservoirs with visual warning system
- ⊗ The Millennium 1000 accommodates all 96- and 384-well microplates
- ⊗ RS232 port for robotic integration
- ⊗ The Millennium 1000 can be configured (at the time of production) for filter bottomed and/or deepwell microplates
- ⊗ Heads available in 8, 12, 16, 24 and 48 concentric tip configurations
- ⊗ Easy exchange of wash heads
- ⊗ Easy to read back illuminated full alphanumeric display
- ⊗ Operates on 12V DC, supplied via an external switch mode power supply, thus enhancing operational safety
- ⊗ Separate dispense and aspirate channels reduce the possibility of cross contamination
- ⊗ Compact design

## Jencons, Millennium 1000 Microplate Washer Filler

The Millennium 1000 is a unique processor for fully automated washing and filling of both 96- and 384-well microplates, in all possible profiles.

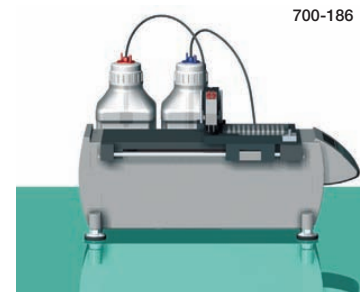
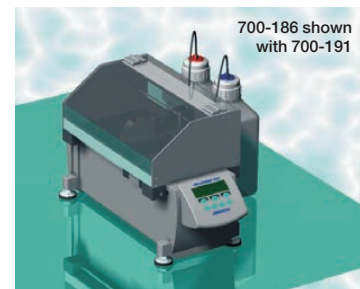
It is designed to achieve fast and reliable microplate processing with high precision and repeatability, whilst allowing the user a multitude of individual adjustment possibilities.

### Specification

Operating voltage/Hz	100–240V/50–60Hz
Max current requirement, VA	52
Dispense reservoir	up to 3x2L
Waste reservoir	2L
Residual volume	3µl per well typical action, 1µl per well with sweep
Precision	CV ≤3%@300µl per well
Dispensing volume <sup>1</sup>	25–1500µl in 25µl increments
Speed, mins.	2.5 <sup>2</sup>
Weight of complete system, kg	9.2
Dimensions - complete system (wxdxh), mm	350x650x350

1. Other volume ranges are available eg. 5–400µl in 2µl increments. Please contact us on +44 (0)1342 337447.
2. To complete a 3 wash cycle using a 12 channel washer, double head, 350µl per well, 96 wells.

Cat. No.	Description
700-186	Millennium 1000 8-channel washer (96-well plates)
700-187	Millennium 1000 12-channel washer (96-well plates)
700-188	Millennium 1000 16-channel washer (96-well plates)
700-189	Millennium 1000 24-channel washer (96-well plates)
700-190	Millennium 1000 48-channel washer (384-well plates)
700-191	Aerosol cover



# Millennium 2000 Microplate Shaker Incubator

- ⊗ Easy access to all four plates at all times for loading & unloading
- ⊗ Uniform heating via air circulation
- ⊗ Unique open construction for easy integration with robotic systems
- ⊗ Remote low voltage supply for safe working
- ⊗ Automatically adjusts to all voltage supplies from 100V to 240V, 50/60Hz
- ⊗ Minimum bench space required
- ⊗ Easy to clean and maintain
- ⊗ Upgradeable for deep well plates at time of order
- ⊗ Optimal temperature uniformity of plates



## Jencons, Millennium 2000 Microplate Shaker Incubator

The Millennium 2000 is a unique microprocessor controlled shaker incubator that accommodates up to four microtitre plates in either 96-well or 384-well format. Three parameters, speed, temperature and time, are programmed via the control panel.

Countdown of remaining time as well as the other two parameters are displayed on the LCD. The plates remain visible to the user at all times under the clear protection cover. For added safety and peace of mind the Millennium 2000 is the only microplate incubator shaker to work from a low voltage supply.

### Specification

Operating voltage/Hz	100–240V/50–60Hz
Remote power supply	24V/5.4A
Max current requirement, W	130
Heater power, W	100
Adjustable temperature range , °C	5 above ambient to +45 in 1°C increments
Temperature uniformity, °C	±1 (between plates)
Readout precision, °C	±1
Operational conditions, °C	12 to 30
Adjustable timer, minutes	1–999 in 1 minute steps
Shaking orbit, mm	1.5 inclusive
Adjustable speed, rpm	500 to 1300 in 10rpm steps
Weight (complete system), kg	4.2
Dimensions (complete system) (wxdxh), mm	200x520x220

Cat. No.	Description
700-182	Millennium 2000 Microplate Shaker Incubator



# Orbis Compact and Orbis Plus Microplate Shakers

- ⊙ All styles of microplate accommodated
- ⊙ Momentary shaking action
- ⊙ No maintenance required
- ⊙ Brushless DC motor for quiet and reliable long life operation
- ⊙ Variable speed control
- ⊙ Timer function (Orbis Plus only)
- ⊙ Low voltage supply for added safety
- ⊙ Ideal for field applications
- ⊙ Washable, anti-slip mat



## Orbis Compact and Orbis Plus Microplate Shakers

The Orbis shaker is a compact choice of microplate shaker for any test environment. With a footprint marginally larger than that of the microplate it shakes, the Orbis offers the most economical and advanced solution for your shaking applications, as well as being competitively priced. The counter-balanced orbital movement guarantees a stable, quiet and long life operation. The Orbis shaker can be operated as a stand alone unit or alternatively, be easily integrated into a robotic system, with a remote on/off control.

Both Orbis shakers can operate as microtube shakers when used with an accessory tube platform. This 131x90mm platform accommodates 40 tubes with diameters 10.5 to 12.7mm.

### Specifications

Model	Orbis	Orbis Plus
Shaking orbit	1mm radius	1mm radius
Capacity	1x96 well microplate	1x96 well microplate
Shaking speed range, rpm	950 to 1300	950 to 1300
Timer function (Orbis Plus only)	————	1 to 180 mins and continuous
Dimensions (wxdxh), mm	93x133x72*	93x133x72*
Electrical	230V 50/60Hz/ 110V 50Hz**	230V 50/60Hz/ 110V 50Hz**
Power consumption	65mA	65mA
Power supply	15V 100mA DC	15V 100mA DC
Environmental operating temperature, °C	+10 to 40	+10 to 40
Environmental storage temperature, °C	+4 to 40	+4 to 40
Weight, g	715	715

\* Height with lid 87mm

\*\* Please specify power supply when ordering

700-235 shown with accessory  
microtube shaker platform  
700-241



Cat. No.	Description
700-235	Orbis microplate shaker
700-236	Clear lid for Orbis shaker
700-237	Orbis Plus microplate shaker with timer, supplied with clear lid
700-241	Platform for Orbis microplate shaker, holds 40 microtubes

# Inca Personal Microplate Incubator

- ⊙ Variable temperature control
- ⊙ Temperature or elapsed time display
- ⊙ Built-in timer with buzzer
- ⊙ Minimum evaporative losses with uncovered plates
- ⊙ Accommodates all plate types
- ⊙ Easy microplate location
- ⊙ No maintenance required
- ⊙ Low voltage for added safety
- ⊙ Ideal for field applications





## Inca Personal Microplate Incubator

The Inca is a personal microplate incubator that provides reliable, accurate and long-life operation. It has a small footprint of just 120mmx180mm.

Whether you are a laboratory technician or a diagnostic kit manufacturer, the Inca is the natural choice for single microplate incubation. The unique design and advanced electronic temperature control guarantees stable and accurate performance combined with quiet operation.

### Specification

Temperature range, °C	ambient or +5 to 45
Accuracy, °C	>±0.5 of set temperature
Timer, mins	0 to 999
Time setting resolution, mins	1
Temperature/timer display	3 digit LCD
Dimensions (wxdxh), mm/	120x180x100
Weight, g	920
Heater power, W	15
Operating voltage	100-230Vac 50/60Hz
Power consumption, Amps	1.25
Power supply	12V 2A DC, centre +
Environmental operating temp, °C	10 to 40
Environmental storage temp, °C	4 to 40
Fuse rating	1.25A T

Cat. No.	Description
583-154	Inca microplate incubator



# Stuart, SC6 Colony Counter

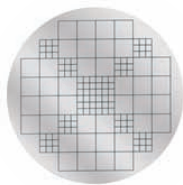
- ④ Pressure sensitive count system
- ④ Can be used with any probe or felt tip pen
- ④ Digital readout from 0 – 999
- ④ Audible confirmation of each count
- ④ Choice of light or dark background
- ④ Electronic pressure pad sensitivity is adjustable to suit the user
- ④ Three year warranty



## Stuart, SC6 Colony Counter

Designed for rapid and accurate counting of bacterial and mould colonies.

The Stuart colony counter is easy to use. Simply place the Petri dish on the electronic pressure pad and touch the dish with a felt tip pen to mark each colony in turn. Touch pressure causes a count to be registered on the digital display and an audible tone confirms each count made. Marking the dish with a felt tip pen avoids missing colonies or double counting, although any suitable implement may be used to apply pressure to the dish. A built-in averaging facility allows multiple plates to be counted and then the average colony count calculated.



Optimum viewing of colonies is aided by peripheral, glare-free illumination. There is also a black background facility for difficult translucent cultures. The SC6 is supplied complete with one Wolffhuegel graticule, one segmentation disc and two centering adaptors, to facilitate use with 50-90mm dishes. A choice of magnifiers is available as an optional extra for counting very small colonies.

Cat. No.	Description	Pack
217-008	SC6 Colony counter	1
217-012	1.7x magnifier	1
217-013	3.0x magnifier	1
217-009	Wolffhuegel graticule and segmentation dish	10

## Specification

Digital display	3 digit LED
Count	0 to 999
Dish size, mm	50, 90 and 100
Dimensions (wxdxh), mm	310x300x140
Net weight, kg	1.5
Electrical supply	230V, 50Hz, 70W

\* All Stuart benchtop equipment is protected by Biocote®, which uses active agent silver to provide effective anti-microbial protection.



## EASI-GRID™

The essential tool for efficient master plate making, the EASI-GRID™ from Jencons-PLS comprises a lightweight and durable case containing nine of the most popular templates for molecular biology, genetics and microbiology applications, plus a blank sheet for your own customised grid pattern. This unique product has been designed to hold any make of 90–100mm diameter petri dish firmly in its place above your chosen grid thus ensuring correct alignment of subsequent clones made from the master plate.

The grids supplied are 25, 50, 70, 100, 150 and 200 squares, 6 and 12 quadrants as well as a black 100 square grid.

Cat. No.	Description
287-000	EASI-GRID Black
287-001	EASI-GRID Blue
287-002	EASI-GRID Red
287-003	EASI-GRID Yellow
287-005	EASI-GRID stand (Holds up to 4 EASI-GRIDS)
287-004	Spare EASI-GRID Grid booklet
287-006	Spare EASI-GRID locking band

287-005 shown with  
4 EASI-GRID units  
(not supplied)



# Melting Point Apparatus

## Stuart, SMP3 Advanced Melting Point Apparatus

Designed for fast and accurate measurements of melting points. Heating block accommodates up to 3 samples and incorporates a platinum resistance sensor for responsive temperature control. A membrane key pad allows easy setting of the desired start temperature and heating ramp rates (fully adjustable from 0.5°C to 10°C per minute) in 0.1°C increments.

- ⊗ Accommodates up to 3 samples
- ⊗ Maximum temperature 360°C
- ⊗ Programmable heating rates
- ⊗ Melt temperature storage
- ⊗ Automatic cooling
- ⊗ User friendly alpha-numeric display
- ⊗ Supplied with calibration certificate
- ⊗ Language is switchable between English, French, Italian and Spanish
- ⊗ Three year warranty



\* All Stuart benchtop equipment is protected by Biocote®, which uses active agent silver to provide effective anti-microbial protection.

## Stuart, SMP3 Advanced Melting Point Apparatus

The user friendly backlit alphanumeric LCD display advises both the temperature and the specific stage of operation. Clear observation of the samples and melt process is aided by a powerful magnifying lens and high intensity illumination. When measurements of melt are being made, the temperature may be stored in the instrument's memory by pressing the storage buttons. The values can be recalled at a convenient time.

Once the heating cycle is completed, an integral air pump quickly cools the heating block so that the next series of tests can be commenced promptly. Each unit is supplied with an individual calibration certificate showing actual temperature accuracy and serial number for full traceability.

Cat. No.	Description
439-024	SMP3 Melting Point Apparatus, supplied with 100x melting point tubes (closed at both ends)
439-023	Melting point tubes, open both ends, pk 100

### Specification

Temperature range	Ambient to 360°C (resolution 0.1°C)
Accuracy	±0.5°C at 20°C, ±1.5°C at 360°C
Ramp rate, °C/min	0.5 to 10 in 0.1°C increments
Dimensions (wxdxh), mm	180x260x190 closed – 300 extended
Weight, kg	3.5

## Stuart, SMP11 Analogue Melting Point Apparatus

- ⊗ Easy to operate
- ⊗ Supplied with safe spirit filled thermometer
- ⊗ Economical price

The SMP11 measures the melting point of chemicals from ambient to 250°C. Samples need to be placed in a sealed end capillary tube and located in the heating block. Up to three tubes can be tested at one time. The heating rate can be adjusted manually between 20°C/min, for rapid heating and 1°C/min, to obtain an accurate melting point range.

The sample and melt process can be viewed via the magnifying lens, which is illuminated by bright LEDs. The melt temperatures are recorded from the thermometer, which is positioned horizontally to the samples to allow simultaneous viewing. The thermometer is filled with low toxic spirit making it completely safe in the event of a breakage. The lens can be detached for cleaning and simple to follow instructions are printed directly onto the unit, making it very easy for students to use.



### Specification

Display	Analogue	Dimensions (wxdxh), mm	370x140x110
Temperature Range, °C	0 to 350	Weight, kg	1.6
Ramp Rate, °C	1 to 20	Power	230V, 50Hz, 50W

Cat. No.	Description
439-030	SMP11 Analogue Melting Point Apparatus
439-031	SMP11/1 Spare thermometer 0°C to 250°C
439-032	SMP1/2 Cooling plug (brass) for rapidly reducing heating block temperature after use
439-023	SMP1/4 Glass Melting Point Tubes, open at both ends (pack of 100)



\* All Stuart benchtop equipment is protected by Biocote®, which uses active agent silver to provide effective anti-microbial protection.

# Stuart, SRT Roller Mixers

- ⌚ Rocking and rolling action for complete mixing
- ⌚ Choice of analogue fixed speed or digital variable speed
- ⌚ Choice of two sizes, 6 rollers or 9 rollers
- ⌚ Suitable for use in cold rooms or in incubators between 4°C and 60°C
- ⌚ Ideal for mixing blood samples
- ⌚ Three year warranty



## Stuart, SRT Roller Mixers

The Stuart roller mixers provide a gentle, but highly efficient, rocking and rolling action. There is a choice of four models:

The SRT6 and SRT9 mixers have a fixed speed of 33rpm with an on / off switch. The SRT6D and SRT9D digital models have a variable speed range (5 to 60rpm) and a built-in digital timer which can either be set from 1 second to 90 minutes, or 1 minute to 9 hours for maximum versatility.

Recommended for mixing blood samples, viscous substances and liquid-solid suspensions where minimum aeration is required. Units can be used in incubators up to 60°C and humidity up to 80%, or in cold rooms down to 4°C. The mixers are robustly constructed and designed for easy cleaning, having plastic rollers and a drip tray to collect accidental spillages. Most sizes of tubes, Bijoux, Universals and bottles can be accommodated.

All Stuart benchtop equipment is protected by Biocote®, which uses active agent silver to provide effective anti-microbial protection.

### Specifications

Model	SRT6	SRT6D	SRT9	SRT9D
No. of rollers	6	6	9	9
Roller size (lengthxdiameter), mm	340x30	340x30	340x30	340x30
Speed, rpm	33	5 to 60	33	5 to 60
Orbit dia./amplitude, mm	16	16	16	16
Controls	Analogue	Digital	Analogue	Digital
Timer	No	Yes	No	Yes
Dimensions (wxhxdxh), mm	565x240x110	565x240x110	565x360x110	565x360x110
Weight, kg	5.1	5.1	6.9	6.9

Cat. No.	Description
364-038	SRT6 Analogue roller mixer (6 roller model)
364-016	SRT6D Digital roller mixer (6 roller model)
364-069	SRT9 Analogue roller mixer (9 roller model)
364-017	SRT9D Digital roller mixer (9 roller model)



### Stuart, Roller Mixer Stacking System

An accessory stacking system is available which comprises of four magnetised stack blocks that are designed to allow rollers to be stacked on top of one another, thus saving valuable bench space. Up to three rollers can be stacked in virtually any combination.

No tools are required as magnets hold the rollers securely in position making the stacking system easy and quick to assemble and dismantle.

Cat. No.	Description
364-030	Stacking system for rollers (4 x stack blocks)

# NEW

# UVItec, UVI doc Gel Documentation Systems

- ⊗ Sony scientific grade camera with electronically variable shutter speed
- ⊗ 0.5 Megapixels
- ⊗ 12-bit file format for increased dynamic range: 4.0 OD
- ⊗ 6x optical zoom
- ⊗ Available with manual or motorised zoom
- ⊗ Ideal for both quantification and publication
- ⊗ Ideal for multi-user environments
- ⊗ Comes complete with UVI doc 1D software
- ⊗ Fully networkable allowing easy image transfer to a PC
- ⊗ USB Compact-Flash™ reader
- ⊗ Smart control panel with UV security option
- ⊗ Steel and stainless steel darkroom, epoxy-painted for chemical resistance

NEW





## UVitec, UVIdoc Gel Documentation Systems

The UVIdoc gel documentation systems are characterised by a combination of both speed and simplicity. The UVIdoc systems are stand alone systems which enable users to view and photograph gels and then download their image from their own computer due to the easy-share network connection. The UVIdoc system just needs to be installed onto a local network, allowing fast and easy access to images already stored in the systems sizable internal memory. This system is therefore ideal for multi-user environments where ease of use and speed are of the essence.

The unique 12-bit performance of the UVIdoc system, delivers a high signal-to-noise ratio, producing ideal imaging for both quantification and publication. Light saturation of images is detectable on the monitor or LCD screen. Saturation monitoring of the live images ensures fully quantifiable images.

Four UVIdoc models are available with various roll-out transilluminator sizes and the option of a built-in LCD screen and motorised zoom or separate monitor and manual zoom. All UVIdoc models come complete with UVIdoc 1D software which provides a comprehensive set of image acquisition, enhancement and analysis tools. From molecular weight to colony counting, UVIdoc 1D is perfect for analysis and gel annotation and editing. UViband software is available as an optional extra, this software offers powerful and accurate analysis of 1D gels to produce molecular weight and quantitative data. It includes advanced image enhancement tools and multiple methods for data processing as well as special functions for colony counting, quantification of gels, blots, dot blots and microtitre plates.

Cat. No.	Description
287-641	UVIdoc gel documentation system with camera, motorised zoom, Ethidium filter, darkroom D-55 with TFT screen, 20x20cm transilluminator 8w, 312nm filter, control unit, built-in LCD, UVIdoc software
287-642	UVIdoc gel documentation system with camera, motorised zoom, Ethidium filter, darkroom D-55 with TFT screen, 21x26cm transilluminator 8w, 312nm filter, control unit, built-in LCD, UVIdoc software
287-643	UVIdoc gel documentation system with camera, manual zoom, Ethidium filter, darkroom D-55 with TFT screen, 20x20cm transilluminator 8w, 312nm filter, control unit, UVIdoc software*
287-644	UVIdoc gel documentation system with camera, manual zoom, Ethidium filter, darkroom D-55 with TFT screen, 21x26cm transilluminator 8w, 312nm filter, control unit, UVIdoc software*

\* Monitor must be purchased separately



### Accessories

Cat. No.	Description
287-651	9" monitor for 287-643 & 287-644
287-652	Safety screen for D-55 darkrooms
286-245	UV/ white light conversion screen (21x26cm)
287-650	UV/ blue light conversion screen (21x26cm)
287-654	UViband software
286-758	Mitsubishi P38E thermal printer (analogue)
287-653	Syber green filter
286-540	Glossy thermal paper. Box of five rolls

# Taylor-Wharton, LD Series Dewars

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



## Taylor-Wharton, LD Series Dewars

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

### Specifications

Model	LD4	LD5	LD10	LD25 <sup>3,4</sup>	Classic 25	LD35 <sup>3,4</sup>	LD50 <sup>3,4</sup>
Static holding time, days <sup>1</sup>	10	6	45	109	119	152	122
Normal evaporation rate L/day <sup>1</sup>	0.40	0.77	0.22	0.23	0.21	0.23	0.41
LN <sub>2</sub> 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
<b>Spares &amp; Accessories</b>							
Replacement Cap/neck core	238-099	238-101	238-102	238-104	238-097	238-095	238-095
Roller Base	————	————	————	238-091	232-016	238-067	238-067

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 above right.
3. Liquid withdrawal device (238-093) recommended for safe dispensing, see above right.
4. Safety carry truck available see right.



238-091



### Accessories

Cat. No.	Description
238-094	Tipping stand for LD25 dewars
238-011	Tip-Truk for LD25 dewars
238-012	Tip-Truk for LD35 dewars
238-093	Liquid withdrawal device with phase separator for LD25, LD35, LD50



# Taylor-Wharton, HC and VHC Series Refrigerators

- Ⓞ 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
- Ⓞ All units are supplied complete with canisters and neck core
- Ⓞ Roller bases are available for some models
- Ⓞ Three year warranty on vacuum



## 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.

### Specifications

Model	HCL12	HC20	HC34	HC35	VHC35
Static holding time, days <sup>1</sup>	60	87	200	130	130
Working time, days <sup>2</sup>	37	54	125	81	81
Normal evaporation rate, L/day <sup>1</sup>	0.20	0.23	0.17	0.27	0.27
LN <sub>2</sub> capacity, L	12	20	34	35	35
Weight (Empty/ Full, kg)	9.8/19.5	12.0/28.2	16.1/43.6	17.7/46.0	17.2/45.5
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 <sup>3</sup>
Canister dimensions, mm	70x127	70x279	70x279	67x279	94x279
Vial capacity <sup>4</sup>	————	684	684	1020	1260
Cat. No.	232-033	232-034	232-036	232-037	232-039
<b>Spares &amp; Accessories</b>					
Neck core	238-068	238-071	238-075	238-078	238-079
Canisters 127mm	238-070	————	————	————	————
Canisters 278mm	————	238-072	238-076	238-080	238-081
Low level alarm	————	————	238-063	238-065	238-066
Roller base	238-091	238-091	238-067	238-067	238-067

#### Notes:

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.



# Taylor-Wharton, XT Series Refrigerators

- ⊗ 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
- ⊗ 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
- ⊗ Three year warranty on vacuum
- ⊗ Roller bases are available for some models
- ⊗ Low level alarms available on some models, please contact our Technical Office on +44 (0)1342 337447



## 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.

### Specifications

Model	XTL3	XTL8	XT10	XT20	XT34
Static holding time, days <sup>1</sup>	27	80	100	230	340
Working time, days <sup>2</sup>	17	50	62	140	212
Normal evaporation rate, L/day <sup>1</sup>	0.11	0.10	0.10	0.09	0.10
LN <sub>2</sub> capacity, L	3	8	10	20.7	34
Weight (Empty/ Full, kg)	3.3/5.7	8.9/15.4	7.5/15.6	11.8/28.6	15.8/43.3
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 <sup>3</sup>	6	6	6	6	6
Canister dimensions (øxh), mm	38x127	38x127	38x279 <sup>4</sup>	38x279 <sup>4</sup>	38x279 <sup>4</sup>
Vial capacity <sup>5</sup>	—	—	180	180	180
Straw capacity (0.5ml)	750	750	1500	1500	1500
Cat. No.	232-030	232-044	232-045	232-031	232-032
<b>Spares &amp; Accessories</b>					
Neck core	238-069	238-090	238-058	238-061	238-061
Canisters 127mm high	238-085	238-092	—	—	—
Canisters 279mm high	—	—	238-246	238-060	238-060
Roller base	—	238-091	—	238-091	238-067

#### Notes:

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. 127mm canisters available on request. Please contact our Technical Office on +44 (0)1342 337447.
5. Capacity based on 1.2 or 2ml plastic vials, 12.5mm dia. (internal thread), on canes, 6 vials per cane, no cryosleeve.



# Taylor-Wharton, LS Series Refrigerators

- ③ Dual benefit of large sample capacity and exceptionally low evaporation rates
- ③ All units supplied complete with racks. Standard units are supplied without boxes
- ③ LS750 holds 25 vial boxes in 5 x 5 matrix
- ③ LS3000, LS4800, LS6000 hold vial boxes in 10 x 10 matrix
- ③ LS3000, LS4800 and LS6000 are available with two controller options, see opposite page
- ③ Rack system index location ring and internal spider allows easy location and quick retrieval of samples
- ③ For sample protection low liquid level alarms are available on all units
- ③ Three year warranty on vacuum





## Taylor-Wharton, LS Series Refrigerators

The LS series refrigerators are a unique design 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 and retrofitting is not possible.

### Specifications

Model	LS750	LS3000	LS4800	LS6000
Static holding time, days <sup>1</sup>	130	106	200	194
Working time, days <sup>2</sup>	80	66	102	120
Normal evaporation rate, L/day <sup>1</sup>	0.27	0.76	0.80	0.84
LN <sub>2</sub> 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 <sup>3</sup>	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
With M551 economy controller*	—	232-107	232-109	232-085
With M505 controller*	—	232-108	232-110	232-086
<b>Accessories</b>				
Low level alarm	238-066	238-298	238-056	238-106
Roller base	238-067	238-036	238-036	238-036

#### Notes:

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).

\* For full details on the controllers please contact us on +44 (0)1342 337447.



# Taylor-Wharton, K Series Cryostorage Systems

- ③ Reliable liquid nitrogen storage with controllable temperatures down to  $-196^{\circ}\text{C}$
- ③ 3000 to 38,000 vial storage capacities
- ③ Baxter and Gambro bag storage systems
- ③ 96 tube format storage systems
- ③ Fully automated, microprocessor based controller options on 10K, 24K and 38K (see page 92-93)
- ③ Temperature Gradient Suppression system for improved Vapour Phase storage temperature (check models available)
- ③ Medical Device Directive MDD CE 93/42 Class IIa version available in 10K, 24K and 38K range. All models feature the M505CE controller



## 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.

### Specifications

Model	3K	10K	24K	38K
Static holding time, days <sup>1</sup>	19	33	52	74
Working time, days <sup>2</sup>	12	20	32	46
Normal evaporation rate litres/day <sup>1</sup>	2.5	5	7	8
LN <sub>2</sub> capacity, litres	48	165 <sup>4</sup>	365 <sup>4</sup>	590 <sup>4</sup>
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 <sup>5</sup>	864x965 <sup>6</sup>	1397 <sup>7</sup>
Vial capacity <sup>3</sup>				
Liquid phase	3726	10400	24050	38350
Vapour phase	2484	8800	20350	32450
New Vapour phase	—	9100	21775	35100
Cat. No. <sup>8</sup>	232-021	232-018	232-060	232-061
Cat. No. with MDD-Approval and M505CE controller <sup>9</sup>	—	232-087	232-088	232-114
<b>Accessories</b>				
Roller base	238-091	—	—	—

#### Notes:

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 diameter (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.
8. Inventory control system required. See page 94-95.
9. Optional Cryodate software, printer cable and PC cable are available for controller data download. See page 92 for full details.

# Taylor-Wharton M505CE Liquid Nitrogen Level Controller



NEW

- ⊗ User programmable temperature control in vapour phase
- ⊗ 20,000 data logging events
- ⊗ Fascia panel RS232 connector on 10K and 24K
- ⊗ Automatic level control
- ⊗ Password controlled access
- ⊗ LCD temperature and level display
- ⊗ 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 LN<sub>2</sub> 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

## 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 due to the proven and reliable method of thermistors sensors.

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

## M550 Economy Liquid Nitrogen Level Controller

The M550 is an economical controller for those who do not require data logging or temperature control.

- ⊗ Automatic level control
- ⊗ Level display on four level LEDs
- ⊗ Easy on-site update of operating firmware using a PC and download cable
- ⊗ 4 level monitoring points, extra low, normal, high and extra high
- ⊗ Alarms for high temperature, sensor fault, failure of LN<sub>2</sub> supply, under fill/overflow, unauthorised access, lid left open
- ⊗ Remote alarm contacts
- ⊗ Manual fill stop/start
- ⊗ Lid switch controls automatic defog and quick chill
- ⊗ Optional simultaneous fill
- ⊗ Easy upgrade to M505CE

Cat. No.	Description	For Model
238-336	M550CE Economy controller	10K and 24K
238-337	M550KB Economy controller (boxed version)	38K

# Inventory Control Systems (ICS) for K-Series

- ⊙ Lightweight anodised aluminium racks with wide handle on top
- ⊙ Racks contain 25 cell and 100 cell polycarbonate boxes for 1.2 or 2.0ml vial size. 12.5mm O.D (internal thread)
- ⊙ 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

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

### 10K Models

Model	10K	10K
Storage Phase	Vapour	Liquid
5 x 5 No. of Racks	4	4
10 x 10 Shelves	7	7
Shelves per rack	11	13
Capacity	8,800	10,400
Cat. No.	238-296	238-297

### 24K Models

Model	24K	24K
Storage Phase	Vapour	Liquid
5 x 5 No. of Racks	6	6
10 x 10 Shelves	17	17
Shelves per rack	11	13
Capacity	20,350	24,050
Cat. No.	238-299	238-309

### 38K Models

Model	38K	38K
Storage Phase	Vapour	Liquid
5 x 5 No. of Racks	6	6
10 x 10 Shelves	28	28
Shelves per rack	11	13
Capacity	32,450	38,350
Cat. No.	238-310	238-302



## 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 Vapour or Liquid phase. Custom-made inventory systems can also be designed. Please contact our Technical Office on +44 (0) 1342 337447.

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

## Specifications

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

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

\* Vapour phase 2 packs, Liquid phase 3 packs

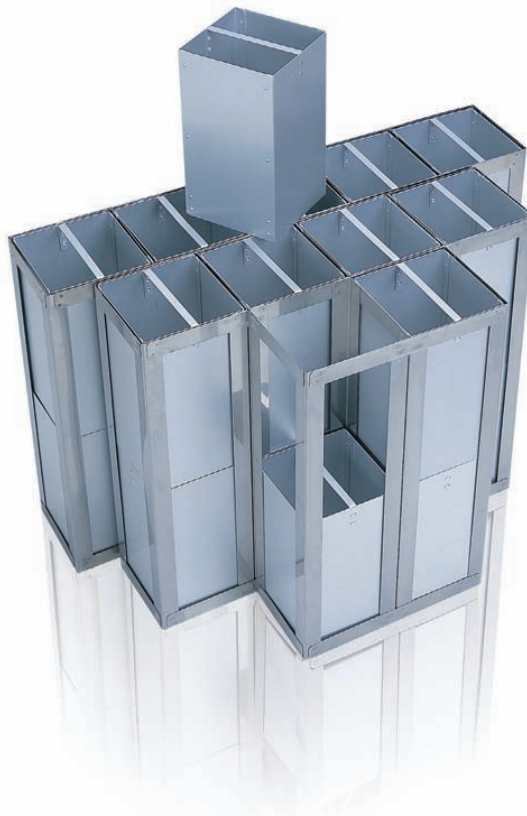
# Inventory Control Systems (ICS) for K Series

## Gambro and Baxter Blood Bag Systems

Stainless steel frame and aluminium boxes for use with K-Series Cryostorage Systems. Special systems can be manufactured to suit any requirement. For further details please contact our Technical Office on +44 (0) 1342 337447.

- ⊗ Stainless steel frame
- ⊗ Aluminium boxes slot inside the frame
- ⊗ For use with 10K, 24K and 38K Cryostorage Systems
- ⊗ Custom made systems can be manufactured to suit any requirement

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



# NEW



## 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.

- ⊗ For use with K-Series Cryostorage Systems
- ⊗ 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
238-050	Vapour phase insert for 7 10x10 racks in 10K, 9,100 vials <sup>1,2</sup>
238-053	Vapour phase insert for 15 10x10 racks and 7 5x5 racks in 24K, 21,775 vials <sup>1,2</sup>
238-054	Vapour phase insert for 26 10x10 racks and 4 5x5 racks in 38K, 35,100 vials <sup>1,2</sup>

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

2. Racks must be ordered separately for more information please call +44 (0) 1342 337447



# Taylor-Wharton, Cryo Express Dry Shippers

- ⊗ Advanced concept absorbent enables faster charging
- ⊗ Complies with IATA regulations
- ⊗ Optional storage accessories include a five shelf rack system for the CX500/CXR500
- ⊗ 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
- ⊗ Replacement absorbent material for cleaning purposes (CXR models)



## Taylor-Wharton, Cryo Express Dry Shippers

Cryo Express 'dry shippers' are designed to transport a variety of materials safely at cryogenic temperatures. The new CXR models have replaceable absorbent material enabling easy cleaning of the shippers. 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.

### Specifications

Model	CX100	CX500	CXR500
Static holding time <sup>1</sup> , days	16	11	11
Working time <sup>2</sup> , days	11	7	7
Normal evaporation rate <sup>1</sup> , litres/day	0.23	0.6	0.6
Absorbed LN <sub>2</sub> , litres	3.7	6.4	6.7
Weight			
Empty, kg	5.3	13.6	13.6
Full, kg <sup>3</sup>	8.9	18.8	19.8
Neck diameter, mm	91	216	216
Overall height, mm	493	683	683
Overall diameter, mm	234	391	391
Vial capacity <sup>4</sup>	102	500	500

### CXR Models with Replaceable Absorbent

Cat. No.	Description
232-001	CXR100 transportable LN <sub>2</sub> refrigerator
232-000	CXR500 transportable LN <sub>2</sub> refrigerator with shelf rack for 500 vials
232-004	CXR500 transportable LN <sub>2</sub> refrigerator with blood bags rack

### CX Models

Cat. No.	Description
232-076	CX500 transportable LN <sub>2</sub> refrigerator with shelf rack for 500 vials
232-077	CX500 transportable LN <sub>2</sub> refrigerator with blood bags rack

### Accessories

Cat. No.	Description
238-086	Shipping enclosure for CXR100
238-089	Shipping enclosure for CX500/CXR500
238-107	Absorbent replacement for CXR100/CXR500*

\* Two required for CXR500

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 LN<sub>2</sub> 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.

238-013



### Data Loggers for CXR100 and CX500/CXR500 Dry Shippers

Data loggers for the CXR100 and CX500/CXR500 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
238-013	M382CE Data logger, requires 238-049	CXR100
238-048	M385CE Data logger, requires 238-049	CX500/ CXR500
238-049	M381CE PC cable, software and documentation on CD-ROM	CX100/ CX500/ CXR500

# Taylor-Wharton, LABS Vapour Phase Cryostorage

- ⊗ All stainless steel inner and outer container with full super insulation wrap
- ⊗ Two-handle aluminium 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 right



**NEW**

## Taylor-Wharton, LABS Vapour Phase Cryostorage

The LABS 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.

### Specifications

Model	LABS 20K	LABS 40K	LABS 80K
Reference value evaporation rate <sup>1</sup> , L/day	4.0	4.5	8.0
LN <sub>2</sub> capacity below turntable, L	46	76	140
Weight, Empty/Full <sup>2</sup> , kg	295/332	417/478	703/815
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 <sup>3</sup> (13 shelves)	14, 127x127mm	30, 127x127mm	58, 127x127mm
Number of racks <sup>4</sup> (13 shelves)	4, 76x76mm	8, 76x76mm	12, 76x76mm
Vial capacity <sup>5</sup>	19,500	41,600	79,300
Blood bag (Fenwall 4R9951)/ (Fenwall 4R9953)/(Fenwall 4R9955)	560/400/290	1204/820/590	2100/1505/1050
Cat. No. with M550CE KB economy controller <sup>6</sup>	232-102	232-100	232-089
Cat. No. with M505KB controller <sup>6</sup>	232-103	232-104	232-105
Cat. No. with MDD-Approval and M505CE controller <sup>6</sup>	232-106	232-101	232-099
<b>Accessories</b>			
Vapour phase inventory control system <sup>7</sup>	232-115	238-249	238-248

#### Notes:

- 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.
- Includes the empty weight and LN<sub>2</sub> weight.
- 127x127mm 100 cell box.
- 76x76mm 25 cell box.
- 2ml vial size; 12.5mm O.D. (internal thread)
- Optional Cryodate software, printer cable and PC cable are available for controller data download. See page 102 for full details.
- For full details on Vapour phase inventory control systems please see page 103.

Please note: The LABS units are only available with controllers. See page 102 for full details on controllers.



# Taylor-Wharton, LABS Vapour Phase Cryostorage Controllers

The LABS Vapour Phase Cryostorage Units are supplied as standard with either the M505KB controller or the economy M550CE KB controller which are detailed on the right.



- ⊗ User programmable Temperature Control in Vapour Phase
- ⊗ 20,000 data logging events
- ⊗ RS232 connector
- ⊗ Automatic level control
- ⊗ Password Controlled Access
- ⊗ LCD temperature and level display
- ⊗ 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 LN<sub>2</sub> 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

**NEW**

## M505KB Liquid Nitrogen Level Controller

Microprocessor-based Liquid Nitrogen level controller with built in data logging, designed to fit the LABS units. Level monitoring and control is by the proven and reliable method of thermistors sensors.

Cat. No.	Description	For
238-382	Cryodata software	Downloading data from M505 KB controller to PC, cable required
238-374	Printer cable	Printing directly from M505KB controller
238-375	PC cable	Required to download data from M505KB to PC

## M550CE KB Economy Liquid Nitrogen Level Controller

- ⊗ The M550CE KB is an economical controller for those who do not require data logging or temperature control
- ⊗ Automatic level control
- ⊗ Level display on four level LEDs
- ⊗ Easy on-site update of operating firmware using a PC and download cable
- ⊗ 4 level monitoring points, extra low, normal, high and extra high
- ⊗ Alarms for high temperature, sensor fault, failure of LN<sub>2</sub> supply, under fill/overflow, unauthorised access, lid left open
- ⊗ Remote alarm contacts
- ⊗ Manual fill stop/start
- ⊗ Lid switch controls automatic defog and quick chill
- ⊗ Optional simultaneous fill

## LABS Vapour Phase Inventory Control System

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.mm 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.

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

# Taylor-Wharton, XL Series, Laboratory Liquid Gas Cylinders

- ⊗ Rugged transportable units
- ⊗ Polished heavy duty outer body
- ⊗ Castor mounted for easy manoeuvrability (except XL-160)
- ⊗ Colour-coded relief valves for different pressure settings
- ⊗ 5 year vacuum warranty
- ⊗ Approved according to Transportable Pressure Equipment Directive 1999/36 EC
- ⊗ Ideal for use with K-Series refrigerators on pages 90-91



NEW



## Taylor-Wharton, XL Series, Laboratory Liquid Gas Cylinders

The XL series of low-pressure liquid gas cylinders are specifically designed for laboratory applications using LN<sub>2</sub>. The XL-160, XL-180-660 and XL-240 allow frequent usage and provide for larger on-site requirements.

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. Non-magnetic wheels are available, please contact our Technical Office on +44 (0)1342 337447 for details. A square base is also available for the XL-180-660 and the XL-240.

### Specifications

Model	XL-70	XL-120	XL-160	XL-180-660	XL-240
Dimensions (dxh), mm	508x1205	508x1480	508x1464	660x1280	660x1510
Weight (empty), kg	71	82	104	116	137
Usable capacity, litres	67	120	160	180	240
Normal evaporation rate, %/day					
Nitrogen	3.5	2.4	1.5	1.3	1.4
Pressure relief valve, bar	22 psig/ 1.5 bar	22 psig/ 1.5 bar	22 psig/ 1.5 bar	22 psig/ 1.5 bar	22 psig/ 1.5 bar
Warranty on vacuum, years	5	5	5	5	5
Cat. No. with pressure building	232-090	232-091	————	232-094	232-012
Cat. No. without pressure building	————	232-092	232-011	232-093	232-095
<b>Accessories</b>					
Square base*	————	————	————	232-096	232-096
Cylinder transport trolley					238-370

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

# Taylor-Wharton, XL Series, Medium and High Pressure Vessels

- ⊗ 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
- ⊗ 5 year warranty on vacuum



NEW

## Taylor-Wharton, XL Series, Medium and High Pressure Vessels for Liquid or Gaseous LN<sub>2</sub>, O<sub>2</sub> and Argon

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).

All models require a trolley for transportation with the exception of XL-65HP which has built-in castors.

Non-magnetic wheels are also available, please contact our Technical Office on +44 (0)1342 337447 for details.

### 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 <sup>3</sup> /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
<b>Accessories</b>					
Transport Trolley	238-370	238-370	238-370	238-370	———

# Safety Carry Truck / Trolley

- ⊗ Safe transport of LN<sub>2</sub> dewars and refrigerators
- ⊗ Accommodates most vessels up to 50L
- ⊗ Strong and manoeuvrable
- ⊗ Latching post provides improved stability
- ⊗ Ideal for transporting Taylor-Wharton LD10, Classic 25, LD25, LD35, LD50 models



NEW

## 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.

### Specification

Material	Tubular Steel
Maximum load, kg	140
Maximum diameter of vessel accommodated, mm	480
Dimensions (h <sub>x</sub> w <sub>x</sub> d), mm	1110x547x248
Weight, kg	8
Wheel size (dia.xw), mm	220x65

Cat. No.	Description
238-010	Safety carry truck



### Roller Bases

This sturdy 5 wheel dolly enables safe and easy movement of refrigerators and dewars. Four models are available to accommodate various models of Taylor-Wharton refrigerators and dewars.

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

# Jencons, Liquid-Dispensing Tip-Truk

- ⊗ Designed for the safe transport and pouring of LN<sub>2</sub> from Taylor-Wharton LD Series dewars (25 and 35L)
- ⊗ The dewar sits in a cradle sling secured by a strong clamping arm
- ⊗ A wide, square, castor-mounted base provides stability and manoeuvrability
- ⊗ Two locking castors permit safe pouring



Cat. No.	Description
238-011	Tip-Truk for LD25 dewars
238-012	Tip-Truk for LD35 dewars



## Liquid Dispensing Tipping Stand

Mobile tipping stand for the LD25 liquid dewars. Enables safe dispensing of LN<sub>2</sub> into small containers.

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



## Cylinder Transport Trolley XL Series

This transport trolley has been designed for the safe transport of XL Series cylinders. It is suitable for use with the XL-160, and other similar cylinders.

Cat. No.	Description
238-370	Cylinder transport trolley for XL-160

## Measuring Rod

A calibrated plastic measuring rod to clearly show the liquid nitrogen ( $\text{LN}_2$ ) level in a dewar in millimetres and inches.

Cat. No.	Description
238-096	Measuring rod, calibrated plastic

## Liquid Nitrogen ( $\text{LN}_2$ ) Dipper

A safe and convenient dipper for removing small quantities (11ml) of liquid nitrogen ( $\text{LN}_2$ ) from dewars or refrigerators.

Cat. No.	Description
238-103	$\text{LN}_2$ Dipper

## Transfer Hoses for $\text{LN}_2$

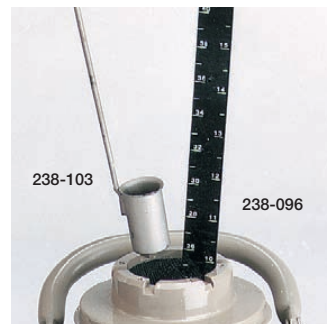
Flexible, stainless steel hoses, 12mm nominal bore, are available in 1.2 and 1.8m lengths to fit Taylor-Wharton XL cylinders and liquid withdrawal devices.

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

## Liquid Withdrawal Device and Phase Separators

The liquid withdrawal device enables the Taylor-Wharton LD25, LD35 and LD50 to conveniently transfer  $\text{LN}_2$  at rates up to 8 litres per minute. The low pressure, 0.5bar relief valve assures safe dispensing through a phase separator, eliminates turbulence and significantly reduces the losses that sometimes occur when transferring pressurised cryogenic liquids to open containers. Optional flexible transfer hoses are available, see below.

Cat. No.	Description	For model
238-093	Liquid withdrawal device with phase separator	LD25, LD35, LD50
238-019	1.2 m transfer hose for fitting to above 238-093, 12mm bore	
238-014	1.8m transfer hose for fitting to above 238-093, 12mm bore	
238-015	Model 80 phase separator 35mm (dia) x 57mm long	
238-017	Model 82 phase separator 25mm (dia) x 25mm long	



# Simport, Cryovials<sup>®</sup>

NEW



238-500 to 238-505 Capinserts sold separately

A range of round bottom and self-standing cryogenic vials for storing biological material at temperatures as low as  $-196^{\circ}\text{C}$ . These should only be used in the vapour phase of liquid nitrogen. 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  $\frac{1}{4}$  turn.

The tubes and caps are both manufactured from polypropylene, with the same coefficient of expansion, which

further enhances the leakproof qualities of these cryovials at changing temperatures. Tubes are provided with a white marking area for sample identification, can be colour coded by using a Capinsert<sup>™</sup> (see page 115) 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. Vials are also autoclavable.



## Simport, Cryovials®

### 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.

### Cryovials® with a silicone washer seal and external threads

The addition of a silicone seal fitted inside the cap to ensure a positive seal at any temperature, even the very lowest cryogenic temperatures.

### Cryovials® with a silicone washer seal and internal threads

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

Cat. No.	Description	Volume, ml	Dimensions (dia)xh, mm	Shape	Pack
<b>Cryovials with a lip seal design and external threads</b>					
238-500	Cryovial®	1.2	12.5x41	Self-standing	1000
238-501	Cryovial®	2	12.5x46	Round bottom <sup>1</sup>	1000
238-502	Cryovial®	2	12.5x48	Self-standing	1000
238-503	Cryovial®	3	12.5x70	Self-standing	1000
238-504	Cryovial®	4	12.5x76	Self-standing	1000
238-505	Cryovial®	5	12.5x90	Self-standing	1000
<b>Cryovials with a silicone washer seal and external threads</b>					
238-506	Cryovial®	1.2	12.5x43	Self-standing	1000
238-507	Cryovial®	2	12.5x48	Round bottom <sup>2</sup>	1000
238-508	Cryovial®	2	12.5x49	Self-standing	1000
238-509	Cryovial®	3	12.5x72	Self-standing	1000
238-510	Cryovial®	4	12.5x76	Self-standing	1000
238-511	Cryovial®	5	12.5x93	Self-standing	1000
238-512	Cryovial® <sup>3</sup>	10	17x84	Self-standing	500
<b>Cryovials with a silicone washer seal and internal threads</b>					
238-513	Cryovial®	1.2	12.5x41	Self-standing	1000
238-514	Cryovial®	2	12.5x48	Self-standing	1000
238-515	Cryovial®	2	12.5x48	Round bottom <sup>4</sup>	1000
238-516	Cryovial®	4	12.5x70	Round bottom <sup>4</sup>	1000
238-517	Cryovial®	4	12.5x72	Self-standing	1000
238-518	Cryovial®	5	12.5x90	Round bottom <sup>4</sup>	1000

238-506 to 238-511  
Capinserts® sold  
separately



238-512



238-513 to 238-518  
Capinserts® sold  
separately



Notes:

1. Can be centrifuged up to 17,000g.
2. Can be centrifuged up to 17,000g.
3. Polyethylene cap. Supplied in bags of 50.
4. Can be centrifuged up to 14,000g

# Simport, Cryovial® Workstation Rack

This compact, stackable, polypropylene rack holds up to 50 cryogenic vials and makes use of the universal locking system, enabling any self-standing cryovials with universal locking bases to lock into place. Once locked in the vials do 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.



**NEW**

Cat. No.	Description	Dimensions, lwxh, mm	Colour	Pack
238-531	Cryovial® workstation rack	250x200x100	Blue	4
238-532	Cryovial® workstation rack	250x200x100	Red	4
238-533	Cryovial® workstation rack	250x200x100	Lilac	4

## Simport, Capinserts™ for Cryovials®

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

Cat. No.	Description	Colour	Pack
238-519	Capinserts™	White	500
238-520	Capinserts™	Blue	500
238-521	Capinserts™	Red	500
238-522	Capinserts™	Green	500
238-523	Capinserts™	Yellow	500
238-524	Capinserts™	Tan	500
238-525	Capinserts™	Grey	500
238-526	Capinserts™	Lilac	500
238-527	Capinserts™	Orange	500
238-528	Capinserts™	Violet	500
238-529	Capinserts™	Pink	500
238-530	Capinserts™	Assorted <sup>1</sup>	500

<sup>1</sup> Five bags of 100 each of white, blue, red, green and yellow

## CryoCanes

Aluminium canes with clips to hold cryovials. For use with 278mm 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
238-052	CryoCanes, aluminium with clips	10

## Cryotubes

Cryotubes are available in cardboard or aluminium. Cardboard cryotubes offer an economic alternative to PVC or aluminium sleeves/tubes. Aluminium cryotubes have a viewing slot and can hold six 1.2 or 2.0ml cryovials or three 5.0ml cryovials without the need for a cane. The locking cap on the aluminium cryotube features a flat writing area for identification marks.

Cat. No.	Description	Pack
238-039	Cardboard cryotube	100
238-051	Aluminium cryotube	10



# Cryo-gloves

Developed for laboratory use to provide protection against extreme cold, freezer burns and frost bite. They are ideally suited to retrieving and placing samples in cryogenic atmospheres. For retrieving materials from liquid nitrogen atmospheres the waterproof versions are recommended.

These gloves are manufactured from a highly efficient Poly-olefin insulation with an outer nylon skin which is laminated to a micro porous film. This makes the products very flexible in use and water resistant. In addition all seams are double stitched for added strength and long life stress areas are triple stitched.

The gloves **MUST NOT BE IMMERSUED IN LIQUID NITROGEN**, worn near an open flame or in a hazardous area in which ignition could occur.



**NEW**

- ⊗ Provide protection against extreme cold, freezer burns and frost bite
- ⊗ Essential for low temperature work, including the handling of dry ice
- ⊗ Flexible and water resistant
- ⊗ Double stitched seams for added strength
- ⊗ Available in a variety of lengths and sizes

## Cryo-gloves



Glove Length	Size	Pack	Standard Cryo-gloves Cat. No.	Waterproof Cryo-gloves* Cat. No.
Wrist	Small	1 pair	211-257	211-263
Wrist	Medium	1 pair	211-258	211-264
Wrist	Large	1 pair	211-259	211-265
Mid-arm	Medium	1 pair	211-002	211-012
Mid-arm	Large	1 pair	211-001	211-011
Mid-arm	Extra large	1 pair	211-003	211-013
Elbow	Medium	1 pair	211-260	211-266
Elbow	Large	1 pair	211-261	211-267
Elbow	Extra large	1 pair	211-262	211-268
Shoulder	Medium	1 pair	211-005	211-251
Shoulder	Large	1 pair	211-004	211-250
Shoulder	Extra large	1 pair	211-006	211-252

\* Recommended for use when retrieving materials from liquid nitrogen

## 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
610-015	Faceshield

610-015



NEW



NEW

211-008

211-005

## Cryo-aprons

Cryo-aprons are essential for protection against extreme cold when accessing samples in cryogenic liquids and handling low temperature objects. Manufactured from highly efficient polyolefin insulation with an outer nylon skin which is laminated to a micro porous film. They retain flexibility even when exposed to cold atmospheres for long periods. All seams are double stressed for added strength and long life stress areas are triple stitched. Available in 3 sizes with fully adjustable straps.

Cat. No.	Description	Size	Length, mm	Pack
211-009	Cryo-apron	Small	890	1
211-008	Cryo-apron	Medium	1050	1
211-007	Cryo-apron	Large	1190	1

# Industrial Cryo-gloves

Industrial Cryo-gloves have been designed for use in demanding environments where durability and high abrasion resistance are required in a cryogenic glove. These gloves are essential for handling all types of low temperature materials and carrying out specialised tasks. They provide protection against extreme cold, freezer burns and frost bite with a rugged outer shell which is made from nylon Cordura and a waterproof, breathable membrane laminated to the underside.

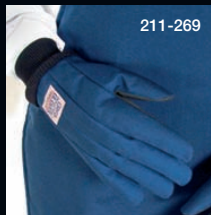
The insulating layers and inner glove are constructed in three layers: two layers are insulation and a lining material, which has a high insulating value and is specially designed to absorb and wick away moisture from the skin. Between the outer shell and the insulating layers is a 100% waterproof, breathable, seamless inner protective glove. This layer acts as a barrier, stopping any moisture that penetrates the outer shell from reaching the insulating layers.



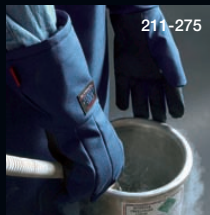
NEW

- ⊗ Designed for use in demanding environments
- ⊗ Constructed in three layers
- ⊗ Inner protective glove is both waterproof and breathable
- ⊗ Available in three different lengths

## Industrial Cryo-gloves



211-269



211-275



211-272

Applications include:

- ⊗ Liquid nitrogen atmospheres
- ⊗ Liquid oxygen atmospheres
- ⊗ Liquid helium atmospheres
- ⊗ Liquefied natural gas in enclosed systems
- ⊗ Dry ice
- ⊗ Low temperature freezers
- ⊗ Blast freezers
- ⊗ Walk-in freezers
- ⊗ Cold rooms
- ⊗ Handling of super-cooled material

Wrist length gloves are provided with a knitted cuff to allow the sleeves of the garment not to restrict the operators use. Gauntlets are elbow length with an adjustable strap at the opening which allows secure closure over any size of garment. Mid arm length industrial cryo-gloves are also available, these gloves come up to the mid arm without any straps making them easy to put on and take off.

## Industrial Cryo-gloves

Cat. No.	Description	Size	Pack
211-269	Industrial cryo-gloves wrist length	Medium	1 pair
211-270	Industrial cryo-gloves wrist length	Large	1 pair
211-271	Industrial cryo-gloves wrist length	Extra large	1 pair
211-272	Industrial cryo-gloves gauntlets	Medium	1 pair
211-273	Industrial cryo-gloves gauntlets	Large	1 pair
211-274	Industrial cryo-gloves gauntlets	Extra large	1 pair
211-275	Industrial cryo-gloves mid-arm length	Medium	1 pair
211-276	Industrial cryo-gloves mid-arm length	Large	1 pair
211-277	Industrial cryo-gloves mid-arm length	Extra large	1 pair

These gloves MUST NOT BE IMMERSSED IN LIQUID NITROGEN.

211-278 shown with 211-269



## Industrial Cryo-apron

This industrial cryo-apron is essential for protection against extreme cold when accessing samples in cryogenic liquids and handling low temperature objects. Like the industrial cryo-gloves this industrial cryoapron has been designed for use in demanding environments.

Cat. No.	Description	Size	Pack
211-278	Industrial cryo-apron	Large	1

NEW

# Vac-Seal, All Stainless Steel Dewars & Glass Dewars with Steel Containers

## Vac-Seal, 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
238-115	0.5	65	87	180	204
238-111	1.0	85	107	206	232
238-112	1.0	100	122	157	177
238-113	2.0	100	122	285	313
238-114	3.0	185	200	160	190
238-116	6.0	185	200	270	300



## 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 CO<sub>2</sub>. 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				Stainless Steel Cased Glass Dewars			
Cat No.	Vented lid	Clamps on lid	Suitable for transportation	Cat No.	Vented lid	Clamps on lid	Suitable for transportation
238-130	No	No	No	238-147	Yes	Yes	Yes
238-133	No	No	No	238-150	Yes	Yes	Yes
238-136	No	No	No	238-153	Yes	Yes	Yes
238-131	Yes	Yes	Yes				
238-134	Yes	Yes	Yes				
238-137	Yes	Yes	Yes				

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



# Cooler, Standard, Extra Tuff and Magna Ice Buckets

- ⊗ Economical and effective bench-top ice storage
- ⊗ Can be used with a wide range of racks
- ⊗ Highly insulated
- ⊗ Lightweight yet robust
- ⊗ Supplied with lid



## Cooler, Standard, Extra Tuff and Magna Ice Buckets

A full range of inexpensive, expanded-polystyrene ice buckets designed for economical and effective storage of ice and dry ice. These Cooler ice buckets can also be used with our range of acrylic racks so that samples bedded in flake ice will keep cold and stable.

### Cooler Standard Ice Buckets

The Cooler Standard weighs only 114g, and has a capacity of 3.5L. Each Cooler is supplied complete with lid. Hygienic disposable polystyrene leak-proof inner liners are also available.

External dimensions: 200x200x190 (hwxwd), mm

### Cooler Extra Tuff Ice Buckets

A specially treated Cooler Standard, the Extra Tuff model has a rigid polystyrene outer coating, considerably extending its life. The Extra Tuff is supplied complete with lid and a hygienic disposable polystyrene leak-proof inner liner.

### Cooler Magna Ice Buckets

A large-capacity expanded-polystyrene Cooler, the Cooler Magna is identical in design to the Cooler Standard but with dimensions of 300x300x275 (hwxwd), mm. Lightweight at 307g the Cooler Magna is supplied complete with lid.

Cat. No.	Description	Capacity, L
190-024	Cooler Standard with lid	3.5
190-048	Cooler Extra Tuff with lid and inner liner	3.5
190-018	Cooler Magna with lid	10
526-077	Pack of 5 inner liners for Cooler Standard & Extra Tuff	

190-024



190-048



190-018



Tube racks sold separately

526-098



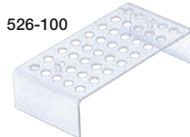
526-039



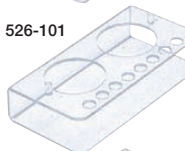
526-102



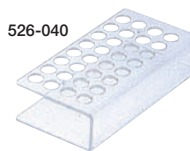
526-100



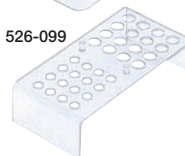
526-101



526-040



526-099



### Jencons Cooler, Centrifuge Tube Racks

A wide range of quality acrylic centrifuge tube racks for use with your Cooler ice bucket. Each rack when positioned will allow samples to be kept stable and cool for long periods of time. External dimensions for all racks are: 40x160x80 (hwxwd), mm

Cat. No.	Description	To hold
526-098	Cooler rack	15x15ml centrifuge tubes
526-102	Cooler rack	8x50ml centrifuge tubes
526-101	Cooler rack	2x Falcon tubes and 8x1.5ml tubes
526-099	Cooler rack	16x1.5ml and 16x0.5ml tubes
526-040	Cooler rack	32x2ml cryotubes
526-039	Cooler rack	32x1.5ml microcentrifuge tubes
526-100	Cooler rack	40x0.5ml microcentrifuge tubes

# Cooler, Mini, Midi and Maxi Insulated Trays & Ice Bucket

- ⊗ Low profile bench-top ice storage
- ⊗ Can be used with a wide range of racks
- ⊗ Easy to clean
- ⊗ Highly insulated
- ⊗ Lightweight yet robust



## Cooler, Mini, Midi and Maxi Insulated Trays

The Cooler Mini, Midi and Maxi insulated trays are all designed to give good thermal storage of ice to maintain your samples and reagents in optimal condition on the laboratory bench. The three units will accept standard acrylic racks enabling safe support of microcentrifuge tubes.

The Cooler Mini will accept a single acrylic tube rack. These acrylic racks are available in a variety of configurations. The Cooler Midi is designed to accept two racks, whilst the Cooler Maxi will accept four racks for high throughput work or two racks plus all your reagents to provide a complete workstation. All three Cooler trays are manufactured from chemically-resistant rigid white polystyrene and are easy to clean.

Cat No.	Description	External Dimensions (h x w x d), mm
190-103	Cooler Mini tray	244x165x80
190-104	Cooler Midi tray	253x240x80
190-105	Cooler Maxi tray	424x253x80

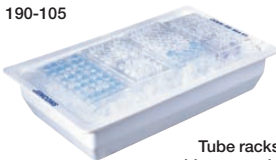
190-103



190-104



190-105



Tube racks  
sold separately

### Jencons Cooler, Centrifuge Tube Racks

A wide range of quality acrylic centrifuge tube racks for use with your Cooler ice bucket. Each rack when positioned will allow samples to be kept stable and cool for long periods of time. External dimensions for all racks are: 40x160x80 (h x w x d), mm

Cat. No.	Description	To hold
526-098	Cooler rack	15x1.5ml centrifuge tubes
526-102	Cooler rack	8x50ml centrifuge tubes
526-101	Cooler rack	2x falcon tubes and 8x1.5ml tubes
526-099	Cooler rack	16x1.5ml and 16x0.5ml tubes
526-040	Cooler rack	32x2ml cryotubes
526-039	Cooler rack	32x1.5ml microcentrifuge tubes
526-100	Cooler rack	40x0.5ml microcentrifuge tubes



190-101

190-102

## Cooler Ice Bucket

The Cooler ice bucket is specially designed to provide a rugged container for long term thermal storage of ice on the laboratory bench. The smooth, easy-to-clean, chemically-resistant, white polystyrene body and lid have a 25mm thick double-insulated wall filled with expanded polystyrene foam. Each Cooler ice bucket is made with four convenient support-holes to accept your single-channel pipettors. Ideal for laboratory use, the Cooler ice bucket is stable, leakproof and has a capacity of 3.5 litres.

Cat No.	Description	Ext. Dimensions (h x w x d), mm
190-101	Cooler ice bucket	280x300x200
190-102	Lid for Cooler ice bucket	—

# Dry-Seal Desiccators



- ⊙ Entirely grease-free
- ⊙ All parts interchangeable
- ⊙ Lift-off lids for storage above flange
- ⊙ Manufactured in borosilicate glass
- ⊙ Available with Seal-Cote anti-fragmentation shield
- ⊙ Manufactured to BS 3423: 1962
- ⊙ Pressure tested

## Glass Vacuum Dry-Seal Desiccators

Dry-seal safety desiccators. Fitted with a simple, efficient and unbreakable valve of PTFE, eliminating the need for a glass stopcock with its ground joint entry.

Dry-seal vacuum desiccators are supplied complete with white silicone sealing ring, gauze and PTFE stopcock.

### Dry-Seal, Grease Free Desiccators

Cat. No	Internal flange diameter	Outside diameter	Overall height
250-026	304mm	375mm	432mm
250-028	254mm	318mm	375mm
250-030	203mm	254mm	320mm
250-032	152mm	197mm	254mm
250-034	101mm	140mm	206mm

Supplied complete with sealing ring, gauze and PTFE stopcock.

## Glass Vacuum Dry-Seal Desiccators with Seal-Cote Protection

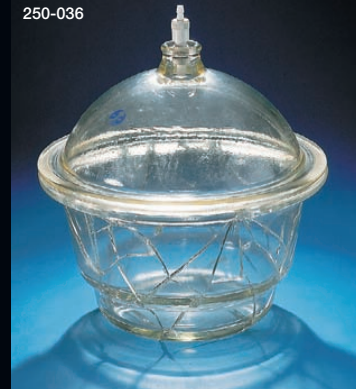
This range of dry-seal desiccators is supplied with an applied fragmentation shield coating with excellent chemical resistance. Fitted with a simple, efficient and unbreakable valve of PTFE, eliminating the need for a glass stopcock with its ground joint entry. These desiccators have a transparent Seal-Cote coating for use in areas where environmental conditions are such that possible external damage could be caused to vacuum glassware.

Dry-seal desiccator (Seal-Cote protected) is supplied complete with sealing ring, gauze and PTFE stopcock.

Cat. No	Internal flange diameter	Outside diameter	Overall height
250-036	304mm	375mm	432mm
250-039	254mm	318mm	375mm
250-042	203mm	254mm	320mm
250-045	152mm	197mm	254mm
250-048	101mm	140mm	206mm

Supplied complete with sealing ring, gauze and PTFE stopcock.

250-036



### The Dry-Seal Method

A simple and effective end to the problem of greased flanges. The rubber 'O' ring is simply placed in the base flange groove, making the necessary seal between lid and base.

# 4000X and 8000X Water Stills

The 4000X and 8000X are fully automatic, vertical boiler water stills, producing 4 and 8L/hr of ultra-pure pyrogen-free distillate, from any potable tap water supply. They are simple to operate and easy to clean.

- ⊗ Water flow rate automatically set and maintained
- ⊗ Automatic switch-off of water and heaters when distillate reservoir is full
- ⊗ Flowswitch automatically switches off heaters should water flow fall to an inadequate level
- ⊗ Borosilicate glassware and silica sheathed heaters
- ⊗ Fireproof toughened glass door
- ⊗ Boiler protected by external, independent thermal cut-out
- ⊗ Attractive zinc-plated steel casing has excellent corrosion resistance
- ⊗ Compact design, for bench or wall mounting



For specifications, please see pages 134-135.

Cat. No.	Description
703-001	Autostill 4000X 4L/hr vertical boiler water still
703-007	Autostill 8000X 8L/hr vertical boiler water still



## Distillation

Glass Water Stills continue to be a most effective and economic method of producing ultra-pure water for laboratory use. During distillation, water passes through the vapour phase, which presents a particularly effective barrier to the passage of a wide range of impurities. Distilled water is extremely low in inorganic and organic contaminants, and is bacteria and pyrogen-free.

### Nova 4 Water Stills

The Nova 4 has been designed as a simple, low cost and reliable still. It has a tough stainless steel boiler and borosilicate glass condenser. Its metal non-corrosive heating element is protected by a thermostat. The Nova 4 produces a high quality distillate with a conductivity of 0.3µm/cm at a rate of 4L/hr at 230V or 2L/hr at 110V.

Cat. No.	Description	Voltage
703-062	Nova 4 distillation still*	220/240V
703-063	Nova 4 distillation still*	110V

\* Specifications for all stills are detailed on pages 134-135.

### Aquadest, Rollabout Trolleys/Carts

Robust rollabouts for holding and transporting your 50L distillate containers or aspirators. An under-shelf holds beakers and jugs. Strong steel construction, stove-enamelled finish, 4 strong castors with rubber tyres for silent running; 2 with brakes. Two trolleys available to hold any container up to 350mm and 380mm diameter.

Cat. No.	Description	Container Dia. max., mm
685-028	B-Safe, Aquadest rollabout trolley/ cart	350
685-029	B-Safe, Aquadest rollabout trolley/ cart	380



685-028



Supplied without aspirator

# AutoFour Range of Water Stills

- ③ Flow regulator automatically sets and maintains correct water flow rate
- ③ Fully automatic operation with 'switch-off' of water and heaters when distillate reservoir is full
- ③ Borosilicate glassware and silica sheathed heaters
- ③ Boilers protected by two independent thermal cut-outs
- ③ Efficient condenser design gives cool distillates
- ③ Zinc-plated steel casing has excellent corrosion resistance
- ③ For bench or wall mounting

## AutoFour Range of Water Stills

A range of four fully automatic horizontal boiler water stills, producing ultra-pure, pyrogen-free distillates.



### AutoFour

A competitive distillation unit producing 4L/hr of ultra-pure, pyrogen-free distillate from any potable water supply. The boiler is designed to minimise cleaning requirements and features a by-pass flushing arrangement to simplify acid cleaning.

Cat. No.	Description
703-025	AutoFour with wall bracket*

## AutoFour Range of Water Stills

### AutoFour WS

The AutoFour WS is similar to the AutoFour, but has its own water-softener to prevent the formation of scale in the boiler, eliminating the need for periodic boiler cleaning. Regeneration of the softener is easy and inexpensive, merely requiring flushing through with sodium chloride solution.

Cat. No.	Description
703-030	AutoFour WS with water softener and wall bracket*
703-035	Spare water softener

### D-Ionstill 4 Litre

The D-Ionstill is designed for connection to any standard laboratory deioniser, to produce an exceptionally high-purity distillate.

The still controls the flow of water from the deioniser, conserving deionised water – tap water is used to cool the condenser. Since deionised water is used the boiler should never require cleaning.

Cat. No.	Description
703-036	D-Ionstill (4L/hr) with wall bracket*

### D-Ionstill 8 Litre

A larger, twin boiler version of the D-Ionstill, producing 8L/hr of ultra pure, pyrogen-free distillate.

Cat. No.	Description
703-070	D-Ionstill (8L/hr) with wall bracket*

\* Specifications for these stills are detailed on pages 134-135.

703-036



703-030



## Freshman 4

The Freshman 4 offers the user an inexpensive all-glass still, designed for simplicity of operation. The unit produces a high-purity, pyrogen-free distillate at a rate of 4L/hr.

- ⊗ Low cost
- ⊗ Borosilicate glassware and silica sheathed heaters
- ⊗ Open construction gives easy access to glassware and heaters
- ⊗ Boiler thermostatically protected by external thermal cut-out
- ⊗ High efficiency condenser ensures cool distillate

Cat. No.	Description
703-051	Freshman-4 distillation unit*

\* Specifications for these stills are detailed on pages 134-135.

# Double Distillation Units

- ③ Flow regulator automatically sets and maintains correct water flow rate
- ③ Fully automatic operation with 'switch-off' of water and heaters when distillate reservoir is full
- ③ Borosilicate glassware and silica sheathed heaters
- ③ Each boiler is protected by two independent thermal cut-outs
- ③ Efficient condenser design gives cool distillates
- ③ Zinc-plated steel casing has excellent corrosion resistance
- ③ For bench or wall mounting



## Double Distillation Units

A range of three fully-automatic water stills, each producing 4L/hr of double distilled water. These stills incorporate all the features of the AutoFour range, ensuring that they are extremely simple to run and maintain. The distillates produced are of exceptional quality and are pyrogen-free.

### Double D Still

The Double D Still is designed to operate from any potable water supply. The front boiler is the first stage, making it easily accessible for cleaning – a bypass flushing arrangement simplifies acid cleaning. The second stage boiler should never need cleaning.

### Double D WS Still

The Double D WS is similar to the Double D still, but has its own water softener to prevent the formation of scale in the boiler and eliminate the need for periodic boiler cleaning. Regeneration of the water softener is easy and inexpensive, merely requiring flushing through with NaCl solution.

### Double D-Ionstill

The Double D-Ionstill offers the advantages of a three-stage purification system, with deionisation followed by two distillations. Any standard laboratory deioniser may be used. The still controls the flow of water from the deioniser, thereby conserving deionised water – tap water is used to cool the condensers. Since deionised water is used the boilers should never require cleaning.

### Double Distillation Stills

Cat. No.	Description
703-048	Double D Still with wall bracket
703-054	Double D WS Still with wall bracket
703-057	Double D-Ionstill with wall bracket
703-065	Distillate storage tank, 50L

Specifications for these stills are detailed on pages 134-135.



703-065 shown  
with still  
(703-025)

## Autostill Distillate Storage Tank

The Autostill Distillate Tank has a 50 litre inner storage tank of natural polypropylene (to maintain the ionic purity of the distillate) surrounded by a sturdy metal case which has detachable legs for bench mounting. A level-protection device (which connects directly to any of the range of automatic stills), prevents flooding. The AutoFour and the Double Distillation range of stills stand directly on top of the tank. The 4000X and 8000X models should be wall-mounted above the tank.

### Specification

Working volume, litres	50
Dimensions (wxdxh), mm	570x430x580 (with legs) 570x430x410 (without legs)
Weight, kg	17 (empty)

Cat. No.	Description
703-065	Autostill distillate storage tank

## Water Stills

## Specifications

Model	4000X	8000X <sup>3</sup>	AutoFour/ AutoFour WS	D-Ionstill	D-Ionstill 8L	Double-D Still/ Double-D WS <sup>3</sup>
Conductivity <sup>1</sup> , µS/cm	0.2	0.2	0.2	0.1	0.1	0.1
Min. water, kg/cm <sup>2</sup> supply pressure	0.3	0.8	0.3 0.8 (WS)	0.3	0.8	0.8
Water consumption	60L/hr	120L/hr	60L/hr	60L/hr	120L/hr	120L/hr
Deionised water consumption	————	————	————	4L/hr	8L/hr	————
Dimensions (hxxwxd), mm						
Overall	510x290x200	780x250x240	410x540x210	410x540x210	480x570x330	480x570x330
Water softener			350x180x180			350x180x180
Materials						
Casing	Zinc-coated steel	Zinc-coated steel	Zinc-coated steel	Zinc-coated steel	Zinc-coated steel	Zinc-coated steel
Stoved finish	Epoxy polyester	Epoxy polyester	Epoxy polyester	Epoxy polyester	Epoxy polyester	Epoxy polyester
Heaters	Silica	Silica	Silica	Silica	Silica	Silica
Boiler	Borosilicate glass	Borosilicate glass	Borosilicate glass	Borosilicate glass	Borosilicate glass	Borosilicate glass
Condenser	Borosilicate glass	Borosilicate glass	Borosilicate glass	Borosilicate glass	Borosilicate glass	Borosilicate glass
Electric supply	13A	27A	230/240V <sup>2</sup> , 50/60-Hz (all models) 13A		27A	27A
Heaters, kW	3x1	4x1.5	2x1.5	2x1.5	4x1.5	4x1.5
Weight, kg	10.5	18.5	10.6	10.6	20	20
Cat. No.	703-001	703-007	703-025	703-036	703-070	703-048
Autostill model with Water Softener	————	————	703-030	————	————	703-054

1. Conductivity at 25°C with dissolved CO<sub>2</sub> removed from distillate. Any ultra pure water in contact with the atmosphere has a conductivity of 1–2 µS/cm and pH ~ 5, due to a small amount of CO<sub>2</sub> (0.5 ppm) absorbed from the atmosphere. Deionisers and similar systems measure conductivity before the water contacts the atmosphere and absorbs CO<sub>2</sub> (during collection and use). As distillates are already open to the atmosphere before measurements can be made, it is necessary to remove this CO<sub>2</sub> to provide a comparable conductivity value.

2. 220V versions are available, please contact us on +44 (0)1342 337447.

3. 3-phase electricity supply versions are available as a special order, please contact us on +44 (0)1342 337447.

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## Water Stills

### Specifications

Model	Double D-Ionstill <sup>1</sup>	Freshman 4	Nova 4
Conductivity <sup>1</sup> , $\mu\text{S}/\text{cm}$	0.1	0.2	0.3
Min. water, $\text{kg}/\text{cm}^2$ supply pressure	0.8	0.3	0.3
Water consumption	120L/hr	60L/hr	60L/hr
Deionised water consumption	4L/hr	—————	—————
Dimensions (h $\times$ w $\times$ d), mm	480 $\times$ 570 $\times$ 330	530 $\times$ 520 $\times$ 130	440 $\times$ 210
Materials			
Casing	Zinc coated steel	Zinc coated steel	Stainless steel
Stoved finish	Epoxy polyester	Epoxy polyester	N/A
Heaters	Silica	Silica	Metal
Boiler	Borosilicate glass	Borosilicate glass	Stainless steel
Condenser	Borosilicate glass	Borosilicate glass	Borosilicate glass
Electric supply	230/240V 50/60Hz, 27A	230/240V 50/60Hz, 13A	110 or 220/240V 50/60Hz
Heaters, kW	4 $\times$ 1.5	2 $\times$ 1.5	1 $\times$ 2.4
Weight, kg	20	4.35	2.5
<b>220/240V Models</b>	—————	—————	<b>703-062</b>
<b>230/240V Models<sup>2</sup></b>	<b>703-057</b>	<b>703-051</b>	—————
<b>110V Models</b>	—————	—————	<b>703-063</b>

1. Conductivity at 25°C with dissolved CO<sub>2</sub> removed from distillate. Any ultra pure water in contact with the atmosphere has a conductivity of 1–2  $\mu\text{S}/\text{cm}$  and pH ~ 5, due to a small amount of CO<sub>2</sub> (0.5 ppm) absorbed from the atmosphere. Deionisers and similar systems measure conductivity before the water contacts the atmosphere and absorbs CO<sub>2</sub> (during collection and use). As distillates are already open to the atmosphere before measurements can be made, it is necessary to remove this CO<sub>2</sub> to provide a comparable conductivity value.

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# Insulated Carriers

## 'Carrisafe' Specimen Carrier

The Carrisafe is an insulated specimen carrier with two layers of adjustable divisions to accommodate specimens ranging in size from as small as 12mm square up to the full size of the carrier in increments of 12mm. One layer consists of 16 divisions measuring 60x45mm and the other layer consists of eight divisions measuring 50x45mm, both being adjustable. The carrier has a rigid, break-resistant, nontoxic, polystyrene construction. With its full body Isofoam polyurethane insulation, it is designed to give superior long lasting temperature performance. It has a securely fitting lid and carry handle.

- ④ Transports hazardous specimens in upright position
- ④ Adjustable divisions to accommodate a variety of sample sizes
- ④ Rigid, easy-to-clean, lightweight construction
- ④ Highly insulated
- ④ Secure lid and carrying handle



Cat. No.	Description	Dimensions (hxdwxw), mm
190-021	'Carrisafe' complete with divisions	390x290x370



## Cooler Major

The Cooler Major has a rigid clinically-clean, break-resistant, nontoxic, lightweight, polypropylene construction. With its full body isofoam polyurethane insulation, it is designed to give superior long lasting cold performance. It has a securely fitting lid and carry handle.

Cat. No.	Description	Capacity, L	Dimensions (hxdxw), mm	Pack
190-016	Cooler Major	25	390x290x370	1

## UNICEF Vaccine Carrier

Rigid, impact-resistant, non-toxic polystyrene carrier with polyurethane thermal insulation. This carrier is recommended by UNICEF for the transportation of vaccines under tropical conditions. It is a small thermally insulated box with tight sealing lid and carrying handle. It maintains temperatures within the box below 8°C for at least 8 hours and reaches 10°C after 32 hours. An ideal choice for long distance vaccine deliveries.

Dimensions with carrying handle: External 320x250x240mm (hxdxw)  
Internal 250x200x180mm (hxdxw)

Cat. No.	Description	Pack
190-031	Vaccine carrier complete with 7 ice packs	1

## Cold/Hot Gel Packs & Gel Pack Trays

Rigid hermetically-sealed polythene containers, holding a non-toxic gel with excellent temperature-absorbing qualities, for increasing the storage period in insulated containers. These gel packs aid with the transport of temperature-sensitive materials such as serums, test samples, tissue matter and pharmaceuticals.

The gel pack trays double as refrigerated trays on the benchtop, shaped to hold bottles/containers securely. Provided in packs of 2, they can be positioned on both the top and bottom of containers for extra cooling.

Cat. No.	Description	Pack
190-049	Standard cold/hot gel pack	1
190-060	Cold/hot gel pack trays	2

190-016



190-031



190-049



190-060



# Ballotini Solid Soda Glass Balls

Ballotini solid glass balls are produced from high quality and pure soda-lime glass. The unique washing and polishing process does not involve the addition of hydrofluoric acid and thus gives the balls a pure shiny surface without contamination.

Ballotini main applications include:

- ⊗ Chemical plants (where large inert surface areas are required) and for filters, e.g. fractionating columns
- ⊗ Resin filler
- ⊗ Shot blasting
- ⊗ Burnishing (metal finishing)
- ⊗ Gas chromatography



## Ballotini with size range from 0.04mm to 3.5mm

### Specification

SiO <sub>2</sub>	72.0%
Na <sub>2</sub> O	13.8%
CaO	9.0%
MgO	4.0%
Al <sub>2</sub> O <sub>3</sub>	1.0%
K <sub>2</sub> O, Fe <sub>2</sub> O <sub>3</sub>	0.2%
(Slight deviations are possible. PbO free <0.01%).	
Hardness according to Mohs	≥6
Elasticity module, GPa	63
Specific weight, kg/dm <sup>3</sup>	2.5
Bulk weight, kg/dm <sup>3</sup>	1.5
Abrasion after 9h grinding*	29 weight %

\* Test conditions:

DRAIS laboratory mill PML H/V, speed 13.4m/s, filling grade 70 vol.%  
Milling suspension: 4Kg Water and 1Kg Titaniumdioxide.

Cat. No.	Grade	Diameter Range, mm*	Pack Size, kg
136-008	5210	0.0 to 0.050	1
136-007	5211	0.040 to 0.070	1
136-006	5212	0.070 to 0.110	1
136-005	5213	0.090 to 0.15	1
136-003	5214	0.10 to 0.20	1
136-002	5215	0.15 to 0.25	1
136-001	5216	0.20 to 0.30	1
136-017	5223	0.30 to 0.40	1
136-015	45015	0.40 to 0.60	1
136-014	4502	0.50 to 0.75	1
136-011	4504	1.00 to 1.25	1
136-010	4505	1.25 to 1.55	1
136-009	4506	1.55 to 1.85	1
136-021	4507	1.70 to 2.00	1
136-022	4511	2.85 to 3.30	1

\* Note approximately 80% of any consignment should be within the diameter range specified for each grade

## Ballotini with size range from 4mm to 12mm

### Specification

SiO <sub>2</sub>	66.0%
Na <sub>2</sub> O	16.0%
K <sub>2</sub> O	0.01%
CaO	7.0%
Al <sub>2</sub> O <sub>3</sub>	5.0%
B <sub>2</sub> O <sub>3</sub>	3.0%
MgO	2.0%
ZnO	1.0%
(Slight deviations are possible. PbO free).	
Hardness according to Mohs	≥6
Elasticity module, GPa	63
Specific weight, kg/dm <sup>3</sup>	2.5
Bulk weight, kg/dm <sup>3</sup>	1.5

Cat. No.	Grade	Diameter Range, mm*	Pack Size, kg
136-023	5009	3.70 to 4.30	1
136-024	5011	4.70 to 5.30	1
136-025	5012	5.70 to 6.30	1
136-026	5013	6.70 to 7.30	1
136-027	5014	7.60 to 8.40	1
136-028	5015	8.60 to 9.40	1
136-018	5016	9.50 to 10.50	1
136-019	5017	10.50 to 11.50	1
136-020	5018	11.50 to 12.50	1

\* Note approximately 80% of any consignment should be within the diameter range specified for each grade

# Safety Waste Disposal Bags

## Polyethylene B-Safe Bin Box Bags

Supplied in benchtop dispenser boxes. Heat sealed for leak protection. Each bag is box-shaped and has a double-string neck-pull. No printing. Clear Polyethylene (500 gauge).



Cat. No.	Description	Size (wxhxd), mm	Pack
526-089	Bin box bags	150x150x150	25
526-090	Bin box bags	200x200x250	25
526-091	Bin box bags	280x280x510	25
526-092	Bin box bags	490x270x400	25

## Labsak, General Purpose Sack

Puncture and tear resistant. Laminated general purpose laboratory sack in natural polypropylene. Suitable for general purpose use in laboratories and workshops. Ideal for disposal purposes. Long term resistance to heat and UV and stabilised for weathering. Not suitable for autoclaving.

Cat. No.	Description	Size, mm	Pack
121-024	Labsaks	495x910	25

## Mini-Grip Style Bags

Pressure sealing transparent polyethylene bags. Plain or with 'write-on' labels.

Cat. No.	Size, mm	Type	Pack
121-086	56x56	Plain	500
121-087	110x137	Plain	500
121-088	150x225	Plain	500
121-089	250x350	Plain	500
121-090	375x500	Plain	500
121-091	56x56	Write-on label	500
121-092	100x137	Write-on label	500
121-093	125x187	Write-on label	500
121-094	150x225	Write-on label	500

## Polyethylene Plain Storage Bags

Clear polyethylene (250 gauge) general purpose storage bags and (500 gauge) heavy duty bags. All are suitable for heat sealing.

Cat. No.	Size, mm	Gauge	Pack
121-080	150x200	250	500
121-081	200x250	250	500
121-082	300x450	250	250
121-040	150x200	500	100
121-041	255x355	500	50
121-042	355x510	500	50
121-043	455x760	500	50

121-024



121-086 to 121-094



121-080 to 121-043



526-081 to 526-085



121-067 to 121-071



## Radiation B-Safe Bin Box Bags

Supplied in bench top dispenser boxes. Heavy gauge polyethylene bags (500 gauge). Heat sealed for leak protection. Each bag is box-shaped and has a double-string neck-pull. Printed with yellow radioactive warning symbol and a maximum fill line.

Cat. No.	Description	Size (wxhxd), mm	Pack
526-082	Bin box bags	130x130x140	25
526-083	Bin box bags	150x150x150	25
526-084	Bin box bags	200x200x250	25
526-085	Bin box bags	490x270x400	25
526-081	Bin box bags	280x280x510	25

## Radiation B-Safe Bags

Supplied in bench top dispenser boxes or loose packs. Heavy duty (500 gauge) polyethylene bags printed on one side; yellow centre with black trefoil and the wording 'Caution Radioactive Material'. Warning is given in English, French and German.

Cat. No.	Description	Size, mm	Pack
<b>Dispenser Box</b>			
121-067	Radiation bags	150x200	100
121-068	Radiation bags	255x355	50
121-069	Radiation bags	355x510	50
121-070	Radiation bags	455x760	50
121-071	Radiation bags	790x760	25
<b>Loose Pack</b>			
121-033	Radiation bags	150x200	100
121-034	Radiation bags	255x355	50
121-035	Radiation bags	355x510	50
121-036	Radiation bags	455x760	50
121-037	Radiation bags	790x760	25

## B-Safe, Biohazard Bags

Supplied in loose packs or in benchtop dispenser boxes. Yellow heavy-gauge biohazard bags for heavy-duty disposal. Printed both sides with biohazard symbol and the wording 'Biohazard, Danger of Infection' and 'Burn Without Opening' on two largest bags. Warning in English, French and German. Polyethylene (500 gauge).

Cat. No.	Description	Size, mm	Pack
<b>Dispenser Box</b>			
121-072	Biohazard bags	255x355	50
121-073	Biohazard bags	455x760	50
121-074	Biohazard bags	790x1015	25
<b>Loose Pack</b>			
121-027	Biohazard bags	255x355	50
121-028	Biohazard bags	455x760	50
121-029	Biohazard bags	790x1015	25

## Biohazard Mini-grip Specimen Bags

Polyethylene specimen bags (220x150x140mm) with front compartment for specimen (150x140mm) and back pocket for report. Thumb and finger press seal across upper section. Plain for own labelling or printed with biohazard symbol.

Cat. No.	Description	Pack
121-031	Printed, mini-grip specimen bags	500
121-032	Plain, mini-grip specimen bags	500

## Self-Seal Biohazard Bags

Supplied in benchtop dispenser boxes. Tough, yellow biohazard bags with peel off permanent adhesive seal. Just remove backing and seal for safer transportation/ disposal. Warning in English, French and German, black printing on yellow background. Polyethylene (250 gauge).

Cat. No.	Description	Size, mm	Pack
121-103	Self-seal bags	200x300	200
121-104	Self-seal bags	300x450	200
121-105	Self-seal bags	450x600	200

121-072 to 121-074



121-032



121-031

121-103 to 121-105



## Bags

121-075 to 121-078



### B-Safe, Biohazard Bin Box Bags

Supplied in benchtop dispenser boxes. Each bag is box shaped and has a double string neck pull. Printed black biohazard symbol on yellow background with a maximum fill line.

Polyethylene (500 gauge).

Cat. No.	Description	Dimensions, mm	Pack
121-075	Bin box bags	150x150x150	25
121-076	Bin box bags	200x200x250	25
121-077	Bin box bags	490x270x400	25
121-078	Bin box bags	280x280x510	25

121-038

121-039



### Cliniclave Bags

These clinical waste bags are manufactured from tough 50 micron polypropylene film which is permeable to ethylene oxide and autoclavable at 134°C for 31/2 minutes at 32 psi. Designed to the recommendation of the Advisory Code of Practice. Clear with blue lettering. Side-welded for extra base strength.

Cat. No.	Description	Size (wxl), mm	Pack
121-039	Cliniclave bags	420x762	100
121-038	Cliniclave bags	610x762	100

121-025

121-026



### Polytemp, High-Low Autoclavable Bags

These Polytemp bags withstand temperatures from -129°C to +243°C. Polytemp bags protect their contents from contact with the heating apparatus in use.

Cat. No.	Description	Size (wxl), mm	Pack
121-026	Polytemp bags	609x559	100
121-025	Polytemp bags	357x432	100

121-100 to 121-102



### Autoclavable Hi-Temp Bio-Bags

Supplied in benchtop dispenser boxes. Transparent, clear, autoclavable, non-sterile biohazard bags. Suitable for temperatures up to 135°C, complete with black warning symbol on yellow background. Safety use instructions printed on each bag. Polypropylene (250 gauge).

Cat. No.	Description	Size, mm	Pack
121-100	Hi-temp bags	350x600	200
121-101	Hi-temp bags	650x800	200
121-102	Hi-temp bags	650x1000	200