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SciLabware Limited is one of the world's leading manufacturers of laboratory glassware and reusable plastics, supplying the scientific community with world renowned brands.

Our extensive product range features over 3,000 general purpose and specialised glassware and reusable plastic laboratory products carrying some of the best known names in science - Azlon®, MBL®, Pyrex®, Quickfit® and Rotaflo®.

From glass beakers and condensers to plastic measuring cylinders and washbottles, the comprehensive range of SciLabware consumables finds applications in all types of laboratory.

We work to the most rigorous International standards. Product excellence is achieved by the enforcement of strict quality standards and meticulous quality control, supported by the specialist skills of some of the worlds most experienced glassblowers and polymer technicians.

The result is a quality conscious culture committed to total customer satisfaction.



FM 2472

SciLabware is an ISO9001:2000 registered company











There are very few products made so well that the brand becomes a generic name for everything similar.

Pyrex® is one of the few.

Pyrex® borosilicate glass was developed in the early years of the 20th century to satisfy the demand for a material with high thermal resistance.

This property, coupled with excellent chemical durability, makes Pyrex® the ideal material for laboratory products.

Today more than 800 items of glassware carry the famous Pyrex® name including beakers, bottles, flasks, dishes and test tubes, all manufactured to the same exacting quality standards.

Quickfit® pioneered the concept of interchangeable joints in 1934. Today, the Quickfit® name is renowned throughout the world for quality and reliability.

Quickfit® ground-glass joints are precision manufactured with an accurate taper and smooth finish for leak-free performance and assured interchangeability.

The Quickfit® range comprises over 1,000 products, enabling the user to construct the widest choice of assemblies.

Quickfit® glassware is manufactured exclusively from Pyrex® borosilicate glass. This type of glass has a very low co-efficient of expansion, allowing use at both elevated and sub-zero temperatures. Quickfit® is the first choice of scientists who demand maximum performance and value for money.

















MBL® volumetric glassware has an international reputation for quality and performance.

MBL® is ideal for general volumetric applications and offers exceptional value for money. The range comprises over 300 products, one of the widest selections available, offering unbeatable choice, accuracy and performance.

Rotaflo® stopcocks are renowned for their performance and reliability. The range comprises a wide selection of general purpose stopcocks offering fine flow control and high vacuum versions, individually tested for guaranteed performance.

For more than half a century the **Azlon®** name has been synonymous with high quality affordable plastic laboratory ware.

Azlon® reusable plastics cover a broad range of applications in the modern laboratory, offering more than 800 products, including bottles, wash bottles, measuring cylinders, jugs and beakers.

Leadership in polymer science and many important innovations have combined to make Azlon® one of the most widely known and respected brands in durable plastic labware.

Azlon® products are manufactured in an ISO 9001:2000 accredited site that has benefited from major investment in blow and injection moulding equipment.



















The SciLabware range of glassware and reusable plastics is available to customers through a worldwide network of distributors.

If you need any help with sourcing, please contact our Customer Service Department for advice or visit our website www.scilabware.com.

Advice on selection of products and their usage is also available from our qualified scientists and glass and polymer technologists. Our aim is to provide the highest level of care - before, during and after the sale.

#### Head Office:

#### **SciLabware Limited**

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www.scilabware.com

#### **Glassware**

Glass is an inorganic mixture of metal oxides fused together at high temperatures, which upon cooling, solidifies into the clear, rigid, non-crystalline, versatile material known widely across the globe.



# Pyrex® Borosilicate Glass

All Pyrex®, Quickfit®, SVL® and many MBL® branded SciLabware products are manufactured from borosilicate glass (unless otherwise stated).

#### **Standards**

Pyrex® is a borosilicate glass which meets the specifications of the following standards:

ISO 3585, DIN 12217	Type 3.3 borosilicate glass
ASTM E-438	Type 1 Class A borosilicate glass
US Pharmacopoeia	Type 1 borosilicate glass
European Pharmacopoeia	Type 1 glass

Due to the demanding conditions that borosilicate glass is subjected to, maximum chemical toughness, minimum thermal expansion and high resistance to thermal shock make Pyrex® the ideal material for use in the laboratory.

A profusion of SciLabware Ltd products also conform to other standards set out for laboratory glassware; for example beakers comply to ISO 3819 and volumetric flasks comply to ISO 1042 and DIN 12664. Typically these standards will specify not only glass type, but also dimensional detail, volumetric accuracy and tolerances.

### **Chemical Composition**

Pyrex® glass has the following typical composition (% by weight):

SiO <sub>2</sub>	=	80.6%
$B_2O_3$	=	13.0%
Na <sub>2</sub> O	=	4.0%
Al <sub>2</sub> O <sub>3</sub>	=	2.3%

## **Physical Properties**

Coefficient of expansion (20 – 300°C)	=	3.3x10 <sup>-6</sup> K <sup>-1</sup>
Density	=	2.23g/cm <sup>3</sup>
Refractive index (Sodium D line)	=	1.474
Dielectric constant (1MHz, 20°C)	=	4.6
Specific heat (20°C)	=	750J/kg°C
Thermal conductivity (20°C)	=	1.14W/m°C
Poissons Ratio (25 - 400°C)	=	0.2

### **Chemical Properties**

Pyrex® borosilicate glass has a very high resistance to attack from water, acids, salt solutions, halogens and organic solvents. Only hydrofluoric acid, hot concentrated phosphoric acid and strong alkaline solutions cause appreciable corrosion of the glass.

# Hydrolytic resistance

For many applications, it is important that laboratory glassware has excellent hydrolytic resistance; e.g. during steam sterilisation procedures, where repeated exposure to water vapour at high temperature can leach out alkali (Na+) ions. Pyrex® borosilicate glass has a relatively low alkali metal oxide content and consequently a high resistance to attack from water. Pyrex® fits into Class 1 of glasses for hydrolytic resistance according to ISO 719 (98°C) and ISO 720 (121°C).

#### Acid resistance

Glasses with a high percentage weight of silica (SiO<sub>2</sub>) are less likely to be attacked by acids. Pyrex® borosilicate glass is over 80% silica and therefore remarkably resistant to acids (with the exception of hot concentrated phosphoric acid and hydrofluoric acid). Glass is separated into 4 acid resistance classes and Pyrex® corresponds to Class 1 in accordance with DIN 12116 and meets the requirements of ISO 1776.

#### Alkali resistance

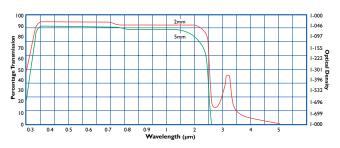
Alkaline solutions attack all glasses and Pyrex® can be classified as moderately resistant. The alkali resistance of Pyrex® borosilicate glass meets Class 2 requirements as defined by ISO 695 and DIN 52322.

#### Temperature resistance

Pyrex® borosilicate glass has excellent thermal properties at both high and low temperatures. The maximum recommended working temperature for laboratory glassware manufactured from Pyrex® is 500°C (for short periods of time only). Special care should be taken at temperatures above 150°C to ensure both heating and cooling are achieved in a slow and uniform manner (see Care and Maintenance of Laboratory Glassware).

Pyrex® also performs excellently at lower temperatures. Pyrex® can withstand conditions down to approximately -192°C and is suitable for use with liquid nitrogen. In normal laboratory use, temperatures of -70°C are easily sustained for lengthy periods. Again special care should be taken to avoid sudden changes in temperature, and cooling should be achieved in a slow uniform manner.

# Optical data



Pyrex® borosilicate glass is clear and colourless in appearance and thus transmits light through the visible range of the spectrum. This quality makes it ideal for work involving photochemical reactions, for example chlorinations. The graph (above) shows the degree of transmission of light as a function of wavelength in the ultra-violet, visible and infra-red regions of the spectrum. For the majority of glassware detailed in our catalogue, the thickness of the glass is 2–5mm.

Several SciLabware glass products, including media-lab bottles and volumetric flasks, are available in amber-coated glass. The glassware is coated on the exterior surface with a brown diffusion colour which results in a strong absorbtion in the short wavelength region up to 500nm. This feature is particularly useful when handling reagents that are light-sensitive.

# Glassblowing data

Listed in this catalogue are some Pyrex® and Quickfit® items that are suitable for further manipulation and processing. These items include stopcocks, ground glass joints, sinters and screwthreads. When working with these products, Glassblowers may find the following information useful regarding Pyrex® borosilicate glass:

Working point	=	1252°C
Softening point	=	821°C
Annealing point	=	565°C
Strain point	=	510°C

#### Pyrex® bottles with retrace codes



Pyrex® media bottles are used in many laboratory processes but they are also used in packaging, which often has to meet the strict requirements of the United States and European Pharmacopoeias (USP and EP), GMP and ISO 9000. To meet these stringent requirements, all Pyrex® media bottles are now printed with a

'Retrace Code'. This retrace code allows the product to be traced to the point of production and the matching batch. This code is our commitment to support your quality management documentation and can be easily downloaded from the SciLabware web site by keying in the 8-digit code shown on the side of the bottle. 'Retrace' codes can be found on all Pyrex® 1516/: 1517/: 1518/: 1519/: and 1520/: series bottles.

# Pyrex® bottles with plastic coating



The Pyrex® range of 1518: media-lab bottles have a plastic coating to provide protection from mechanical impact and to help reduce leakage of the contents should the glass break. The maximum

working temperature for these bottles is 135°C but long term exposure (>30 mins) should be avoided. Avoid exposure to direct heat from

a hotplate or a Bunsen flame. The 1518: media bottle is suitable for freezing at -30°C and can also be used in microwave ovens.

Please note that the plastic coating does not increase the permissible pressure at which the bottles can be used and a protective screen is recommended for all pressure work.

## Centrifuge tubes

This catalogue lists a number of Pyrex® and Quickfit® centrifuge tubes. Within the product information for each entry we advise the maximum Relative Centrifugal Force (RCF) they can be subjected to.

Before centrifuging, it is important to calculate the actual RCF values that will be generated. This can quickly be determined by using the following nomogram.

To calculate the RCF value at any point along the tube, measure the radius, in mm, from the centre of the centrifuge spindle to the particular point.

#### **RCF Values** 450 425 400 375 10,000 30,000 20,000 300 275 10.000 250 5000 225 4000 200 2000 1000 150 500 200 120 110 100 90 80 70

NB: The chosen point should be the base of the tube as this area will experience the maximum RCF.

Radius in mm from centre of

centrifuge spindle to point

along tube or bottle

Note the radius value from the right of the table and draw a line to the appropriate centrifuge speed value on the left hand column. The RCF value is the point where the line crosses the centre column.

The nomogram is based on the following equation:

Relative centrifugal

force (xg)

Speed of

(mggr)

Centrifuge

RCF = 
$$(11.17x10^{-7})$$
 RN<sup>2</sup>  
R = Rotational radius (in mm)  
N = Rotational speed (in RPM)

The allocated RCF values are for tubes in good condition. Do not use centrifuge tubes which are scratched, abraded or chipped as the strength will be seriously impaired.

#### Sintered discs

The SciLabware ranges of filtration glassware utilise sintered discs manufactured from Pyrex® borosilicate glass. Since they are manufactured from Pyrex® they are resistant to the majority of corrosive reagents, unaffected by ammonia, sulphuric acid and other solvents that are damaging to filter paper. The sintered glassware is available in five porosity classes from 0-4, as outlined in the table below. The pore sizes indicated, give a range of pores present within the sinter disc. Therefore, the size of particles that will be obstructed will generally be of a size at the upper end of the range.

Porosity Grade	ISO 4793 designation	Pore index (mic.)	Principal uses
0	P250	160 - 250	Coarse filtration, gas dispersion and support for other filter material
1	P160	100 - 160	Course precipitate filtration, gas dispersion, coarse grain material filtration
2	P100	40 - 100	Medium and crystalline precipitate filtration, medium filtration and washing of gases
3	P40	16 - 40	Analytical work with medium precipitates
4	P16	10 - 16	Analytical work with fine precipitates

In addition to the above detail, sinters should be treated under the same conditions as described in the general Pyrex® thermal properties as listed on page 8.

When using new sintered glassware for the first time, we recommend a wash with hydrochloric acid followed by several rinses with distilled water to remove any residual glass dust particles from the sinter.

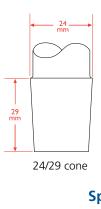
# Quickfit® Products

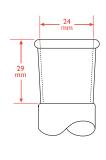


# Conical Joints - size designation

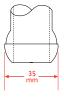
Size designation	Actual dia. of wide end (mm)	Actual dia. of narrow end (mm)	Nominal length of engagement (mm)
7/16	7.5	5.9	16
10/19	10.0	8.1	19
12/21	12.5	10.4	21
14/23	14.5	12.2	23
19/26	18.8	16.2	26
24/29	24.0	21.1	29
29/32	29.2	26.0	32
34/35	34.5	31.0	35
40/38	40.0	36.2	38
45/40	45.0	41.0	40
50/42	50.0	45.8	42
55/44	55.0	50.6	44
60/46	60.0	55.4	46

**Conical joints** 





**Spherical joints** 

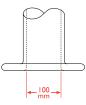




24/29 socket

Flat flange

S35 ball





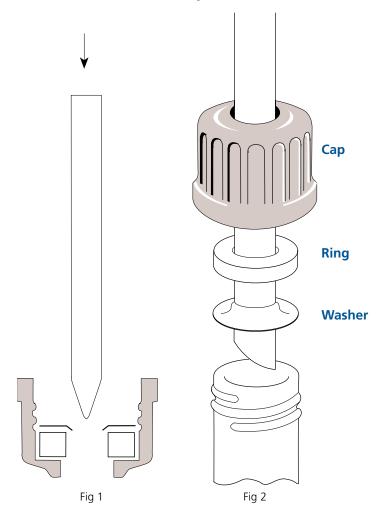
100mm bore flange

**Screwthread** 



28 screwthread

Quickfit® screwthread joints



### Screwcap assembly

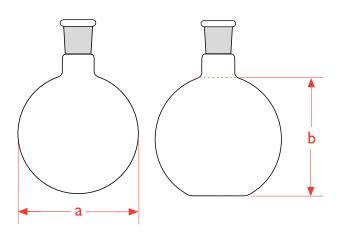
When using screwthreads it is important that the PTFE washer is fitted carefully and correctly. This is best achieved by opening out the washer to the correct diameter using a tapered former. This should be carried out with the silicone rubber ring and PTFE washer in position in the plastic cap as shown in Fig1. Withdraw the tapered former and remove the rubber ring and washer from the cap.

Fit each component separately to the fitting which is to be held, as shown in Fig 2, and screw the cap on to the thread. It is advisable that the ends of all fittings should be slightly tapered or fired in a Bunsen flame to remove sharp edges and produce a slight taper.

# Quickfit® flask dimensions

The body diameter of Quickfit® Round Bottomed and Flat Bottomed flasks comply with ISO 1773 (BS 6352).

Nominal	Approx	Approx	Nominal	Approx	Approx
capacity	bulb	bulb	capacity	bulb	bulb
ml	dia. 'a'	height 'b'	ml	dia. 'a'	height 'b'
	mm	mm		mm	mm
5	25	-	1000	132	115
10	30	-	2000	166	155
25	40	-	3000	188	-
50	50	40	5000	220	-
100	65	55	10000	279	-
150	75	65	20000	345	-
250	85	75	-	-	-
500	105	95	-	-	-



#### Volumetric Glassware

SciLabware Ltd manufactures two brands of volumetric glassware, Pyrex® and MBL®. As the name indicates Pyrex® volumetrics are manufactured solely from Pyrex® borosilicate glass. MBL® volumetric products are manufactured from borosilicate and soda-lime glass. Soda-lime glass is generally used for Class B products or where long term exposure to chemicals is unlikely, e.g. one mark pipettes.

Pyrex® volumetric glassware has superior thermal and chemical resistance and is better suited to glassware for storage of solutions, e.g. flasks.

The use of Pyrex® borosilicate glass for volumetric glassware means accuracy is retained over a longer working lifetime than their soda-lime equivalents. With everyday use, volumetric glassware requires recalibration. Soda-lime glass items will generally necessitate twice as many recalibrations as items constructed from borosilicate glass.

ASTM 542 and ISO 4787 international standards for calibration of laboratory volumetric glassware recommend that volumetric flasks are recalibrated at the following intervals (or sooner if chemical corrosion is observed): Borosilicate – 10 years; Soda-lime – 5 years.

### Inscriptions

SciLabware volumetric glassware is manufactured and calibrated in accordance with international ISO requirements. All of our volumetric glassware is marked with a set of inscriptions in accordance with any specific standard associated with it.

Tolerance	Class A – Highest level of accuracy.  Class B – General purpose work  calibrated to a lower level of accuracy
Standard	The standard to which the product conforms
Graduation	Pyrex® and MBL® volumetric glass is graduated in ml (millilitres) in accordance with ISO
IN	Calibrated to contain
EX	Calibrated to deliver
Blowout	Indication that last drop should be blown out of jet
Temp °C	All Pyrex® and MBL® volumetric glassware is calibrated at 20°C
Certification	All Class A Works Certified glassware bears a serial number for identification

and traceability.

#### Certification

Many of our range of volumetric products are available with certification. Our certificates confirm that the product has been tested for compliance to the appropriate standard. Below is an overview of the certification that is offered by SciLabware.

#### Works Certified Products



Pyrex® Class A Works Certified volumetric flasks, pipettes, cylinders and burettes are inscribed with an individual serial number and are supplied with an individual calibration certificate. Each certificate includes details of the actual volume, uncertainty estimation for the calibration and the required tolerance for compliance. Graduated pipettes, cylinders and burettes are calibrated at five separate points on the scale which is detailed on the certificate.

#### **Batch certificates**



For our ranges of Pyrex® and MBL® Class A volumetric flasks a downloadable batch certificate is available from the SciLabware website. The batch certificate contains detailed information pertaining to the specific production batch including average volume and standard deviation for the batch.

To download a batch certificate visit www.scilabware.com and go the 'downloads' section then follow the links for 'batch certificates'. Simply enter the unique serial number inscribed on the base of each flask and the batch certificate is downloaded as a pdf.

#### Re-calibration

Normally, volumetric glassware only needs re-calibrating after extensive or demanding usage, which may have affected the original accuracy.

Re-calibration is usually not necessary if:

- The glassware is new but been in storage for some time. Age does not affect accuracy.
- The glassware is only subjected to moderate temperatures such as cleaning in a washing machine or sterilising in an autoclave at 121°C.
- The glassware has been used for less than 5 years with no repeated use of corrosive chemicals or strong acids/ alkalis.

However, recalibration should definitely be considered under the following circumstances:

- The glassware is made from soda-lime glass and has been in use for 5 years.
- The glassware is made from borosilicate and has been in use for 10 years.
- The glassware has been subjected to temperatures in excess 150°C.
- The glassware is frequently used with strong acids or bases
- There are any signs of chemical corrosion e.g. frosting of internal glass surfaces.

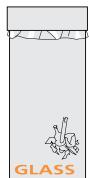
# Care and maintenance of laboratory glassware

SciLabware Ltd has a commitment to provide the highest quality glassware products. All of our glassware is manufactured with great care in order to provide you with a reliable piece of laboratory equipment. To obtain maximum life and performance from your glassware, correct handling is essential. The following notes will serve as a guide to new users and to remind more experienced handlers of the recommended procedures.

## General precautions

Before using any piece of glassware, take time to examine it carefully and ensure that it is in good condition. Do not use any glassware which is scratched, chipped, cracked or etched. Defects like these can seriously weaken the glass and make it prone to breakage in use.

- Dispose of broken or defective glassware safely. Use a purposedesigned disposal bin that is puncture resistant and clearly labelled.
- Lifting or carrying large glass flasks, beakers or bottles etc. by the neck or rim can be very dangerous. It is best to provide support from the base and sides.

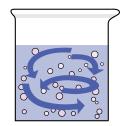




 Never use excessive force to fit rubber bungs into the neck of glass aspirators, test tubes, conical flasks, etc. Take care to select the correct size.



- Most SciLabware products are provided with durable, easy to use screwthread connectors, to allow installation of any tubing. When attaching tubing, ensure the screwthread connector is removed from the glassware, the tubing is lubricated and protective gloves are worn. Never use excessive force to connect rubber hose or tubing.
- When stirring solutions in glass vessels, such as beakers and flasks, avoid using stirring rods with sharp ends which can scratch and weaken the glassware.



 Do not mix concentrated sulphuric acid with water inside a glass measuring cylinder.
 The heat of reaction can break the seal at the base of the cylinder.

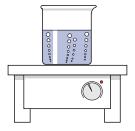


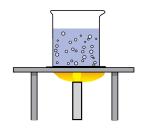
- We recommend that all glassware is washed before it is first used.
- Wash glassware promptly after use to avoid hard dried residues.
   Use a biodegradable, phosphate free detergent, specially formulated for laboratory use.
- Do not use cleaning brushes which are badly worn and where the metal spine may scratch the glass.

### Heating and cooling

The maximum recommended working temperature for Pyrex® and Quickfit® glassware is 500°C (for short periods only). However, once the temperature exceeds 150°C extra special care should be taken to ensure that heating and cooling is achieved in a slow and uniform manner.

- Do heat vessels gently and gradually to avoid breakage by thermal shock. Similarly, allow hot glassware to cool gradually and in a location away from cold draughts.
- If using a hotplate, ensure that the top plate is larger than the base of the vessel to be heated. Also, never put cold glassware onto a hotplate which is already well heated. Warm up gradually from ambient temperature.





- If using a Bunsen burner, employ a soft flame and use a wire gauze with ceramic centre to diffuse the flame.
- Pyrex® borosilicate glass is microwave safe. However, as with any microwave vessel, be sure it holds a microwave

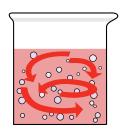
absorbing material, such as water, before placing in the oven. Many SciLabware items utilise plastic screwcaps and connectors. These are typically manufactured from polypropylene or PTFE, both of which are microwave safe.

• When autoclaving Pyrex® containers, e.g. bottles, with screwcaps – always slacken off the caps. Autoclaving with tightly screwed caps can result in pressure differences and consequent breakage.

# Preparation of media

Take great care when heating liquids that have a HIGH VISCOSITY. Viscous liquids can act as thermal insulators and can cause 'hot spots' leading to thermal breakage of the glassware.

# Preparation of media (continued)

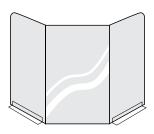


This is particularly important with MEDIA SOLUTIONS as the viscosity usually increases considerably during preparation.

- Do regularly stir the solution to assist even distribution of heat. If using a magnetic stirrer set the speed to ensure adequate agitation of the whole liquid.
- Do not use glass vessels with thick walls e.g. Pyrex® 'Heavy Duty Ware' or standard beakers or flasks which have capacities of 5 litres or greater.

#### Vacuum and Pressure Use

Because working conditions can vary enormously, SciLabware cannot guarantee any glassware against breakage when used under vacuum or pressure. The application of positive pressures inside glass apparatus is particularly hazardous and should be avoided if at all possible. Safety precautions should always be taken to protect personnel and a number of these are listed below:



- Always use an adequate safety screen and/or protective cage.
- Under no circumstances use glassware that is scratched, cracked or chipped. Its strength will be seriously impaired.
- Do not use flat bottomed vessels such as Erlenmeyer flasks and bottles under vacuum as they are likely to implode. Exceptions are vessels with specially thickened walls such as Büchner filter flasks and desiccators.
- Avoid stress caused by over-tightening clamps. Support glassware gently where possible.
- Never subject glassware to sudden pressure changes. Always apply and release pressure gradients and vacuums gradually.

#### **Ground Glass Joints**

Lubricate the ground surfaces of joints to prevent leakage in use and facilitate separation. Use a silicone-free laboratory grease and apply a light coat completely around the upper part of the joint

Alternatively, consider PTFE joint sleeves which can be fitted between the cone and socket.

- If ground glass joints do seize, then the following remedies can be considered;
  - Always wear thick protective gloves and safety spectacles. Never use force.

- Carefully rock the cone in its socket to achieve separation.
- If the joint is 'dry', try to provide lubrication. Hold the joint upright and add penetrating oil to the top of the cone. Wait until the penetrating oil is well into the joint before trying to separate.
- If the use of temperature is permissible, e.g. no volatile liquids present, then warm the outer socket under a running stream of hot water from the tap. Hold under the tap for a few minutes before trying to separate.

#### Sintered Glassware

New apparatus with sintered glass discs should be washed before use to remove loose particles of dust etc. Wash through with hot dilute hydrochloric acid followed by a thorough rinse with water.



- Do ensure that the porosity of the sintered disc is appropriate for the application. Porosity 0 sinters are for coarse filtration, whilst higher grades give progressively finer filtration.
- Never subject sintered glassware to differential pressures exceeding 100kN/m² (1 bar).

#### Volumetric Glassware

Do ensure that all volumetric glassware is kept scrupulously clean. Dirt, and especially grease, can distort the shape of the meniscus and also cause droplets of liquid to adhere to the vessel walls. Both seriously impair accuracy.

(Good cleanliness is indicated by uniform wetting of the glass surface with distilled water).



- Do not expose volumetric glassware to direct heat e.g. hotplates, bunsen flame.
- Autoclaving at 121°C and cleaning in automatic dishwashers is acceptable and will not affect the accuracy of Pyrex® or MBL® glassware.
- Never pipette by mouth. Always use a purpose designed pipette filler.
- All items should be held in a vertical position when reading the meniscus.
   The meniscus should be at eye level to avoid parallax errors.
- If using strong corrosive acids etc. select volumetric ware manufactured from chemically resistant Pyrex<sup>®</sup> borosilicate glass.





Pyrex® is a registered trade mark of Corning Inc. SciLabware is a registered user.

# Physical properties and chemical resistance of plastics

These icons provide a quick guide as to the chemical resistance of the polymers and can be found throughout the catalogue where appropriate.



Moderate resistance to common aqueous laboratory chemicals, but avoid organic solvents, strong acids and



Excellent resistance to most laboratory chemicals



Good general resistance to a range of laboratory chemicals including acids, bases and some solvents



Can be subjected to autoclaving at 121°C without damage to the polymer.



Where no icon is shown, this product is made from several materials. In this instance please refer to the chemical resistance/physical properties chart for each polymer.

#### Polypropylene, PP

- Translucent rigid polymer
- Temperature range -20 to +135°C
- Autoclavable at 121°C
- Good to excellent chemical resistance
- Resistant to fatigue making it tough
- Typically used for beakers, bottles and cylinders





#### Polytetrafluoroethylene, PTFE

- Opaque rigid polymer
- Wide temperature range -200 to +260°C
- Autoclavable at 121°C
- Unrivalled resistance to almost all chemicals
- Extremely low friction coefficient
- Typically used for bottles, beakers and stirrers





#### Low Density Polyethylene, LDPE

- Translucent flexible polymer
- Narrow temperature range of -50 to +80°C
- Not autoclavable at 121°C
- Good to excellent chemical resistance
- Robust and virtually unbreakable
- Typically used for wash bottles

#### Polyfluoroalkoxy, PFA

- Translucent flexible form of PTFE
- Wide temperature range -260 to +260°C
- Autoclavable at 121°C
- Excellent chemical resistance
- Typically used for trace metal analysis bottles





# High Density Polyethylene, HDPE

- Translucent rigid polymer
- Broad temperature range of -100 to +120°C
- Not autoclavable at 121°C
- Good to excellent chemical resistance
- High tensile strength making it very tough
- Typically used for bottles



## Polymethylmethacrylate, Acrylic (PMMA)

- Transparent rigid polymer
- Narrow temperature range -60 to +50°C
- Not autoclavable at 121°C
- Moderate chemical resistance
- Very tough and high clarity
  - Typically used for radiation shields



# Polymethylpentene, PMP (TPX)

- Transparent rigid polymer
- Broad temperature range -180 to +145°C
- Autoclavable at 121°C
- Good to excellent chemical resistance
- Has a low density and a high clarity
- Typically used for beakers and cylinders





# Polystyrene, PS

- Transparent rigid polymer
- Narrow temperature range -40 to +90°C
- Not autoclavable at 121°C
- Moderate chemical resistance
- Brittle yet has excellent clarity
- Typically used for container ware





# Polycarbonate, PC

- Transparent rigid polymer
- Broad temperature range -135 to +135°C
- Autoclavable at 121°C
- Moderate chemical resistance
- High impact strength
- Typically used for safety shields





# Polyvinylchloride, PVC

- Rigid polymer
- Narrow temperature range -25 to +70°C
- Not autoclavable at 121°C
- Moderate chemical resistance
- Rigid or flexible, coloured or clear
- Typically used for trays and troughs



# **Chemical resistance of plastics**

#### Excellent resistance:

continuous exposure to the substance does not cause damage within 30 days.

	LE	OPE	НС	PE	PI	P	PN (TP	PVC	PC	PS	SAN	PMM	Α	PTFE	PFA	POM
Temperature °C	20	50	20	50	20	50		20 50	20 50	20 5	20 5	0 20 5	50	20 50	20 50	20 50
Acetaldehyde																
Acetic Acid (Glacial)																
Acetic Anhydride	$\overline{\mathbb{A}}$									T						
Acetone				$\overline{\blacktriangle}$		$\overline{\mathbf{A}}$										
Ammonium Chloride (10%)										0 (						
Ammonium Hydroxide (30%)																
Amyl Acetate																
Aniline (Phenylamine)																
Aqua Regia																
Benzaldehyde																
Benzene																
Benzoic Acid																
Boric Acid (10%)									0							
Butyl Acetate																
Butyric Acid (Butanoic acid)																
Calcium Hydroxide (Saturated)																
Carbon Disulphide																
Carbon Tetrachloride																
Chloroform																
Citric Acid (1M)									0 (							
Cresol																
Cyclohexane																
Dibutyl Phthalate																
Dichlorobenzene																
Diethyl Ether																
Diethylene Glycol																
Dimethyl Formamide (DMF)																
Dimethyl Sulfoxide (DMSO)																
Dioxane					<b>A</b> .											
Ethyl Acetate (Ethyl Ester)																
Ethyl Alcohol (Absolute Ethanol)																
Ethyl Chloride (Chloroethane)																
Ethylene Chloride																
Ethylene Oxide (Pure)																
Ethylene Oxide (Gas)																
Formaldehyde (Formalin) 40%																
Formic Acid (50%)																
Formic Acid (100%)																
Glycerine (Glycerol)																

**Good resistance;** continuous exposure to the substance causes minor damage within 7 - 30 days

#### ▲ Poor resistance:

not suitable for continuous exposure to the substance. Immediate damage may occur

No information available

minor damage within 7 - 30 days substance. Immediate damage may occur																							
	LE	PE	HD	PE	P	PP PMP (TPX)		PVC		PC		P	PS		٨N	PMMA		PTFE		PFA	۱	POM	
Temperature °C	20	50	20	50	20	50	_	50	20	50	20	50	20	50	20	50	20	50	20 !	50	20	50	20 50
Hexane		$\mathbf{A}$						A															
Hydrobromic Acid (69%)																							
Hydrochloric Acid (5%)																							
Hydrochloric Acid (35%)																							
Hydrofluoric Acid (48%)																							
Hydrogen Peroxide (30%)																							
Lactic Acid (85%)																							
Methyl Acetate																							
Methyl Alcohol (Methanol)																							
Methyl Ethyl Ketone (Butanone)																							
Methylene Chloride (Dichloro Methane)																							
Mineral Oil																							
Nitric Acid (10%)																							
Nitric Acid (70%)																							
Nitrobenzene																							
Oxalic Acid (10%)																							
Perchloric Acid (70%)																							
Phenol (100%)																							
Phosphoric Acid (85%)																							
Picric Acid																							
Potassium Hydroxide (30%)																							
Potassium Permanganate																							
Propylene Glycol																							
Pyridine																							
Salicylic Acid																							
Silver Nitrate																							
Sodium Hydroxide (50%)																							
Sodium Hypochlorite (15%)																							
Sulphuric Acid (20%)																							
Sulphuric Acid (60%)																							
Sulphuric Acid (98%)																							
Tetrahydrofuran (THF)																							
Toluene																							
Trichloroacetic Acid																							
Trichloroethylene																							
Turpentine																							
Xylene																							
Zinc Chloride (10%)																							
Zinc Sulphate (10%)																							
	,		,	. ,					,			-	.,			,	. ,			. ,	,		

# Physical properties of plastics

		LDPE	HDPE	PP	PMP (TPX)	PC	PS	PMMA	PTFE	PFA
	Max usage Temp. °C	80	120†	135	145	135	90	50	260	260
	Min usage Temp. °C	-50	-100	-20††	-180	-135	-40	-60	-200	-260
	Transparency	Translucent	Translucent	Translucent	Clear	Clear	Clear	Clear	Opaque	Translucent
	Flexability	Flexible	Rigid	Rigid	Rigid	Rigid	Rigid	Rigid	Rigid	Flexible
	Specific Gravity	0.92	0.95	0.9	0.83	1.2	1.05	1.2	2.2	2.15
	Microwaveable	Yes	No	Yes	Yes	Marginal	No	No	Yes	Yes
	Autoclavable	No	No	Yes	Yes	Yes	No	No	Yes	Yes
tion	Gas	Yes	Yes	Tes	Yes	Yes	Yes	No	Yes	Yes
Sterilisation	Dry Heat	No	No	No	Yes	No	No	No	Yes	Yes
Ste	Radiation (Gamma)	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No
	Disinfection	Yes	Yes	Yes	Yes	Yes	Some	Some	260 -200 Opaque Rigid 2.2 Yes Yes Yes Yes	Yes
lity*	N2	180	42	48	8,000	50	25	3	Unknown	291
Permeability*	02	500	185	240	32,000	300	400	12	308	881
Perm	C02	2,700	580	800	115,000	1,075	1,500	68	Unknown	2,260
	Water Absorbtion (%)	<0.01	<0.03	<0.2	0.01	0.35	0.05	0.35	<0.01	<0.02
	Cytotoxic	No	No	No	No	No	No	No	No	No

- \* Permeability (cc-mm/m<sup>2</sup>-24hr.Bar).
- † Polymer may be malleable at temperatures above 80°C if the product is under structural stress.
- †† Material may become brittle at low temperatures.

#### Food safety

#### **Food Contact/Animal Derivative Statement**

Scilabware can confirm that in respect to contact of plastic materials with foodstuffs our suppliers comply with the following:

EU Directive 2002/72 relating to plastic materials and articles intended to come into contact with foodstuffs.

Code of Federal Regulation (CFR), Title 21, Food and Drug Administration (FDA), Part 177.1520 "Olefin Polymers", (a) 2)(i) and (c) 2.1 and 2.2.

We can also confirm that in respect to Bovine Spongiform Encephalopathy (BSE) / Transmissible Spongiform Encephalopathy (TSE), that our suppliers do not use tallow derived from animal sources in the manufacture of our products.

#### **Recycling plastics**

Although our products are designed for the reusable market you may wish to dispose of them at some point. Therefore here is some advice on recycling of our plastics.

Recycling involves the segregation of plastic products by specific resin types ready for the process of converting them into new raw materials for use in other products.

In order to assist with this segregation, the Society of the Plastics Industry (SPI) had adopted a classification system to identify the seven main types of plastic where each resin is assigned a number.

To aid even further a large proportion of our products have the following SPI code permanently moulded into them: -



The seventh classification, or "other" denotes that the product is either not of the preceding plastics or it is a mixture.

Scilabware does not currently supply any products made from PFT

Before recycling any items, please consider the environment and further handling. All items should be washed, cleaned and/or disinfected prior to disposal.

# Care and maintenance of laboratory plasticware

The following guidelines are provided to ensure your plastic laboratory-ware is maintained in the best possible condition.

These guidelines are not definitive and care must be taken as each polymer has its own unique properties. Please also consult the chemical and physical properties charts in this catalogue. If you are still unsure e-mail azlon@scilabware. com for advice.

#### General Precautions



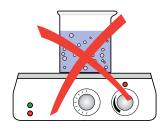
• Chemicals can adversely affect the performance of laboratory plasticware resulting in cracking, loss of strength and flexibility etc.

If in any doubt, note the type of polymer the product is manufactured from, the chemical that is to be used, then confirm compatibility by checking against the chemical resistance chart. (See pages 16 - 17).

### Heating

 Never place plasticware in direct contact with a flame or place onto a hotplate surface.





 Most plastics allow the transmission of microwaves.
 However, as with any microwave vessel, be sure it holds a microwave absorbing material, such as water, before placing in the oven.



#### Sterilisation

• If the plasticware is to be sterilised by autoclaving always pre-check that the polymer can withstand repeated exposure to temperatures of 121°C. (See Physical Properties chart on page 18).

Azlon® plastic products that are autoclavable are identified by an  $\mathcal{A}$  symbol in this catalogue.

• When autoclaving bottles always ensure the caps are loosened or removed to prevent accidental collapse or deformation.

#### Washing and cleaning

 Most laboratory plasticware is readily cleaned in warm water with a detergent and soft cloth or sponge.

Avoid using abrasive cleaners or scouring pads which can result in surfaces becoming scratched.





• A low or non-alkaline detergent is suitable for cleaning most plasticware.

Note however that polystyrene and polycarbonate products are susceptible to attack by alkalis and a neutral detergent is recommended.

• If using an automatic laboratory washing machine to wash plastic volumetric ware, such as measuring cylinders, employ a wash temperature below 60°C. High temperatures can affect volumetric accuracy.

Ultrasonic baths may be used for cleaning plasticware.
 However do take care that the products do not directly touch the transducer membrane

# Disposal

• If the disposal of an item of plasticware is unavoidable, always follow local laws and regulations.

Where reclamation facilities are offered it can be helpful to segregate the products by polymer type: many Azlon® products are marked with an SPI code to help identification.



# **Technical information - metalware**

# Physical properties and chemical resistance of metals

**Excellent resistance:** continuous exposure to the substance does not cause damage

Poor resistance: not suitable for continuous exposure to the substance. Immediate damage may

Good resistance:

No information available

some pitting or localised corrosion may occur	No information available				е			
	Stainless	steel 304	Nickel	200	Nickel	201	:	Aluminium
Temperature °C	20	50	20	50	20	50	20	50
Acetic Acid (80%)								
Ammonium (anhydrous)								
Ammonium (1%)								
Ammonium (10%)								
Ammonium Hydroxide (anhydrous)								
Ammonium Hydroxide (1%)								
Ammonium Hydroxide (10%)								
Citric Acid								
Coper (II) Chloride (cupric chloride)								
Hydrochloric Acid (5%)								
Hydrochloric Acid (30%)								
Hydrofluoric Acid (5%)								
Hydrofluoric Acid (40%)								
Hydrofluoric Acid (60%)								
lodine								
Iron (III) Chloride (Ferric chloride)								
Mercury (II) Chloride (mercuric chloride)								
Nitric Acid (0.5%)								
Nitric Acid (10%)								
Nitric Acid (50%)								
Nitric Acid (95%)								
Phosphoric Acid (5%)								
Phosphoric Acid (25%)								
Phosphoric Acid (50%)								
Potassium Hypochlorite								
Sodium Hydroxide (50%)								
Sodium Hypochlorite								
Sulphuric Acid (5%)								
Sulphuric Acid (50%)								
Sulphuric Acid (98%)								
Water								

This resistance chart is designed for comparative purposes only. Corrosion of metals is affected by several factors, some of which include temperature, chemical concentration, pH and impurities. It is strongly recommended that corrosion tests are performed prior to use.

#### Stainless steel 304

- Steel alloy with 18% chromium and 8% nickel
- Very good corrosion resistance
- Maximum usable temperature
- Typically used for beakers, sampling dippers and spatulas



#### Nickel 200

- Commercially pure (99.6%) wrought nickel
- Very good corrosion resistance especially to dilute alkalis
- Maximum usable temperature
- Typically used for spatulas



#### Nickel 201

- Commercially pure (99.6%) wrought nickel
- Very good corrosion resistance especially to dilute alkalis
- Maximum usable temperature 350°C
- Typically used for crucibles and dishes



#### **Aluminium**

- Very lightweight metal
- Resistant to oxidation
- Maximum usable temperature 340°C
- Typically used for beakers



This technical information is provided in good faith by SciLabware Limited for the safety of its customers.

Please note that the advice given is for general laboratory applications and may not necessarily apply to all tests or procedures.

If you are in any doubt, contact SciLabware for specific advice.

For glassware advice email glass@scilabware.com.

For plasticware and metalware advice email azlon@scilabware.com

# Adapters, cone/screwthread

- PYREX QUICKFIT®
- With screwthread joint complete with plastic cap, silicone rubber ring and PTFE washer
- Ideal for securing thermometers, gas inlet tubes, etc.

Item Code	Thread size	Cone size	Acceptable dia. through screwcap mm	Pack qty.	
ST51/13	13	14/23	6.0 - 7.0	2	
ST51/18	18	14/23	7.0 - 8.5	2	
ST52/13	13	19/26	6.0 - 7.0	2	
ST52/18	18	19/26	7.0 - 8.5	2	
ST52/24	24	19/26	10.5 - 11.5	2	
ST53/13	13	24/29	6.0 - 7.0	2	
ST53/18	18	24/29	7.0 - 8.5	2	
ST53/24	24	24/29	10.5 - 11.5	2	
ST54/13	13	29/32	6.0 - 7.0	2	
ST54/18	18	29/32	7.0 - 8.5	2	
ST54/24	24	29/32	10.5 - 11.5	2	
ST54/28	28	29/32	18.0 - 19.0	1	
ST55/28	28	34/35	18.0 - 19.0	1	





Spare plastic caps, rubber rings and PTFE washers are listed on page 212.

## Adapters, expansion



- Useful for the connection of dissimilar sized ground glass joints
- Large sized socket at the top and small sized cone at the base

Item Code	Cone size	Socket size	Pack qty.
XA10	10/19	14/23	2
XA21	14/23	19/26	2
XA31	14/23	24/29	2
XA32	19/26	24/29	2
XA41	14/23	29/32	2
XA42	19/26	29/32	2
XA43	24/29	29/32	2
XA52	19/26	34/35	2
XA53	24/29	34/35	2
XA54	29/32	34/35	2
XA64	29/32	40/38	1
XA74	29/32	45/40	1





# Adapters, reduction



- Useful for the connection of dissimilar sized ground glass joints
- Small sized socket at the top, large sized cone at the bottom

Item Code	Socket size	Cone size	Pack qty.	
DA01	10/19	14/23	2	
DA12	14/23	19/26	2	
DA13	14/23	24/29	2	
DA14	14/23	29/32	2	
DA23	19/26	24/29	2	
DA24	19/26	29/32	2	
DA25	19/26	34/35	2	
DA34	24/29	29/32	2	
DA35	24/29	34/35	2	
DA36	24/29	40/38	1	
DA37	24/29	45/40	1	
DA38	24/29	50/42	1	
DA39	24/29	55/44	1	
DA45	29/32	34/35	2	
DA47	29/32	45/40	1	
DA56	34/35	40/38	1	
DA57	34/35	45/40	1	
DA58	34/35	50/42	1	



# Adapters, reduction, PTFE





- Useful for the connection of dissimilar sized ground glass joints, works with Quickfit®
- Excellent chemical resistance
- Operating temperature up to 260°C

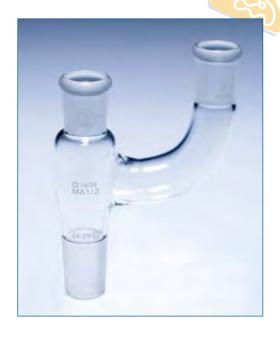
Item Code	Socket	Cone	Pack qty.
SWN902	10/19	14/23	1
SWN908	19/26	34/35	1
SWN909	24/29	29/32	1
SWN911	29/32	34/35	1

# Adapters, multiple, with two parallel necks



With two parallel necks

Item Code	Socket size	Cone size	Pack qty.	
MA1/11	14/23	14/23	1	
MA1/2	19/26	19/26	1	
MA1/3	19/26	24/29	1	
MA1/33	24/29	24/29	1	
MA1/44	29/32	29/32	1	



# Adapters, multiple, with two necks



- With two necks :
  - One vertical
  - One angled at 45°

Item Code	Socket size	Cone size	Pack qty.	
MA2/2	19/26	19/26	1	
MA2/3	19/26	24/29	1	



# Adapter, multiple, with three necks



- With three necks:
  - Two vertical
  - One at 45°

Item Code	Socket size vertical necks	Socket size angled neck	Cone size	Pack qty.	
MA4/23	19/26	19/26	24/29	1	





# Adapters, swan neck



• With screwthread joint to accept thermometers air leak tubes etc.

Item Code	Socket size	Cone size	Thread size	Pack qty.	
MA6/22	19/26	19/26	13	1	
MA6/33	24/29	24/29	13	1	



Acceptable diameter of thermometer through the screwcap is 6 - 7mm. Spare plastic caps, rubber rings and PTFE washers are listed on page 212.



## Adapters, receiver



- With short or long stem
- Useful for feeding distillate from condensers into receiving vessels

Item Code	Socket size	Approx stem length mm	Pack qty.	
RA1/01	14/23	65	1	
RA1/02	19/26	65	1	
RA1/03	24/29	65	1	
RA1/04	29/32	65	1	
RA1/10	10/19	120	1	
RA1/11	14/23	190	1	
RA1/12	19/26	200	1	
RA1/13	24/29	200	1	
RA1/14	29/32	200	1	



For plastic joint clips to secure glassware, please see page 207.

# Adapters, receiver, straight type



Straight type

Item Code	Socket size	Overall height mm	Pack qty.
RA1/22	19/26	180	1
RA1/23	24/29	180	1



# Adapters, receiver, side socket



• With side socket inclined at an angle of 15° from horizontal

Item Code	Socket size	Cone size Ap	pprox overall height mm	Pack qty.	
RA4/11	14/23	14/23	120	1	
RA4/22	19/26	19/26	120	1	
RA4/23	19/26	24/29	120	1	



# Adapters, receiver, plain bend



Plain bend without vent

Item Code	Socket size	Cone size	Approx overall height mm	Pack qty.	
RA9/11	14/23	14/23	90	1	
RA9/22	19/26	19/26	100	1	
RA9/23	19/26	24/29	110	1	
RA9/33	24/29	24/29	125	1	
RA9/44	29/32	29/32	140	1	





## Adapters, receiver, bend with vent



- Bend with vent
- With side-arm to provide vent to atmosphere
- Avoids the problems of 'closed systems'

Item Code	Socket size	Cone size	Approx overall height mm	Pack qty.	
RA2/11	14/23	14/23	80	1	
RA2/22	19/26	19/26	106	1	
RA2/23	19/26	24/29	120	1	
RA2/33	24/29	24/29	130	1	



The side-arm is for venting purposes and not for connection to a vacuum source. For adapters with vacuum connection, see RA3: and RA13: series.

## Adapters, receiver, vacuum, angled



- Delivery stem within cone
- With side-arm for connection to a vacuum supply
- Easy connection to flexible tubing via detachable plastic screwthread connector

Item Code	Socket size	Cone size	Approx overall height mm	Pack qty.	
RA3/11/SC	14/23	14/23	110	1	
RA3/22/SC	19/26	19/26	140	1	
RA3/23/SC	19/26	24/29	140	1	
RA3/33/SC	24/29	24/29	150	1	
RA3/44/SC	29/32	29/32	165	1	



For spare screwthread connectors, please refer to page 100.

# Adapters, receiver, vacuum, straight



- Delivery stem within cone
- With side-arm for connection to a vacuum supply
- Easy connection to flexible tubing via detachable plastic screwthread connector

Item Code	Socket size	Cone size A	Approx overall height mm	Pack qty.	
RA13/33/SC	24/29	24/29	140	1	



# Adapters, receiver, pig



- Allows up to three flasks\* to be connected to a condenser outlet
- Useful for collecting distillate fractions
- By slightly rotating the adapter a new flask is presented to the distillate
- With side-arm for connection to a vacuum supply

Item Code	Socket size	Cone size	Approx overall height mm	Pack qty.	
RA5/11/SC	14/23	14/23	110	1	
RA5/21/SC	19/26	14/23	110	1	



It is not dimensionally possible to fit large capacity flasks to these receivers. \*Maximum flask capacity is: RA5/11/SC - 50ml flask RA5/21/SC - 100ml flask .



# Adapters, receiver, vacuum, four flask connector



- Allows four flasks to be connected to a condenser outlet
- Useful for collecting fractions when distilling under vacuum
- Each flask can be progressively filled by rotating the adapter
- Avoids problems of disturbing vacuum conditions when changing flasks
- Choice of collection flasks

Item Code	Description	Socket size	Cone size	Pack qty.	
RA11/SC	Screwthread vacuum receiver adapter to take four flasks	19/26	14/23	1	
RA12/2	Sloping delivery adapter	19/26	19/26	1	
FR25/1S	25ml flask	14/23	-	5	
FR50/1S	50ml flask	14/23	-	5	
FR100/1S	100ml flask	14/23	-	5	



A choice of retaining clips to hold the flasks are detailed on page 207.





## Adapters, receiver, Perkin



- For vacuum distillation work
- Allows receiver flasks to be changed without disturbing the vacuum within the system
- Fitted with 3 x GP Rotaflo® stopcocks with PTFE keys:
  - No lubrication required
  - No contaminating greases
  - No chemical corrosion
- With screwcap system for gentle release of vacuum at conclusion of work

Item Code	Capacity ml	Cone size	Socket size	Pack qty.
RA6/11/SC	10	14/23	14/23	1
RA6/22/SC	30	19/26	19/26	1
RA6/23/SC	30	24/29	19/26	1
RA6/33/SC	30	24/29	24/29	1



Spare Rotaflo® keys are listed on page 247.



## Adapters, splash head, vertical

 Usually inserted between a flask and condenser to prevent 'carry-over' of raw liquid

Item Code	Socket size	Cone size	Pack qty.
SH17/23	19/26	24/29	1

## Adapters, splash head, sloping



 Popular adapter used in distillation assemblies to prevent raw liquid 'carrying over' from flask to condenser

Item Code	Cone size to fit flask	Cone size to fit condenser	Pack qty.
SH7/02	19/26	19/26	1
SH7/03	24/29	19/26	1
SH7/43	24/29	24/29	1
SH7/0/44	29/32	29/32	1



# Adapters, splash head, vertical distillation



- A splash head for use in distillation assemblies in which the condenser is assembled in the vertical mode
  - Lower cone accepts flask, upper cone accepts condenser
  - Splash head reduces entrainment of raw liquid into the vapour stream

Item Code	Cone size to fit flask	Cone size to fit condenser	Pack qty.	
SH7/12	19/26	19/26	1	
SH7/13	24/29	19/26	1	
SH7/53	24/29	24/29	1	





### Adapters, steam distillation head

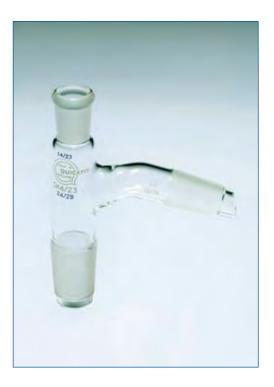


- A splash-head with integral stem for the introduction of steam into flasks
- Stem is connected to steam supply via detachable screwthread safety connector

Item Code	Cone size to fit flask	Cone size to fit condenser	Pack qty.
SH7/23/SC	24/29	19/26	1



Screwthread connector, cat no: 4510/02, accepts 9mm bore flexible tubing. Spare screwthread connectors are available on page 100.



# Adapters, still head



- Used in distillation assemblies for connecting flasks to condenser
- Upper socket designed to accept thermometer either via cone/screwthread adapter or thermometer pocket

Item Code	Cone size to fit flask	Cone size to fit condenser	Socket size	Pack qty.	
SH4/0	10/19	10/19	10/19	1	
SH4/1	14/23	14/23	14/23	1	
SH4/22	19/26	19/26	14/23	1	
SH4/2	19/26	19/26	19/26	1	
SH4/23	24/29	19/26	14/23	1	
SH4/33	24/29	24/29	14/23	1	
SH4/24	29/32	19/26	14/23	1	
SH4/44	29/32	29/32	14/23	1	
SH4/55	34/35	34/35	14/23	1	



PTFE joint sleeves eliminate the possibility of joint seizure - see page 206 for details.

# Adapters, still head, Claisen

PYREX QUICKFIT®

 Similar to the SH4: still heads but with extra socket to accept dropping funnel or stirrer etc.

Item Code	Cone size to fit flask	Cone size to fit condenser	Socket size	Pack qty.	
SH6/1	14/23	14/23	14/23	1	
SH6/22	19/26	19/26	14/23	1	
SH6/23	24/29	19/26	14/23	1	
SH6/33	24/29	24/29	14/23	1	
SH6/44	29/32	29/32	14/23	1	



# Adapters, still head, recovery



• Provides a simple vapour conduit between flasks and distillation condensers

Item Code	Cone size to fit flask	Cone size to fit condenser	Pack qty.	
SH1/11	14/23	14/23	1	
SH1/22	19/26	19/26	1	
SH1/23	24/29	19/26	1	
SH1/33	24/29	24/29	1	
SH1/44	29/32	29/32	1	





#### Adapters, still head, recovery, vertical mode



 Used in distillation assemblies in which the condenser is assembled in the vertical mode

Item Code	Cone size to fit flask	Cone size to fit condenser	Pack qty.	
SH2/22	19/26	19/26	1	
SH2/33	24/29	24/29	1	



#### Adapters, stopcock, cone



- With GP Rotaflo® PTFE stopcock:
- No lubrication required
  - No contaminating greases
  - Fine flow control
  - Positive closure
- Detachable plastic screwthread connectors allow rubber hose etc. to be fitted easily and safely

Item Code	Cone size	Stopcock bore mm	Pack qty.	
MF11/1/SC	14/23	3	1	
MF11/2/SC	19/26	3	1	
MF11/3/SC	24/29	3	1	
MF11/4/SC	29/32	3	1	



The detachable screwthread connectors accept flexible tubing having a bore of 9mm diameter - see page 100 for details.



# Adapters, stopcock, T shape, cone



- With GP Rotaflo® PTFE stopcock providing fine flow control and positive closure
- Detachable plastic screwthread connectors allow rubber hose etc. to be fitted easily and safely

Item Code	Cone size	Stopcock bore mm	Pack qty.	
MF11/1B/SC	14/23	3	1	
MF11/2B/SC	19/26	3	1	
MF11/3B/SC	24/29	3	1	



The detachable screwthread connectors accept flexible tubing having a bore of 9mm diameter.

### Adapters, stopcock, socket



- With GP Rotaflo® PTFE stopcock providing fine flow control and positive closure
- Detachable plastic screwthread connectors allow rubber hose etc. to be fitted easily and safely

Item Code	Socket size	O.D. of olive mm	Stopcock bore mm	Pack qty.	
MF14/1/SC	14/23	9	3	1	
MF14/2/SC	19/26	9	3	1	
MF14/3/SC	24/29	9	3	1	



The detachable screwthread connectors accept flexible tubing having a bore of 9mm diameter.



## Adapters, tubing, right angle



- With right angle connection for attachment of rubber hose etc.
- Detachable plastic screwthread connectors allow flexible tubing to be fitted easily and safely

Item Code	Cone size	Pack qty.
MF10/1B/SC	14/23	1
MF10/2B/SC	19/26	1
MF10/3B/SC	24/29	1
MF10/4B/SC	29/32	1
MF10/5B/SC	34/35	1



For spare crewthread connectors please see page 100.





## Adapter, tubing, straight



- With straight connection for the attachment of rubber hose etc.
- Detachable plastic screwthread connectors allow flexible tubing to be fitted easily and safely

Item Code	Socket size	Pack qty.
MF13/2/SC	19/26	1
MF13/3/SC	24/29	1
MF13/4/SC	29/32	1



Screwthread connector accepts rubber hose with a bore of 9mm.



## Adapters, tubing, side-arm



- With side-arm for the attachment of rubber hose etc.
- Detachable plastic screwthread connector allows flexible tubing to be fitted easily and safely

Item Code	Socket size	Cone size	Pack qty.
MF17/1/SC	14/23	14/23	1
MF17/2/SC	14/23	19/26	1
MF17/3/SC	14/23	24/29	1
MF18/2/SC	19/26	19/26	1
MF18/3/SC	19/26	24/29	1
MF18/4/SC	19/26	29/32	1
MF18/5/SC	19/26	34/35	1
MF18/33/SC	24/29	24/29	1
MF18/44/SC	29/32	29/32	1



For spare screwthread connectors please see page 100.

# **Ampoule breakers**

## Ampoule breakers, HDPE



Azlon

- Enables safe and easy breaking of glass ampoules
- Broken ampoule top is retained for safe disposal
- Choice of size to suit all common glass ampoules

Item Code	Ampoule size	Pack qty.
AWY700	1 - 4 ml	1,000
AWY702	5 -10 ml	1,000



# **LIPSOL® LABWARE DETERGENT**

- Excellent cleaning performance ideal for use with laboratory glassware and plasticware
- Great value for money
- Totally biodegradable

For full details see page 90



# **Arsenic determination apparatus**



## Arsenic determination apparatus



- Designed for the estimation of arsenic and antimony
- Method uses the formation of a complex between arsine and silver diethyldithiocarbamate with subsequent measurement at 5380A

Item Code	Description	Socket size	Cone size	Pack qty.	
1AD/1	Complete Assembly	-	-	1	
AD3	Absorption tube	-	24/29	1	
FE100/3	100ml Erlenmeyer flask	24/29	-	5	



Reference: Elliot and Loper, Analytical Chemistry, (1974), 46, 2256.



## Aspirator bottles, tubing side-arm

# **PYREX**®

- Tubular side arm for attachment of 12mm bore flexible tubing
- Unground neck to accept rubber stoppers

Item Code	Capacity ml	Body diam. mm	Neck I.D.(at top) mm	Bottle height mm	Pack qty.	
1531/06D	250	73	18	131	10	
1531/08D	500	89	23	163	10	
1531/10D	1000	111	28	200	5	
1531/12D	2000	138	28	248	5	



# Aspirator bottles, ground glass side-sockets

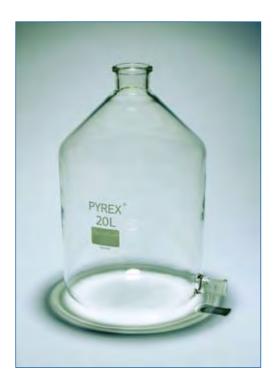


- Complies with ISO 4796
- Ground side socket (size 29/32) to accept stopcock assemblies
- Unground top neck to accept rubber stoppers

Item Code	Capacity ml	Body diam. mm	Neck I.D.(at top) mm	Bottle height mm	Pack qty.	
1541/12D	2000	138	28	248	5	
1541/16D	5000	181	44	318	1	
1541/18D	10000	227	59	398	1	
1541/20D	15000	258	59	460	1	
1541/22D	20000	288	59	492	1	



Compatible with stopcocks on page 38.



# **Aspirators**



# Aspirator bottles, ground glass side-socket and neck

**PYREX**®

- Complies with ISO 4796
- Ground side socket (size 29/32) to accept stopcock assemblies
- Ground neck
- Supplied with glass stopper

Item Code	Capacity ml	Body diam. mm	Stopper size	Neck I.D. (at top) mm	Height with stopper mm	Pack qty.	
1569/12DP	2000	138	29/32	29	262	2	
1569/16D	5000	181	45/40	45	333	1	
1569/18D	10000	227	60/46	60	414	1	
1569/22D	20000	288	60/46	60	508	1	



Compatible with stopcocks detailed below.



## Aspirator stopcocks with ground cone



- For use with Aspirator bottles 1541: and 1569:
- Type 1568/04M with Rotaflo® PTFE key which is chemically inert and requires no lubrication
- Type 1571/02M with traditional glass key

Item Code	Stopcock bore mm	Cone size	Overall length mm	Pack qty.	
1568/04M	3	29/32	53	1	
1571/02M	4	29/32	95	1	



**Aspirators** 

### Aspirator bottles, large capacity

#### **PYREX®**

- Ideal for storage of distilled water etc.
- Choice of sizes up to 25 litre capacity
- Wide neck with simple glass cover
- Supplied with plastic connector and rubber/PTFE sealing ring
- Accepts either stopcock GP6/10W or glass tubing of 14mm O.D.

Item Code	Capacity ml	Ext. neck diam. mm	Total height mm	Max. diam. mm	Pack qty.	
1565/16M	5000	100	320	200	1	
1565/18M	10000	127	395	234	1	
1565/22M	20000	160	500	300	1	



Aspirator and stopcock should be ordered separately.



# Aspirator accessories and spares



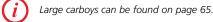
- Stopcock for use with Aspirator Bottles 1565: series with Rotaflo® PTFE key
- Essential spare connectors and sealing rings for 1565: series

Item Code	Description	Pack qty.
GP6/10W	10mm bore Aspirator Rotaflo stopcock	1
1548/02M	Spare plastic connector for outlet	1
1547/02M	Spare rubber/PTFE sealing ring	1



# **Aspirators**







Carboys can be found on page 64

#### Aspirators, narrow neck, HDPE



Azlon

- Large capacity aspirators with screw caps
- Ideal for bench-top dispensing of common solvents/distilled water etc. featuring smooth operating leak-proof stopcocks
- All sizes fitted with carrying handles for ease of transport (except 2L BGH032)
- Good resistance to chemical attack

Item Code	Capacity litres	Neck I.D. mm	Overall height mm	Pack qty.	
BGH032	2	45	243	1	
BGH034	5	49	330	1	
BGH036	10	49	380	1	
BGH038	25	80	580	1	
BGH040	50	80	700	1	

#### Aspirator, narrow neck, HDPE, spares

Item Code	Description	Pack qty.
SWQ016	Spare stopcock for BGH034 & BGH036	POA
SWQ003	Spare stopcock for BGH038 & BGH040	1

# Aspirators, heavy duty, polypropylene $\mathcal{A} \not\sqsubseteq \mathcal{A}$ Zlon





- Squat form for stable location on shelves, bench top or in transit
- Moulded handle for safe and secure carrying
- Clear moulded graduations allowing quick and easy volume assessment
- Leakproof heavy duty stopcock opens and closes in a quarter turn
- Autoclavable polypropylene for easy cleaning and sterilisation
- Caps have moulded drill guides for easy location of probes and feed-lines

Item Code	Capacity litres	Thread size mm	Max height x width mm	Pack qty.
BNP05A	5	45	270 x 220	1
BNP10A	10	90	360 x 280	1
BNP20A	20	90	420 x 350	1



Closures should be removed or loosened before autoclaving.

# Aspirators, heavy duty, polypropylene, spares

Item Code	Description	Pack qty.
CAP/045H	Spare cap for BNP05A/B	1
CGZ85PP	Spare cap for BNP10A/B & 20A/B	1
SCBNP01	Spare stopcock	1

#### Aspirator, wide neck, HDPE



Azlon

- Large capacity aspirator with easy fill wide aperture
- Screw cap with water tight rubber seal, leak-proof stopcock and carry handles
- Ideal for bench top dispensing of common laboratory liquids
- Good resistance to chemical attack

Item Code	Capacity litres	Neck I.D. mm	Height mm	Pack qty.	
BGH068	30	240	415	1	
BGH070	50	240	640	1	
BWX072	100	240	770	1	

# Aspirator, wide neck, HDPE, spares

Item Code	Description	Pack qty.
SWQ003	Spare Stopcock	1



# Bags, autoclave, blue, polypropylene $\mathcal{A} \not\sqsubseteq \mathcal{A}$ Zlon





- Suitable for autoclaving biohazardous waste at 121°C
- Strong side weld construction (50µm)
- Printed with instructions for use and biohazard symbol

Item Code	Size mm	Pack qty.	
BWY200	300 x 608	100	
BWY202	608 x 764	1	
BWY204	608 x 896	1	



#### Bags, autoclave, high temperature, clear, polypropylene





- Suitable for autoclaving biohazardous waste at 135°C
- Strong side weld construction (50µm)
- Transparent and printed with instructions for use and biohazard symbol

Item Code	Size mm	Pack qty.
BWY250	302 x 660	1
BWY252	433 x 632	1
BWY254	608 x 866	1













- Enables easy sampling of liquids
- Modular system allows the user to choose correct beaker size and handle length to suit sampling application
- Durable all polypropylene construction with lightweight tubular handles
- Good chemical resistance
- Autoclavable at 121°C

Item Code	Description	Pack qty.
BWX200	1 Metre length screw-fit handle	1
BWX201	Handle connector	1
BWX202	Finishing connector	1
BWX224	100ml PP Beaker with connection boss	1
BWX230	250ml PP Beaker with connection boss	1
BWX236	500ml PP Beaker with connection boss	1
BWX240	1000ml PP Beaker with connection boss	1
BWX501P	Starter kit comprising 1 x BWX224, BWX230, BWX236, BWX240, BWX201, BWX202 & 2 X BWX200	1



#### Balers, polypropylene





- Enables easy sampling of liquids
- A choice of 3 sampling volumes
- Supplied with 1m durable PP coated steel handle
- Handle is screwed into beaker (13mm thread) via a welded coupling tube
- Units are autoclavable up to 121°C

Item Code	Capacity ml	Pack qty.	
BWX016	250	1	
BWX018	500	1	
BWX020	1000	1	

## Basket, low form, polypropylene



- Strong lightweight rectangular basket
- Suitable for use as a draining / autoclave basket or for general storage
- Units stack when not in use to save space
- Good chemical resistance
- Autoclavable to 121°C

Item Code	l x w x h mm	Nom. Capacity ml	Pack qty.	
TWR200	400 x 300 x 100	10,000	1	



### Baskets, with hinged lid, polypropylene



- Autoclavable at 121°C
- Ideal for sterilising test tubes
- Useful for storage in the laboratory
- Stackable space saving design

Item Code	l x w x h mm	Pack qty.
BWK004	143 x 120 x 109	1
BWK006	167 x 167 x 155	1
BWK009	225 x 225 x 230	1





#### Beakers, low form

**PYREX**®

- Omplies with ISO 3819 and DIN 12331
- Manufactured from Pyrex® borosilicate glass
- Excellent thermal performance
- High resistance to chemical attack
- White graduations and marking spot

Item Code	Capacity ml	Height mm	O.D. mm	Pack qty.	
1000/03M	5	30	22	10	
1000/05M	10	35	26	10	
1000/11M	25	50	34	10	
1000/02M	50	60	42	10	
1000/04D	100	70	50	10	
1000/06D	150	80	60	10	
1000/10D	250	95	70	10	
1000/14D	400	110	80	10	
1000/18D	600	125	90	10	
1000/20D	800	135	100	10	
1000/22D	1000	145	105	10	
1000/28D	2000	185	130	10	
1000/30D	3000	210	150	4	
1000/34D	5000	270	170	1	
1000/38D	10000	350	217	1	



1000/38D is supplementary to ISO range. Graduations are approximate.

### LIPSOL® LABWARE DETERGENT

- Excellent cleaning performance ideal for use with laboratory glassware and plasticware
- Great value for money
- Totally biodegradable

For full details see page 90



### Beakers, low form, heavy duty

### **PYREX**®

- Mechanically stronger than standard beakers
- Designed for longer life and increased user safety
- Reinforced rims and spout, less prone to breakage during washing etc.
- Thicker walls and heavier bases
- Manufactured from Pyrex® borosilicate glass
- White graduations and marking spot

Item Code	Capacity ml	Height mm	O.D. mm	Pack qty.
1003-150	150	89	57	12
1003-250	250	90	68	12
1003-400	400	110	77	12
1003-600	600	124	90	6
1003-1L	1000	156	108	6
003-2L	2000	179	131	4
003-3L	3000	230	170	1
1003-4L	4000	250	160	1
003-5L	5000	300	180	1





For advice on the care and use of Pyrex® glassware, see technical information section. Graduations are approximate.



The thicker walls of Pyrex® heavy duty beakers mean that care must be taken when heating and cooling.

#### Beakers, tall form

**PYREX**®

- Complies with ISO 3819 and DIN 12331
- Manufactured from Pyrex® borosilicate glass
- Tall form with spout
- White graduations and marking spot

Item Code	Capacity ml	Height mm	O.D. mm	Pack qty.	
1015/02M	50	70	38	10	
1015/04D	100	80	48	10	
1015/06D	150	95	54	10	
1015/10D	250	120	60	10	
1015/14D	400	130	70	10	
1015/18D	600	150	80	10	
1015/22D	1000	180	95	10	
1015/26D	2000	240	120	10	





Graduations are approximate.



#### Beakers, conical form

**PYREX**®

- Conical shape (Phillips pattern) with spout
- Manufactured from Pyrex<sup>®</sup> borosilicate glass
- Excellent thermal performance and chemical resistance

Item Code	Capacity ml	Height mm	Base diam. mm	Top diam. mm	Pack qty.	
1020/06D	250	105	68.0	52	10	
1020/16D	500	142	86.0	59	10	



## Beakers, jacketed

**PYREX**®

- Useful for maintaining samples at a constant temperature
- With integral jacket through which a temperature controlling medium can be circulated
- Manufactured from heat resistant Pyrex® borosilicate glass
- With PTFE screwthread connectors for simple and safe connection of 9mm bore tubing

Item Code	Inner chamber capacity ml	Diam. ext mm	Diam. int mm	Height int mm	Height total mm	Pack qty.	
1025/10SC	250	70	52	130	138	1	
1025/18SC	600	95	70	170	180	1	
1025/22SC	1,000	110	80	215	235	1	
1025/28SC	2,000	130	106	260	280	1	



For spare PTFE screwthread connectors please see pae 100. A range of jacketed reaction flasks are featured on page 158.

**Beakers** 

### Beakers, straight sided, printed graduations, polypropylene



- Popular classic Azlon beakers
- Ideal for general laboratory use straight stable shape
- Polypropylene material good chemical resistance
- Can withstand temperatures up to 121°C and therefore autoclavable
- Graduations are clearly printed in indelible solvent resistant ink

Item Code	Capacity ml	Grads. ml	O.D. mm	Height mm	Pack qty.	
BDA208P	10	1.0	32	32	10	
BDA212P	25	2.0	42	40	10	
BDA218P	50	5.0	51	51	10	
BDA224P	100	10.0	62	62	10	
BDA230P	250	25.0	82	82	10	
BDA234P	400	50.0	94	95	10	
BDA236P	500	50.0	100	101	10	
BDA238P	600	50.0	106	107	5	
BDA240P	1000	100.0	127	126	5	
BDA242P	2000	200.0	158	160	1	



# Beakers, straight sided, printed graduations, polypropylene, sets

Item Code	Description	Pack qty.	
BDA218MES	Set of 3 beakers (50, 100 & 250ml)	1	
BDA1198	Set of 3 beakers (500, 1000 & 2000ml)	1	
BDA1199	Set 0f 5 beakers (10, 25, 50, 100 & 250ml)	1	
BDA1200	Set of 8 beakers (10, 25, 50, 100, 250, 500, 1000 & 2000ml)	1	
BDA300P	Set of 10 beakers (One of each size)	1	



#### Beakers, straight sided, printed graduations, polypropylene, with dust covers





- Popular classic Azlon beaker supplied with tight fitting dust cover lid
- Protects against airborne contamination and accidental splashing or spillage

Item Code	Capacity ml	Grads. ml	O.D. mm	Height mm	Pack qty.	
BDA730P	250	25.0	82	82	5	
BDA738P	600	50.0	106	107	5	
BDA740P	1000	100.0	127	126	1	
BDA742P	2000	200.0	158	160	1	



BDA740P and BDA742P have non-autoclavable polystyrene lids.



### Beakers, tapered, printed graduations, polypropylene





- Tapered stacking style space saving and easy to handle
- Comply with ISO 7056
- High clarity polypropylene autoclavable at 121°C with good chemical resistance
- Crisp, blue, easy to read indelible graduations
- Precise non drip pouring spouts

Item Code	Capacity ml	Grads. ml	Rim diam. mm	Height mm	Pack qty.	
BPB0025P	25	5.0	41.5	51	10	
BPB0050P	50	10.0	50.5	61	10	
BPB0100P	100	20.0	61.5	73	10	
BPB0250P	250	50.0	80.5	96	10	
BPB0400P	400	50.0	92.5	111	10	
BPB0500P	500	50.0	102.5	121	10	
BPB0600P	600	50.0	104.0	126	5	
BPB1000P	1000	100.0	120.0	148	5	
BPB2000P	2000	200.0	163.0	188	1	
BPB3000P	3000	200.0	172.0	214	1	
BPB5000P	5000	500.0	230.0	250	1	

#### Beakers, tapered, moulded graduations, polypropylene



- Tapered beaker allowing ease of handling
- Comply to ISO 7056
- Autoclavable at 121°C with good chemical resistance
- Stackable space saving design
- Made from high clarity polypropylene
- Durable and economical with clear, moulded permanent graduations
- Precise non drip pouring spouts

Item Code	Capacity ml	Grads. ml	Rim diam. mm	Height mm	Pack qty.	
BPM0025P	25	5.0	41.5	51	10	
BPM0050P	50	10.0	50.5	61	10	
BPM0100P	100	20.0	61.5	73	10	
BPM0250P	250	50.0	80.5	96	10	
BPM0400P	400	50.0	92.5	111	10	
BPM0500P	500	50.0	102.5	121	10	
BPM0600P	600	50.0	104.0	126	5	
BPM1000P	1000	100.0	120.0	148	5	
BPM2000P	2000	200.0	163.0	188	1	
BPM3000P	3000	200.0	172.0	214	1	
BPM5000P	5000	500.0	230.0	250	1	



#### Beakers, straight sided, printed graduations, PMP (TPX)





- Popular classic Azlon beakers
- Ideal for general laboratory use straight sided and stable
- PMP material with excellent chemical resistance
- Can withstand temperatures up to 180°C and therefore autoclavable
- Graduations are clearly printed in indelible solvent resistant ink

Item Code	Capacity ml	Grads. ml	O.D. mm	Height mm	Pack qty.	
BDB312P	25	2.0	42	40	10	
BDB318P	50	5.0	51	51	10	
BDB324P	100	10.0	62	62	10	
BDB330P	250	25.0	82	82	5	
BDB334P	400	50.0	94	95	5	
BDB336P	500	50.0	100	101	5	
BDB338P	600	50.0	106	107	5	
BDB340P	1000	100.0	127	126	1	
BDB342P	2000	200.0	158	160	1	





#### Beakers, tapered, printed graduations, PMP (TPX)



- Tapered beaker allowing ease of handling and stacking to save space
- Comply with ISO7056
- Autoclavable at 121°C with good chemical resistance
- Crisp, blue, easy to read indelible graduations
- Precise non drip pouring spouts

Item Code	Capacity ml	Grads. ml	Rim diam. mm	Height mm	Pack qty.	
BTB0025P	25	5.0	41.5	51	10	
BTB0050P	50	10.0	50.5	61	10	
BTB0100P	100	20.0	61.5	73	10	
BTB0250P	250	50.0	80.5	96	5	
BTB0400P	400	50.0	92.5	111	5	
BTB0500P	500	50.0	102.5	121	5	
BTB0600P	600	50.0	104.0	126	5	
BTB1000P	1000	100.0	120.0	148	1	
BTB2000P	2000	200.0	163.0	188	1	
BTB3000P	3000	200.0	172.0	214	1	
BTB5000P	5000	500.0	230.0	250	1	



### Beakers, straight sided, PTFE





- Opaque PTFE beakers
- Rigid and non-porous with a smooth surface
- Resistant to all chemicals except molten alkali metals and fluorine
- Are efficient substitutes for platinum
- Can withstand temperatures up to 260°C

Item Code	Capacity ml	O.D. mm	Height mm	Pack qty.	
BWN008	10	24	33	1	
BWN012	25	32	47	1	
BWN018	50	43	60	1	
BWN024	100	54	68	1	
BWN030	250	66	97	1	
BWN036	500	80	125	1	



It is NOT advisable to use PTFE beakers on a hotplate as fluorine can be emitted at high temperatures.

#### Beaker, aluminium, with spout

- Lightweight and durable
- Can be heated up to 340°C
- Smooth finish for easy cleaning
- Spout for safe pouring

Item Code	Capacity ml	Diam. mm	Height mm	Pack qty.	
NE402	100	50	57	1	
NE404	250	69	76	1	
NE407	500	84	103	1	
NE410	1000	102	132	1	



### Beaker, stainless steel, with spout

- Manufactured from high quality 304 (18/8 alloy) stainless steel for improved corrosion resistance
- Can be heated up to 550°C
- Robust, seamless construction for long working life
- Smooth finish for easy cleaning

Item Code	Capacity ml	Diam. mm	Height mm	Pack qty.	
NE201	200	60	75	1	
NE203	550	75	125	1	
NE204	700	75	165	1	
NE206	1000	110	135	1	
NE207	2000	125	180	1	
NE208	2500	150	160	1	
NE209	5000	185	220	1	





A range of stainless steel dippers are featured on page 119.



#### Disposal bins, cardboard & LDPE



& Azlon

- Self assembly rigid boxes for safe disposal of broken glass
- Glass is safely held in strong leak-proof and puncture resistant LDPE liner
- Lid has an integral waste flap for easy use and has a sealing feature for use when
- Boxes are clearly printed with instructions for use

Item Code	Description	Dimensions (w x d x h) cm	Pack qty.	
DBG001P	Glass disposal bin floor standing	30 x 30 x 70	6	
DBG002P	Glass disposal bin bench top	23 x 23 x 26.5	6	



#### Incineration bins, cardboard & LDPE





- Self-assembly rigid boxes for the collection and incineration of biohazardous
- Waste is safely held in strong leak-proof and puncture resistant LDPE liner
- Lid has an integral waste flap for easy use and has a sealing feature for use when full
- Boxes are clearly printed with instructions for use

Item Code	Description	Dimensions (w x d x h) cm	Pack qty.	
DBH001P	Incineration bin floor standing	30 x 30 x 70	6	
DBH002P	Incineration bin bench top	20 x 20 x 25	6	

# Bottles, media-lab, with cap and pouring ring PYREX®

- Bottles complete with polypropylene cap and drip-free pouring ring
- Complies with ISO 4796
- Printed with retrace code: downloadable batch certificate
- Ideal for mixing and storage of culture medium
- Sloping shoulders for smooth pouring action
- White graduations and marking spot
- Manufactured from temperature and chemically resistant borosilicate glass
- For use up to 140°C

Item Code	Capacity ml	Bottle height mm	Body diam. mm	Thread size mm	Pack qty.	
1516/01D	25	70	36	25	10	
1516/02D	50	88	46	32	10	
1516/04D	100	100	56	45	10	
1516/06D	250	138	70	45	10	
1516/08D	500	176	86	45	10	
1516/10D	1000	225	101	45	10	
1516/12D	2000	260	136	45	10	
1516/16D	5000	335	181	45	1	
1516/18D	10000	410	227	45	1	
1516/20D	15000	465	258	45	1	
1516/22D	20000	510	300	45	1	



Never autoclave bottles with a fully tightened screwcap. Always slacken off. Failure to follow this procedure can lead to breakage of the bottle.







Further information about 'retrace codes' is detailed in the technical information section.

# Bottles, media-lab, with high temp cap and pouring ring

**PYREX**®

- As 1516: bottles but with thermoplastic polyester cap and pouring ring
- Printed with retrace code: downloadable batch certificate
- Withstands hot air sterilisation up to 180°C
- PTFE sealing disc resists chemical attack

Item Code	Capacity ml	Bottle height mm	Body diam. mm	Thread size mm	Pack qty.	
1516/01Red	25	70	36	25	10	
1516/02Red	50	88	46	32	POA	
1516/04Red	100	100	56	45	10	
1516/06Red	250	138	70	45	10	
1516/08Red	500	176	86	45	10	
1516/10Red	1000	225	101	45	10	
1516/12Red	2000	260	136	45	10	





# Bottles, media-lab, without cap or pouring ring

**PYREX**®

- Glass bottles only
- As Pyrex 1516: range but supplied without cap or pouring ring
- Printed with retrace code: downloadable batch certificate

Item Code	Capacity ml	Bottle height mm	Body diam. mm	Thread size mm	Pack qty.
1517/01	25	70	36	25	10
1517/02	50	88	46	32	10
1517/04	100	100	56	45	10
1517/06	250	138	70	45	10
1517/08	500	176	86	45	10
1517/10	1000	225	101	45	10
1517/12	2000	260	136	45	10
1517/16	5000	335	181	45	1
1517/18	10000	410	227	45	1
1517/22	20000	510	300	45	1



Choice of caps and pouring rings available separately on pages 56-57.



Never autoclave bottles with a fully tightened screwcap. Always slacken off. Failure to follow this procedure can lead to breakage of the bottle.

#### Bottles, media-lab, plastic-coated





- Borosilicate glass with clear plastic coating to provide added protection against mechanical breakage
- Reduces the hazard of flying glass and liquid splashes in the event of breakage
- Printed with retrace code: downloadable batch certificate
- Coating withstands steam sterilisation up to 135°C

Item Code	Capacity ml	Bottle height mm	Body diam. mm	Thread size mm	Pack qty.	
1518/04	100	100	56	45	10	
1518/06	250	138	70	45	10	
1518/08	500	176	86	45	10	
1518/10	1000	225	101	45	10	
1518/12	2000	260	136	45	10	
1518/16	5000	335	181	45	1	
1518/18	10000	410	227	45	1	



For further information about plastic coated bottles please see the technical information section.



#### Bottles, media-lab, amber glass

#### **PYREX®**

- Bottles only. Supplied without cap or pouring ring
- Manufactured from amber coated borosilicate glass
- UV absorbent up to 500nm
- Ideal for storage of light sensitive materials
- Printed with retrace code: downloadable batch certificate

Item Code	Capacity ml	Bottle height mm	Body diam. mm	Thread size mm	Pack qty.
1519/01	25	70	36	25	10
1519/02	50	88	46	32	10
1519/04	100	100	56	45	10
1519/06	250	138	70	45	10
1519/08	500	176	86	45	10
1519/10	1000	225	101	45	10
1519/12	2000	260	136	45	10
1519/16	5000	335	181	45	1
1519/18	10000	410	227	45	1





1519: Amber media bottles also available with polypropylene or High temperature cap and pouring ring. Please contact SciLabware customer service department for details.

#### Bottles, media-lab, square shape

# **PYREX**®

- Square shape allows closer stacking in water baths or on shelves
- Up to 20% saving of space compared to round bottles
- Bottle complete with polypropylene cap and pouring ring
- For use up to 140°C
- Printed with retrace code: downloadable batch certificate

Item Code	Capacity ml	Bottle height mm	Body diam. mm	Thread size mm	Pack qty.	
1520/04D	100	109	50	32	10	
1520/06D	250	143	64	45	10	
1520/08D	500	181	78	45	10	
1520/10D	1000	222	94	45	10	



For further information on 'retrace codes' please see the technical information section.



# **Bottles**



## Screwcaps for media-lab bottles

**PYREX**®

- For use with 1516, 1517, 1518, 1519 and 1520 series bottles
- Polypropylene plug seal cap ideal for media preparation work
- Autoclavable up to 140°C
- Available in choice of 4 colours for easy identification of samples

Item Code	Thread size mm	Colour	Pack qty.
4506/25D	25	Light blue	10
4506/32D	32	Light blue	10
4506/45D	45	Light blue	10
4506/45E	45	Green	10
4506/45F	45	Yellow	10
4506/45G	45	Grey	10



# Screwcaps for media-lab bottles, high temperature



- For use with 1516, 1517, 1518, 1519 and 1520 series bottles
- Ideal for applications involving high temperatures or aggressive chemicals
- Thermoplastic polyester cap with PTFE faced sealing disc
- Withstands hot air sterilisation up to 180°C
- PTFE sealing disc resists chemical attack

Item Code	Thread size mm	Colour	Pack qty.
4526/25D	25	Red	10
4526/32D	32	Red	10
4526/45D	45	Red	10



The cap may discolour when used at the maximum temperature of 180°C, however this does not affect performance.

# Pouring rings for media-lab bottles

## **PYREX**®

- For use with 1516, 1517, 1518, 1519 and 1520 series bottles
- Ensures drip-free pouring
- Clear polypropylene pouring ring
- Withstands autoclaving up to 140°C

Item Code	Thread size mm	Colour	Pack qty.	
4516/32D	32	Clear	10	
4516/45D	45	Clear	10	



# Pouring rings for media-lab bottles, high temperature



- For use with 1516, 1517, 1518, 1519 and 1520 series bottles
- Ideal for applications involving high temperatures
- Red coloured ethylene-tetrafluoroethylene pouring ring
- Withstands hot air sterilisation up to 180°C

Item Code	Thread size mm	Colour	Pack qty.	
4536/32D	32	Red	10	
4536/45D	45	Red	10	





#### Bottles, reagent, screwcap

**PYREX®** 

- Complies with ISO 4796-1
- Ideal for storage of reagents, analytical standards and culture media etc.
- Manufactured from Pyrex® borosilicate glass
- Excellent resistance to chemical attack and high temperatures
- Supplied with phenolic screwcaps having a PTFE faced sealing disc
- Autoclavable up to 121°C
- White graduations and marking spot

Item Code	Capacity ml	Bottle height mm	Body diam. mm	Thread size mm	Pack qty.	
1515/01D	25	65	35	20	10	
1515/02D	50	80	43	25	10	
1515/04D	100	105	53	25	10	
1515/06D	250	135	66	30	10	
1515/08D	500	175	81	30	10	
1515/10D	1000	215	101	42	10	
1515/12D	2000	245	136	60	10	
1515/16D	5000	324	181	60	1	
1515/18D	10000	395	227	60	1	
1515/20D	15000	460	258	60	1	
1515/22D	20000	502	288	60	1	



Never autoclave bottles with a fully tightened cap. Always slacken off. Failure to follow this procedure can lead to breakage of the bottle.



# Screwcaps for 1515: series reagent bottles

**PYREX**®

- Phenolic cap with PTFE faced sealing disc for chemical resistance
- Autoclavable up to 121°C

Item Code	Thread size mm	Description	Pack qty.
4503/20	20	Cap with insert	20
4503/25	25	Cap with insert	20
4503/30	30	Cap with insert	20
4503/42	42	Cap with insert	10
4503/60	60	Cap with insert	5
4513/20M	20	Spare insert	20
4513/25M	25	Spare insert	20
4513/30M	30	Spare insert	20
4513/42M	42	Spare insert	10
4513/60M	60	Spare insert	5





Insert is ethylene propylene with PTFE face for chemical resistance.

#### Bottles, reagent, narrow neck, glass stopper

## **PYREX**®

- Complies with ISO 4796-2
- Borosilicate glass with ground neck
- Supplied with solid glass stopper

Item Code	Capacity ml	Body diam. mm	Stopper size	Height with stopper mm	Pack qty.	
1521/04D	100	54	14/15	106	10	
1521/06D	250	73	19/26	143	10	
1521/08D	500	89	24/29	175	10	
1521/10D	1000	111	29/32	214	10	
1521/12D	2000	138	29/32	262	10	
1521/16D	5000	181	45/40	333	1	
1521/18D	10000	227	60/46	414	1	
1521/22D	20000	288	60/46	508	1	





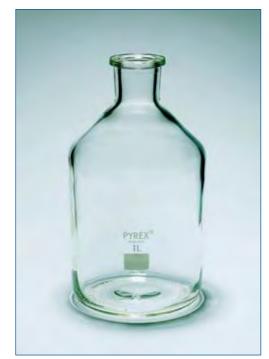
Spare glass stoppers are available on page 283.

### Bottles, reagent, narrow neck

### **PYREX**®

- Complies with ISO 4796
- Borosilicate glass with unground neck
- For use with rubber stoppers (not supplied)

Item Code	Capacity ml	Body diam. mm	Neck I.D. at top mm	Bottle height mm	Pack qty.	
1526/04D	100	54	13	95	10	
1526/06D	250	73	18	131	10	
1526/08D	500	89	23	163	10	
1526/10D	1000	111	28	200	10	
1526/12D	2000	138	28	248	10	
1526/16D	5000	181	44	318	1	
1526/18D	10000	227	59	398	1	
1526/20D	15000	258	59	460	1	
1526/22D	20000	288	59	492	1	





1526/20D is supplementary to the ISO range.

# **Bottles**



#### Bottles, density, adjusted



- Ocmplies with ISO 3507, IP190 Type 1(b) and STPTC Schedule VII
- Adjusted ready for use with the exact volume engraved on the bottle
- With individual capillary stoppers which are numbered and matched with the bottle
- Manufactured from Pyrex® borosilicate glass

Item Code	Nom. capacity ml	Tol. +/- ml	Pack qty.	
BRE000	10	1.00	2	
BRE002	25	2.00	2	
BRE004	50	3.00	2	
BRE006	100	3.00	2	



#### Bottles, roller

- Ideal for cell culture work
- Pyrex® borosilicate glass, specially selected for surface finish and optical clarity
- Wide neck for easy cell harvesting
- Non-toxic polypropylene screwcap
- Autoclavable up to 121°C
- Fits standard roller apparatus

Item Code	Overall length mm	Body O.D. mm	Effective length mm	Effective growth area cm <sup>2</sup>	Overall growth area cm²	Pack qty.	
1528/02	284	110	210	670	820	2	



Never autoclave bottles with a fully tightened screwcap. Always slacken off. Failure to follow this procedure can lead to breakage of the bottle.

## Bottles, dropping

**MBL**®

- Borosilicate glass bottle and pipette.
- Polypropylene stopper
- Pipette fitted with vinyl rubber teat

Item Code	Capacity ml	O.D. mm	Bottle height mm	Pack qty.	
BRF056	100	54	104	10	



# Bottles, dropping, pipette cap, LDPE





- Round LDPE bottles fitted with a closure that features an integral LDPE bellows pipette
- Good resistance to chemical attack

Item Code	Capacity ml	Dispenser volume ml	Diam. x height mm	Pack qty.	
BGE614P	30	2.0	31 x 109	10	
BGE620P	60	2.0	39 x 119	10	
BGE628P	150	2.5	50 x 157	10	
BGE630P	250	2.5	59 x 175	10	



More dispensing bottls can be found on pages 69 and 71.





#### Bottles, eyedropper, LDPE





- Round LDPE 15ml eyedropper style bottle
- Fitted with fine-bore dropper insert and over cap
- Available in natural for general use or amber for light sensitive solutions
- Good resistance to chemical attack

Item Code	Capacity ml	Description	Diam. x height mm	Pack qty.	
BGE510P	15	Natural	24 x 73	10	
EGR336P	15	Amber	24 x 73	10	



### Bottles, round, narrow neck, polypropylene





- Translucent, rigid polypropylene bottles with polypropylene screw caps
- Heavy duty and very durable in use
- Autoclavable at 121°C
- Ideal for a wide range of liquid storage, media preparation and sampling applications
- Good general chemical resistance

Capacity ml	Height mm	O.D. mm	Neck I.D. mm	Pack qty.	
30	66	32	17	10	
60	79	40	17	10	
100	89	50	22	10	
125	102	50	22	10	
150	116	50	22	10	
250	140	60	21	10	
500	160	75	21	10	
1000	201	90	21	5	
2000	238	120	34	5	
	30 60 100 125 150 250 500	ml         mm           30         66           60         79           100         89           125         102           150         116           250         140           500         160           1000         201	ml         mm         O.D. IIIII           30         66         32           60         79         40           100         89         50           125         102         50           150         116         50           250         140         60           500         160         75           1000         201         90	ml         mm         O.D. IIIII         mm           30         66         32         17           60         79         40         17           100         89         50         22           125         102         50         22           150         116         50         22           250         140         60         21           500         160         75         21           1000         201         90         21	ml         mm         O.D. IIIII         mm         Fack quy           30         66         32         17         10           60         79         40         17         10           100         89         50         22         10           125         102         50         22         10           150         116         50         22         10           250         140         60         21         10           500         160         75         21         10           1000         201         90         21         5



When autoclaving bottles always ensure the caps are loosened or removed to prevent accidental implosion.

### Bottles, round, wide neck, polypropylene



- Translucent, rigid polypropylene bottles with PP screw caps
- Screw caps have non-stick feature and open and close in less than 1½ turns
- Heavy duty and very durable in use
- Ideal for a wide range of liquid storage, media preparation and sampling applications
- Good chemical resistance
- Autoclavable at 121°C

Item Code	Capacity ml	Height mm	O.D. mm	Neck I.D. mm	Pack qty.	
BWP0030PN	30	70	32	22	10	
BWP0060PN	60	82	40	26	10	
BLP0100P	100	86	50	32	10	
BWP0100PN	100	78	50	26	10	
BLP0125P	125	100	50	32	10	
BWP0125PN	125	92	50	26	10	
BLP0150P	150	113	50	32	10	
BWP0150PN	150	106	50	26	10	
BWP0250P	250	141	60	34	10	
BWP0500P	500	161	75	44	10	
BWP1000P	1000	207	90	53	5	
BWP2000P	2000	243	120	53	5	



## Bottles, round, wide neck, amber, polypropylene





- Opaque rigid polypropylene bottles with black polypropylene screw caps
- Ideal for a wide range of light sensitive liquid or solid storage
- Screw caps have non-stick feature and open or close easily in less than 11/2 turns
- Heavy-duty and very durable in use
- Autoclavable at 121°C
- Good general chemical resistance

Item Code	Capacity ml	Height mm	O.D. mm	Neck I.D. mm	Pack qty.	
BWP0060AP	60	84	40	22	10	
BWP0150AP	150	104	50	26	10	
BWP0250AP	250	141	60	34	10	
BWP0500AP	500	161	75	44	10	
BWP1000AP	1000	207	90	53	5	
BWP2000AP	2000	243	120	53	5	





For information on chemical resistance please refer to the chemical resistance chart in the technical information setion.



### Bottles, graduated, write-on-panel, polypropylene



A D Azlon

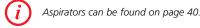
- High clarity polypropylene bottles with good chemical resistance
- Clear crisp printed graduations show millilitres and fluid ounces
- Printed with large white write-on-panel for easy labelling
- Wide mouth bottle
- Ideal for both liquids and solids, perfect for microbiological sampling
- Autoclavable at 121°C
- Reference code detailed on the bottle for easy replacement ordering

Item Code	Capacity ml	Neck I.D. mm	Pack qty.	
BWP0060PGRAD	60	26	10	
BLP0125PGRAD	125	32	10	
BWP0250PGRAD	250	34	10	
BWP0500PGRAD	500	44	10	
BWP1000PGRAD	1000	53	5	



When autoclaving bottles always ensure the caps are loosened or removed to prevent accidental implosion.





## Bottles, carboy, heavy duty, polypropylene





- Excellent general chemical resistance
- Squat form for easy location on shelves, bench top or in transit
- Moulded handle for safe and secure carrying
- Moulded graduations for quick easy volume reference
- Autoclavable at 121°C
- Caps on 10 & 20 litre carboys have moulded drill guides to aid installation of feed-lines etc.

Item Code	Capacity litres	Thread size mm	Max height x width mm	Pack qty.
BNP05B	5	45	270 x 220	1
BNP10B	10	90	360 x 280	1
BNP20B	20	90	420 x 350	1



When autoclaving bottles always ensure the caps are loosened or removed.

## Bottles, carboy, heavy duty, polypropylene, spares

Item Code	Description	Pack qty.
CAP/045H	Spare cap for BNP05A/B	1
CGZ85PP	Spare cap for BNP10A/B & 20A/B	1

# Bottles, carboy, large, narrow neck, HDPE Azlon



- Large capacity bottles with screw cap
- Ideal for bulk storage or transport of liquids
- Fitted with carrying handle (except 5L carboy)
- Good resistance to chemical attack

Item Code	Capacity litres	Neck I.D. mm	Overall height mm	Pack qty.	
BGH022	5	49	330	1	
BGH024	10	49	380	1	
BGH026	25	80	580	1	
BGH028	50	80	700	1	



### Bottles, round, narrow neck, HDPE





- Translucent, rigid HDPE bottles with polypropylene screw caps
- Lightweight but very durable in use
- Ideal for storing a wide range of liquids

Item Code	Capacity ml	Height mm	O.D. mm	Neck I.D. mm	Pack qty.
BNH0030PN	30	66	32	17	10
BNH0060PN	60	79	40	17	10
BNH0100PN	100	89	50	22	10
BNH0125PN	125	102	50	22	10
BNH0150PN	150	116	50	22	10
BNH0250P	250	140	60	21	10
BNH0500P	500	160	75	21	10
BNH1000P	1000	201	90	21	5
BNH2000P	2000	238	120	34	5





For further information on chemical comparability see the chemical resistance chart in the technical information section.



#### Bottles, round, wide neck, HDPE



Azlon

- Translucent, rigid HDPE bottles with polypropylene screw caps
- Screw caps have non-stick feature and open and close in less than 1½ turns
- Heavy duty and very durable in use
- Ideal for a wide range of liquid storage, media preparation and sampling applications
- Good chemical resistance

Item Code	Capacity ml	Height mm	O.D. mm	Neck I.D. mm	Pack qty.	
BWH0030PN	30	70	32	22	10	
BWH0060PN	60	82	40	26	10	
BLH0100P	100	86	50	32	10	
BWH0100PN	100	78	50	26	10	
BLH0125P	125	100	50	32	10	
BWH0125PN	125	92	50	26	10	
BLH0150P	150	113	50	32	10	
BWH0150PN	150	106	50	26	10	
BWH0250PN	250	141	60	34	10	
BWH0500PN	500	161	75	44	10	
BWH1000PN	1000	207	90	53	5	
BWH2000P	2000	243	120	53	5	



# Bottles, round, powder, wide neck, HDPE





- Translucent rigid HDPE bottles with PVDC wadded Urea screw caps
- Ideal for storage of powders and other solids

Item Code	Capacity ml	Height mm	O.D. mm	Neck I.D. mm	Pack qty.	
BGC428P	150	104	50	26	10	
BGC430P	250	124	61	48	10	
BGC432P	300	135	61	48	10	
BGC436P	500	154	74	48	10	
BGC440P	1000	190	98	72	5	

#### Bottles, square, wide neck, wadded, **HDPE**



E Azlon

- Heavy duty wide neck bottles
- Black urea caps with LDPE foam wad
- Practical square design for economic use of space
- Designed for chemical, powder or granule storage

Item Code	Capacity ml	Base x height mm	Neck I.D. mm	Pack qty.	
BGE414P	30	38 x 47	21	10	
BGE420P	60	38 x 72	21	10	
BGE424P	100	47 x 74	33	10	
BGE426P	125	47 x 89	33	10	
BGE430P	250	60 x 106	43	10	
BGE436P	500	72 x 127	52	10	
BGE439P	1000	95 x 171	58	5	
BGE441P	1500	101 x 184	58	5	



#### Bottles, square, graduated, wide neck, **HDPE**





- Heavy duty square bottles with plug seal and screw cap
- Easy to grip caps have toggle for tamper evident wire attachment to neck
- Moulded graduations for approximate volume measurement
- Suitable for liquid or solid usage
- Food Safe
- Space saving design

Item Code	Capacity ml	l x w x h mm	Neck I.D. mm	Pack qty.	
BGE212P	25	32 x 32 x 51	18	10	
BGE218P	50	36 x 36 x 68	24	10	
BGE224P	100	48 x 45 x 88	34	10	
BGE230P	250	60 x 56 x 108	34	10	
BGE336P	500	80 x 67 x 135	44	10	
BGE340P	1000	101 x 82 x 170	58	5	
BGE342P	2000	130 x 98 x 215	58	5	





For further information on food safety, please refer to the technical section.

# **Bottles**



## Bottles, square, graduated, coloured cap, wide neck, HDPE



- Lightweight square bottles with plug seal and red or blue screw cap
- Moulded graduations for approximate volume measurement
- Ideal for powders
- Space saving design
- Neck I.D. 58mm

Item Code	Description	Capacity ml	l x w x h mm	Pack qty.
BGE236P	Blue	500	75 x 75 x 120	10
BGE236RED	Red	500	75 x 75 x 120	1
BGE240P	Blue	1000	94 x 75 x 180	5
BGE240RED	Red	1000	94 x 75 x 180	1
BGE242P	Blue	2000	108 x 92 x 235	5
BGE242RED	Red	2000	108 x 92 x 235	50



# Bottle, round, concertina, amber, HDPE





- Collapsable/extendable bottles in amber HDPE
- Bellows action allows for adjustment of volume to preclude air space or allow for gas expansion
- Ideal for solutions that readily oxidise e.g. photographic chemicals
- Suitable for use with gas liberating solutions e.g. hydrogen peroxide

Item Code	Capacity ml	Diam. x height mm	Neck I.D. mm	Pack qty.	
BGE440	1000	100 x 201	32	1	

### Bottles, pump dispenser, HDPE



Azlon

- Round HDPE bottles fitted with polypropylene pump dispenser closures
- Suitable for gels, detergents and other viscous liquids
- Good resistance to chemical attack

Item Code	Capacity ml	Dispenser volume ml	Diam. x height mm	Pack qty.	
BGE462P	125	0.5	50 x 143	10	
BGE466P	250	4.0	59 x 190	10	
BGE468P	500	4.0	74 x 220	10	



## Bottles, atomising spray, HDPE



Azlon

- Round translucent HDPE bottles fitted with polypropylene atomising pump caps
- Good resistance to chemical attack
- Ideal for a wide range of applications including plant misting, disinfecting etc.

Item Code	Capacity ml	O.D. mm	Height mm	Pack qty.	
BGE480P	30	31	107	10	
BGE482P	60	39	120	10	
BGE484P	125	50	144	10	
BGE486P	250	61	174	10	
BGE488P	500	74	204	10	





### Bottles, round, slope shoulder, narrow neck, LDPE





- Flexible and translucent lightweight bottles
- Suitable for liquids
- Slope shoulder for smooth pouring
- Supplied capped with 28R4 polypropylene screw cap
- Neck I.D. 21mm

Item Code	Capacity ml	Diam. x height mm	Pack qty.
BGK926P	125	49 x 106	10
BGK930P	250	54 x 152	10
BGK936P	500	69 x 187	10
BGK940P	1000	84 x 246	5



## Bottles, round, narrow neck, LDPE





- Translucent, flexible LDPE bottles with polypropylene screw caps
- Heavy duty and very durable in use
- Ideal for a wide range of liquid storage/media preparation and sampling applications
- Good general chemical resistance

Item Code	Capacity ml	Height mm	O.D. mm	Neck I.D. mm	Pack qty.	
BNL0030PN	30	66	32	17	10	
BNL0060PN	60	79	40	17	10	
BNL0100PN	100	89	50	22	10	
BNL0125PN	125	102	50	22	10	
BNL0150PN	150	116	50	22	10	
BNL0250P	250	140	60	21	10	
BNL0500P	500	160	75	21	10	
BNL1000P	1000	201	90	21	5	
BNL2000P	2000	238	120	34	5	

### Bottles, dispensing, pivot nozzle, LDPE



Azlon

- Round LDPE bottles fitted with a pivoting nozzle closure
- Nozzle retracts into cap to seal bottle
- Suitable for use as a dropping or wash bottle and excellent for dispensing gels
- Good resistance to chemical attack

Item Code	Capacity ml	O.D. mm	Height mm	Pack qty.	
BGE514P	30	32	84	10	
BGE520P	60	39	94	10	
BGE528P	150	59	120	10	
BGE530P	250	59	145	10	
BGE536P	500	74	174	10	



# Bottles, dispensing, spouted cap, LDPE





- Round LDPE bottles fitted with spouted dropper closure
- Closure features a captive sealing cap and can be cut to adjust flow rate
- Suitable for use as a dropping or dispensing bottle
- Good resistance to chemical attack

Item Code	Capacity ml	Diam. x height mm	Cap size	Pack qty.	
BGE814PNC	30	32 x 103	28R4	10	
BGE820PNC	60	39 x 118	28R4	10	
BGE828PNC	150	50 x 144	28R4	10	
BGE830PNC	250	60 x 168	28R4	10	
BGE836PNC	500	73 x 198	28R4	10	



# **Bottles**



#### Bottles, round, wide neck, PTFE



- Opaque PTFE bottles
- Rigid and non-porous with a smooth surface
- Resist all chemicals except molten alkali metals and fluorine
- Slope shoulder for easy pouring of powders or liquids
- Can withstand temperatures upto 260°C

Item Code	Capacity ml	Diam. x height mm	Neck I.D. mm	Pack qty.	
BWN118	50	43 x 76	25	1	
BWN124	100	52 x 88	35	1	
BWN130	250	67 x 115	42	1	



Do not use when sealed for chemical reactions or digestions. Loosen lids when thermally sterilising.



#### Bottles, round, wide neck, PFA





- Translucent PFA bottles and closures
- Resistant to virtually all chemical attack ideal for very aggressive solutions
- PFA material of highest purity bottle ideal for trace element work and sensitive solutions
- Autoclavable at 121°C and can withstand temperatures up to 270°C

Item Code	Capacity ml	Height mm	O.D. mm	Cap size DIN	Pack qty.	
BWF0100	100	120	45	GL 32	1	
BWF0500	500	179	76	GL 45	1	
BWF1000	1000	217	96	GL 56	1	



When autoclaving bottles always ensure the caps are loosened or removed to prevent accidental implosion.

### Bottles, wash, safety venting, wide neck, **LDPE**



- Labelled wide neck wash bottles featuring the patented DripLok® vapour venting valve that prevents hazardous volatile solvent drips
- Indelibly printed with a choice of five solvent labels all including full hazard symbols/safety information and instructions for use
- Fitted with colour coded one-piece PP closures that maintain their shape in use
- Closures feature precision jet-tip aperture for fine control

Item Code	Capacity ml	Print label	Closure colour	Pack qty.
WGW531VT	250	Acetone	Red	5
WGW535VT	250	Ethanol	Orange	5
WGW534VT	250	I.M.S.	Yellow	5
WGW533VT	250	Isopropanol	Blue	5
WGW532VT	250	Methanol	Green	5
WGW537VT	500	Acetone	Red	5
WGW541VT	500	Ethanol	Orange	5
WGW540VT	500	I.M.S	Yellow	5
WGW539VT	500	Isopropanol	Blue	5
WGW538VT	500	Methanol	Green	5











Wash bottles for gram staining detailed on page 78.

### Bottles, wash, safety venting, DIY, wide neck, LDPE





- Do-it-yourself DripLok® wash bottles as above with blank write-on-panel
- Supplied with adhesive hazard labels

Item Code	Description	Pack qty.
WGW001VT	250ml Custom/DIY with white cap	5
WGW002VT	500ml Custom/DIY with white cap	5
WGWPEN01	Indelible black marker pen for custom/DIY wash bottles	2





### Bottles, wash, non-venting, wide neck, **LDPE**



& Azlon

- Labelled wide neck wash bottles
- Indelibly printed with a choice of three water or five solvent labels all including full hazard symbols / safety information
- Fitted with colour coded one-piece PP closures that maintain their shape in use
- Closures feature precision jet-tip aperture for fine control

Item Code	Capacity ml	Print label	Closure colour	Pack qty.
WGW600P	250	Distilled water	White	5
WGW602P	250	Deionised water	White	5
WGW530P	250	Water	White	5
WGW531P	250	Acetone	Red	5
WGW532P	250	Methanol	Green	5
WGW533P	250	Isopropanol	Blue	5
WGW534P	250	I.M.S	Yellow	5
WGW535P	250	Ethanol	Orange	5
WGW536P	500	Water	White	5
WGW601P	500	Distilled water	White	5
WGW603P	500	Deionised water	White	5
WGW537P	500	Acetone	Red	5
WGW538P	500	Methanol	Green	5
WGW539P	500	Isopropanol	Blue	5
WGW540P	500	I.M.S	Yellow	5
WGW541P	500	Ethanol	Orange	5



### Bottles, wash, non-venting, wide neck, DIY, **LDPE**



- Do-it-yourself wash bottles as above with blank write-on-panel
- Supplied with adhesive hazard labels

Item Code	Description	Pack qty.
WGW001P	250ml Custom/DIY with white cap	5
WGW002P	500ml Custom/DIY with white cap	5
WGWPEN01	Indelible black marker pen for custom/DIY wash bottles	2

#### Bottles, wash, tracker, LDPE



Azlon

- Wash bottle designed with complete labelling facility to ensure full traceability
- Meets industry standards including those required by the Clinical Pathology Accreditation body
- Ideal for use in the clinical & general hospital market
- Unique write-on, wipe-off panel
- DripLok® vapour venting cap version available for ultimate safety with volatile solvents
- Supplied with a set of COSHH labels

Item Code	Capacity ml	Сар Туре	Pack qty.
WTR250P	250	Plain non-venting	5
WTR250VT	250	Vapour-Venting	5
WTR500P	500	Plain non-venting	5
WTR500VT	500	Vapour-Venting	5



Recordable information includes: bottle contents, first use and expiry dates, lot number, COSHH information, originator and date of receipt/preparation.



## Bottle, wash, wide neck, DIY, polypropylene





- 500ml wide neck wash bottle manufactured from flexible polypropylene
- More resilient to chemical attack than LDPE
- Bottle has blank write-on-panel to facilitate self written content labels

Item Code	Description	Closure colour	Pack qty.	
WGW013PN	500ml wash bottles	Blue	5	
WGWPEN01	Indelible black marker pen for custom/DIY wash bottles	-	2	





### Bottles, wash, wide neck, LDPE



Azlon

- Square shoulder wash bottles featuring a wide neck for easy spill-free filling
- Fitted with colour-coded one-piece PP closures that maintain their shape in use
- Closures feature precision jet-tip aperture for fine control

Item Code	Capacity ml	Closure colour	Pack qty.
WGW230P	250	White	5
WGW231P	250	Red	5
WGW232P	250	Yellow	5
WGW233P	250	Green	5
WGW234P	250	Blue	5
WGW236P	500	White	5
WGW237P	500	Red	5
WGW238P	500	Yellow	5
WGW239P	500	Green	5
WGW235P	500	Blue	5
WGW443P	1000	White	5
WGW445P	1000	Red	5
WGW444P	1000	Yellow	5
WGW447P	1000	Green	5
WGW446P	1000	Blue	5
WGW229P	250	Mixed pack one of each colour	1



# Bottles, wash, classic style, narrow neck, LDPE





- Traditional and popular square shoulder round wash bottles
- Closures feature precision jet-tip aperture for fine control

Item Code	Capacity ml	Closure colour	Pack qty.
WGF220P	60	White	5
WGF228P	150	White	5
WGF230P	250	White	5
WGF236P	500	White	5

**Bottles** 

# Bottles, wash, slope shoulder, narrow neck, LDPE



Azlon

- The slim design enables comfortable handling and enhanced ease of use
- Fitted with a choice of white or red PP swivel dispensing closures
- Choice of four sizes
- Closures feature precision jet-tip aperture for fine control

Item Code	Capacity ml	Closure colour	Pack qty.	
WGF326P	125	White	5	
WGF327P	125	Red	5	
WGF330P	250	White	5	
WGF331P	250	Red	5	
WGF336P	500	White	5	
WGF337P	500	Red	5	
WGF240P	1000	White	5	
WGF241P	1000	Red	5	



## Bottles, wash, slope shoulder, printed, LDPE





- Labelled wash bottles for easy identification of contents
- Indelibly printed with a choice of seven popular laboratory solvents, appropriate hazard symbols and CAS numbers
- The slim design enables comfortable handling and enhanced ease of use
- Fitted with colour-coded closures
- Closures feature precision jet-tip aperture for fine control

Item Code	Capacity ml	Printed	Print / closure colour	Pack qty.
WGF530P	250	Water	White	5
WGF600P	250	Distilled water	White	5
WGF531P	250	Acetone	Red	5
WGF532P	250	Methanol	Green	5
WGF533P	250	Isopropanol	Blue	5
WGF534P	250	I.M.S.	Yellow	5
WGF535P	250	Ethanol	Orange	5
WGF536P	500	Water	White	5
WGF601P	500	Distilled water	White	5
WGF537P	500	Acetone	Red	5
WGF538P	500	Methanol	Green	5
WGF539P	500	Isopropanol	Blue	5
WGF540P	500	I.M.S	Yellow	5
WGF541P	500	Ethanol	Orange	5





### Bottles, wash, coloured, narrow neck, **LDPE**



Azlon

- Coloured wash bottles with matching closures
- Ideal for colour-coding purposes
- Fitted with polypropylene closures
- Choice of four colours

Item Code	Capacity ml	Bottle colour	Pack qty.
WGR036P	500	Green	5
WGR038P	500	Red	5
WGR136P	500	Yellow	5
WGR138P	500	Blue	5



### Bottles, wash, integral, narrow neck, LDPE

- Ergonomic wash bottles with an integrally moulded dispensing tube and removable jet tip
- Slim hexagonal cross section makes the bottles particularly suited to smaller
- Precision tip is ideal for use as a dropper or for fine liquid jet dispensing

Item Code	Capacity ml	Bottle colour	Pack qty.	
BGF130P	250	Natural	5	
BGF136P	500	Natural	5	



### Bottles, wash, gram stain, venting





- Pre-labelled with Gram Stain solutions, hazard warning and instructions for use
- With patented DripLok® vapour venting technology
- The set of five wash bottles contains:-
- Crystal violet solution
- Lugol's iodine solution
- Gram iodine solution
- Gram colour/de-colourising solution
- Safranine solution

Item Code	Description	Pack qty.
WGW0255V	Set of five 250ml Gram Stain venting wash bottles	1

### **Bottle carriers**

### Bottle carriers, cluster design, polypropylene



Azlon

- A simple and safe carrying system for use in the laboratory
- Strong lightweight construction
- Will accept most 500ml bottles
- Internal cavity diameter 90mm

Item Code	Description	Pack qty.
BGS024	6 compartment bottle carrier	1



### Bottle carriers, with lid, HDPE



Azlon

- Robust carrier designed for carrying bottles of hazardous materials with the maximum convenience and safety
- Strong rigid swivel handle
- Push on lids
- Minimum I.D. is 134mm making the carriers suitable for use with most plain or plastic coated Winchester bottles
- Internal height 260mm, external height (including lid) 290mm
- A hole in the cover has a diameter of 60mm to accommodate wider necked European bottles
- A double version is available consisting of two single carriers joined together with a strong welded spacer down the whole length

Item Code	Description	Colour	Pack qty.
BGS002	Single carrier with lid	Red	1
BGS004	Single carrier with lid	White	1
BGS012	Double carrier with lids	Red	1
BGS014	Double carrier with lids	White	1





Will not take squat type Winchesters.

## **Bottle carriers, Boxes**



### Bottle carriers, epoxy coated steel



& Azlon

- Manufactured from polyamide epoxy coated steel
- Offers a better heat and chemical resistance than other coatings
- Ideal for safely carrying up to six bottles or wash bottles

Item Code	Max. bottle diam. mm	Pack qty.
BGS040	60	1
BGS042	74	1



### Boxes, airtight, polyethylene





- Tough lightweight and unbreakable in normal use
- Tight fitting snap on lids create an airtight seal
- Suitable for general and refrigerated storage down to -50°C

Item Code	Capacity ml	External dim. (I x w x h) mm	Pack qty.
BWY030	500	100 x 100 x 65	1
BWY032	1000	100 x 100 x 125	1
BWY034	1000	210 x 100 x 65	1
BWY036	1500	210 x 100 x 90	1
BWY038	2000	210 x 210 x 65	1
BWY039	3500	210 x 210 x 90	1

### **Buckets**

### Buckets, spouted, HDPE



& Azlon

- Durable spouted buckets for easy pouring
- Handle grip for easy lifting and carrying
- Choice of white or black
- Moulded graduations

Item Code	Capacity litres	Sub div. litres	Diam. x height mm	Colour	Pack qty.
BWX104	10.5	0.5	286 x 283	Black	1
BWX106	17	0.5	330 x 315	Black	1
BWX112	10.5	0.5	286 x 283	White	1
BWX114	17	0.5	330 x 315	White	1



### Buckets, square, HDPE



& Azlon

- Durable square shape allows economical use of space
- Handle grip for easy lifting and carrying
- Choice of white or black
- Moulded graduations

Item Code	Capacity litres	Sub div. litres	External dim. (l x w x h) mm	Colour	Pack qty.	
BWX108	14	0.5	292 x 292 x 292	Black	1	
BWX116	14	0.5	292 x 292 x 292	White	1	

### Buckets, square, lids, HDPE

Lids with moulded inset handle for buckets above

Item Code	Description	External dim. (I x w x h) mm	Colour	Pack qty.
BWX110	Lid for bucket	280 x 280 x 45	Black	1
BWX118	Lid for bucket	280 x 280 x 45	White	1



### **Burettes**



### Burettes, PTFE key, class A, works certified

**PYREX**®

- Complies with ISO 385
- Individually tested and supplied with certificate showing exact volume dispensed at 5 points on the scale
- Individual serial number and certificate provides complete traceability to National Standards
- Each burette engraved with outflow time to confirm performance
- Manufactured from precision-bore borosilicate glass tubing for high accuracy
- PTFE key which requires no lubrication
- White enamel graduations

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Pack qty.	
3295/22	10	0.02	0.02	1	
3295/24	25	0.10	0.05	1	
3295/26	50	0.10	0.05	1	
3295/28	100	0.20	0.10	1	



### Burettes, PTFE key, class A

**PYREX**®

- Complies with ISO 385
- Manufactured from precision-bore tubing (borosilicate glass) for high accuracy
- Each burette individually engraved with serial number for complete traceability
- Each burette individually engraved with outflow time to confirm performance
- Graduations in white enamel for increased visibility with dark solutions
- Grease-free interchangeable PTFE key

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Pack qty.	
3295/12	10	0.02	0.02	1	
3295/14	25	0.10	0.05	1	
3295/16	50	0.10	0.05	1	
3295/18	100	0.20	0.10	1	

### Burettes, PTFE key, class B

### **PYREX**®

- Complies with ISO 385
- Fitted with interchangeable PTFE keys for grease-free performance
- White enamel graduations for good visibility with dark coloured solutions
- Manufactured from borosilicate glass for increased chemical resistance

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Pack qty.	
3295/02	10	0.02	0.05	1	
3295/04	25	0.10	0.10	1	
3295/06	50	0.10	0.10	1	
3295/08	100	0.20	0.20	1	



Schools and colleges may wish to onsider Azlon® tough acrylic burettes as detailed on page 87.



### Burettes, PTFE key, class B, economy



- Complies with ISO 385
- Economically priced!
- 25 and 50 ml sizes are available fitted with funnel top to make filling easier and safer
- Grease-free PTFE stopcock (interchangeable)
- Graduations in easy to read blue enamel
- Manufactured from soda-lime glass

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Pack qty.
BRB070P	10	0.02	0.05	1
BRB074P	25	0.10	0.10	1
BRB075P	25	0.10	0.10	1
BRB076P	50	0.10	0.10	1
BRB077P	50	0.10	0.10	1



BRB074P and BRB077P are both fitted with fluted funnel tops. BRB070P is made from borosilicate glass.





### Burettes, Rotaflo®, PTFE key, class B



- Complies with ISO 385
- With GP Rotaflo® stopcock having PTFE key
  - No lubrication required
  - No seizure with caustic solutions
  - Provides fine drop control
- Graduations in permanent amber stain which is fused into the glass and is especially resistant to aggressive cleaning solutions
- Manufactured from soda-lime glass

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Pack qty.	
BRB402	10	0.10	0.10	1	
BRB404	25	0.10	0.10	1	
BRB406	50	0.10	0.10	1	
BRB408	100	0.20	0.20	1	



#### Burettes, modular, PTFE stopcock, class B



- Complies with ISO 385
- With funnel top to make filling easier and safer
- PTFE stopcock for grease-free performance
- Easy to read blue enamel graduations
- Manufactured from soda-lime glass
- Modular design with detachable burette tube, stopcock and jet for easy replacement

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Pack qty.	
BRB264P	25	0.10	0.10	1	
BRB266P	50	0.10	0.10	1	

### Replacement parts for modular burette

Item Code	Description	Pack qty.
BRB274P	25ml glass burette tube	1
BRB276P	50ml glass burette tube	1
BRB284	Glass jet for 25 & 50ml burettes	5
BRB290	PTFE stopcock	10

### Burettes, single bore, class B

### **MBL**®

- Complies with ISO 385
- Replacement keys are available in the event of loss or damage: keys are fully interchangeable.
- Graduations in easy to read blue enamel
- Manufactured from soda-lime glass

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Pack qty.	
BRB050P	10	0.02	0.05	1	
BRB056P	25	0.10	0.10	1	
BRB058P	50	0.10	0.10	1	
BRB060P	100	0.20	0.20	1	



BRB050P is manufactured from borosilicate glass. Spare keys are available on page 277.



### Burettes, Sofnol, auto zero, Rotaflo stopcock



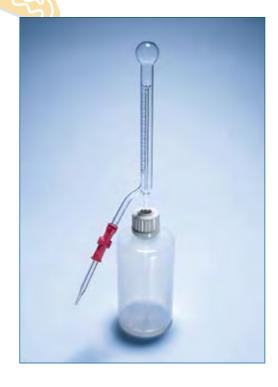
- Easy filling and automatic zero
  - Squeeze the polyethylene bottle to fill the burette
  - Release pressure to allow excess liquid to drain back into bottle and set the burette to zero
- With PTFE Rotaflo® Stopcock for grease-free performance and fine drop-wise control
- Graduations in white enamel
- Manufactured from borosilicate glass
- Burettes and bottles should be ordered separately

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Pack qty.	
3298/02	10	0.1	0.10	5	
3298/03	20	0.1	0.10	5	
3298/04	25	0.1	0.10	5	



### Polyethylene reservoir bottles

Item Code	Description	Pack qty.
3299/04	500ml Polyethylene reservoir bottle	1
3299/06	1000ml Polyethylene reservoir bottle	1



### Burettes, Sofnol, auto zero, pinch clip



- Easy filling and automatic zero
  - Squeeze the polyethylene bottle to fill burette
  - Release pressure to allow excess liquid to drain back into bottle and set the burette to zero
- Easy to read blue enamel graduations
- Manufactured from borosilicate glass
- With simple rubber tube and pinch valve for low cost replacement

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Reservoir bottle capacity ml	Pack qty.	
BRB004	10	0.1	0.10	500	1	
BRB006	20	0.1	0.10	1,000	1	

#### Replacement parts

Item Code	Description	Pack qty.
3299/04	500ml Polyethylene reservoir bottle	1
3299/06	1000ml Polyethylene reservoir bottle	1
BRB042	Rubber pinch clip and glass jet	5
BRB256	Glass jet only	5





- With automatic zero facility
- Simple operation
  - To fill burette apply either a slight positive pressure to lower side-arm or vacuum to upper side-arm
  - To set zero, release pressure to allow excess liquid to siphon back into the bottle
- Both burettes and bottles manufactured from chemically resistant borosilicate glass
- White ceramic graduations
- PTFE stopcock
- Burettes and accessories should be ordered separately

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Joint size	Pack qty.	
3296/02	10	0.05	0.05	24/29	1	
3296/04	25	0.10	0.10	29/32	1	
3296/06	50	0.10	0.10	29/32	1	



Item Code	Description	Pack qty.
3297/08	500ml glass reservoir with 24/29 joint	1
3297/12	2000ml glass reservoir with 29/32 joint	1
3297/14	Rubber blowing ball	1



### Burettes, acrylic, Class B, with PMP/PE stopcocks



[ Azlon

- Acrylic construction for strength and transparency
- Graduations are screen printed in black to ISO 385 Class B accuracy
- Suitable for use in educational laboratories especially where breakages often
- Unaffected by most dilute aqueous solutions, however unsuitable for use with organic solvents\*
- Turning the stopcock through 90° makes it suitable for left or right handed use
- Stopcocks can be removed for easy cleaning

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Pack qty.
BDH108T	10	0.1	0.05	1
BDH112T	25	0.1	0.1	1
BDH118T	50	0.1	0.1	1
BDH124T	100	0.2	0.2	1





\*See chemical resistance chart in the technical information section for more details.

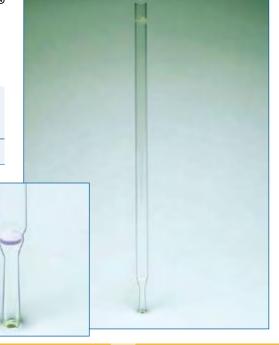
### Burettes, acrylic, spares

Item Code	Description	Pack qty.
SWQ030TAR	Spare stopcock for BDH108T, 118T & 124T	1
SWQ028T	Spare stopcock for BDH112T	1

### Chromatography column, plain

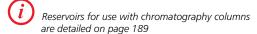
- **PYREX**®
- Simple and economical column ideal for educational use
- With chemically resistant glass sintered disc porosity 1
- Manufactured from Pyrex® borosilicate glass

Item Code	Nom. capacity ml	Body O.D. mm	Length excluding stem mm	Stem O.D. mm	Pack qty.	
3775/02M	30	14	355	8	5	



# Chromatography





## Chromatography columns with Rotaflo® stopcock

- With PTFE Rotaflo® Stopcock for fine control of eluent flow
- Chemically resistant glass sintered disc porosity 0
- Ground glass socket accepts Quickfit® reservoirs
- Manufactured from Pyrex® borosilicate glass

Item Code	I.D. mm	Effective length mm	Socket size	Pack qty.	
CR10/10	10	100	14/23	1	
CR10/20	10	200	14/23	1	
CR10/30	10	300	14/23	1	
CR10/40	10	400	14/23	1	
CR20/20	20	200	19/26	1	
CR20/30	20	300	19/26	1	
CR20/40	20	400	19/26	1	
CR20/50	20	500	19/26	1	
CR30/40	26	400	24/29	1	
CR30/50	26	500	24/29	1	
CR40/40	30	400	29/32	1	
CR40/50	30	500	29/32	1	
CR50/40	30	400	34/35	1	
CR50/50	30	500	34/35	1	
CR60/40	40	400	40/38	1	
CR60/50	40	500	40/38	1	



## Chromatography column, Rotaflo® stopcock and ground cone



- With glass sintered disc (porosity 0) to support column packing
- GP Rotaflo® stopcock with PTFE key for fine control of eluent flow
- Stem within lower cone allows mounting on a Büchner flask for vacuum flash chromatography
- Manufactured from borosilicate glass

Item Code	Nom. bore mm	Effective length mm	Approx overall length mm	Socket size	Cone size	Pack qty.	
CR12/10	10	100	270	14/23	19/26	1	
CR12/30	10	300	470	14/23	19/26	1	

### Chromatography columns, with ground cone



- With glass sintered disc (porosity 0) to support column packing
- Upper socket can be connected to a solvent reservoir
- Lower cone can be connected to stopcock adapter CR3T/23 to control eluent flow
- Manufactured from Pyrex® borosilicate glass

Item Code	Nom. bore mm	Effective length mm	Approx overall length mm	Socket size	Cone size	Pack qty.	
CR32/20	18	200	310	24/29	19/26	1	
CR32/30	18	300	415	24/29	19/26	1	
CR32/40	18	400	515	24/29	19/26	1	



### Chromatography, stopcock adapter



- With GP Rotaflo® stopcock having PTFE key for fine control of eluent flow
  - No lubrication required
  - No contaminating greases
  - No chemical corrosion
- Ideal for use with Quickfit® CR32: columns

Item Code	Socket size	Cone size	Approx overall height mm	Stopcock bore mm	Pack qty.	
CR3T/23	19/26	24/29	190	6.0	1	



### **QUICKFIT® PRODUCTS**

- All Quickfit® products are manufactured from Pyrex® borosilicate glass
- They combine the excellent thermal and physical properties of Pyrex® with the flexibility and quality of Quickfit® ground glass joints



# Clamps, cleaning



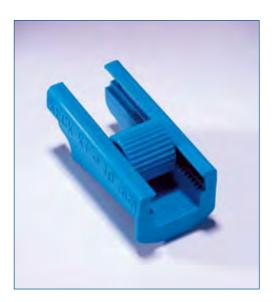
### Clamps, burette, polypropylene & rubber



Azlon

- Spring loaded polypropylene clamps that are corrosion resistant
- Allow clear view of graduations along the full length of the burette
- Rubber grips prevent slipping
- An interchangeable compression cone on the central boss provides a firm grip on rods 11 - 14mm in diameter

Item Code	Model	Pack qty.
CWH002	Single clamp	1
CWH004	Double clamp	1



### Clamps, tubing



- For use with flexible rubber and plastic tubing
- Provides fine flow control of liquids and gases
- Easy one-handed adjustment: just roll serated wheel along sloped floor
- Manufactured from thermoplastic polyester

Item Code	For tubing size	Pack qty.
KT4.5	O.D. up to 4.5mm	5
KT6	O.D. up to 6mm	5
KT10	O.D. up to10 mm	5
KT14	O.D. up to 14mm	5



### Concentrate, Lipsol® detergent



- Excellent cleaning performance, ideal for use with laboratory glassware, plasticware, rubber, ceramics and stainless steel
- Economical price
- Non-corrosive, non-irritant and totally biodegradable surface-active cleaning agent
- Free of chlorine bleaches, phosphates and enzymes

Item Code	Description	Pack qty.
40023	Lipsol concentrate 2 x 5 Litre Jerry Cans	1



Not suitable for use on non-ferrous metals, especially aluminium, zinc or on polycarbonates. MSDS downloadable from www.scilabware.com

### Clips, closed type, epoxy coated



Azlon

- Manufactured from polyamide epoxy coated steel
- Offers a better heat and chemical resistance than other coatings
- Will not scratch burettes, cylinders, pipettes etc.
- Affix with a single screw (not supplied)

Item Code	Diam. (to hold) mm	Pack qty.
CWH006	6	10
CWH009	9	10
CWH012	12	10
CWH019	19	10
CWH025	25	10
CWH032	32	10
CWH038	38	10



### Clips, open type, polyethylene





- One piece mouldings in white polyethylene
- Robust flexible and corrosion resistant
- Provide a safe grip for fragile glassware, instruments, tools etc.
- Affix with a single screw (not supplied)

Item Code	Diam. (to hold) mm	Pack qty.	
CWH109	9	10	
CWH112	12	10	
CWH125	25	10	
CWH132	32	10	



# Cold Traps, condensers



### Cold trap



- Designed for use in vacuum systems
- Prevents vapours from volatile materials from damaging pumps etc.
- Easy to use:
  - immerse trap into Dewar vessel containing refrigerant e.g. dry ice
  - volatile materials passing through system are frozen onto the cold surface

Item Code	Description	Socket size	Cone size	Pack qty.	
MF28/52	Trap head	19/26	34/35 & 19/26	5	
MF24/5	Trap body, 250mm overall length	34/35		1	



Trap head can be connected to flexible vacuum hose using adapters MF10/2B/SC and MF13/2/SC



### Condenser, air



 Simple condensers for condensation of materials with boiling points above 150°C

Item Code	Approx surface area x 10 <sup>-2</sup> m <sup>2</sup>	Socket size	Cone size	Approx effective length mm	Approx overall length mm	Pack qty.	
C2/11	1.0	14/23	14/23	200	260	1	
C2/12	1.0	19/26	19/26	150	210	1	
FC7/23	2.0	24/29	24/29	250	365	1	
C2/22	2.5	19/26	19/26	400	470	1	
FC7/43	4.0	24/29	24/29	500	615	1	

### **Condensers**

### Condenser, Allihn, with ground cone



- Ideal for reflux applications
- Inner bulb sections provide increased cooling surface
- With detachable plastic screwthread connectors for easy and safe attachment of flexible tubing

Item Code	Approx surface area x 10 <sup>-2</sup> m <sup>2</sup>	Cone size	Approx effective length mm	Approx overall length mm	Pack qty.
CX7/02/SC	1.3	19/26	250	400	1
CX7/03/SC	1.3	24/29	250	405	1
CX7/04/SC	1.3	29/32	250	415	1
CX7/05/SC	1.3	34/35	250	335	1
CX7/06/SC	1.3	40/38	250	365	1
CX7/08/SC	1.5	50/42	250	365	1



# Condenser, Allihn, with ground cone and socket



As above but with ground socket

Item Code	Approx surface area x 10 <sup>-2</sup> m <sup>2</sup>	Socket size	Cone size	Approx effective length mm	Approx overall length mm	Pack qty.	
CX7/33/SC	1.8	24/29	24/29	400	545	1	



For spare screwthread connectors please refer to page 100.



# Condensers



### Condenser, coil, Graham, plain ends

**PYREX**®

- Coil condenser with a large cooling surface
- Complete with detachable plastic hose connections to allow easy and safe attachment to flexible tubing

Item Code	Cup O.D. mm	Stem O.D. mm	Approx effective length mm	Overall length mm	Approx cooling area 10 <sup>-2</sup> m <sup>2</sup>	Pack qty.	
1751/02	22	13	250	445	2.50	2	



### Condenser, coil, with ground cone



- Ocolant is circulated through a coil having a very large cooling surface
- Ideal for use in the upright reflux mode where counter-current cooling is possible
- Supplied with detachable plastic connectors for the attachment of rubber hose

Item Code	Approx surface area x 10 <sup>-2</sup> m <sup>2</sup>	Cone size	Approx effective length mm	Approx overall length mm	Pack qty.
CX3/05/SC	2.0	34/35	160	320	1
CX3/06/SC	3.5	40/38	207	380	1
CX3/08/SC	2.0	50/42	155	348	1



For spare screwthread connectors, please refer to page 100.

### Condenser, coil, with ground cone and socket



- Suitable for either reflux or distillation work
- Highly efficient condensers with a large cooling surface
- Supplied with detachable plastic screwthread connectors which allow 9mm flexible tubing to be fitted easily and safely

Item Code	Approx surface area x 10 <sup>-2</sup> m <sup>2</sup>	Socket size	Cone size	Approx effective length mm	Approx overall length mm	Pack qty.	
C3/12/SC	2.0	19/26	19/26	165	305	1	
C3/13/SC	2.0	24/29	24/29	165	310	1	
C3/14/SC	2.0	29/32	29/32	165	315	1	
C3/22/SC	4.0	19/26	19/26	320	460	1	
C3/23/SC	4.0	24/29	24/29	320	465	1	
C3/24/SC	4.0	29/32	29/32	320	470	1	



### Condenser, coil, reversible



- Highly versatile reflux condensers
- Each end of the condenser is fitted with a different size cone thus reducing the need for adapters
- With detachable plastic connectors for the attachment of flexible tubing

Item Code	Approx surface area x 10 <sup>-2</sup> m <sup>2</sup>		Approx effective length mm	Approx overall length mm	Pack qty.	
CX3/23/SC	2.0	19/26 & 24/29	160	315	1	
CX3/35/SC	2.0	24/29 & 34/35	160	335	1	



# Condensers



### Condenser, twin-coil



- With two independent cooling coils
- Each can be fed from separate water supplies for maximum efficiency

Item Code	Approx surface area x 10 <sup>-2</sup> m <sup>2</sup>	Socket size	Cone size	Approx effective length mm	Approx overall length mm	Pack qty.	
C4/13/SC	5.5	24/29	24/29	207	390	1	



For spare screwthread connectors, please refer to page 100.



### Condenser, multi-coil, large scale



- Features a double coil design with a common water inlet
- Suitable for pilot plant work

Item Code	Approx surface area x 10 <sup>-2</sup> m <sup>2</sup>	Socket size	Cone size	Approx effective length mm	Approx overall length mm	Pack qty.	
C13/55	9.0	34/35	34/35	230	440	1	
C13/55/2	18.0	34/35	34/35	420	660	1	



Due to their larger size, these condensers have glass olives for the attachment of flexible tubing.



### Condenser, jacketed coil



- Coil condenser has an outer water jacket
- Coil provides large cooling surface
- Jacket avoids vapour creeping around the coil
- Ideal for reflux work

Item Code	Approx surface area x 10 <sup>-2</sup> m <sup>2</sup>	Socket size	Cone size	Approx effective length mm	Approx overall length mm	Pack qty.	
CX6/22/SC	4.0	19/26	19/26	160	360	1	
CX6/33/SC	4.0	24/29	24/29	160	365	1	
CX6/44/SC	4.0	29/32	29/32	160	370	1	
CX6/05/SC	4.0	-	34/35	160	380	1	



CX6/05/SC has one 34/35 cone and a plain glass chimney at the top.

### Condenser, cold finger



- For immersion into distillation assemblies etc.
- Can be used to regulate refluxing by adjusting the flow of air or water through it

Item Code	Approx surface area x 10 <sup>-2</sup> m <sup>2</sup>	Cone size	Approx effective length mm	Approx overall length mm	Pack qty.
FC14/00/SC	0.35	19/26	100	185	1



### Condenser, double surface, Davies



- Highly efficient condenser with large cooling surface
- Inner cooling surface gives 'baffle' effect
- Outer cooling surface prevents 'creep' with low boiling point liquids
- With detachable plastic screwthread connectors for easy and safe attachment of flexible tubing

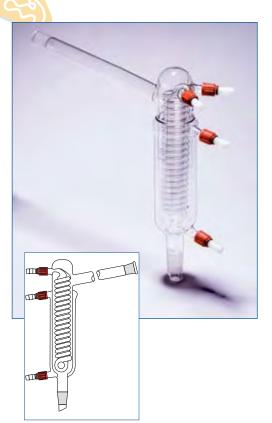
Item Code	Approx surface area x 10 <sup>-2</sup> m <sup>2</sup>	Socket size	Cone size	Approx effective length mm	Approx overall length mm	Pack qty.	
C5/11/SC	1.7	14/23	14/23	160	275	1	
C5/12/SC	1.7	19/26	19/26	160	295	1	
C5/13/SC	2.3	24/29	24/29	160	300	1	
C5/22/SC	2.3	19/26	19/26	200	340	1	
C5/23/SC	3.0	24/29	24/29	200	345	1	
C5/24/SC	3.0	29/32	29/32	205	365	1	
CX5/23/SC	3.0	-	24/29	205	350	1	
CX5/25/SC	3.0	-	34/35	205	360	1	





CX5/23/SC and CX5/25/SC are fitted with a glass chimney instead of socket.

# Condensers



#### Condenser, ether



- Highly efficient coil condenser suitable for condensing very volatile liquids
- Inner coil with large surface area
- Outer water jacket to avoid vapour creep around the coil
- Coil and jacket are independent and can be fed from separate water supplies for maximum efficiency
- With detachable plastic screwthread connectors for the easy and safe attachment of flexible tubing

Item Code	Approx surface area x 10 <sup>-2</sup> m <sup>2</sup>	Socket size	Cone size	Approx effective length mm	Approx overall length mm	Approx length of side tube mm	Pack qty.	
C11/23/SC	6.5	19/26	24/29	165	315	205	1	



For spare screwthread connectors, please refer to page 100.



### Condenser, Inland Revenue



- Inland Revenue Pattern
- Highly efficient
- Vapour and distillate move down through the coil
- Coolant water flows outside the coil
- Complete with detachable plastic hose connectors for the easy and safe attachment of flexible tubing

Item Code	Approx surface area x 10 <sup>-2</sup> m <sup>2</sup>	Socket size	Cone size	Approx effective length mm	Approx overall length mm	Pack qty.	
C6/12/SC	2.5	19/26	19/26	205	340	1	
C6/13/SC	2.5	24/29	24/29	205	340	1	



Inland Revenue condensers should be used in the vertical mode only with vapour fed in via the upper socket and liquid distillate leaving via the lower cone. Distillation rates should be slow to avoid 'slugging' and back pressure in the coil.

### Condenser, Liebig



- Popular water-jacketed condenser suitable for distillation and reflux applications
- With detachable plastic screwthread connectors for easy and safe attachment of rubber hose

Item Code	Approx surface area x 10 <sup>-2</sup> m <sup>2</sup>	Socket size	Cone size	Approx effective length mm	Approx overall length mm	Pack qty.	
C1/00	0.15	10/19	10/19	60	135	1	
C1/11/SC	0.06	14/23	14/23	155	260	1	
C1/12/SC	1.00	19/26	19/26	208	340	1	
C1/12/25/SC	1.30	19/26	19/26	250	380	1	
C1/13/SC	1.00	24/29	24/29	250	390	1	
C1/14/25/SC	1.30	29/32	29/32	250	400	1	
C1/22/SC	2.00	19/26	19/26	398	530	1	
C1/23/SC	2.00	24/29	24/29	395	535	1	
C1/44/SC	2.90	29/32	29/32	400	550	1	





C1/00 is fitted with glass olives because of size limitations.

### One piece distillation apparatus



- Omprises Liebig condenser, stillhead and receiver adapter in a single piece
- Angle and position pre-defined
- Simple to set up with fewer clamps required
- Less grease contamination
- No air leakage under vacuum
- No liquid hold-up at the joints

Item Code	Cone size	Socket size	Approx effective condenser length mm	Pack qty.
DA1/22	19/26	14/23	155	1





#### Connectors, screwthread



- For use with glassware manufactured by SciLabware Ltd having 13mm screwthread inlets and outlets
- Allows 9mm bore rubber hose and flexible tubing to be attached to the glassware easily and safely
- Polypropylene screwthread connectors with Viton O rings for use up to 140°C
- PTFE screwthread connectors with PTFE protected O rings for use up to 200°C
- PTFE connectors have a high chemical resistance and are ideal for connections in contact with aggressive liquids or chemical vapours

Item Code	Description	Pack qty.
4510/02	Polypropylene screwthread connector	10
4510/04	PTFE screwthread connector	10
4511/02	Spare Viton 'O' ring	10



### Connectors, screwthread holder



- For use with all connectors manufactured by SciLabware Ltd and having 13mm screwthread inlets and outlets
- Screws onto the screwthread connector to hold it whilst inserting into the tubing
- Allows safer and easier removal of the connector from the hose or tubing
- Autoclavable

Item Code	Description	Pack qty.
4512/02	Screwthread holder	5



### Connectors, 'T' Pattern, white polypropylene





- "T" pattern tubing connectors in white polypropylene
- Tapered arms are rigid with steps to give firm grip
- Autoclavable at 121°C with good chemical resistance

Item Code	O.D. mm	I.D. mm	Pack qty.
CWH204	4 - 7	2	10
CWH206	6 - 7	4	10
CWH208	8 - 9	7	10
CWH210	10 - 12	9	10

### Connectors, 'Y' pattern, white polypropylene

- AB Azlon
- "Y" pattern tubing connectors in white polypropylene
- Tapered arms are rigid with steps to give firm grip
- Autoclavable at 121°C with good chemical resistance

Item Code	O.D. mm	Pack qty.
CWH304	4 - 7	10
CWH306	6 - 7	10
CWH308	8 - 9	10
CWH310	10 - 12	10



### Connectors, straight pattern, polypropylene





- Straight pattern tubing connectors in white polypropylene
- For connecting tubing of similar or different sizes
- Tapered arms are rigid with steps to give firm grip
- Autoclavable at 121°C with good chemical resistance

Item Code	To fit tube I.D. (mm)	Pack qty.
CWH600	4 - 7 and 4 - 7	10
CWH602	4 - 7 and 7 - 12	10
CWH604	7 - 12 and 7 - 12	10
CWH606	4 - 7 and 10 - 15	10
CWH608	7 - 12 and 10 - 15	10
CWH610	10 - 15 and 10 - 15	10



### Connectors, non-return valves, polypropylene and neoprene





- Designed for use in vacuum lines and fluid handling systems
- Neoprene disc valve has no spring and will operate at very low back pressures
- Useful for preventing back pressure in filter flasks
- Printed arrow indicates the direction of flow
- Rigid with stepped tapered arms to give firm grip on tubing
- Easily disassembled for cleaning

Item Code	O.D. mm	Pack qty.
NWH902P	4 - 7	5
NWH904P	7 - 12	5
NWH906P	11 - 15	5



# **Containers**



### Containers, specimen, LDPE



Azlon

- Containers with captive hinged cap suitable for many applications
- Lightweight and unbreakable in normal use
- Can withstand temperatures up to 80°C

Item Code	Capacity ml	O.D. x height mm	Pack qty.
BGG302	1	8 x 38	20
BGG304	2.5	12 x 40	20
BGG306	5	15 x 49	20
BGG308	10	28 x 32	10
BGG311	20	32 x 36	10
BGG312	25	25 x 78	10



# Containers, specimen, polystyrene with polyethylene lid





- Clear polystyrene containers with maximum sample visibility
- Polyethylene airtight snap-on lids for quick easy use
- Lightweight for easy handling

Item Code	Capacity ml	O.D. mm	Height mm	Pack qty.	
BGG440P	10	26	28	10	
BGG442P	20	32	33	10	
BGG444P	30	36	33	10	
BGG446P	50	36	53	10	
BGG448P	75	51	42	10	
BGG450P	100	51	60	10	
BGG452P	150	65	53	10	
BGG454P	200	65	88	10	
BGG456P	250	65	87	5	
BGG458P	500	100	100	5	

### Containers, snap-on Lid, polypropylene



Azlon

- Useful lightweight tapered containers with tight fitting LDPE lids
- Good chemical resistance
- Ideal for storage of samples, powders, animal feeds etc.

Capacity ml	O.D. x height mm	Pack qty.	
125	80 x 40	250	
250	70 x 70	250	
400	70 x 90	100	
1000	90 x 120	100	
2000	140 x 150	50	
2500	170 x 150	25	
5000	200 x 210	25	
	125 250 400 1000 2000 2500	125 80 x 40 250 70 x 70 400 70 x 90 1000 90 x 120 2000 140 x 150 2500 170 x 150	125 80 x 40 250 250 70 x 70 250 400 70 x 90 100 1000 90 x 120 100 2000 140 x 150 50 2500 170 x 150 25



### Containers, screw cap, polypropylene





- Useful autoclavable wide neck containers with liner-less screw caps
- Good chemical resistance
- Ideal for storage of samples, powders, animal feeds etc.

Item Code	Capacity ml	O.D. x height mm	Pack qty.
JWP0030P	30	43 x 43	72
JWP0060P	60	53 x 47	48
JWP0125P	125	70 x 60	36
JWP0250P	250	89 x 66	36
JWP0500P	500	89 x 97	24
JWP0950P	950	120 x 100	24
JWP1200P	1200	120 x 132	24





### Crucibles, Gooch

**PYREX**®

- Ideal for drying precipitates to constant mass at 110°C
- Also suitable for ignition work up to 450°C (see safety notice)
- With integral glass sintered disc
- Manufactured from chemically resistant Pyrex® borosilicate glass

Item Code	Nom. capacity ml	Sintered disc diam. mm	Porosity grade	Overall height mm	Pack qty.	
3650/02M	10	20	1	45	5	
3650/04M	10	20	2	45	5	
3650/06M	10	20	3	45	5	
3650/08M	10	20	4	45	5	
3660/02M	30	30	1	53	5	
3660/04M	30	30	2	53	5	
3660/06M	30	30	3	53	5	
3660/08M	30	30	4	53	5	
3660/10M	30	30	5	53	5	
3680/02M	60	40	1	65	5	
3680/04M	60	40	2	65	5	
3680/06M	60	40	3	65	5	
3680/08M	60	40	4	65	5	
3680/10M	60	40	5	65	5	



Avoid sudden changes in temperature which can result in thermal breakage. For high temperature ignition work, use a furnace and slowly heat to 450°C maximum. Allow to cool below 200°C before removing from the furnace.

### Crucible adapter

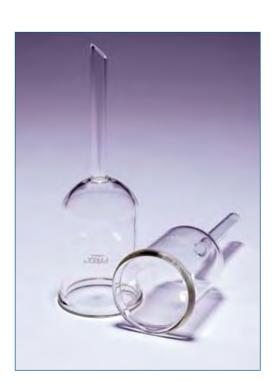
**PYREX**®

- Allows Gooch crucibles to be fitted to a Büchner filter flask
- Useful for filtering and washing precipitates prior to drying

Item Code	To fit crucible	Open end I.D. mm	Height excluding stem mm	Stem O.D. (mm)	Stem length mm	Pack qty.	
3690/02M	3650:	30	60	9	75	10	
3690/04M	3660:	37	68	9	75	10	
3690/08M	3680:	47	78	9	75	10	



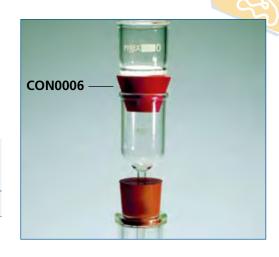
For fitting a crucible onto the adapter, it is necessary to use a rubber cone as detailed on page 105.



#### Rubber cones

- For mounting Gooch crucibles onto Adapters 3690: series
- Manufactured from natural rubber
- Set of six sizes; 15, 22, 28, 36, 42 and 52mm I.D. at top
- May also be used for mounting filter funnels into Büchner flasks

Item Code	Description	Pack qty.
CON0006	Set of 6 cones	1



### Crucibles, nickel, heavy duty

- Manufactured for high purity Nickel 201
- Withstands temperatures up to 800°C
- Highly resistant to dilute alkalies
- One-piece, heavy wall construction for extra durability

Item Code	Thickness mm	Capacity ml	Diam. mm	Depth mm	Pack qty.
NE002	0.5	10	20	30	1
NE003	0.5	15	30	30	1
NE004	0.5	25	35	35	1
NE005	0.5	30	40	40	1
NE006	0.5	50	45	45	1
NE008	0.5	130	60	60	1
NE010	0.5	270	80	80	1
NE014	1.0	15	30	30	1
NE015	1.0	25	35	35	1
NE016	1.0	30	40	40	1
NE017	1.0	50	45	45	1
NE019	1.0	130	60	60	1
NE021	1.0	270	80	80	1
NE022	1.0	600	100	90	1
NE025	1.5	15	30	30	1
NE027	1.5	30	40	40	1
NE028	1.5	50	45	45	1
NE037	2.0	30	40	40	1
NE038	2.0	50	45	45	1
NE039	2.0	70	50	50	1
NE040	2.0	130	60	60	1



# Crucibles, cutting board



### Crucible lids, nickel, heavy duty

- Suitable for use with crucibles from 25mm to 80mm in diameter (see page 105)
- Made from commercially pure Nickel 201
- Excellent corrosion resistance

Item Code	Thickness mm	Diam. mm	Pack qty.	
NE045	0.5	25	1	
NE046	0.5	30	1	
NE047	0.5	35	1	
NE048	0.5	40	1	
NE049	0.5	45	1	
NE050	0.5	50	1	
NE051	0.5	60	1	
NE053	0.5	80	1	



### Cutting board, polypropylene





- Autoclavable at 121°C with good chemical resistance
- Unbreakable in normal use
- Non-absorbent and easy to clean

Item Code	Overall dim. I x b x h mm	Pack qty.	
BWY300	300 x 210 x 9	1	

**Cylinders** 

### Cylinders, works certified, with spout, class A PYREX®

- Complies with ISO 4788
- Calibrated to Class A tolerances
- Individually tested and supplied with certificate showing exact volume contained at 5 points on the scale
- Inscribed with individual serial number for traceability to national standards
- Graduations in white enamel
- Manufactured from chemically resistant borosilicate glass with hexagonal foot

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Max. height mm	Pack qty.	
3201/02WC	5	0.1	0.05	115	2	
3201/04WC	10	0.2	0.10	140	2	
3201/06WC	25	0.5	0.25	170	2	
3201/08WC	50	1.0	0.50	200	2	
3201/10WC	100	1.0	0.50	260	2	
3201/12WC	250	2.0	1.00	335	2	
3201/14WC	500	5.0	2.00	390	2	
3201/16WC	1000	10.0	5.00	470	2	
3201/18WC	2000	20.0	10.00	570	1	





### Cylinders, with spout, class A

**PYREX**®

- Complies with ISO 4788
- Calibrated to Class A tolerances
- Conformity 'H' certified
- Graduations in white enamel
- Robust hexagonal foot
- Manufactured from chemically resistant Pyrex<sup>®</sup> borosilicate glass

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Max. height mm	Pack qty.	
3201/02	5	0.1	0.05	115	2	
3201/04	10	0.2	0.10	140	2	
3201/06	25	0.5	0.25	170	2	
3201/08	50	1.0	0.50	200	2	
3201/10	100	1.0	0.50	260	2	
3201/12	250	2.0	1.00	335	2	
3201/14	500	5.0	2.00	390	2	
3201/16	1000	10.0	5.00	470	2	
3201/18	2000	20.0	10.00	570	1	





### Cylinders, blue graduations, class B



- Complies with ISO 4788
- Easy to read graduations in blue enamel
- Manufactured in chemically resistant borosilicate glass
- Robust hexagonal foot

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Max. height mm	Pack qty.	
CRC201	5	0.1	0.10	115	10	
CRC202	10	0.2	0.20	140	2	
CRC204	25	0.5	0.50	170	2	
CRC206	50	1.0	1.00	200	2	
CRC209	100	1.0	1.00	260	2	
CRC211	250	2.0	2.00	335	2	
CRC213	500	5.0	5.00	390	2	
CRC214	1000	10.0	10.00	470	2	
CRC216	2000	20.0	20.00	570	1	



### Cylinders, white graduations, class B



- Complies with ISO 4788
- Manufactured to Class B tolerances
- Robust hexagonal foot
- White enamel graduations which remain visible when using dark coloured solutions
- Manufactured from chemically resistant borosilicate glass

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Max. height mm	Pack qty.	
3200/02MP	5	0.1	0.10	115	2	
3200/04MP	10	0.2	0.20	140	2	
3200/06MP	25	0.5	0.50	170	2	
3200/08MP	50	1.0	1.00	200	2	
3200/10MP	100	1.0	1.00	260	2	
3200/12MP	250	2.0	2.00	335	2	
3200/14MP	500	5.0	5.00	390	2	
3200/16MP	100	10.0	10.00	470	2	
3200/18MP	2000	20.0	20.00	570	1	

# Cylinders, tall form, heavy duty, class B

# **PYREX**®

- Complies to ISO 4788
- Heavy duty construction for increased mechanical strength and longer life:
  - Thicker walls
  - Heavily beaded rim and spout
  - Robust hexagonal foot
- Graduations in highly contrasting blue enamel
- Manufactured from Pyrex® borosilicate glass for high resistance to chemical attack

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Max. height mm	Pack qty.	
3280-50	50	1.0	1.00	200	2	
3280-100	100	1.0	1.00	260	2	
3280-250	250	2.0	2.00	335	2	
3280-500	500	5.0	5.00	390	2	
3280-1L	1000	10.0	10.00	470	2	
3280-2L	2000	20.0	20.00	570	1	



#### Cylinders, squat form, heavy duty, class B

**PYREX**®

- Complies with ISO 4788
- Squat height more stable
- Heavy duty construction for increased mechanical strength
- More convenient to use in confined spaces e.g. fume cupboards
- Graduations in blue enamel
- Manufactured from Pyrex® borosilicate glass

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Max. height mm	Pack qty.	
3285-10	10	1.0	0.30	75	2	
3285-25	25	1.0	0.50	107	2	
3285-50	50	1.0	1.00	140	2	
3285-100	100	2.0	1.00	147	2	
3285-250	250	5.0	2.00	212	2	
3285-500	500	10.0	5.00	236	2	
3285-1L	1000	20.0	10.00	293	2	





# Cylinders, detachable plastic foot, class B

**PYREX**®

- Complies with ISO 4788
- Comprises Pyrex® glass cylinder and polyethylene foot
- Glass cylinder has white enamel graduations
- Polyethylene foot absorbs impact and reduces breakage
- Replacement parts readily available

# Complete cylinder

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Approx overall height mm	Pack qty.	
3205/04MP	10	0.2	0.20	150	2	
3205/06MP	25	0.5	0.50	175	2	
3205/08P	50	1.0	1.00	195	2	
3205/10P	100	1.0	1.00	270	2	
3205/12P	250	2.0	2.00	320	2	

# Spare glass cylinder body

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Approx overall height mm	Pack qty.	
3205/05MP	10	0.2	0.20	140	2	
3205/07MP	25	0.5	0.50	160	2	
3205/09P	50	1.0	1.00	180	2	
3205/11P	100	1.0	1.00	250	2	
3205/13P	250	2.0	2.00	300	2	

# Spare plastic feet

Item Code	Description	Pack qty.
4500/00	To fit cylinder capacity: 10ml	10
4500/01	To fit cylinder capacity: 25ml	10
4500/02M	To fit cylinder capacity: 50ml	10
4500/04M	To fit cylinder capacity: 100ml	10
4500/06M	To fit cylinder capacity: 250ml	10

**PYREX**®

# Cylinder, with plastic stopper and detachable foot, class B, complete cylinder

- Complies with ISO 4788
- Omprises borosilicate glass cylinder polyethylene foot and polyethylene stopper
- Replacement parts available separately
- Graduations in white enamel

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Socket size	Pack qty.	
3215/06MP	25	0.5	0.50	14/23	2	
3215/08P	50	1.0	1.00	19/26	2	
3215/10P	100	1.0	1.00	24/29	2	
3215/12P	250	2.0	2.00	29/32	2	



For further details on the spare plastic feet see previous page.

# Spare glass cylinder body with socket

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Stopper size	Pack qty.	
3215/07MP	25	0.5	0.50	14/23	2	
3215/09P	50	1.0	1.00	19/26	2	
3215/11P	100	1.0	1.00	24/29	2	
3215/13P	250	2.0	2.00	29/32	2	



# Cylinder, with plastic stopper, hexagonal foot, blue graduations, class B

- Complies with ISO 4788
- Supplied with polyethylene stopper
- Graduations in easy to read blue enamel
- Manufactured from borosilicate glass
- Robust hexagonal foot

Item Code	Capacity ml	Grads. ml	Tol. ± ml	Stopper size	Pack qty.	
CRC302	10	0.2	0.20	10/19	2	
CRC304	25	0.5	0.50	14/23	2	
CRC306	50	1.0	1.00	19/26	2	
CRC308	100	1.0	1.00	24/29	2	
CRC310	250	2.0	2.00	29/32	2	
CRC312	500	5.0	5.00	34/35	2	
CRC314	1000	10.0	10.00	45/40	2	
CRC316	2000	20.0	20.00	45/40	1	





# Cylinder, with glass stopper, hexagonal foot, white graduations, class B PYREX®

- Complies with ISO 4788
- Supplied with interchangeable glass stopper
- Graduations in white enamel for improved visibility with dark coloured solutions
- Manufactured in chemically resistant Pyrex® borosilicate glass
- Robust hexagonal foot

Item Code	Capacity ml	Grads. ml	Tol. ± ml	Stopper size	Pack qty.	
3211/04MP	10	0.2	0.20	10/19	2	
3211/06MP	25	0.5	0.50	14/23	2	
3211/08MP	50	1.0	1.00	19/26	2	
3211/10MP	100	1.0	1.00	24/29	2	
3211/12MP	250	2.0	2.00	29/32	2	
3211/14MP	500	5.0	5.00	34/35	2	
3211/16MP	1000	10.0	10.00	45/40	2	
3211/18MP	2000	20.0	20.00	45/40	1	



For spare glass stoppers please refer to page 282.



# Cylinders, Nessler



- For colour comparison of water samples etc.
- Manufactured from soda-lime tubing specially selected for freedom from colour or visible defects
- Cylinder bases are formed by a technique which gives maximum clarity
- Supplied in matched pairs for uniformity

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Overall height mm	Pack qty.	
CRC320	50	50	0.04	150	2	
CRC322	100	50 & 100	0.08	180	2	

**Cylinders** 

#### Receivers, Crow, class B

#### **PYREX**®

- Complies with BS 658
- For the collection of distillate in oil and tar tests
- Graduations in white enamel
- Manufactured from Pyrex® borosilicate glass

Item Code	Capacity ml	Grads. ml	Overall height mm	Pack qty.	
3400/04	100	1	250	2	



# Cylinders, squat form, polypropylene





- Squat design for increased stability on the bench and ease of handling particularly in restricted spaces
- Unique self-draining base eliminating water collection during washing in an automatic lab washing machine, thereby removing all spill and contamination issues
- Moulded, blue over-printed graduations
- Manufactured from high clarity polypropylene
- Good chemical and temperature resistance
- Anti-suction base stops cylinders slipping on a wet surfaces

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Height mm	Pack qty.
CPS0100P	100	2.0	2.00	163	5
CPS0250P	250	5.0	5.00	192	1
CPS0500P	500	10.0	10.00	218	1
CPS1000P	1000	20.0	20.00	285	1



Exposure to temperatures up to 80°C will not cause permanent exceeding of tolerance limits. Cleaning temperatures below 60°C is recommended to preserve marks and inscriptions.



# **Cylinders**





Exposure to temperatures above 80°C may affect accuracy.

## Cylinders, moulded graduations, class B, polypropylene



- Onform to ISO 6706
- Ultra clear polypropylene with good chemical resistance
- Large pouring spout for easy dispensing
- Stable hexagonal bases with non slip anti-suction feature
- Permanent moulded graduations

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Height mm	Pack qty.	
CP0010P	10	0.2	0.2	140	10	
CP0025P	25	0.5	0.5	170	10	
CP0050P	50	1	1.00	200	10	
CP0100P	100	1	1.00	250	5	
CP0250P	250	2	2.00	215	1	
CP0500P	500	5	5.00	360	1	
CP1000P	1000	10	10.00	440	1	
CP2000P	2000	20	20.00	535	1	

# Cylinders, moulded graduations, set, class B, polypropylene

Item Code	Description	Pack qty.	
NB1203	Set of 6 cylinders comprising (1x 10, 25, 50, 100, 250 & 500ml)	1	

# Cylinders, printed graduations, class B, polypropylene





- Conform to ISO 6706
- Clear pin sharp blue graduations
- Ultra clear polypropylene with good chemical resistance
- Stable hexagonal bases with non slip anti-suction feature

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Height mm	Pack qty.	
CPB0010P	10	0.2	0.20	140	10	
CPB0025P	25	0.5	0.50	170	10	
CPB0050P	50	1.0	1.00	200	10	
CPB0100P	100	1.0	1.00	250	5	
CPB0250P	250	2.0	2.00	315	1	
CPB0500P	500	5.0	5.00	360	1	
CPB1000P	1000	10.0	10.00	440	1	
CPB2000P	2000	20.0	20.00	535	1	





Exposure to temperatures above 80°C may affect accuracy.

**Cylinders** 

## Cylinders, printed graduations, class A, PMP (TPX)



A Zlon

- Calibrated to ISO 6706 and DIN 12681, class A tolerances
- Steam sterilisation at 121°C does not affect accuracy
- Supplied with conformity certificate
- Enhanced pin sharp blue printed graduations
- Stable hexagonal bases with non-slip anti-suction feature

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Height mm	Pack qty.	
CTA0010P	10	0.2	0.1	140	2	
CTA0025P	25	0.5	0.2	170	2	
CTA0050P	50	1.0	0.5	200	2	
CTA0100P	100	1.0	0.5	250	2	
CTA0250P	250	2.0	1	315	2	
CTA0500P	500	5.0	2.5	360	2	
CTA1000P	1000	10.0	5	440	2	
CTA2000P	2000	20.0	1	535	1	



## Cylinders, printed graduations, class B, PMP (TPX)





- Calibrated to ISO 6706 and DIN 12681, class B tolerances
- Steam sterilisation at 121°C does not affect accuracy
- Supplied with conformity certificate
- Enhanced pin sharp blue printed graduations
- Stable hexagonal bases with non-slip anti-suction feature

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Height mm	Pack qty.	
CTB0010P	10	0.2	0.2	140	10	
CTB0025P	25	0.5	0.5	170	5	
CTB0050P	50	1.0	1	200	5	
CTB0100P	100	1.0	1	250	5	
CTB0250P	250	2.0	2	315	1	
CTB0500P	500	5.0	5	360	1	
CTB1000P	1000	10.0	10	440	1	
CTB2000P	2000	20.0	20	535	1	





## Cylinders, moulded graduations, class B, PMP (TPX)



- Conform to ISO 6706
- Transparent robust PMP
- Good chemical resistance
- Large pouring spout for easy dispensing
- Autoclavable to 121°C

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Height mm	Pack qty.	
CT0010P	10	0.2	0.2	140	10	
CT0025P	25	0.5	0.5	170	5	
CT0050P	50	1.0	1	200	5	
CT0100P	100	1.0	1	250	5	
CT0250P	250	2.0	2	315	1	
CT0500P	500	5.0	5	360	1	
CT1000P	1000	10.0	10	440	1	
CT2000P	2000	20.0	20	535	1	

## **STAINLESS STEEL JUGS**

- Internally graduated in ml
- Durable design with high polished surface
- Tapered jug features seamless design for reduced contamination risk
- Suitable for pharmaceutical, food and beverage and general laboratory use

For full details see page 214



#### Desiccators, non-vacuum

#### **PYREX®**

- Robust desiccator base and cover in borosilicate glass
- Simple design for drying under atmospheric pressure
- Ground glass flanges
- Ohoice of 2 sizes 150mm or 200mm diameter
- Accessory metal perforated plate available

Item Code	Description	Flange I.D. mm	Height ledge to flange mm	Pack qty.	
1590/02D	Desiccator comprising base and cover	170	-	1	
1590/04D	Spare cover	170	-	1	
1590/06D	Spare base	170	85	1	
1591/02D	Desiccator comprising base and cover	220	-	1	
1591/04D	Spare cover	220	-	1	
1591/06D	Spare base	220	120	1	





Not supplied with metal perforated plate. See bottom of the page for information on this product.

#### Desiccators, vacuum



- Designed for use under vacuum
- Sturdy construction in borosilicate glass
- Ground glass flanges
- Ohoice of 2 sizes 150mm or 200mm diameter
- Accessory metal perforated plate and Rotaflo® glass/PTFE stopcock available

Item Code	Description	Flange I.D. mm	Socket size	Pack qty.
1593/02D	Desiccator comprising Base and cover	170	24/29	1
1593/04D	Spare cover	170	24/29	1
1594/02D	Desiccator comprising Base and cover	220	24/29	1
1594/04D	Spare cover	220	24/29	1



Not supplied with perforated plate or Rotaflo® stopcock, see entry below and overleaf.

# **Desiccator plate**



Metal perforated plate for use with Pyrex® vacuum and non-vacuum desiccators

Item Code	To fit size mm	Pack qty.
1597/02D	170	1
1597/04D	220	1



# **Dessicators**



#### **Desiccator stopcock**

**PYREX®** 

- For use with Pyrex® vacuum desiccators
- With Rotaflo® stopcock for vacuum tight seal

Item Code	Joint size	Pack qty.	
1612/03	24/29	1	



#### Desiccators, vacuum, polycarbonate



() Azlon

- Transparent polycarbonate cover and base
- Durable with high impact resistance
- Will safely withstand high vacuum pressures
- Ceramic plate permits the use of incandescent crucibles

Item Code	Description	I.D. mm	Plate size	Overall height mm	Effective inside height mm	Pack qty.	
DWA215	With Stopcock	215	205	262	178	1	
DWA245	With Stopcock	245	236	296	195	1	
DWA246	Without Stopcock	245	236	296	195	1	

## Desiccators, vacuum, polycarbonate, spares

Item Code	Description	Pack qty.
DWA205	Spare plate for DWA 215	1
DWA236	Spare plate for DWA245/246	1
DWA510	Spare stopcock for DWA215/245	1



## Desiccator, cabinet, polystyrene





- Provides moisture-proof storage
- Clear high impact polystyrene cabinet
- Space saving stacking feature
- Airtight door with foam rubber gasket
- Supplied with sealed jar of silica gel

Item Code	Int. I x w x h	Ext. I x w x h mm	Door opening mm	Pack qty.	
DWA301	210 x 180 x 130	225 x 200 x 168	188 x 110	1	



Not suitable for vacuum use or filling with gases.

# Dilatometer, dippers

#### **Dilatometer**

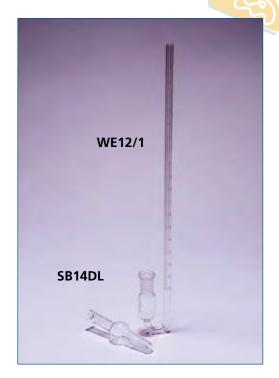


- For measuring the expansion of edible oils and fats over the temperature range within which melting takes place
- Dilatometer body is graduated with an arbitrary scale
- Interchangeable stopper has open top to allow weighting with steel balls etc.

Item Code	Description	Socket size	Cone size	Pack qty.	
SB14DL	Stopper	-	14/23	1	
WE12/1	Dilatometer body	14/23	-	1	



The body and stopper should be ordered separately.



#### Dippers, stainless steel

- Straight or tapered cups
- Cups have pouring spout for ease of decanting samples
- Hooked handle welded onto cup for durability
- Crevice free cups reduces cross contamination
- Ideal for food and dairy sampling

Item Code	Side	Cap. ml	Cup Height mm	Overall length mm	Cup O.D. mm	Pack qty.	
NE5092	Straight	10	25	300	24	1	
NE5082	Straight	60	35	381	45	1	
NE5062	Straight	120	42	381	60	1	
NE5042	Straight	230	70	508	65	1	
NE5052	Tapered	120	42	150	60	1	
NE5072	Tapered	300	60	381	90	1	





# Dishes



# Crystallising dishes, flat bottom

**PYREX**®

- Complies with DIN 12337
- Manufactured from Pyrex® borosilicate glass
- Suitable for use up to 400°C
- Chemically and thermally resistant

Item Code	Capacity ml	Diam. mm	Height mm	Pack qty.	
1470/02D	100	70	40	10	
1470/04D	150	80	45	10	
1470/08D	300	95	55	10	
1470/10D	500	115	65	10	
1470/12D	900	140	75	10	
1470/16D	2000	190	90	10	



# **Evaporating dishes**

PYREX®

- Complies with DIN 12336
- Manufactured from Pyrex® borosilicate glass
- High resistance to chemical attack and thermal shock
- Flat hase
- Curved sides with spout

Item Code	Capacity ml	Diam. mm	Height mm	Pack qty.	
1450/01D	15	50	25	10	
1450/03D	45	60	30	10	
1450/04D	90	80	45	10	
1450/06D	170	95	55	10	
1450/10D	320	115	65	10	
1450/14D	600	140	80	10	



1450/01D & 1450/03D are unbadged.

# Dishes, general purpose

# **PYREX**®

- Manufactured from chemically resistant Pyrex® borosilicate glass
- Ideal for numerous applications:
  - Drying powders and crystals
  - Staining and development
  - Collection of drips and spills from solution bottles
  - Gel electrophoresis and paper chromatography
  - Dissection work
- Dishes can be autoclaved or used in microwave ovens

Item Code	Capacity ml	Length mm	Width mm	Height mm	Pack qty.	
1490/02	2000	275	200	51	4	
1490/04	2000	200	210	60	4	
1490/06	3500	337	230	57	4	
1490/08	4500	389	270	57	4	





Dimensions are approximate.

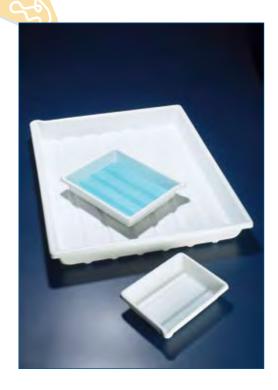
#### Petri dishes

# **PYREX**®

- Specially formed to ensure even wall thickness and consistent optical performance
- Will withstand repeated autoclaving
- Manufactured from chemically resistant Pyrex® borosilicate glass

Item Code	Size mm	Base ext. dia mm	Cover int. dia mm	Pack qty.	
1480/02D	60 x 20	54	55	10	
1480/06D	80 x 20	74	75	10	
1480/08D	100 x 20	94	95	10	
1480/10D	120 x 20	144	115	10	
1480/12D	150 x 30	143	145	10	





# Dishes, photographic, white PVC



[] Azlon

- Lightweight PVC trays
- Unbreakable in normal use
- Do not chip and are easily cleaned
- Accepts standard photographic paper
- Ribbed with pouring lip

Item Code	Internal dim. I x w mm	Height mm	Pack qty.	
DWR002	185 x 127	50	1	
DWR004	230 x 170	65	1	
DWR006	260 x 200	65	1	
DWR007	300 x 250	62	1	
DWR008	420 x 320	75	1	
DWR010	510 x 425	75	1	
DWR012	650 x 520	90	1	



# Dishes, aluminium

- Lightweight and heat resistant
- Can be heated up to 340°C
- Easy to clean
- Optional lid

Item Code	Capacity ml	Diam. mm	Depth mm	Pack qty.	
NE602	8	55	19	1	
NE603	9	60	16	1	
NE604	10	70	19	1	

# Dish lid, aluminium

Item Code	Knob	Diam. mm	Depth mm	Pack qty.	
NE640	No	55	5	1	
NE642	No	60	5	1	
NE643	No	70	5	1	
NE642A	Yes	60	5	1	

#### Dishes, nickel

- Manufactured from high purity nickel 201
- Can be used at temperatures up to 800°C
- High chemical resistance especially to caustic sodas and alkalis
- Optional lid available

Item Code	Capacity ml	Diam. mm	Depth mm	Pack qty.	
NE502	1	55	19	1	
NE504	3	70	19	1	
NE505	4	75	25	1	
NE506	5	85	30	1	

# NEW

#### Dish lid, nickel

Item Code	Knob	Diam. mm	Depth mm	Pack qty.	
NE541	No	55	5	1	
NE544	No	70	5	1	
NE545	No	75	5	1	
NE546	No	85	5	1	
NE541A	Yes	55	5	1	
NE544A	Yes	70	5	1	
NE545A	Yes	75	5	1	
NE546A	Yes	85	5	1	

#### Dishes, stainless steel

- Manufactured from stainless steel 304, seamless construction providing substantial container for long working life
- Corrosion resistant
- Can be easily cleaned or sterilised
- Will not stain in normal use

Item Code	Capacity ml	Diam. mm	Depth mm	Pack qty.	
NE796	80	70	30	1	
NE798	250	100	40	1	



# Dispensers



## Dispensers, tilt measure, variable volume



- Ideal for dispensing fixed volumes of liquids
- Very easy to use
  - Tilt the unit backwards to fill
  - Tilt the unit forwards to dispense
- Accuracy of ± 5% can be achieved
- Fits any vessel with a 24/29 socket
- Manufactured from chemically resistant borosilicate glass

Item Code	To accept inner measures ml	Cone size	Thread size	Pack qty.	
TM28/23	5ml or 10ml	24/29	28	1	
TM28/43	20ml or 25ml	24/29	28	1	



Comprises outer body which accepts choice of inner measures: TM28/23 for use with either 5ml or 10ml inner measures or TM28/43 for use with either 20ml or 25ml inner measures.

#### Inner tilt measures

Item Code	Capacity ml	Pack qty.	
TM11/5	5	1	
TM11/10	10	1	
TM11/20	20	1	
TM11/25	25	1	



#### Extractors, Soxhlet



- Conforms to BS 2071
- For extracting soluble components or impurities from solids via repeated soaking/ siphoning with solvent
- Wide choice of extractors to accommodate most sizes of sample and thimbles
- Accurately formed concentric siphon tube for reliable performance

Item Code	Nom. capacity (siphoning vol.) ml	Socket size	Cone size	Approx overall height mm	Pack qty.	
EX5/21	6	19/26	14/23	150	1	
EX5/32	20	24/29	19/26	175	1	
EX5/43	40	29/32	24/29	200	1	
EX5/53	60	34/35	24/29	205	1	
EX5/55	60	34/35	34/35	205	1	
EX5/55/100	100	34/35	34/35	240	1	
EX5/63	100	40/38	24/29	220	1	
EX5/83	200	50/42	24/29	250	1	





Approximate overall height is measured from the wide end of the cone.

# Extractors, Soxhlet, large capacity



- Confroms to BS 2071
- Large capacity extractors
- With flat flange joints to permit introduction of large samples
- Used in conjuction with flat flange lid and retaining clip which should be ordered separately

Item Code	Nom. capacity (siphoning vol.)	Extractor flange size mm	Extractor cone size	Pack qty.	
EX5/75	600	75	34/35	1	
EX5/105	2000	100	34/35	1	

## Lids for large capacity Soxhlet extractor

Item Code	Description	Pack qty.
DA5/75	Lid for EX5/75	1
DA5/100	Lid for EX5/105	1

# Metal clip for large capacity Soxhlet extractor

Item Code	Description	Pack qty.
JC75F	Metal clip for EX5/75	1
JC100F	Metal clip for EX5/105	1



# **Extractors**





#### Extractors, plain body



- Designed for use in reflux assemblies so that solvent vapour permeates directly through the material to be extracted then condenses and washes back into the flask
- Sample can be supported directly on glass spiral or in a paper or glass thimble

Item Code	Item code: spiral support	Nom. capacity ml	Socket size	Cone size	Approx overall height mm	Pack qty.	
EX7/13	EX13/25	60	34/35	24/29	205	1	
EX7/33	EX13/26	200	55/44	24/29	250	1	



Approximate overall height is measured from the wide end of the cone.

#### Extractors, spiral support

Item Code	Description	Diam. mm	Pack qty.
EX13/25	To fit EX7/13	29	1
EX13/26	To fit EX7/33	35	1

#### Extractors, paper thimbles

Paper thimbles are the most common type used in liquid/solid extractors and although not available from SciLabware, are readily obtained from most laboratory suppliers. Recommended sizes for the Quickfit® range of extractors are as follows:

Item Code	Recommended thimble size mm	
EX5/21	10 x 50	
EX5/32	18 x 65	
EX5/43	22 x 80	
EX5/53	28 x 80	
EX5/55	28 x 80	
EX5/55/100	28 x 120	
EX5/63	33 x 100	
EX5/75	60 x 160	
EX5/83	41 x 123	
EX5/105	70 x 240	
EX7/13	27 x 100	
EX7/33	33 x 100	



The dimensions are internal and are given for single thickness thimbles only. If double thickness thimbles are used, the internal diameter should be 2mm less to allow for greater wall thickness.

Alternatively, thimbles made from borosilicate glass are available on page 127.

# **Extractors**

#### Extractors, glass thimbles

# **PYREX**®

- Borosilicate glass with sintered glass disc to support solid sample
- Highly resistant to chemical attack
- Useful for chemical applications where it is required to weigh the extracted material

Item Code	Porosity grade	Disc diam. mm	O.D. mm	Overall length mm	Pack qty.	
3840/02M	1	20	26	95	5	
3845/02M	1	30	36	95	5	



3840: thimbles fit Quickfit® extractors EX5/53 and EX5/55. 3845: thimbles fit Quickfit® extractors EX5/63 and EX5/83.

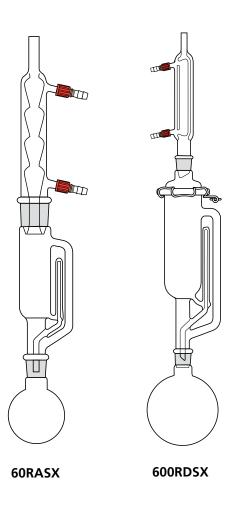


## Extractors, Soxhlet, complete assemblies



- Each assembly comprises the basic components for solid-liquid extraction : Flask/Soxhlet extractor/Condenser/Associated lids and clips
- Choice of 7 assemblies with extractor capacities from 20ml to 2000ml

Item Code		Components extractor etc	Flask	Condenser	Pack qty.
25RASX	20	EX5/32	FR50/2S	CX7/03/SC	1
40RASX	40	EX5/43	FR100/3S	CX7/04/SC	1
60RASX	60	EX5/53	FR150/3S	CX7/05/SC	1
100RASX	100	EX5/63	FR250/3S	CX7/06/SC	1
200RASX	200	EX5/83	FR500/3S	CX7/08/SC	1
600RDSX	600	EX5/75, DA5/75, JC75F	FR2L/5S	CX5/25/SC	1
2LRCSX	2,000	EX5/105, DA5/100, JC100F	FR5L/5US	C13/55	1



# Extractors, eye wash



# Extractors, liquid-liquid, heavy phase, small capacity



- For use with heavy phase solvents i.e. solvents with a heavier specific gravity than the sample liquid being extracted
- Comprises extractor body and baffle which should be ordered separately
- Designed for continuous operation
- Condensed solvent falls onto the baffle and is broken into small droplets
- Droplets of solvent descend through the liquid sample and extract desired components/contamination
- Solvent then returns to the boiling flask via a tube on the side of the extractor

Item Code	Nom. capacity ml	Socket size	Cone size	Approx overall height mm	Pack qty.	
EX10/23	60	34/35	24/29	250	1	



This extractor can be used with a variety of Quickfit® flasks and condensers e.g. FR250/3S and CX7/05/SC

#### Extractors, baffle

Item Code	Description	Pack qty.	
EX10/20	Baffle to fit EX10/23 extractor	1	



#### Eye wash bottles, polyethylene



Two types of eye wash bottle are available: -

#### The curved stem model:

- Easy to use
- Curved stem designed for comfort and safety
- Captive dust cover for the cap
- When the cup is placed firmly against the face a slight squeeze on the bottle gently sprays the eye through a fine rose
- Waste liquid flows away from the cup through a waste tube

#### **Economy model:**

- Same bottle & cup as above
- No curved stem or waste tube

Item Code	Туре	Capacity ml	Pack qty.
EGR136P	Curved stem and overflow	500	1
EGR236P	Economy model	500	1

#### Eye wash post, wall mounted

- Azlon
- Emergency eye wash post for laboratories schools, factories etc.
- Equipped with eye wash bottle EGR136P
- PGR110 and PGR112 support racks also features a mirror, refill bottle, eye dropper bottle and large easy to release clips to hold the bottles in place
- Instructions printed on the unit

Item Code	Туре	Dimensions (w x h x d) mm	Pack qty.	
PGR110	With hinged cover	400 x 400 x 85	1	
PGR112	Without hinged cover	400 x 400 x 85	1	
PGR114	Small unit without hinged cover	275 x 400 x 85	1	



# Eye wash post, wall mounted, economy



- Eye wash bottle EGR236P on a white polystyrene wall mount
- Includes small eye dropper bottle

Item Code	Capacity ml	Pack qty.	
PGR118	500	1	



# **Filtration**



(i)

For further information regarding porosities, safe usage and cleaning please refer to the technical information section.

#### Filter discs

**PYREX**®

- Complies with ISO 4793
- For use by Glassblowers constructing special apparatus
- Manufactured from Pyrex® borosilicate glass for resistance to heat and chemical corrosion
- Close control of pore size
- Accurate and consistent disc dimensions
- High mechanical strength to withstand full vacuum

Item Code	Porosity grade	Nom. diam.mm	Pack qty.	
3010/10M		10	10	
3020/10M	0	20	10	
3030/10M	0	30	10	
3040/10M	0	40	10	
3050/10M	0	50	10	
3065/10M	0	65	1	
3090/10M	0	90	1	
3010/11M	1	10	10	
3020/11M	1	20	10	
3030/11M	1	30	10	
3040/11M	1	40	10	
3050/11M	1	50	10	
3065/11M	1	65	1	
3090/11M	1	90	1	
3120/11M	1	120	1	
3010/12M	2	10	10	
3020/12M	2	20	10	
3030/12M	2	30	10	
3040/12M	2	40	10	
3050/12M	2	50	10	
3065/12M	2	65	1	
3090/12M	2	90	1	
3120/12M	2	120	1	
3010/13M	3	10	10	
3020/13M	3	20	10	
3030/13M	3	30	10	
3040/13M	3	40	10	
3050/13M	3	50	10	
3065/13M	3	65	1	
3090/13M	3	90	1	
3120/13M	3	120	1	
3010/14M	4	10	10	
3020/14M	4	20	10	
3030/14M	4	30	10	
3040/14M	4	40	10	
3050/14M	4	50	10	
3065/14M	4	65	1	
3090/14M	4	90	1	
3120/14M	4	120	1	

Filter tubes

**PYREX**®

- For use by Glassblowers constructing special apparatus
- Borosilicate glass tube with integral sintered disc
- Overall length of glass tube is 150mm

Item Code	Diam. of disc mm	Porosity grade	O.D. of tube mm	Pack qty.	
3790/42M	10	3	13	5	
3790/44M	20	3	26	5	
3790/46M	30	3	36	5	
3790/48M	40	3	46	5	_



Avoid heating too close to the disc as the porosity may be impaired.



# Filters, pipeline

PYREX®

- Designed for connection to flexible pipelines to filter liquids and gases
- Large filtering area to minimise resistance to flow

Item Code	Diam. of disc mm	Porosity grade	Stem O.D. mm	Overall length mm	Pack qty.
3800/02	30	1	10	190	2
3800/08	55	1	12	260	2
3800/10	95	1	14	260	1
3800/12	30	2	10	190	2
3800/18	55	2	12	260	2
3800/20	95	2	14	260	1



The pressure differential across the disc should NOT exceed 1 atmosphere.



# Filtration, flasks



#### Filter pump



- Provides a moderate vacuum (up to 65 mbar) when connected to a water supply
- Fitted with a non-return valve to prevent suck-back and flooding
- Manufactured from chemically resistant borosilicate glass

Item Code	Overall height mm	Body diam. mm	Pack qty.	
FRF442	240	20	1	



Recommended water pressure = 1 bar. Approximate water consumption = 17 l/hr.



#### Flasks, boiling, flat bottom, narrow neck



- Complies with ISO 1773
- Flat base for standing on benches and hotplates etc.
- Manufactured from Pyrex® glass for high resistance to thermal shock
- Excellent chemical durability for contamination-free performance
- With white enamel marking spot

Item Code	Capacity ml	Height mm	Body diam. mm	Neck ID mm	Pack qty.	
1070/02M	50	100	50	18	10	
1070/04D	100	110	64	18	10	
1070/12D	250	140	85	30	10	
1070/18D	500	170	105	30	10	
1070/24D	1000	200	131	36	10	
1070/28D	2000	250	166	45	10	
1070/32D	4000	300	207	45	1	
1070/36D	6000	340	237	57	1	
1070/38D	10000	360	280	57	1	
1070/40D	12000	465	300	57	1	
1070/42D	20000	558	341	60	1	



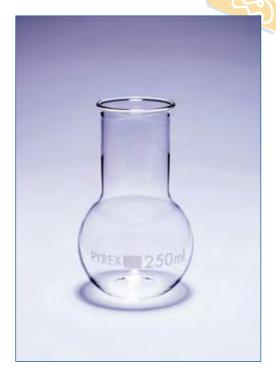
40D and 42D are supplementary to the ISO range.

# Flasks, boiling, flat bottom, wide neck

# **PYREX**®

- Complies with ISO 24450
- With wide neck to facilitate easy addition of solid samples etc.
- Flat base for standing on benches and hotplates etc.
- Manufactured from Pyrex® glass for high resistance to thermal shock
- Excellent chemical durability for contamination-free performance

Item Code	Capacity ml	Height mm	Bulb diam. mm	Neck I.D. mm	Pack qty.	
1080/02M	50	75	52	32	10	
1080/04M	100	100	64	32	10	
1080/08D	250	140	84	47	10	
1080/10D	500	170	103	47	10	
1080/12D	1000	200	131	47	10	
1080/14D	2000	230	166	76	10	

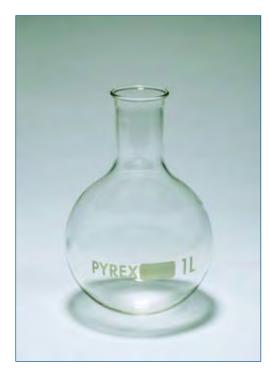


#### Flasks, boiling, round bottom, narrow neck



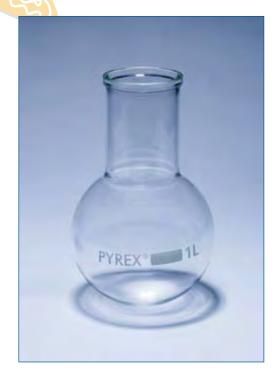
- Complies with ISO 1773
- Manufactured from Pyrex® borosilicate glass offering highest resistance to chemical corrosion and thermal shock

Item Code	Capacity ml	Height mm	Bulb diam. mm	Neck I.D. mm	Pack qty.	
1100/02M	50	105	50	18	10	
1100/04M	100	115	65	18	10	
1100/12D	250	144	85	30	10	
1100/18D	500	175	105	30	10	
1100/24D	1000	200	131	36	10	
1100/28D	200	260	166	45	10	
1100/32D	4000	315	207	45	1	
1100/35D	6000	355	236	57	1	
1100/36D	10000	420	279	57	1	
1100/38D	20000	515	345	67	1	





20000ml flask is supplementary to the ISO range. For information on the safe heating of Pyrex® glassware, please see the care and maintenance of glassware section.



## Flasks, boiling, round bottom, wide neck

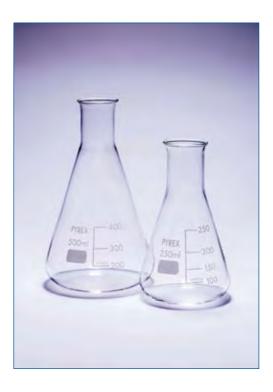
**PYREX**®

- Complies with ISO 24450
- With wide neck to facilitate addition of solid samples etc.
- Pyrex® glass means highest resistance to chemical corrosion and thermal shock

Item Code	Capacity ml	Height mm	Bulb diam. mm	Neck I.D. mm	Pack qty.	
1120/04M	100	100	65	30	10	
1120/08D	250	145	85	46	10	
1120/14D	500	168	105	46	10	
1120/18D	1000	210	131	60	10	
1120/22D	2000	260	165	70	10	
1120/26D	4000	315	206	70	1	
1120/29D	6000	355	236	80	1	



Sizes 1000ml and above have tooled rim for greater durability.



# Flasks, conical, narrow neck



- Complies with ISO 1773 and DIN 12353
- Erlenmeyer pattern
- Manufactured from Pyrex® borosilicate glass for highest resistance to thermal shock and chemical corrosion
- White enamel graduations and marking spot

Item Code	Capacity ml	Body O.D. mm	Height mm	Neck I.D. mm	Pack qty.
1130/03	5	25	52	12	10
1130/05M	10	30	60	12	10
1130/11M	25	42	70	18	10
1130/02M	50	51	85	18	10
1130/06D	100	64	105	18	10
1130/10D	150	74	118	28	10
1130/12D	200	79	131	34	10
1130/14D	250	85	140	30	10
1130/16D	300	87	156	34	10
1130/20D	500	105	180	30	10
1130/26D	1000	131	220	36	10
1130/30D	2000	166	280	45	10
1130/32D	3000	187	310	46	2
1130/36D	5000	220	365	46	1



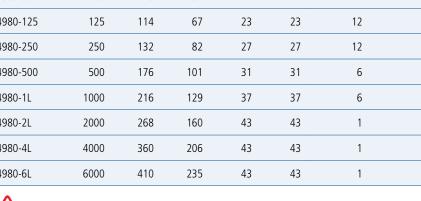
5, 10, 150, 200, 300 and 5000ml flasks are supplementary to the ISO range.

#### Flasks, conical, narrow neck, heavy duty

# **PYREX**®

- Mechanically stronger than standard flasks
- Designed for longer life and increased user safety
- Reinforced rims to reduce chipping and breakage
- Manufactured from Pyrex® borosilicate glass
- White enamel graduations and marking spot

Item Code	Capacity ml	Height mm	Body O.D. mm	Neck I.D. mm	B.S. stopper size	Pack qty.	
4980-10	10	50	31	10	10	12	
4980-25	25	65	41	13	13	12	
4980-50	50	78	51	14	14	12	
4980-125	125	114	67	23	23	12	
4980-250	250	132	82	27	27	12	
4980-500	500	176	101	31	31	6	
4980-1L	1000	216	129	37	37	6	
4980-2L	2000	268	160	43	43	1	
4980-4L	4000	360	206	43	43	1	
4980-6L	6000	410	235	43	43	1	





If using Pyrex® conical flasks to prepare culture media or to heat viscous solutions, remember to stir the solution regularly to dissipate the heat. Failure to observe this procedure can result in thermal breakage.

# **PYREX**®

# Complies with ISO 24450

- Erlenmeyer pattern
- Manufactured from Pyrex® borosilicate glass
- Excellent thermal performance
- High resistance to chemical attack

Flasks, conical, wide neck

White enamel graduations and marking spot

Item Code	Capacity ml	Body O.D. mm	Height mm	Neck I.D. mm	Pack qty.	
1140/02M	50	48	85	30	10	
1140/04D	100	64	110	30	10	
1140/08D	250	85	140	46	10	
1140/10D	500	105	175	46	10	
1140/14D	1000	131	220	46	10	
1140/18D	2000	153	275	66	10	





2000ml size is supplementary to ISO range.

# Flasks



#### Flasks, conical, wide neck, heavy duty

**PYREX**®

- Mechanically stronger than conventional Erlenmeyers
- Reinforced rims for extra strength and resistance to impact fracture
- Manufactured from high quality Pyrex<sup>®</sup> borosilicate glass
- White graduations and marking spot

Item Code	Capacity ml	Height mm	Body O.D. mm	Neck I.D. mm	B.S. stopper size	Pack qty.	
5100-125	125	109	66	27	27	12	
5100-250	250	134	81	33	33	12	
5100-500	500	170	97	43	43	6	
5100-1L	1000	219	122	48	48	6	
5100-2L	2000	279	156	58	58	1	



#### Flasks, conical, screwcap

**PYREX**®

- Ideal for storage of culture specimens and media
- Manufactured from Pyrex® borosilicate glass
- Phenolic screwcaps with PTFE faced sealing disc
- Excellent chemical durability for contamination-free storage
- Flask and cap are autoclavable up to 121°C see safety notice

Item Code	Capacity ml	Body O.D. mm	Flask height mm	Cap size	Pack qty.	
1137/11M	5	25	57	15	10	
1137/12M	10	30	68	15	10	
1137/13M	25	42	76	22	10	
1137/02M	50	51	85	22	10	
1137/03D	100	64	105	30	10	
1137/06M	250	85	130	42	10	
1137/08D	500	105	160	42	10	
1137/10M	1000	131	210	42	1	



If sterilising flasks by steam or dry heat, the screwcap must NOT be fully tightened. Slacken off first. Failure to follow this procedure can result in pressure build-up and possible fracture of the flask.

## Flasks, conical, graduated with ground socket

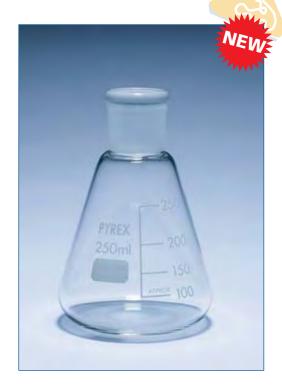


- Erlenmeyer flasks with high quality Quickfit® ground glass socket
- Manufactured from Pyrex® borosilicate glass for highest resistance to thermal shock and chemical corrosion
- White enamel graduations and marking spot

Item Code	Capacity ml	Socket size	Approx overall height mm	Approx diam. mm	Pack qty.	
1132/02	50	19/26	85	51	10	
1132/06	100	19/26	109	64	10	
1132/14	250	24/29	128	85	10	
1132/20	500	29/32	167	105	10	
1132/26	1000	29/32	208	131	10	



These conical flasks are NOT suitable for use under vacuum.



# **MICROSCALE CHEMISTRY SET**

- Comprises 16 pieces of equipment idealfor small scale chemistry procedures
- Save money on purchase and disposal of chemicals
- Housed in a robust plastic case for safe transport and storage

For full details see page 240



# Flasks



# Flasks, conical, with ground socket



- Omplies to ISO 4797
- Conical flasks with highest quality Quickfit® ground glass socket
- Borosilicate glass for corrosion-free performance and high resistance to thermal shock

Item Code	Nom. capacity ml	Socket size	Approx overall height mm	Approx diam. mm	Pack qty.	
FE5/1	5	14/23	54	25	5	
FE10/1	10	14/23	60	34	5	
FE25/0	25	10/19	64	40	5	
FE25/1	25	14/23	70	42	5	
FE25/2	25	19/26	70	42	5	
FE50/1	50	14/23	85	51	5	
FE50/2	50	19/26	85	51	5	
FE50/3	50	24/29	90	51	5	
FE100/1	100	14/23	100	64	5	
FE100/2	100	19/26	100	64	5	
FE100/3	100	24/29	100	64	5	
FE100/4	100	29/32	100	64	5	
FE150/2	150	19/26	118	74	5	
FE150/3	150	24/29	118	74	5	
FE150/4	150	29/32	116	74	5	
FE250/2	250	19/26	140	85	5	
FE250/3	250	24/29	140	85	5	
FE250/4	250	29/32	140	85	5	
FE250/5	250	34/35	140	85	5	
FE500/2	500	19/26	175	101	5	
FE500/3	500	24/29	175	101	5	
FE500/4	500	29/32	175	101	5	
FE500/5	500	34/35	175	101	5	
FE1L/3	1,000	24/29	220	130	2	
FE1L/4	1,000	29/32	220	130	2	
FE1L/5	1,000	34/35	220	130	2	
FE2L/4	2,000	29/32	270	160	1	
FE2L/5	2,000	34/35	270	160	1	



For Quickfit® glass stoppers please see page 282. Flasks FE5, FE25/0 and FE150 are supplementary to ISO standard.



These conical flasks are NOT suitable for use under vacuum.

#### Flasks, conical, vacuum

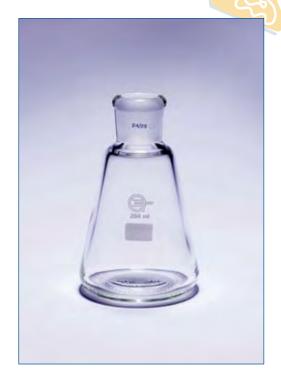


- With heavy walls and bases
- Suitable for use under vacuum

Item Code	Capacity ml	Socket size	Approx height mm	Approx diam. mm	Pack qty.	
FEH250/3	250	24/29	139	90	1	



Always take safety precautions when using flasks under vacuum.



# Flasks, conical, polypropylene





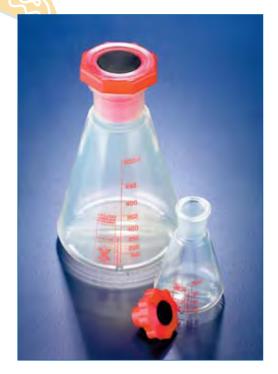
- Heavy walled Erlenmeyer flasks with tooled necks
- Good chemical resistance
- Flasak and stopper are autoclavable at 121°C
- Supplied complete with polypropylene stoppers
- Temperature characteristics and approximate graduations are clearly and indelibly printed on each flask

Item Code	Capacity ml	Neck size	Base O.D.mm	Height without stopper mm	Pack qty.
FDE512	25	14/23	42	67	1
FDE518	50	19/26	56	90	1
FDE526	125	24/29	72	101	1
FDE530	250	29/32	84	140	1
FDE536	500	34/35	107	158	1
FDE540	1000	34/35	130	198	1





When autoclaving flasks always ensure the stoppers are removed to prevent accidental



## Flasks, conical, PMP (TPX)

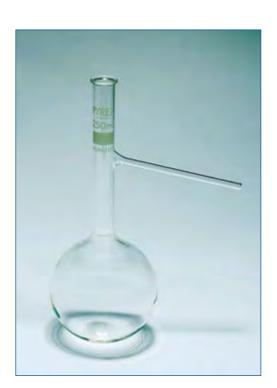


- High clarity PMP Erlenmeyer flasks with tooled necks complete with PP stoppers
- Flasks can withstand temperatures up to 180°C
- Flask and stopper are autoclavable to 121°C
- Good chemical resistance
- Temperature characteristics and approximate graduations are clearly and indelibly printed on each flask

Item Code	Capacity ml	Neck size	Base O.D. mm	Height without stopper mm	Pack qty.
FDE418	50	19/26	56	90	1
FDE426	125	24/29	72	101	1
FDE430	250	29/32	84	140	1
FDE436	500	34/35	107	158	1



When autoclaving flasks always ensure the stoppers are removed to prevent accidental implosion.



#### Flasks, distillation, ASTM



- Complies with ASTM E133
- For the distillation of petroleum products
- Side arm inclined at 75° to the vertical axis
- For use with thermometers calibrated for 76mm immersion
- Length of side-arm is 100mm

Item Code	Capacity ml	Bulb diam. mm	Neck I.D. mm	Sidearm O.D. mm	Height mm	Pack qty.	
1290/04M	125	69	17	7	214	5	
1290/06M	250	86	15	6	215	5	



125ml flask also complies with IP 123.

#### Flasks, distillation

# **PYREX**®

- For general distillation work
- Side-arm is inclined at 75° to the vertical axis
- For use with thermometers calibrated for 76mm immersion
- Side-arm length is 140mm

Item Code	Capacity ml	Bulb diam. mm	Neck I.D. mm	Sidearm O.D. mm	Height mm	Pack qty.	
1280/14M	500	105	24	10	240	5	



# Flasks, Büchner, polypropylene



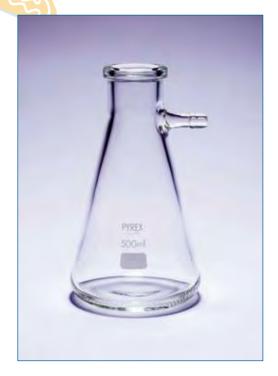


- Heavy wall translucent Büchner flasks suitable for use under vacuum
- Autoclavable to 121°C
- The rigid side arm below the neck is angled to prevent empty flasks from tipping when used with heavy tubing
- Side arm has O.D. of 11.3mm and should be used with 10mm or 10.5mm bore

Item Code	Capacity ml	Approx neck size	Base O.D. mm	Height mm	Pack qty.	
FWB730	250	29/32	84	140	1	
FWB736	500	34/35	107	158	1	
FWB740	1000	34/35	130	198	1	



# Flasks



# Flask, Büchner, plain side-arm

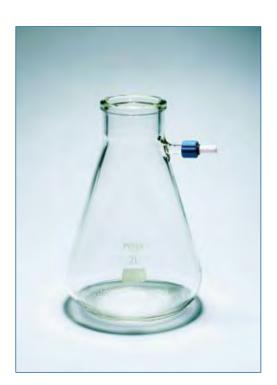
**PYREX®** 

- Complies with ISO 6556
- Büchner type flasks for vacuum filtration
- Heavy walls provide increased mechanical strength
- 'Studded' base to minimise surface abrasion
- With integral glass side arm to accept 9mm bore flexible tubing

Item Code	Nom. capacity ml	Body diam. mm	Neck I.D. mm	Height mm	Pack qty.	
1170/02M	100	64	24	105	10	
1170/04M	250	85	35	155	10	
1170/06M	500	105	35	185	10	
1170/08M	1,000	135	45	230	5	
1170/10D	2,000	166	60	260	1	
1170/12M	3,000	187	68	335	5	
1170/14D	5,000	220	68	385	1	



3000 and 5000ml flasks are supplementary to ISO range.



## Flask, Büchner with screwthread connector

**PYREX**®

- Complies with ISO 6556
- Büchner flasks with heavy wall construction for vacuum filtration applications
- Side-arm features a PTFE screwthread connector for easy and safe fitting of 9mm bore vacuum tubing
- With tooled neck to accept a drilled rubber stopper

Item Code	Capacity ml	Body diam. mm	Neck I.D. mm	Height mm	Pack qty.	
1170/02SC	100	64	24	105	10	
1170/04SC	250	85	35	155	10	
1170/06SC	500	105	35	185	10	
1170/08SC	1000	135	45	230	5	
1170/10SC	2000	166	60	260	1	
1170/14SC	5000	220	68	385	1	



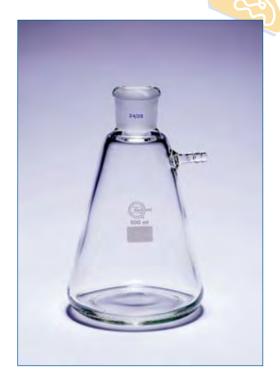
5000ml size is supplementary to ISO range. For spare PTFE screwthread connectors, please see page 100.

# Flask, Büchner, plain side-arm and ground socket



- Büchner filter flasks with precision-ground Quickfit® socket
- With traditional plain glass side-arm to accept 9mm bore vacuum tubing
- Heavy-wall and base construction for vacuum work

Item Code	Nom. capacity ml	Socket size	Approx height mm	Approx diam. mm	Pack qty.
FB100/2	100	19/26	107	64	2
FB100/3	100	24/29	107	64	2
FB250/3	250	24/29	145	85	2
FB250/4	250	29/32	145	85	2
FB500/3	500	24/29	172	105	2
FB500/4	500	29/32	172	105	2
FB1L/3	1,000	24/29	227	136	2
FB1L/4	1,000	29/32	227	136	2



# Büchner flask with screwthread connector and ground socket



- Büchner flasks with precision-ground Quickfit® socket
- Side-arm features a plastic screwthread connector for the safe attachment of 9mm bore vacuum tubing:
  - Unscrew connector from flask and fit tubing:
  - Rescrew connector and tubing to flask
- Heavy walls and bases for vacuum filtration work

Item Code	Nom. capacity ml	Socket size	Approx height mm	Approx diam. mm	Pack qty.
FB100/2SC	100	19/26	107	64	2
FB100/3SC	100	24/29	107	64	2
FB250/3SC	250	24/29	145	85	2
FB250/4SC	250	29/32	145	85	2
FB500/3SC	500	24/29	172	105	2
FB500/4SC	500	29/32	172	105	2
FB1L/3SC	1,000	24/29	227	136	2
FB1L/4SC	1,000	29/32	227	136	2





# Filter tubes, plain neck

**PYREX**®

- For small scale filtrations
- Ideal for use with Pyrex® short stem funnels

Item Code	Length mm	Tube O.D. mm	Tube I.D. mm	Sidearm O.D. mm	Pack qty.	
2110/06M	150	18	15	6	10	
2110/08M	150	24	22	6	10	



#### Flasks, iodine



- Complies with BS 2735
- For the determination of iodine
- Flask has ground socket and cup shaped top
- Stopper has extended handle which projects well above the liquid seal

Item Code	Item code: iodine stopper	Nom. capacity ml	Joint size	Min. cup capacity ml	Pack qty.	
FIB250/3	SIB 24	250	24/29	20	2	
FIB250/4	SIB 29	250	29/32	20	2	
FIB500/3	SIB 24	500	24/29	20	2	
FIB500/4	SIB 29	500	29/32	20	2	



FIB/4 items are supplementary to BS 2735.

# Flasks, iodine stopper

Item Code	Joint size	Pack qty.
SIB 24	24/29	2
SIB 29	29/32	2

#### Flasks, Kjeldahl with plain neck

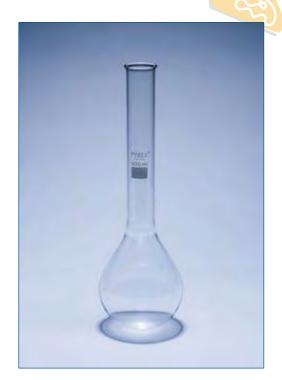
### **PYREX**®

- Suitable for the determination of nitrogen etc.
- Manufactured from Pyrex® borosilicate glass
  - Withstands high temperatures
  - Resistant to chemical corrosion

Item Code	Capacity ml	Bulb diam. mm	Height mm	Neck O.D. mm	Neck I.D. mm	Pack qty.	
1200/04M	100	58	240	22	17	10	
1200/10D	300	81	300	28	24	10	
1200/12D	500	101	325	34	30	10	
1200/16M	800	115	350	34	30	10	



The Kjeldahl method subjects flasks to severe chemical and thermal abuse. See care and maintenance of laboratory glassware for advice on safety and usage.



#### Flasks, Kjeldahl with ground socket



- For the determination of nitrogen by the Kjeldahl method
- Extra long necks act as air condensers during digestion stage and reduce entrainment during distillation stage

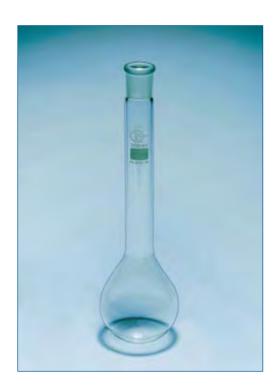
Item Code	Nom. capacity ml	Approx overall height mm	Socket size	Pack qty.	
FK300/3L	300	295	24/29	1	
FK500/3L	500	305	24/29	1	
FK800/3L	800	325	24/29	1	



A Quickfit  $^{\circ}$  assembly for Kjeldahl digestions and distillations is described on page 216.



The Kjeldahl method of nitrogen determination imposes severe demands on glassware.





#### Flasks, Roux culture, off-set neck

**PYREX**®

- Ideal for cell culture
- Manufactured from chemically inert Pyrex® glass for a contamination-free environment
- Withstands repeated autoclaving
- Off-set neck

Item Code	Capacity ml	Base x height mm	Neck I.D. mm	Length mm	Pack qty.	
1350/04M	600	107 x 47	28	230	10	
1350/06M	1200	123 x 56	33	275	10	

### LIPSOL® LABWARE DETERGENT

- Excellent cleaning performance ideal for use with laboratory glassware and plasticware
- Great value for money
- Totally biodegradable

For full details see page 90

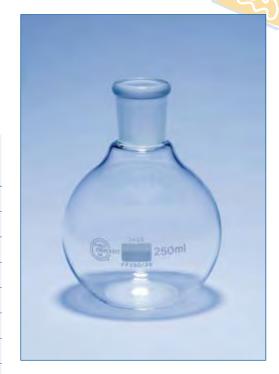


### Flasks, flat bottom, short neck



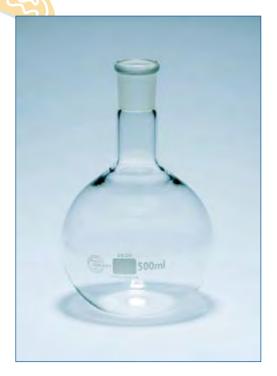
- Omplies with ISO 4797
- With highest quality Quickfit® ground glass socket
- Borosilicate glass for highest resistance to thermal shock and chemical corrosion
- Flat base allows use with hotplates

	novis ase with	otp.ates		•		
Item Code	Nom. capacity ml	Socket size	Approx overall height mm	Approx neck length mm	Pack qty.	
FF50/2S	50	19/26	85	10	5	
FF50/3S	50	24/29	85	10	5	
FF100/2S	100	19/26	95	10	5	
FF100/3S	100	24/29	103	15	5	
FF100/4S	100	29/32	103	15	5	
FF100/5S	100	34/35	103	15	5	
FF150/2S	150	19/26	105	10	5	
FF150/3S	150	24/29	110	15	5	
FF150/4S	150	29/32	110	10	5	
FF150/5S	150	34/35	115	10	5	
FF250/2S	250	19/26	130	10	5	
FF250/3S	250	24/29	130	10	5	
FF250/4S	250	29/32	130	10	5	
FF250/5S	250	34/35	130	10	5	
FF500/2S	500	19/26	135	15	5	
FF500/3S	500	24/29	140	15	5	
FF500/4S	500	39/32	145	15	5	
FF500/5S	500	34/35	155	20	5	
FF1L/3US	1,000	24/29	170	25	2	
FF1L/4S	1,000	29/32	187	20	2	
FF1L/5S	1,000	34/35	175	20	2	
FF2L/3S	2,000	24/29	205	25	1	
FF2L/4S	2,000	29/32	230	25	1	
FF2L/5S	2,000	34/35	215	20	1	
FF4L/7S	4,000	45/40	260	20	1	





These flasks are not suitable for use under vacuum.



#### Flasks, flat bottom, medium neck

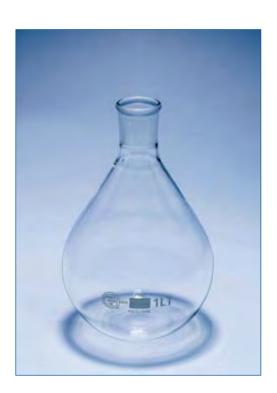


- With longer neck than standard Quickfit® flasks
- Useful in reducing the problems associated with splashing and frothing

Item Code	Capacity ml	Socket size	Approx overall height mm	Approx neck length mm	Pack qty.	
FF100/3M	100	24/29	130	45	2	
FF150/3M	150	24/29	140	45	2	
FF250/3M	250	24/29	150	45	2	
FF500/3UM	500	24/29	170	45	2	
FF1L/3M	1000	24/29	190	45	2	



These flat bottom flasks are NOT suitable for use under vacuum.



#### Flasks, Florentine



- Ideal for use with rotary evaporators
- Large surface area for rapid evaporation
- Robust heavy wall construction for added strength
- Shape allows easy removal of solid residues

Item Code	Nom. capacity ml	Socket size	Approx overall height mm	Pack qty.	
FD50/4RE	50	29/32	94	2	
FD100/3	100	24/29	108	1	
FD100/4RE	100	29/32	107	1	
FD250/3	250	24/29	148	1	
FD250/4RE	250	29/32	151	1	
FD500/3	500	24/29	165	1	
FD500/4RE	500	29/32	160	1	
FD1L/3	1,000	24/29	204	1	
FD1L/4RE	1,000	29/32	198	1	
FD2L/4RE	2,000	29/32	245	1	



 ${\it Most Rotary Evaporators accept flasks with size 29/32 ground glass sockets-check first.}$ 

#### Flasks, pear shaped, single neck



- With highest quality Quickfit® ground glass socket
- Ideal for semi-micro distillations
- Pear shaped design allows distillation down to small bulk:
  - Minimum hold-up
  - Reduced losses from thermal decomposition
- Borosilicate glass for chemical resistance and thermal performance

Item Code	Capacity ml	Socket size	Approx overall height mm	Approx diam. mm	Pack qty.	
FP5/1	5	14/23	67	23	1	
FP10/1	10	14/23	85	28	1	
FP25/0	25	10/19	89	38	1	
FP25/1	25	14/23	100	38	1	
FP50/1	50	14/23	115	48	1	
FP50/2	50	19/26	125	48	1	
FP100/1	100	14/23	135	58	1	
FP100/2	100	19/26	140	58	1	
FP100/3	100	24/29	150	58	1	





For advice on the use of glassware under conditions of temperature and vacuum, please refer to the care and maintenance section.

### Flask, pear shaped, two necks



• With one vertical centre neck and one angled side neck

Item Code	Capacity ml	Centre socket	Side socket	Approx overall height mm	Pack qty.
FP50/1/1A	50	14/23	14/23	115	1



The axis of the side neck meets the axis of the central neck at the bottom of the flask.



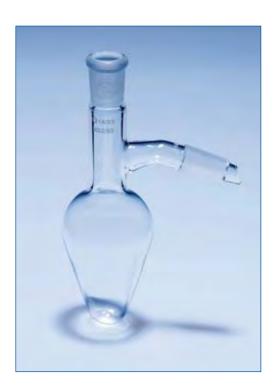


## Flasks, pear shaped three necks



- With vertical centre neck
- One vertical side neck and one angled side neck

Item Code	Nom. capacity ml	Centre socket	Side socket	Approx overall height mm	Pack qty.
FP25/0AP	25	10/19	10/19	112	1



### Flasks pear shaped, distillation



- Designed for micro and semi-micro distillations
- Vertical neck with Quickfit® socket for introducing a thermometer etc.
- Angled Quickfit® cone for connecting to condenser

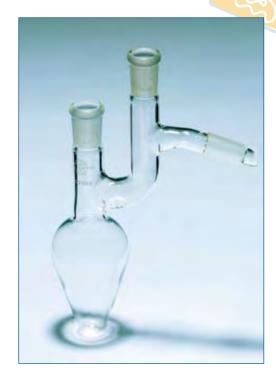
Item Code	Capacity ml	Socket size	Cone size	Approx overall height mm	Pack qty.	
MD2/50	50	14/23	14/23	147	1	

### Flasks, pear shaped, Claisen



• With two vertical sockets for introducing thermometers and dropping funnels etc.

Item Code	Capacity ml	Socket size	Cone size	Pack qty.	
MD3/50	50	14/23	14/23	1	

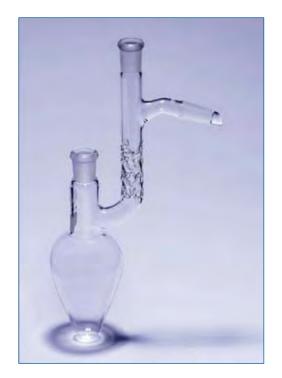


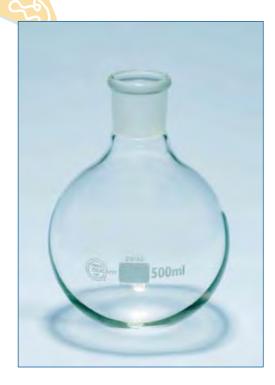
### Flasks, pear shaped, Claisen-Vigreux



- Incorporates a short, Vigreux type fractionating column
- Olumn indents aid intimate contact between vapour and liquid

Item Code	Capacity ml	Socket size	Cone size	Pack qty.	
MD4/50	50	14/23	14/23	1	
MD4/100	100	14/23	14/23	1	





#### Flasks, round bottom, short neck

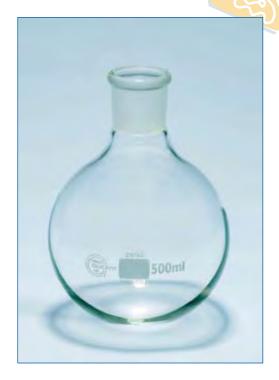


- With highest quality Quickfit® ground glass socket
- Manufactured from borosilicate glass for corrosion-free performance and resistance to thermal shock
- Omprehensive range of 45 flasks from 5ml to 10000ml
- Body diameter and wall thickness comply with relevant ISO 1773 and ISO 4797 requirements

rem code r	5.	ze height mm		Pack qty.	
FR5/0S	5 10/	19 50	5	5	
FR5/1S	5 14/	23 65	15	5	
FR10/0S	10/	19 65	15	5	
FR10/1S	0 14/	23 70	15	5	
FR25/1S 2	25 14/	23 85	10	5	
FR25/2S 2	25 19/	26 80	15	5	
FR25/3S 2	25 24/	29 80	15	5	
FR50/1S 5	50 14/	23 90	15	5	
FR50/2S 5	50 19/	26 90	15	5	
FR50/3S 5	50 24/	29 90	15	5	
FR50/5S 5	50 34/	35 90	15	5	
FR100/1S 10	00 14/	23 105	15	5	
FR100/2S 10	00 19/	26 105	15	5	
FR100/3S 10	00 24/	29 105	15	5	
FR100/4S 10	00 29/	32 105	15	5	
FR100/5S 10	00 34/	35 105	10	5	
FR150/2S 15	50 19/	26 114	10	5	
FR150/3S 15	50 24/	29 115	15	5	
FR150/4S 15	50 29/	32 120	15	5	
FR150/5S 15	50 34/	35 118	10	5	
FR250/1S 25	50 14/	23 126	15	2	
FR250/2S 25	50 19/	26 140	15	5	
FR250/3S 25	50 24/	29 140	15	5	
FR250/4S 25	50 29/	32 140	15	5	
FR250/5S 25	50 34/	35 140	15	5	

### Flasks, round bottom, short neck (continued)

Item Code	Capacity ml	Socket size	Approx overall height mm	Approx neck length mm	Pack qty.
FR500/2S	500	19/26	147	15	5
FR500/3S	500	24/29	163	15	5
FR500/4S	500	29/32	163	15	5
FR500/5S	500	34/35	163	25	5
FR1L/2S	1000	19/26	177	15	2
FR1L/3S	1000	24/29	200	15	2
FR1L/4S	1000	29/32	200	10	2
FR1L/5S	1000	34/35	196	20	2
FR1L/7S	1000	45/40	201	25	1
FR2L/3US	2000	24/29	205	10	1
FR2L/3S	2000	24/29	240	20	1
FR2L/4S	2000	29/32	240	15	1
FR2L/5S	2000	34/35	228	20	1
FR3L/3S	3000	24/29	236	15	1
FR3L/5S	3000	34/35	249	20	1
FR4L/7S	4000	45/40	290	20	1
FR5L/4S	5000	29/32	270	15	1
FR5L/5US	5000	34/35	280	20	1
FR5L/9S	5000	55/44	289	20	1
FR10L/5S	10000	34/35	350	20	1



### Flask Stand, polypropylene

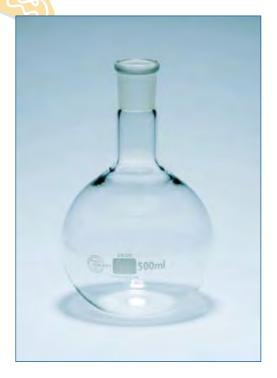




- Suitable for most round bottomed flasks
- Has stepped concentric rings to help stabilise flask
- Autoclavable up to 121°C
- Has good chemical resistance

Item Code	Top I.D. mm	Pack qty.	
TWR038	145	1	



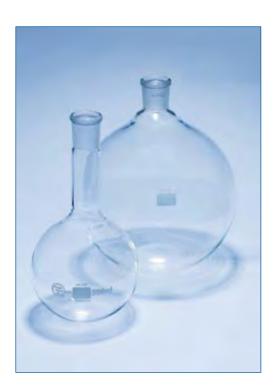


#### Flasks, round bottom, medium neck



- With a longer neck than standard Quickfit® flasks
- Useful for reducing problems associated with frothing and splashing

Item Code	Nom. capacity ml	Socket size	Approx overall height mm	Approx neck length mm	Pack qty.
FR50/3M	50	24/29	130	45	5
FR100/3M	100	24/29	145	45	2
FR150/3M	150	24/29	150	45	2
FR250/3M	250	24/29	165	45	2
FR500/3M	500	24/29	180	45	2
FR500/3U	500	24/29	205	70	1
FR1L/3UM	1,000	24/29	205	40	2



#### Flasks, round bottom, uniform height



- Flasks with different capacities but with a uniform overall height
- Provides increased convenience when transferring stirring equipment between different capacity flasks

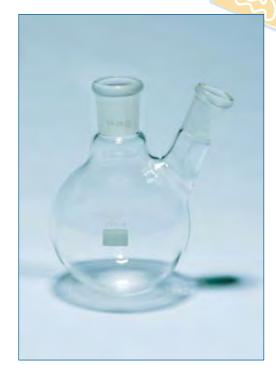
Item Code	Capacity ml	Socket size	Approx overall height mm	Approx neck length mm	Pack qty.	
FR500/3U	500	24/29	205	70	1	
FR1L/3UM	1000	24/29	205	40	2	
FR2L/3US	2000	24/29	205	10	1	

#### Flasks, round bottom, two necks



- Fitted with two Quickfit® ground glass sockets
  - One vertical centre neck
  - One angled side neck
- Side neck useful for introducing gas inlet tubes and thermometers etc into the flask
- Manufactured from borosilicate glass for highest resistance to thermal shock and chemical attack

Item Code	Capacity ml	Centre socket	Side socket	Approx overall height mm	Pack qty.
FR25/1S/1A	25	14/23	14/23	77	1
FR50/1S/1A	50	14/23	14/23	89	1
FR100/3S/1A	100	24/29	14/23	110	1
FR100/3S/2A	100	24/29	19/26	110	1
FR250/3S/1A	250	24/29	14/23	130	1
FR250/3S/2A	250	24/29	19/26	130	1
FR500/3S/1A	500	24/29	14/23	150	1
FR500/3S/2A	500	24/29	19/26	150	1
FR1L/3S/1A	1000	24/29	14/23	180	1
FR1L/3S/2A	1000	24/29	19/26	180	1
FR2L/5S/2A	2000	34/35	19/26	225	1





The axis of the side neck meets the axis of the centre neck at the bottom of the flask.

# Flasks, round bottom, small capacity, with septum side neck

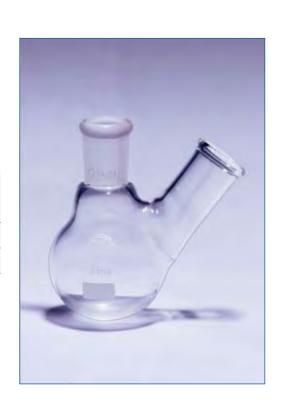


- Designed for semi-micro and micro scale preparations
- One vertical centre neck having precision-ground Quickfit® socket to accept Quickfit® cone
- One angled side neck designed to take a rubber septum seal to allow small quantities of liquid to be handled easily and safely using a syringe

Item Code	Capacity ml	Centre socket	Side socket	Approx overall height mm	Pack qty.	
FR10/1S/SEP	10	14/23	Septum	60	1	
FR25/1S/SEP	25	14/23	Septum	77	1	



Septum side necks have an O.D. of 19mm and an I.D. of 15.4mm to accept a 16mm septum.





#### Flasks, round bottom, three necks



- Fitted with three Quickfit® precision-ground sockets
  - One vertical centre neck
  - Two angled side necks
- Quickfit® ground glass sockets are manufactured to an accuracy which surpasses the requirements of ISO 383

Item Code	Nom. capacity ml	Centre socket	Side sockets	Approx overall height mm	Pack qty.
FR25/1S/11A	25	14/23	14/23	77	1
FR25/2S/11A	25	19/26	14/23	80	1
FR50/1S/11A	50	14/23	14/23	89	1
FR50/2S/11A	50	19/26	14/23	92	1
FR50/2S/22A	50	19/26	19/26	92	1
FR100/2S/11A	100	19/26	14/23	108	1
FR100/3S/11A	100	24/29	14/23	110	1
FR100/3S/22A	100	24/29	19/26	110	1
FR250/2S/22A	250	19/26	19/26	128	1
FR250/3S/11A	250	24/29	14/23	130	1
FR250/3S/22A	250	24/29	19/26	130	1
FR250/4S/11A	250	29/32	14/23	135	1
FR250/4S/22A	250	29/32	19/26	135	1
FR500/3S/11A	500	24/29	14/23	150	1
FR500/3S/22A	500	24/29	19/26	150	1
FR500/4S/22A	500	29/32	19/26	153	1
FR1L/3S/22A	1,000	24/29	19/26	180	1
FR1L/4S/22A	1,000	29/32	19/26	183	1
FR1L/4S/44A	1,000	29/32	29/32	183	1
FR1L/5S/22A	1,000	34/35	19/26	195	1
FR2L/3US/22A	2,000	24/29	19/26	205	1
FR2L/5S/22A	2,000	34/35	19/26	228	1
FR3L/5S/22A	3,000	34/35	19/26	249	1



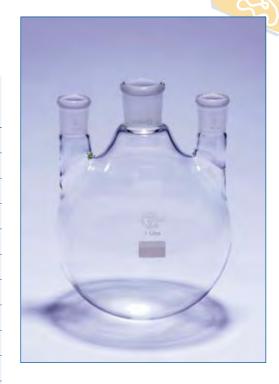
The axes of the side necks meet the axis of the central neck at the bottom of the flask.

#### Flasks, round bottom, three vertical necks



With one vertical centre neck and two vertical side necks

Item Code	Capacity ml	Centre socket	Side sockets	Approx overall height mm	Pack qty.
FR250/3S/22P	250	24/29	19/26	130	1
FR250/4S/11P	250	29/32	14/23	135	1
FR500/3S/22P	500	24/29	19/26	150	1
FR500/4S/22P	500	29/32	19/26	153	1
FR1L/3S/22P	1000	24/29	19/26	180	1
FR1L/4S/22P	1000	29/32	19/26	185	1
FR1L/5S/22P	1000	34/35	19/26	195	1
FR1L/5S/33P	1000	34/35	24/29	195	1
FR2L/3US/22P	2000	24/29	19/26	210	1
FR2L/4S/22P	2000	29/32	19/26	220	1
FR2L/4S/44P	2000	29/32	29/32	218	1
FR2L/5S/22P	2000	34/35	24/29	228	1
FR2L/5S/33P	2000	34/35	24/29	228	1
FR2L/7S/44P	2000	45/40	29/32	233	1
FR3L/5S/22P	3000	34/35	19/26	249	1
FR3L/5S/33P	3000	34/35	24/29	249	1
FR4L/7S/44P	4000	45/40	29/32	270	1
FR5L/5US/33P	5000	34/35	24/29	275	1
FR6L/7S/44P	6000	45/40	29/32	300	1







#### Flasks, reaction, wide neck, flat flange

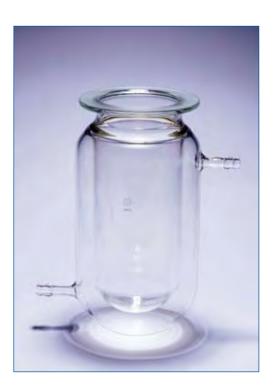


- With large diameter Quickfit® flat-flange joint
- For use with Quickfit® flat-flange lids and retaining clips
- Wide neck allows easy incorporation of stirrer paddles and easy removal of solid residues

Item Code	Item code: clip to fit	Nom. capacity ml	Flange bore mm	Flask shape	Approx overall height mm	Pack qty.	
FR250F	JC75F	250	75	Spherical	90	1	
FR500F	JC75F	500	75	Spherical	115	1	
FR700F	JC100F	700	100	Cylindrical	135	1	
FR1LF	JC100F	1,000	100	Spherical	155	1	
FR2LF	JC100F	2,000	100	Spherical	185	1	
FR3LF	JC100F	3,000	100	Spherical	210	1	
FR4LF	JC100F	4,000	100	Spherical	225	1	
FR5LF	JC100F	5,000	100	Spherical	245	1	
FR6LF	JC100F	6,000	100	Spherical	260	1	
FR10LF	JC100F	10,000	100	Spherical	320	1	
FR20LF	JC100F	20,000	100	Spherical	380	1	



The cylindrical shaped 700ml flask fits a 500ml heating mantle. See pages 159 and 160 for a comprehensive range of flat flange lids and retaining clips.



#### Flasks, reaction, jacketed



- With outer jacket for circulation of water or oil etc
- Ideal for temperature controlled reactions
- For use with Quickfit® flat-flange lids and retaining clips

Item Code	Nom. capacity ml	Flange bore mm	Overall height mm	External diam. mm	Sidearm O.D. mm	Pack qty.	
JRV1L	1,000	100	228	140.0	12	1	
JRV2L	2,000	100	312	165.0	12	1	



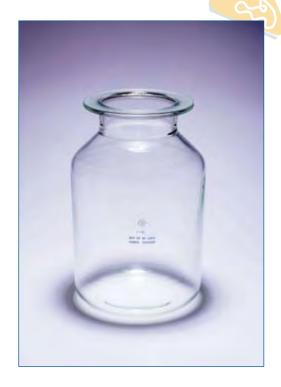
When circulating hot water or oil through the jacket, take care to avoid thermal shock. Raise the temperature gradually and do not exceed  $300^{\circ}$ C.

#### **Culture vessels**

PYREX QUICKFIT®

- Ideal for fermentation and culture work
- Manufactured from temperature resistant borosilicate glass
- Autoclavable
- With precision-ground flat-flange joint
- For use with Quickfit® flat-flange lids and retaining clips

Item Code	Capacity ml	Flange bore mm	Approx overall height mm	Approx diam. of body mm	Pack qty.	
FV500	500	75	130	80	1	
FV1L	1000	100	160	105	1	
FV2L	2000	100	225	133	1	
FV5L	5000	100	290	181	1	
FV10L	10000	100	375	227	1	
FV20L	20000	100	465	288	1	





Culture vessels with flat bases are not suitable for use under vacuum.

#### Lids for wide neck flasks



- With precision ground flat-flange joints
- Fits Quickfit® wide neck reaction flasks and culture vessels
- Each lid with one or more sockets to accept other Quickfit® components

Item Code	Flange bore mm	Vertical centre socket	Side socket (0°)	Side socket (5°)	Side socket (10°)	Side socket (15°)	Pack qty.	
MAF1/75	75	19/26	14/23	19/26	19/26	19/26	1	
DA5/75	75	34/35	-	-	-	-	1	
MAF2/2	100	19/26	19/26	2 x 19/26	19/26	-	1	
MAF2/32	100	19/26	19/26	24/29	19/26	-	1	
MAF2/41	100	19/26	14/23	14/23	14/23	29/32	1	
MAF2/52	100	19/26	19/26	19/26	19/26	34/35	1	
MAF3/52	100	24/29	19/26	19/26	19/26	34/35	1	
DA4/100	100	29/32	-	-	-	-	1	
MAF4/41	100	29/32	14/23	14/23	14/23	29/32	1	
DA5/100	100	34/35	-	-	-	-	1	
MAF5/2	100	34/35	19/26	-	2 x 19/26	-	1	



Lids should be secured to flasks with relevant metal clips, JC75F or JC100F as detailed overleaf.









DA4/100 DA5/75 DA5/100

MAF2/2

MAF1/75



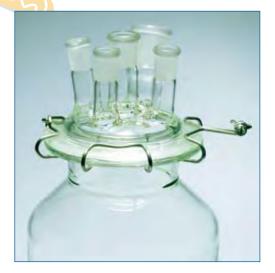




MAF2/32

MAF5/2

MAF2/41 MAF2/52 MA3/25 MAF4/41

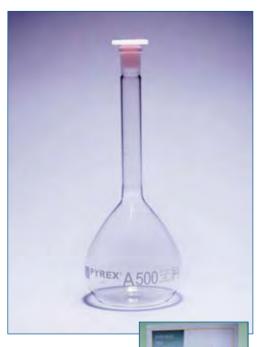


#### Retaining clips for wide neck flask lids



- For securing flat flange lids to wide neck reaction flasks and culture vessels
- Stainless steel construction

Item Code	Flange bore mm	Pack qty.	
JC75F	75	1	
JC100F	100	1	



# Flasks, volumetric, class A, works certified, DIN/ISO/USP tolerances

**PYREX**®

- Omplies with ISO 1042 and DIN 12664
- Calibrated to the tolerances required by the United States Pharmacopoeia (USP) which are tighter than those of ISO/DIN standards
- Each flask engraved with individual serial number and supplied with certificate of calibration traceable to National standards
- Conformity 'H' certified
- Manufactured from borosilicate glass for corrosion-free performance
- White enamel inscriptions
- Polyethylene stopper

Item Code	Capacity ml	Tol. +/- ml	Approx height mm	Stopper size	Pack qty.	
3151/01WC	1	0.02	65	7/16	5	
3151/02WC	2	0.02	65	7/16	5	
3151/04WC	5	0.02	70	10/19	5	
3151/06WC	10	0.02	90	10/19	5	
3151/08WC	20	0.03	110	10/19	5	
3151/10WC	25	0.03	110	10/19	5	
3151/12WC	50	0.05	140	12/21	5	
3151/14WC	100	0.08	170	14/23	5	
3151/16WC	200	0.10	210	14/23	5	
3151/18WC	250	0.12	220	14/23	2	
3151/20WC	500	0.20	260	19/26	2	
3151/22WC	1000	0.30	300	24/29	2	
3151/24WC	2000	0.50	370	29/32	1	
3151/26WC	5000	1.00	574	34/35	1	



20ml and 5000ml sizes are supplementary to DIN range.

## Flasks, volumetric, class A, amber, works certified, DIN/ISO/USP tolerances

## PYREX®

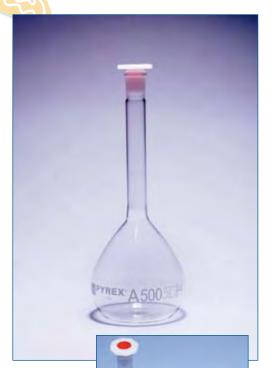
- Complies with ISO 1042 and DIN 12664
- Calibrated to the tolerances required by the United States Pharmacopoeia (USP) which are tighter than those of ISO/DIN standards
- Each flask engraved with individual serial number and supplied with certificate of calibration traceable to National standards
- Manufactured from borosilicate glass with an amber coating on exterior surfaces to facilitate use with light sensitive solutions
- Conformity 'H' certified
- Polyethylene stopper
- White enamel inscriptions

Item Code	Capacity ml	Tol. +/- ml	Approx height mm	Stopper size	Pack qty.	
3152/04AWC	5	0.02	70	10/19	5	
3152/06AWC	10	0.02	90	10/19	5	
3152/08AWC	25	0.03	110	10/19	5	
3152/10AWC	50	0.05	140	12/21	5	
3152/12AWC	100	0.08	170	14/23	5	
3152/14AWC	200	0.10	210	14/23	5	
3152/16AWC	250	0.12	220	14/23	2	
3152/18AWC	500	0.20	260	19/26	2	
3152/20AWC	1000	0.30	300	24/29	2	
3152/22AWC	2000	0.50	370	29/32	1	





For spare polyethylene stoppers, please see page 284.



## Flasks, volumetric, class A, ISO/DIN/USP tolerances

**PYREX**®

- Omplies with ISO 1042 and DIN 12664
- Calibrated to the tolerance required by the United States Pharmacopoeia (USP) which is tighter than those of ISO/DIN standards
- Each flask is laser etched with an individual serial number batch code and date of manufacture
- Batch certificate available to download online
- Conformity 'H' certified
- Manufactured from chemically resistant Pyrex® glass
- Inscriptions in white enamel
- Polyethylene stopper

Item Code	Capacity ml	Tol. +/- ml	Approx height mm	Stopper size	Pack qty.	
3151/01	1	0.02	65	7/16	5	
3151/02	2	0.02	65	7/16	5	
3151/04	5	0.02	70	10/19	5	
3151/06	10	0.02	90	10/19	5	
3151/08	20	0.03	110	10/19	5	
3151/10	25	0.03	110	10/19	5	
3151/12	50	0.05	140	12/21	5	
3151/14	100	0.08	170	14/23	5	
3151/16	200	0.10	210	14/23	5	
3151/18	250	0.12	220	14/23	2	
3151/20	500	0.20	260	19/26	2	
3151/22	1000	0.30	300	24/29	2	
3151/24	2000	0.50	370	29/32	1	
3151/26	5000	1.00	475	34/35	1	



20ml and 5000ml sizes are supplementary to DIN range. Please note that downloadable batch certificates can be obtained by visiting www.scilabware.com and entering the unique batch code etched on the base of each

# Flasks, volumetric, class A, amber, DIN/ISO/USP tolerances PYREX®

- Omplies with ISO 1042 and DIN 12664
- Calibrated to the tolerance required by the United States Pharmacopoeia (USP) which are tighter than those of ISO/DIN standards
- Manufactured from borosilicate glass with an amber coating on exterior surfaces to facilitate use with light sensitive solutions
- Each flask is laser etched with an individual serial number, batch code and date of manufacture
- Conformity 'H' certified
- Batch certificate available to download online

Item Code	Capacity ml	Tol. +/- ml	Approx height mm	Stopper size	Pack qty.	
3152/04A	5	0.02	70	10/19	5	
3152/06A	10	0.02	90	10/19	5	
3152/08A	25	0.03	110	10/19	5	
3152/10A	50	0.05	140	12/21	5	
3152/12A	100	0.08	170	14/23	5	
3152/14A	200	0.10	210	14/23	5	
3152/16A	250	0.12	220	14/23	2	
3152/18A	500	0.20	260	19/16	2	
3152/20A	1000	0.30	300	24/29	2	
3152/22A	2000	0.50	370	29/32	1	





### Flasks, volumetric, class A



- Omplies with ISO 1042 and DIN 12664
- Finely calibrated to Class A tolerances
- Individually laser etched with serial number, batch code and date of manufacture
- Manufactured from chemically resistant borosilicate glass
- Conformity 'H' certified
- Inscriptions in blue enamel
- Supplied with polyethylene stopper
- Batch certificate available to download online

Item Code	Capacity ml	Tol. +/- ml	Approx height mm	Stopper size	Pack qty.	
FRD164	5	0.025	70	10/19	5	
FRD166	10	0.025	90	10/19	5	
FRD167	20	0.04	110	10/19	5	
FRD168	25	0.04	110	10/19	5	
FRD170	50	0.06	140	12/21	5	
FRD172	100	0.10	170	14/23	5	
FRD174	200	0.15	210	14/23	5	
FRD176	250	0.15	220	14/23	2	
FRD178	500	0.25	260	19/26	2	
FRD180	1000	0.40	300	24/29	2	
FRD182	2000	0.60	370	29/32	1	
FRD184	5000	1.20	475	34/35	1	



Please note that downloadable batch certificates cn be obtained by visiting www.scilabware.com and entering the unique batch code etched on the base of each flask.

#### Flasks, volumetric, class B

## **MBL**®

- Omplies with ISO 1042 and DIN 12664
- Manufactured from borosilicate glass for corrosion-free performance
- Inscriptions in blue enamel
- Polyethylene stopper

Item Code	Capacity ml	Tol. +/- ml	Approx height mm	Stopper size	Pack qty.	
FRD300P	1	0.05	45	10/19	5	
FRD302P	2	0.05	50	10/19	5	
FRD022P	5	0.05	70	10/19	5	
FRD024P	10	0.05	90	10/19	5	
FRD025P	20	0.08	110	10/19	5	
FRD026P	25	0.08	110	10/19	5	
FRD028P	50	0.12	140	12/21	5	
FRD030P	100	0.20	170	14/23	5	
FRD032P	200	0.30	210	14/23	5	
FRD034P	250	0.30	220	14/23	2	
FRD036P	500	0.50	260	14/23	2	
FRD038P	1000	0.80	300	24/29	2	
FRD040P	2000	1.20	370	29/32	1	
FRD042P	5000	2.40	475	34/35	1	



#### **MICROSCALE CHEMISTRY SET**

- Comprises 16 pieces of equipment idealfor small scale chemistry procedures
- Save money on purchase and disposal of chemicals
- Housed in a robust plastic case for safe transport and storage

For full details see page 240





### Flasks, volumetric, Col Lisse, class A

**MBL**®

- With plain neck to accept rubber stopper
- Manufactured from borosilicate glass
- Finely calibrated to Class A tolerances
- Individually laser etched with serial number, batch code and date of manufacture
- Blue enamel inscriptions
- Batch certificate available to download online

Item Code	Capacity ml	Tolerance +/- ml	Approx height mm	Neck I.D. mm	Pack qty.	
FRD200	5	0.025	70	7	10	
FRD202	10	0.025	90	7	5	
FRD204	20	0.040	110	9	5	
FRD206	25	0.040	110	9	5	
FRD208	50	0.060	140	11	5	
FRD210	100	0.100	170	13	5	
FRD212	200	0.150	210	15	5	
FRD214	250	0.150	220	16	2	
FRD216	500	0.250	260	19	2	
FRD218	1000	0.400	300	23	2	
FRD220	2000	0.600	370	27	1	
FRD222	5000	1.200	475	42	1	



Rubber stoppers not supplied.

#### LIPSOL® LABWARE DETERGENT

- Excellent cleaning performance ideal for use with laboratory glassware and plasticware
- Great value for money
- Totally biodegradable

For full details see page 90



## Flasks, volumetric, class B, polypropylene Azlon





- Manufactured from translucent polypropylene giving good durability
- Clear easy to read calibration line
- Calibrated to ISO 1042, class B tolerances
- Supplied complete with polyethylene stoppers
- Feature a mixing chamber at the top of each flask neck

Item Code	Capacity ml	Neck size	Height with stopper mm	Pack qty.	
FDF012N	25	10/19	114	1	
FDF018N	50	14/23	144	1	
FDF024N	100	14/23	178	1	
FDF030N	250	19/26	223	1	
FDF036N	500	19/26	277	1	





Exposure to temperatures above 60°C may affect accuracy and remove marks and inscriptions.

#### Flasks, volumetric, PMP (TPX)





- Manufactured from transparent PMP offering excellent clarity
- Clear easy to read calibration line
- Calibrated to ISO 1042, class B tolerances
- Supplied complete with polyethylene stoppers
- Feature a mixing chamber at the top of each flask neck

Item Code	Capacity ml	Neck size	Height with stopper mm	Pack qty.	
FDF112N	25	10/19	114	1	
FDF118N	50	14/23	144	1	
FDF124N	100	14/23	178	1	
FDF130N	250	19/26	223	1	
FDF136N	500	19/26	277	1	



Exposure to temperatures above 60°C may affect accuracy and remove marks and inscriptions.





#### Flasks, Kohlrausch, class A

**MBL**®

- Complies with BS 615
- With expanded neck for easy introduction of viscous liquids or solid samples
- 2 sizes available:
  - 100ml for sugar analysis
  - 200ml for determination of oil viscosity by Engler method
- Calibrated to Class A tolerances
- White enamel inscriptions
- Manufactured from soda-lime glass

Item Code	Capacity ml	Tol. +/- ml	Approx height mm	Pack qty.	
FRE011	100	0.06	155	2	
FRE013	200	0.10	185	2	

# **AZLON® SQUAT FORM MEASURING CYLINDERS**

- Low height improves stability on lab bench
- Easier to manoeuvre in fume cupboards
- Robust polypropylene construction
- Unique drainage hole for problem-free washing

For full details see CPS: range on page 113





In the world of laboratory glassware, all things are not created equal.

Take the Pyrex® heavy duty beaker for example. Made with 20% more borosilicate glass than a standard beaker, it has thicker walls, a heavier base and a reinforced rim and spout, making it significantly more resistant to impact fracture.

Pyrex® heavy duty beakers are also quality controlled for uniform thickness to give consistent, safe performance for years to come. The benefits to you - fewer breakages, fewer accidents, lower replacement costs.

To find out more about the best value for money glassware available, see page 45 in this catalogue.

PYREX® is a registered trademark of Corning Inc.





# Flow indicator, fractionation



#### Flow indicator, PMP (TPX)





- Simple but highly effective device to show flow of liquid or gas
- Transparent robust moulding with a coloured paddle wheel
- Operates at low flow rates. (The impeller starts to turn at 150ml/min)
- Stepped side arms are tapered to accept tubing from 6 11mm I.D.

Item Code	m Code Overall length mm		Pack qty.	
FWY053	90	10	1	



2 bar operating pressure.



#### Fractionating columns, plain



- Borosilicate glass with Quickfit® ground-glass joints for dependable performance
- Designed for use with various types of column packing e.g. Raschig rings or Fenske helices

Item Code	Approx surface area x 10 <sup>-2</sup> m <sup>2</sup>	Socket size	Cone size	Approx effective length mm	Approx overall length mm	Pack qty.	
FC7/23	2.0	24/29	24/29	250	365	1	
FC7/43	4.0	24/29	24/29	500	615	1	
FC7/53	6.0	24/29	24/29	750	865	1	



The Quickfit® range of C2: air condensers listed on page 92 can also be used as fractionating columns.

## **Fractionation**

#### Column packing support



- Designed to support Raschig rings and Fenske helices within plain fractionating columns
- Support is passed through socket of column and rests at the constriction above the cone
- Manufactured from chemically resistant borosilicate glass

Item Code	Fits socket size	Diam. mm	Pack qty.	
EX13/12	19/26	16	1	
EX13/23	24/29	21	1	
EX13/25	34/35	29	1	
EX13/26	40/38	35	1	



#### Column packing

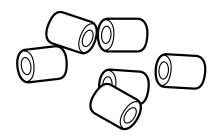


- For use with Quickfit® plain fractionating columns
- Available as Raschig rings or Fenske helices in 1 litre bags
  - Raschig rings; Short lengths of glass tubing
  - Fenske helices; Single turn glass helices
- Manufactured from borosilicate glass for contamination-free performance

Item Code	Description	Approx diam. mm	Approx length mm	Pack qty.	
FC8/06	Raschig rings	6	6	1	
FC8/09	Raschig rings	9	9	1	
FC8/4S	Fenske helices	4	-	1	



To support the packing within the column, the use of packing supports EX13: series is recommended.



FC8/06



FC8/4S

# Fractionation

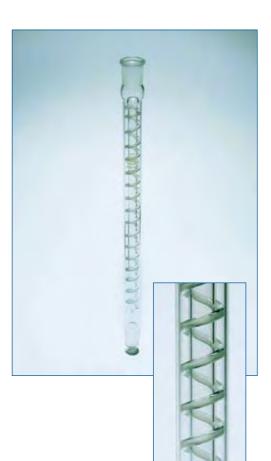


### Fractionating columns, Vigreux



- Popular, easy to use column
- Vigreux type with combination of horizontal and angled indentations
- Horizontal indentations ensure intimate vapour and liquid contact
- Angled indentations redistribute liquid from walls to centre of column

Item Code	Socket size	Cone size	Approx effective length mm	Sets of points	Pack qty.	
FC3/13	24/29	24/29	360	7	1	
FC3/23	24/29	24/29	600	12	1	
FC3/14	29/32	29/32	360	7	1	



### Fractionating columns, Dufton



- Comprises column with accurately fitted Dufton glass spiral
- Good efficiency liquid spiralling down column meets ascending vapour
- Spiral can be removed for cleaning

Item Code	Socket size	Cone size	Approx effective length mm	Approx overall height mm	Pack qty.	
FC1/12	19/26	19/26	150	270	1	
FC1/22	19/26	19/26	300	425	1	
FC2/13	24/29	24/29	150	290	1	
FC2/23	24/29	24/29	300	435	1	

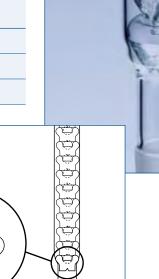
#### Fractionating column, pear bulb

- PYREX QUICKFIT®
- This type of column comprises precision bore tubing and accurately fitted removable pear bulbs
- The addition of bubbles to the column produces a highly efficient fractionating column
- The column, bulbs and bubbles should be ordered separately
- Each column accepts 12 bulbs and 12 bubbles

Item Code	Description	Socket size	Cone size	Max. effective length mm	Approx overall height mm	Pack qty.	
FC6/23A	Column	34/35	24/29	225	365	1	
FC6/00	Bulb					5	
FC6/10	Bubble					5	

FE6/10

FE6/00



#### **Distillation head**



- Fits on the top of a fractionating column to provide an effective liquid dividing head
- With integral jacketed condenser
- Liquid leaving condenser is directed towards a GP Rotaflo® stopcock
- Adjustment of stopcock controls proportion of liquid returned to the column or collected
- Screwcap fitting for insertion of thermometer
- Side-arm for venting or connection to vacuum supply

Item Code	Cone size to fit column	Cone size to fit receiver	Screwthread size mm	Stopcock bore mm	Condenser surface area x 10 <sup>2</sup> m <sup>2</sup>	Pack qty.	
SH30/42/SC	29/32	19/26	13	3	4.0	1	



# Funnels



## Funnels, short stem

### **PYREX**®

- With 60° bowl angle for precise fitting of filter paper
- Manufactured from chemical and heat resistant Pyrex® borosilicate glass

Item Code	Top external diam. mm	Stem O.D. mm	Stem length mm	Overall height mm	To suit filter paper diam.	Pack qty.
2140/01M	35	8	35	60	45-55	10
2140/02M	45	8	45	78	55-70	10
2140/03M	70	8	71	125	70-90	10
2140/06M	80	8	82	144	90-150	10
2140/10M	105	10	106	186	150-185	10
2140/11M	125	12	122	220	185-240	1
2140/12M	150	16	154	270	240-270	1
2140/14M	200	24	193	345	320-385	1



#### Funnels, long stem



- With 60° bowl angle for precise fitting of filter paper
- Manufactured from chemical and heat resistant Pyrex® borosilicate glass
- Stem approximately 150mm

Item Code	Top external diam. mm	Stem O.D. mm	Overall height mm	To suit filter paper diam. mm	Pack qty.	
2145/03M	70	8	205	70-90	10	
2145/06M	80	8	215	90-150	10	
2145/10M	105	8	237	150-185	10	

#### Funnels, polypropylene





- Sturdy break resistant funnels
- Withstands temperatures up to 135°C
- Manufactured from food grade plastic

Item Code	Top I.D. mm	Stem O.D. at tip mm	Overall height mm	Pack qty.	
FWC002	35	4	64	10	
FWC004	65	7	97	10	
FWC006	90	9	138	10	
FWC008	115	11	170	5	
FWC010	140	12	201	5	
FWC012	165	15	221	1	
FWC014	200	20	277	1	





Additional plastic funnels are available on pages 183-184. Stainless steel funnels are featured on page 185.

#### Funnels, filter, ribbed



- With interior 'ribs' to increase the filtration rate
- Robust construction in Pyrex® borosilicate glass
- Stem length of 150mm

Item Code	Top external diam. mm	Stem O.D. mm	Overall height mm	To suit filter paper diam.	Pack qty.	
2150/03M	65	8	196	70-90	10	
2150/06M	80	8	210	90-150	10	
2150/10M	110	8	235	150-185	10	



# Funnels

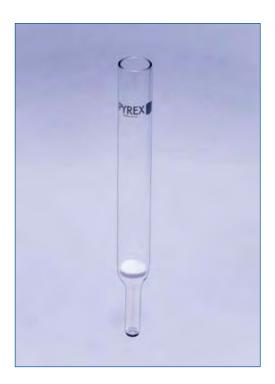


## Funnel, sintered glass disc

**PYREX**®

- With 20mm diameter sintered discs
- Sintered disc manufactured from Pyrex® borosilicate glass
- For the filtration of solutions:
  - No requirement for filter paper
  - Resistant to most corrosive reagents including ammonia and concentrated sulphuric acid
- Available in a choice of porosities

Item Code	Nom. capacity ml	Porosity grade	Bowl I.D. mm	Overall height mm	Stem O.D. x length mm	Pack qty.	
3730/04	20	2	65	130	8 x 55	5	
3730/06	20	3	65	130	8 x 55	5	
3730/08	20	4	65	130	8 x 55	5	



#### Funnels, filter, micro

**PYREX**®

- With 15mm diameter sintered disc
- Ideal for filtering small amounts of material

Item Code	Nom. capacity ml	Porosity grade	Body O.D. mm	Height exc. stem mm	Stem O.D. x length mm	Pack qty.	
3780/02M	8	1	18	135	8 x 40	5	
3780/04M	8	2	18	135	8 x 40	5	
3780/06M	8	3	18	135	8 x 40	5	

#### Funnels, filter, sintered glass disc, cylindrical

### **PYREX**®

With 30mm diameter sintered discs

Item Code	Nom. capacity ml	Porosity grade	Body O.D. mm	Overall height mm	Pack qty.	
3760/02	130	1	34	300	1	
3760/04	130	2	34	300	1	
3760/06	130	3	34	300	1	



# Funnels, filter, sintered glass disc, Büchner, 30mm diameter



- Omprehensive range of Büchner filter funnels with integral sintered glass discs
- Disc and funnel body manufactured from chemically resistant Pyrex® glass
- For convenient filtration of solutions
  - No filter papers required
  - Highly resistant to most corrosive reagents including ammonia and concentrated sulphuric acid
- Choice of disc diameters and porosities

Item Code	Nom. capacity ml	Porosity grade	Diam. of rim mm	Overall height mm	Stem O.D. x length mm	Pack qty.
3620/02	35	1	38	160	8 x 100	5
3620/04	35	2	38	160	8 x 100	5
3620/06	35	3	38	160	8 x 100	5
3620/08	35	4	38	160	8 x 100	5
3620/10	35	5	38	160	8 x 100	5



## **Funnels**



# Funnels, filter, sintered glass disc, Büchner, 40mm diameter

Item Code	Nom. capacity ml	Porosity grade	Diam. of rim mm	Overall height mm	Stem O.D. x length mm	Pack qty.
3630/01	80	0	54	170	8 x 100	5
3630/02	80	1	54	170	8 x 100	5
3630/04	80	2	54	170	8 x 100	5
3630/06	80	3	54	170	8 x 100	5
3630/08	80	4	54	170	8 x 100	5
3630/10	80	5	54	170	8 x 100	5

**PYREX**®

# Funnels, filter, sintered glass disc, Büchner, 60mm diameter PYREX®

Item Code	Nom. capacity ml	Porosity grade	Diam. of rim mm	Overall height mm	Stem O.D. x length mm	Pack qty.
3700/01	125	0	71	180	13 x 100	5
3700/02	125	1	71	180	13 x 100	5
3700/04	125	2	71	180	13 x 100	5
3700/06	125	3	71	180	13 x 100	5
3700/08	125	4	71	180	13 x 100	5
3700/10	125	5	71	180	13 x 100	5



# Funnels, filter, sintered glass disc, Büchner, 95mm diameter PYREX®

Item Code	Nom. capacity ml	Porosity grade	Diam. of rim mm	Overall height mm	Stem O.D. x length mm	Pack qty.
3710/01	500	0	106	250	19 x 100	5
3710/02	500	1	106	250	19 x 115	5
3710/04	500	2	106	250	19 x 115	5
3710/06	500	3	106	250	19 x 115	5
3710/08	500	4	106	250	19 x 115	5
3710/10	500	5	106	250	19 x 115	5

## Funnels, filter, sintered glass disc, Büchner, 120mm diameter

#### **PYREX**®

Item Code	Nom. capacity ml	Porosity grade	Diam. of rim mm	Overall height mm	Stem OD x length mm	Pack qty.	
3720/02M	1,000	1	135	290	19 x 120	2	
3720/04M	1,000	2	135	290	19 x 120	2	
3720/06M	1,000	3	135	290	19 x 120	2	
3720/08M	1,000	4	135	290	19 x 120	2	



## Funnels, filter, sintered glass disc, Büchner, 175mm diameter

## **PYREX**®

Item Code	Nom. capacity ml	Porosity grade	Diam. of rim mm	Overall height mm	Stem O.D. x length mm	Pack qty.	
3722/02M	3,000	1	190	390	30 x 150	1	
3722/04M	3,000	2	190	390	30 x 150	1	
3722/06M	3,000	3	190	390	30 x 150	1	
3722/08M	3,000	4	190	390	30 x 150	1	



For advice on the choice of sinter porosity, please refer to the technical section of the catalogue.

#### Funnels, filter, Büchner, stem with cone



- Büchner funnel with glass sintered disc
- Borosilicate glass construction for high resistance to chemical attack
- Useful where conventional filter papers would be destroyed by acids and alkalis
- Integral ground glass cone on stem for connecting to Quickfit® Büchner flasks

Item Code	Cone size	Approx disc diameter mm	Approx funnel diam. mm	Sintered disc porosity	Pack qty.	
SF3A32	19/26	55	71	3	1	
SF3A33	24/29	55	71	3	1	
SF3A34	29/32	55	71	3	1	
SF3B33	24/29	95	106	3	1	



# Funnels



# Funnel, sintered glass disc, conical, stem with cone



- Conical shape with glass sintered disc
- Resistant to most corrosive reagents
  - Ammonia, sulphuric acid, etc.
- With integral ground glass cone on the stem for connecting to Quickfit® Büchner flasks

Item Code	Cone size	Approx disc diameter mm	Approx funnel diam. mm	Sintered disc porosity	Pack qty.
SF4A32	19/26	20	45	3	1
SF4B32	19/26	30	80	3	1



#### Funnels, filter, semi-micro



- Ideal for filtering semi-micro quantities of material
- Fitted with borosilicate glass sintered disc
- Suitable for use with Quickfit® MD: range of receivers

Item Code	Cone size	Approx disc diameter mm	Approx funnel diam. mm	Sintered disc porosity	Pack qty.	
SF4T30	10/19	10	30	3	1	
SF4T31	14/23	10	30	3	1	

#### Semi-micro filter receivers



- With side-arm for venting or attachment to vacuum supply
- Ideal for use with Quickfit® semi-micro filter funnels SF4T30 and SF4T31

Item Code	Nom. capacity ml	Socket size	Approx overall height mm	Pack qty.	
MD60	5	10/19	95	1	
MD61	10	14/23	130	1	_



#### Funnel, filter, perforated plate



- With a perforated glass plate (not a sintered disc)
- Plate acts as a support for standard laboratory filter papers
- Useful for quantitative work where recovery of the precipitate is desired

Item Code	Cone size	Approx plate diam. mm	Approx funnel diam. mm	Pack qty.	
SF42/2	19/26	24	55	1	





#### Filter holder, for 25mm membranes



- With sintered glass disc to support 25mm diameter membranes
- Liquids only in contact with chemically resistant borosilicate glass
- Omprises three components which should be ordered separately
  - Funnel 15ml capacity
  - Support base with sintered glass disc
  - Metal retaining clip
- Fully autoclavable

Item Code	Description	Funnel capacity ml	For membrane diam. mm	Pack qty.	
5808/2	Funnel	15	-	1	
5808/3	Base	-	25	1	
9830/29M	Clip	-	-	1	



#### Filter holder, for 47mm membranes



- With sintered glass disc to support 47mm diameter membranes
- All borosilicate glass liquid pathway to avoid sample contamination
- Comprises three components which should be ordered separately
  - Funnel 300ml capacity
  - Support base with sintered glass disc
  - Metal retaining clip
- Fully autoclavable

Item Code	Description	Funnel capacity ml	For membrane diam. mm	Pack qty.	
5809/2	Funnel	300	-	1	
5809/3	Base	-	47	1	
5810/5	Clip	-	-	1	

#### Filtration system, for 47mm diameter membranes



- All glass filtration system for use with 47mm diameter membranes
- Borosilicate glass sintered disc to support membrane
- Comprises four components which should be ordered separately
  - Funnel 300ml capacity
  - Support base with sintered disc and vacuum connection
  - Metal retaining clip
  - 1000ml conical flask suitable for use under vacuum
- Fully autoclavable
- Ideal for microbiology

Item Code	Description	Pack qty.
5809/2	Funnel	1
5810/3	Base	1
5810/4	Flask	1
5810/5	Clip	1



# Funnels, lightweight, polypropylene A & Azlon





- Lightweight polypropylene funnels with ribs that prevent air locks, allowing rapid filtration
- Autoclavable to 121°C
- Made from food grade plastic

Item Code	Top I.D. mm	Stem O.D. at tip mm	Overall height mm	Pack qty.	
FWC052	30	2	47	10	
FWC054	30	5	47	10	
FWC056	40	5	62	10	
FWC058	50	9	78	10	
FWC060	75	10	107	10	
FWC062	100	13	149	10	
FWC064	120	14	170	5	
FWC066	150	17	210	5	





General purpose plastic funnels available on page175. For information on food safety, please refer to the technical section.



#### Funnels, Industrial, HDPE





- Rigid industrial funnels in polyethylene
- Unbreakable in normal use
- Feature straight sided upper position to prevent spillage

Item Code	Top I.D. mm	Stem O.D. at tip mm	Overall height mm	Pack qty.	
FWC102	80	9	80	10	
FWC104	100	11	102	10	
FWC106	120	12	121	10	
FWC108	140	13	141	5	
FWC110	180	17	181	5	
FWC112	230	21	226	5	
FWC114	245	24	239	1	
FWC116	290	27	277	1	
FWC118	360	36	351	1	



#### Funnels, powder, polypropylene





- Lightweight polypropylene powder funnel
- Unbreakable in normal use
- Parallel stem minimises 'bridging' of powder
- The two largest sizes have vertical sided tops

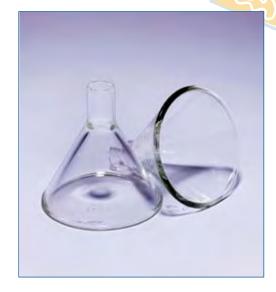
Item Code	Top I.D. mm	Stem O.D. mm	Overall height mm	Pack qty.	
FWC202	65	18	69	5	
FWC204	80	22	74	5	
FWC206	100	26	90	5	
FWC208	120	30	106	5	
FWC210	150	36	135	5	
FWC212	290	35	208	1	
FWC214	420	48	270	1	

#### Funnels, powder, plain stem

#### **PYREX**®

- Ideal for transferring powders
- With short wide stem for smooth flow
- Manufactured from chemically resistant Pyrex® borosilicate glass

Item Code	Top diam. funnel mm	Stem O.D. x length mm	Pack qty.	
2130/02M	80	18 x 25	10	

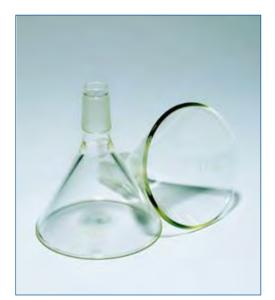


#### Funnels, powder, stem with cone



- Designed for transferring powders into Quickfit® flasks and vessels
- With Quickfit® ground glass cone
- Manufactured from chemically-resistant Pyrex® borosilicate glass

Item Code	Cone size	Approx funnel diam. mm	Pack qty.	
CF5/1	14/23	105	1	
CF5/2	19/26	105	1	
CF5/3	24/29	105	1	
CF5/4	29/32	105	1	
CF5/5	34/35	105	1	



#### Funnels, stainless steel

- Ourable stainless steel funnel, break-resistant, stain proof and easy to clean
- Stem is vented to allow complete, uninhibited flow
- Can be used with liquids or solids
- The handle can also be used as a convenient hanging point when not in use

Item Code	Overall height mm	Approx funnel diam. mm	Stem length mm	Pack qty.	
NEFUNSS100H	120	90	60	1	
NEFUNSS150H	180	145	85	1	
NEFUNSS200H	210	180	85	1	



A range of stainless steel beakers are featured on page 51.





#### Funnels, support and stand



- Acrylic support that can accept two funnels
- Support attaches to a PVC rod 800 x 12 mm diameter
- The base is made out of white polyethylene 245 x 170 mm

Item Code	Description	Pack qty.
SWP018	Funnel support only	1
SWP020	Funnel support, rod and base	1

SWP020 shown



#### Funnels, thistle, polypropylene





- Polypropylene thistle shaped funnel with detachable long stem
- Stem dimensions: 6mm O.D. x 4mm I.D. x 25 mm long
- Stem can be cut to size

Item Code	Approx funnel diam. mm	Pack qty.	
FWC220	34	10	

#### Funnels, dropping, PTFE key

**MBL**®

- Complies with ISO 4800
- Manufactured from borosilicate glass
- With interchangeable PTFE key for grease-free performance
- Supplied with polyethylene stopper

Item Code	Capacity ml	Stopcock bore mm	Stopper size	Pack qty.
FST411	50	1.5	19/26	1
FST421	100	2.5	19/26	1
FST431	250	2.5	24/29	1
FST442	500	4	24/29	1
FST452	1000	4	29/32	1



#### Funnels, dropping, graduated, PTFE key



- Complies with ISO 4800
- Manufactured from borosilicate glass
- Ouble graduated scale showing approx. volume contained/volume dispensed
- Graduations in white enamel
- With interchangeable PTFE stopcock for grease-free performance
- Supplied with polyethylene stopper

Item Code	Capacity ml	Grads. ml	Lowest grad. mark ml	Stopcock bore mm	Stopper size	Pack qty.
FST511	50	1	5	1.5	19/26	1
FST521	100	2	10	1.5	19/26	1
FST531	250	5	25	2.5	24/29	1
FST542	500	10	50	4.0	24/29	1
FST552	1000	20	100	4.0	29/32	1





#### Funnels, dropping, Rotaflo® stopcock



- Complies to ISO 4800
- Manufactured from chemically resistant Pyrex® borosilicate glass
- Fitted with GP Rotaflo® PTFE stopcock
  - No lubrication required
  - No contaminating greases
  - No seizure

Item Code	Nom. capacity ml	Stopcock bore mm	Socket size	Pack qty.	
D41/25	25	3.0	14/23	1	
D41/50	50	3.0	14/23	1	
D42/100	100	3.0	19/26	1	
D42/250	250	3.0	24/29	1	
D42/500	500	6.0	24/29	1	



D41/25 is supplementary to the ISO standard.



# Funnels, dropping, Rotaflo® stopcock, stem with cone



- Complies to ISO 4800
- Funnel stem with ground-glass cone for easy incorporation into the sockets of Quickfit® flasks etc.
- Fitted with GP Rotaflo® stopcock with PTFE key
  - No lubrication required
  - No contaminating greases
  - No seizure with caustic solutions

Item Code	Nom. capacity ml	Cone size	Socket size	Pack qty.	
D1/11GP	50	14/23	14/23	1	
D1/21GP	100	14/23	14/23	1	
D1/22GP	100	19/26	19/26	1	
D1/32GP	250	19/26	24/29	1	
D1/42GP	500	19/26	24/29	1	
D1/62GP	1,000	19/26	29/32	1	

# Funnels, dropping, Rotaflo® stopcock, stem inside cone



- Complies to ISO 4800
- With stem inside the cone see diagram
- Enables easy fitting to the top of Quickfit® chromatography columns etc. where a protruding stem would be undesirable
- GP Rotaflo® stopcock with PTFE key for grease-free performance

Nom. capacity ml	Cone size	Socket size	Pack qty.
50	14/23	14/23	1
100	14/23	14/23	1
100	19/26	19/26	1
250	19/26	24/29	1
500	19/26	24/29	1
1,000	19/26	29/32	1
	ml 50 100 100 250 500	ml     Colle size       50     14/23       100     14/23       100     19/26       250     19/26       500     19/26	ml         Colle size         Socket size           50         14/23         14/23           100         14/23         14/23           100         19/26         19/26           250         19/26         24/29           500         19/26         24/29



# Funnels, dropping, Rotaflo® stopcock, open top, stem inside cone



- Complies with ISO 4800
- With stem inside the cone
- Enables easy fitting to the top of Quickfit® chromatography columns etc where a protruding stem would be undesirable
- GP Rotaflo® stopcock with PTFE key for grease-free performance
- With open top instead of socket for easy addition of solutions
- Economical price

Item Code	Nom. capacity ml	Cone size	Pack qty.	
D3/12	50	19/26	1	
D3/22	100	19/26	1	
D3/32	250	19/26	1	





### Funnels, dropping, glass stopper, ungraduated PYREX®

- Complies with ISO 4800 type 3
- Manufactured from Pyrex® borosilicate glass
- With interchangeable glass key
- Supplied with glass stopper

Item Code	Capacity ml	Stopcock bore mm	Stopper size	Pack qty.
2170/02	25	1.5	14/23	1
2170/04	50	1.5	19/26	1
2170/06	100	2.5	19/26	1
2170/08	250	2.5	24/29	1
2170/10	500	4.0	24/29	1
2170/12	1000	4.0	29/32	1



Item 2170/02 is supplementary to the ISO range.



#### Funnels, dropping, glass stopper, graduated DVD

**PYREX**®

- Complies with ISO 4800 type 4
- Manufactured from Pyrex® borosilicate glass
- With double graduated scale showing approximate volume contained/dispensed
- Graduations in white enamel
- With interchangeable glass key
- Supplied with glass stopper

Item Code	Cap. ml	Grads. ml	Stopcock bore mm	Stopper size	Pack qty.
3590/01	50	1	1.5	19/26	1
3590/02	100	2	2.5	19/26	1
3590/04	250	5	2.5	24/29	1
3590/06	500	10	4.0	24/29	1
3590/08	1,000	20	4.0	29/32	1



Spare glass stoppers on page 282.

#### Funnels, dropping, stem with cone



- Complies with ISO 4800
- Funnel stem with ground-glass cone for easy incorporation into Quickfit® flasks and assemblies
- Stopcock has interchangeable glass key

Item Code	Nom. capacity ml	Cone size	Socket size	Pack qty.
D1/00	20	10/19	10/19	1
D1/11	50	14/23	14/23	1
D1/21	100	14/23	14/23	1
D1/22	100	19/26	19/26	1
D1/32	250	19/26	24/29	1
D1/42	500	19/26	24/29	1
D1/62	1,000	19/26	29/32	1





Stoppers for use with Quickfit® dropping funnels are detailed on page 282.

# Funnels, pressure equalising, pear shape, Rotaflo® stopcock



- Complies with ISO 4800
- For use when liquids have to be introduced into vessels under vacuum
- Can also be used with Soxhlets as solvent traps to facilitate recovery at the end of an extraction
- With GP Rotaflo® stopcocks having chemically resistant PTFE keys

Item Code	Capacity ml	Cone size	Socket size	Pack qty.	
DE100/22	100	19/26	19/26	1	
DE100/32	100	19/26	24/29	1	
DE250/32	250	19/26	24/29	1	
DE250/33	250	24/29	24/29	1	
DE250/44	250	29/32	29/32	1	
DE250/55	250	34/35	34/35	1	

# Funnels, pressure equalising, cylindrical shape, Rotaflo® stopcock

• As pear shaped funnel above but with cylindrical body

Item Code	Capacity ml	Cone size	Socket size	Pack qty.	
DEC500/32	500	19/26	24/29	1	
DEC500/33	500	24/29	24/29	1	
DEC500/44	500	29/32	29/32	1	





#### Funnels, separating, pear-shape, PTFE key



- Complies with ISO 4800
- Borosilicate glass construction
- With PTFE key for non-stick grease-free performance
- Supplied with polyethylene stopper

Item Code	Capacity ml	Stopcock bore mm	Stopper size	Pack qty.
FST211	50	1.5	19/26	1
FST221	100	1.5	19/26	1
FST231	250	2.5	24/29	1
FST242	500	4.0	24/29	1
FST252	1000	4.0	29/32	1
FST274	2000	6.0	29/32	1
FST276	5000	6.0	34/35	1



#### Funnels, separating, conical, PTFE key



- Complies with ISO 4800
- Manufactured from borosilicate glass
- With PTFE key for grease-free and corrosion-resistant performance
- Supplied with polyethylene stopper

Item Code	Capacity ml	Stopcock bore mm	Stopper size	Pack qty.
FST311	50	1.5	19/26	1
FST321	100	1.5	19/26	1
FST331	50	2.5	24/29	1
FST342	500	4.0	24/29	1
FST352	1000	4.0	29/32	1
FST374	2000	6.0	29/32	1



Spare polyethylene stoppers available on page 284.

# Funnels, separating, pear-shape, Rotaflo® stopcock



- Complies with ISO 4800
- Manufactured from borosilicate glass
- With GP Rotaflo® PTFE stopcock:
  - No lubrication required
  - No contaminating greases
  - No seizure

Item Code	Capacity ml	Stopcock bore mm	Socket size	Pack qty.	
D52/50	50	3	19/26	1	
D52/100	100	3	19/26	1	
D52/250	250	3	24/29	1	
D53/500	500	6	24/29	1	
D24/1L	1000	6	29/32	1	



# Funnels, separating, pear-shape, Rotaflo® stopcock, stem with cone



- Complies with ISO 4800
- Funnel stem with ground-glass cone to facilitate connection to apparatus having Quickfit® sockets
- With GP Rotaflo® stopcock having chemically resistant PTFE key

Item Code	Capacity ml	Cone size	Socket size	Pack qty.
D2/11GP	50	14/23	14/23	1
D2/21GP	100	14/23	14/23	1
D2/22GP	100	19/26	19/26	1
D2/31GP	250	14/23	24/29	1
D2/32GP	250	19/26	24/29	1
D2/42GP	500	19/26	24/29	1
D2/43GP	500	24/29	24/29	1
D2/62GP	1000	19/26	29/32	1





Spare Rotaflo® keys are available on page 274.



#### Funnels, separating, conical, Rotaflo® stopcock



- Complies with ISO 4800
- Manufactured from borosilicate glass
- With GP Rotaflo® PTFE stopcock:
  - No lubrication required
  - No contaminating greases
  - No seizure

Item Code	Capacity ml	Stopcock bore mm	Socket size	Pack qty.	
D91/100	100	3	14/23	1	
D92/100	100	3	19/26	1	
D93/250	250	3	24/29	1	
D93/500	500	6	24/29	1	
D38/3/1L	1000	6	29/32	1	



#### Funnels, separating, pear-shape, glass key



- Omplies with ISO 4800 type 2
- Manufactured from Pyrex® glass for corrosion-free performance
- With interchangeable glass key
- Supplied with glass stopper

Item Code	Capacity ml	Stopcock bore mm	Stopper size	Pack qty.
2180/02M	50	1.5	19/26	1
2180/04M	100	1.5	19/26	1
2180/06M	250	2.5	24/29	1
2180/08M	500	4.0	24/29	1
2180/10M	1000	4.0	29/32	1
2180/12M	2000	6.0	29/32	1
2180/14M	5000	6.0	34/35	1



5000ml size supplementary to ISO range.

# Funnels, separating, conical, glass key, glass stopper

**PYREX**®

- Complies to ISO 4800 type 1
- Manufactured from chemically resistant Pyrex® borosilicate glass
- With interchangeable ground glass key
- Supplied with glass stopper

Item Code	Capacity ml	Stopcock bore mm	Stopper size	Pack qty.
2190/01M	50	1.5	14/23	1
2190/02M	100	1.5	19/26	1
2190/04M	250	2.5	24/29	1
2190/06M	500	4	24/29	1
2190/08M	1000	4	29/32	1
2190/10M	2000	6	29/32	1





Spare glass keys available on page 277.

# Funnels, separating, pear-shape, glass key, stem with cone



- Complies with ISO 4800 type 2
- Funnel stem with cone to allow easy connection to Quickfit® flasks etc.
- Stopcock features interchangeable glass key

Item Code	Nom. capacity ml	Cone size	Socket size	Pack qty.	
D2/01	25	14/23	14/23	1	
D2/11	50	14/23	14/23	1	
D2/12	50	19/26	19/26	1	
D2/21	100	14/23	14/23	1	
D2/22	100	19/26	19/26	1	
D2/31	250	14/23	24/29	1	
D2/32	250	19/26	24/29	1	
D2/42	500	19/26	24/29	1	
D2/43	500	24/29	24/29	1	
D2/62	1,000	19/26	29/32	1	





For hollow glass stoppers, please refer to page 282.



#### Funnels, separating, polypropylene



Azlon

- Separating funnels of exceptionally practical and versatile design
- Unscrewing the stopcock housing from the main body allows easy cleaning
- The interchangeable PTFE stopcock can also be dismantled
- Supplied with standard polypropylene stoppers
- Translucent and break resistant
- Printed with approximate graduations

Item Code	Capacity ml	Neck size	Pack qty.	
FWC626T	125	14/23	1	
FWC630T	250	24/29	1	
FWC636T	500	29/32	1	



#### Funnels, separating, PMP (TPX)



Azlon

- Separating funnels of exceptionally practical and versatile design
- Unscrewing the stopcock housing from the main body allows easy cleaning
- The interchangeable PTFE stopcock can also be dismantled
- Supplied with standard polypropylene stoppers
- Break resistant and transparent
- Printed with approximate graduations

Item Code	Capacity ml	Neck size	Pack qty.	
FWC526T	125	14/23	1	
FWC530T	250	24/29	1	
FWC536T	500	29/32	1	



Spare polypropylene stoppers featured on page 284.

# The A-Z of plastic labware







# **Gas tubes**



#### Gas distribution tubes

**PYREX**®

- Ideal for the dispersion of gas in liquids
- Borosilicate glass tube with sintered thimble
- Choice of thimble porosities to achieve optimum gas bubble size

Item Code	Porosity grade	O.D. of thimble mm	Nom. overall length mm	Diam. of tube mm	Pack qty.	
3830/00M	0	15	300	8	2	
3830/02M	1	15	300	8	2	
3830/04M	2	15	300	8	2	
3830/06M	3	15	300	8	2	



#### Gas delivery tubes, polypropylene





- Pre-bent rigid polypropylene delivery tubes
- Unbreakable in normal use ideal substitutes for fragile glass alternatives
- Suitable for many types of gas collection experiments in schools and universities

Item Code	Key	Туре	Tube O.D. mm	Tube I.D. mm	Pack qty.	
DT001	А	90 Degree	6	4	5	
DT002	В	Bung Top	6	4	5	
DT003	С	Side Arm	6	4	5	
DT004	D	Straight tube	6	4	5	
DT005	E	Double Bend	6	4	5	
DT006	F	U Bend	6	4	5	
DT007	G	Large U Bend	6	4	5	
DT008	Н	Small U bend	6	4	5	



It is not recommended that these tubes be exposed to temperatures above 60°C.

# Gas wash bottles

# Dreschel bottle heads, screwthread connections



- Complies with BS 2461
- Drechsel type
- With detachable plastic connectors for easy fitting of flexible tubing

Item Code	Cone size	Approx. stem length mm	To fit bottle	Pack qty.	
MF28/3/125/SC	24/29	130	MF29/3/125	1	
MF28/3/250/SC	24/29	175	MF29/3/250	1	
MF28/3/500/SC	24/29	215	MF29/3/500	1	



Head and bottle should be ordered separately.



#### Dreschel bottle head, adjustable



- With screwthread joint which allows height adjustment of the dip tube and hence permits use with either 125ml or 250ml Drechsel bottles
- To fit MF29: series wash bottles

Item Code	Cone size	Thread size	Sidearm O.D. mm	Pack qty.	
MF27/3/13	24/29	13	7	1	



Head and bottle should be ordered separately.



# Gas wash bottles



#### Dreschel bottle heads, sintered



- Complies with BS 2461
- Sintered dip tube disperses gas into bubbles for greater efficiency
- Choice of sinter porosities to achieve fine bubble size

Item Code	Porosity	Stem length mm	Sidearm O.D. mm	Cone size	To fit bottle	Pack qty.	
MF48/03/125	0	132	8	24/29	MF29/3/125	1	
MF48/03/250	0	165	8	24/29	MF29/3/250	1	
MF48/03/500	0	217	8	24/29	MF29/3/500	1	
MF48/13/125	1	132	8	24/29	MF29/3/125	1	
MF48/13/250	1	165	8	24/29	MF29/3/250	1	
MF48/13/500	1	217	8	24/29	MF29/3/500	1	
MF48/23/250	2	165	8	24/29	MF29/3/250	1	
MF48/23/500	2	217	8	24/29	MF29/3/500	1	
MF48/33/250	3	165	8	24/29	MF29/3/250	1	



Heads and bottles should be ordered separately. Finer porosity sinters, e.g. 2 and 3, provide smaller gas bubbles - a greater pressure however may be required.



#### **Dreschel bottles**



- For use with Quickfit® bottle heads
- Borosilicate glass for corrosion-free performance
- Robust construction

Item Code	Capacity ml	Socket size	Diameter across flat base mm	Overall height mm	Pack qty.	
MF29/3/125	125	24/29	102	163	1	
MF29/3/250	250	24/29	102	200	1	
MF29/3/500	500	24/29	125	252	1	

# Hand/finger protectors, ice buckets

#### Hand/finger protectors, silicone rubber

Azlon

- Ideal for safe handling of hot beakers, flasks etc.
- Capable of withstanding temperatures up to 250°C
- Also excellent for handling cold objects down to -57°C
- Contact surfaces are multi-studded for positive grip.

Item Code	Description	Pack qty.	
PGR402	Medium	1	
PGR404	Small	1	
PGR406	Finger	1	



#### Ice bucket with lid, polyurethane



Azlon

- Black, green and blue skinned polyurethane foam ice buckets
- Suitable for use with water-ice, dry-ice and salt solutions
- Ideal for separating work areas by colour
- Supplied with lids
- Integral handles allow easy lifting and carrying
- Octagonal shape for easy stacking and stability
- Capacity 4.5 litres
- Dimensions 185 x 330mm (h x w) and weight 1200g

Item Code	Colour	Pack qty.	
IBB001P	Black	1	
IBB002P	Pale Blue	1	
IBB003P	Green	1	





Not suitable for use with solvents.

# **Imhoff sedimentation system**



#### Imhoff sedimentation system

Azlon

- For the determination of suspended solids in liquid
- Consists of 2 components to be purchased separately
  - Choose any desired combination of the following three sizes of stand and a single size of sedimentation cone

#### Cone, DIN 12672

- Colourless, transparent S.A.N cone with moulded graduations
- Graduations from 2 to 1000ml (in mixed graduations)
- The bottom end has a stopper (spare included) to facilitate removal of sample and cleaning

Item Code	Capacity ml	Pack qty.
800XW2	1000	1

#### Stands, acrylic

#### Single cone stand

Single cylindrical stand with locating recess in the base

#### **Dual rectangular cone stand**

Accepts 2 cones in a row with locating recess in the base

#### Triple rectangular cone stand

Accepts 3 cones in a row with locating recess in the base

Item Code	Description	Pack qty.	
SWX002	Single stand	1	
SWX004	Double stand	1	
SWX006	Triple stand	1	



#### Imhoff sedimentation cone



- Complies to DIN 12672
- For determining the amount of sediment in sewage or industrial waste
- Fully graduated up to a capacity mark at 1000ml
- Manufactured from Pyrex® borosilicate glass

Item Code	Capacity ml	Pack qty.
CRF530	1000	1



Can be used with acrylic stands as detailed above.

# Jerry cans, joints

#### Jerrycans, rigid polyethylene



Azlon

- Lightweight and robust
- Corrosion resistant
- Ideal for storage and transportation of liquid chemicals

Item Code	Capacity litres	Pack qty.	
JGH140	1	1	
JGH148	5	1	
JGH150	10	1	
JGH154	25	1	



#### Joints, cones, unbadged



- Unbadged ground glass cones free from any ceramic markings
- Avoids the problem of the badge charring at high temperatures which can give an untidy appearance
- Manufactured to an accuracy which surpasses the requirements of ISO 383
- Pyrex® borosilicate glass for resistance to chemical corrosion and thermal shock
- Cones manufactured with a shank length of 100mm

Item Code	Cone size	Max. O.D. of shank mm	Min. bore mm	Min. wall thickness mm	Pack qty.
CNB7UB	7/16	6.0	2.5	1.50	10
CNB10UB	10/19	9.0	5.0	1.00	10
CNB12UB	12/21	11.4	6.5	1.50	10
CNB14UB	14/23	14.0	8.5	1.50	10
CNB19UB	19/26	18.0	12.0	1.80	10
CNB24UB	24/29	23.0	16.5	1.80	10
CNB29UB	29/32	28.0	21.0	2.00	10
CNB34UB	34/35	33.5	26.0	2.00	10
CNB40UB	40/38	38.8	31.0	2.00	5
CNB45UB	45/40	43.0	35.2	2.30	5
CNB50UB	50/42	49.0	41.8	2.30	5
CNB55UB	55/44	53.0	45.4	2.50	5
CNB60UB	60/46	57.0	47.2	3.50	5





CNB55UB is supplementary to the ISO range.



#### Joints, cones, drip end



- Single Quickfit® cones with angled drip end
- Ideal for Glassblowers fabricating apparatus where liquid needs to be directed away from the joint
  - condensers, fractionating columns, still heads, etc.
- Manufactured to an accuracy which surpasses the requirements of ISO 383
- Drip end cones manufactured with a shank length of 90mm

Item Code	Cone size	Max. O.D. of shank mm	Min. bore mm	Min. wall thickness mm	Pack qty.	
CAB10	10/19	8.0	5.0	1.00	10	
CAB14	14/23	13.0	6.0	1.50	10	
CAB19	19/26	18.0	9.0	1.80	10	
CAB24	24/29	22.5	13.0	2.00	10	
CAB29	29/32	28.0	18.0	2.00	10	
CAB34	34/35	32.0	21.0	2.00	10	



#### Joints, cones, long tip, unbadged



- Single Quickfit® cones with long tip allowing cone to be joined to glass tubing
- Useful for construction of stirrer guides etc.
- Unbadged and free from ceramic markings avoids the problem of the badge charring at high temperatures which can give an untidy appearance
- Long tip cones manufactured with a minimum shank length of 90mm

Item Code	Cone size	Max. O.D. of shank mm	Min. bore mm	Min. wall thickness mm	Pack qty.	
CBB7UB	7/16	6.0	2.0	1.50	10	
CBB10UB	10/19	8.0	3.0	1.00	10	
CBB14UB	14/23	13.0	6.0	1.50	10	
CBB19UB	19/26	18.0	8.0	1.80	10	
CBB24UB	24/29	22.5	14.0	2.00	10	
CBB29UB	29/32	28.0	19.0	2.00	10	
CBB34UB	34/35	32.0	22.0	2.00	10	
CBB40UB	40/38	38.0	27.0	2.00	10	
CBB45UB	45/40	42.0	31.0	2.30	10	
CBB55UB	55/44	52.0	40.0	2.50	10	

#### Joints, cone with stem



- Single Quickfit® cone with stem and reduced shank
- Useful for construction of gas-inlet tubes etc.
- Stem length 150mm

Item Code	Cone size	Min. shank length mm	Max. O.D. of shank mm	Min. bore mm	Min. wall thickness mm	Pack qty.	
MF15/1	14/23	45	7.4	4.4	0.9	1	
MF15/2	19/26	60	10.4	6.2	1.3	1	
MF15/3	24/29	70	10.4	6.0	1.3	1	



#### Joints, sockets, unbadged



- Unbadged ground glass sockets
  - Free from any ceramic markings
  - Avoids the problem of the badge charring at high temperatures which can give an untidy appearance
- High quality joints manufactured to an accuracy which surpasses the requirements of ISO 383
- Accurate taper and fine surface finish reduce possibility of joint 'seizure' or leakage
- With round profile bead on top of socket for extra mechanical strength
- Sockets manufactured with a minimum shank length of 100mm

Item Code	Socket size	Max. O.D. of shank mm	Min. bore mm	Min. wall thickness mm	Pack qty.
SRB7UB	7/16	11.4	5.5	1.50	10
SRB10UB	10/19	14.0	8.0	1.50	10
SRB12UB	12/21	16.4	10.0	1.80	10
SRB14UB	14/23	18.4	12.0	1.80	10
SRB19UB	19/26	23.0	16.0	2.00	10
SRB24UB	24/29	28.5	21.0	2.00	10
SRB29UB	29/32	33.5	26.0	2.00	10
SRB34UB	34/35	41.0	31.0	2.00	10
SRB40UB	40/38	46.0	36.0	2.30	5
SRB45UB	45/40	53.0	41.0	2.50	5
SRB50UB	50/42	57.0	45.5	2.50	5
SRB55UB	55/44	66.5	50.0	3.20	5
SRB60UB	60/46	71.5	55.0	3.20	1





#### Joints, sleeves, PTFE, tapered



- For grease free and high vacuum seals using Quickfit® ground glass joints
- Strong construction with knurled shoulder for ease of handling and repeated use
- Self-lubricating and non contaminating
- Working temperature range -100°C to +260°C
- Working vacuum ≤ 10<sup>-3</sup> atmospheres
- Highly resistant to chemical attack
- Forms a liquid and gas tight seal.

Item Code	Joint size	Pack qty.
SWN802	10/19	1
SWN804	14/23	1
SWN806	19/26	1
SWN808	24/29	1
SWN810	29/32	1
SWN812	34/35	1



#### Joints, sleeves, PTFE





- Truncated cone of pure PTFE
- Allows easy separation of joints
- Excellent resistance to chemical attack
- Working temperature range of -100°C to +250°C
- Forms a gas tight seal
- No contamination from joint grease
- Intended for single or occasional use
- Suitable for low vacuum work

Item Code	Joint size	Pack qty.
SWN961	14/23	10
SWN962	19/26	10
SWN963	24/29	10
SWN964	29/32	10
SWN965	34/35	10
SWN966	40/38	10
SWN969	55/44	10

#### Joint clips (PTFE), conical joints



- For retaining glassware having Quickfit® conical joints
- Manufactured from PTFE with encapsulated steel spring to provide a firm grip
- Highly resistant to chemical attack
- Can be used at temperatures up to 250°C
- Clips are numbered with joint size for easy identification

Item Code	Joint size	Pack qty.
GC10	10/19	5
GC12	12/21	5
GC14	14/23	5
GC19	19/26	5
GC24	24/29	5
GC29	29/32	5
GC34	34/35	5
GC40	40/38	5
GC45	45/40	5





Joint clips are intended to complement traditional clamping methods. Whilst they can considerably reduce the need for clamping, they should not be solely relied on to support heavy or large apparatus.

#### Joint clips (Polyacetal), conical joints



- For retaining glassware having Quickfit® conical joints
- Manufactured from polyacetal
- Can considerably reduce the need for clamping
- Easy to fit and remove
- Can be used at temperatures up to 80°C
- Clips are colour coded for easy identification

Item Code	Joint size	Colour code	Pack qty.	
KC10	10/19	Mint	10	
KC12	12/21	Violet	10	
KC14	14/23	Yellow	10	
KC19	19/26	Blue	10	
KC24	24/29	Green	10	
KC29	29/32	Red	10	
KC34	34/35	Orange	10	
KC40	40/38	Ochre	10	
KC45	45/40	Brown	10	



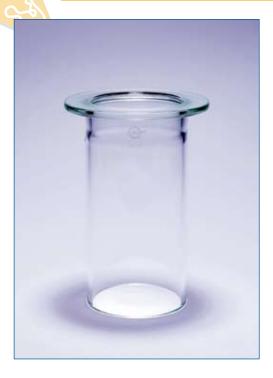


Whilst joint clips can considerably reduce the need for traditional clamping, they should not be solely relied on to support heavy or large apparatus.



These clips should not be exposed to halogen gases or acids which can rapidly attack polyacetal. For such applications, the use of Quickfit® PTFE joint clips should be considered.

# Joints

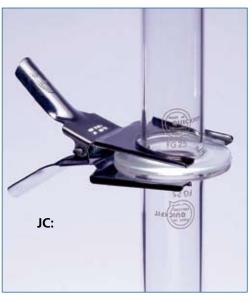


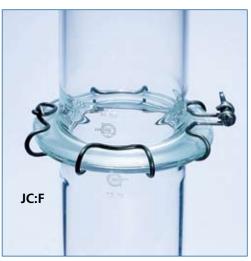
#### Joints, flat flange



- Highest quality flat flange joints
- Precision ground for leak free pereformance
- Choice of sizes up to 100mm bore

Item Code	Nom. bore mm	Min. shank length mm	Max. O.D. of shank mm	Outside diam. flange mm	Min. wall thickness mm	Pack qty.	
FG25	25	110	30.8	55	1.8	2	
FG50	50	110	57.0	85	2.2	2	
FG75	75	110	86.8	120	4.4	2	
FG100	100	110	116.0	150	4.0	1	





#### Joint clips (metal)



- For retaining glassware having Quickfit® flat flange joints
- Metal construction available in 2 versions:
  - i) JC: clips with 'fork' type design and corrosion-resistant nickel finish. Each clip is spring loaded to ensure a positive pressure is applied to both surfaces of the joint. Suitable for joint sizes FG10, FG25 and FG35
  - ii) JC:F clips with 'spring wire' design in stainless steel. Suitable for joint sizes FG50, FG75 and FG100  $\,$

Item Code	To fit joint size	Pack qty.
JC29	FG10	5
JC41	FG25	2
JC51	FG35	2
JC50F	FG50	1
JC75F	FG75	1
JC100F	FG100	1

#### Joints, spherical, male, ball joint, unbadged



- For the Glassblower who demands the highest quality joint
- Manufactured to an accuracy which surpasses the requirements of ISO 641
- Intended for use with female spherical cup joints FS:

Item Code	Joint size	Min. shank length	Max. O.D. of shank mm	Approx bore mm	Pack qty.	
MS13CUB	S13	100	8.8	2	10	
MS13UB	S13	100	8.4	5	10	
MS19UB	S19	100	13.0	9.5	10	
MS29UB	S29	100	18.9	16.4	10	
MS35UB	S35	100	24.5	22	1	
MS41UB	S41	100	32.8	30	1	

#### Joints, spherical, female, cup joint, unbadged



- Female cup joints precision manufactured to the highest standards
- For use with male ball joints MS:

Item Code	Joint size	Min. shank length mm	Max. O.D. of shank mm	Approx bore mm	Pack qty.	
FS13CUB	S13	100	8.8	2	10	
FS13UB	S13	100	8.4	5	10	
FS19UB	S19	100	13.0	9.5	10	
FS29UB	S29	100	18.9	16.4	10	
FS35UB	S35	100	24.5	22	1	
FS41UB	S41	100	32.8	30	1	

# MS: FS:

#### Joint clips (metal), spherical joints



- For retaining glassware having Quickfit® spherical joints
- Metal contruction with corrosion-resistant nickel finish
- Suitable for high temperature work
- Spring loaded to ensure a positive pressure is applied to both surfaces of the joint

Item Code	To fit spherical joint size	Pack qty.
JC13	\$13	5
JC19	\$19	5
JC29	\$29	5
JC35	\$35	2
JC41	S41	2
JC51	S51	2



#### **Joints**



#### Joint clips (Polyacetal), spherical joints



- For retaining glassware having Quickfit® spherical joints
- Manufactured from polyacetal
- Can considerably reduce the need for clamping
- Easy to fit and remove
- Can be used at temperatures up to 80°C
- Clips are colour coded for easy identification

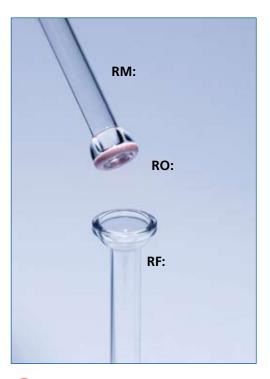
Item Code	To fit joint size	Colour code	Pack qty.
KS13	\$13	Violet	5
KS19	\$19	Dark Blue	5
KS29	S29	Dark Red	5
KS35	\$35	Light Orange	5



Whilst joint clips can considerably reduce the need for traditional clamping, they should not be solely relied on to support heavy or large apparatus.



These clips should not be exposed to halogen gases and acids which can rapidly attack polyacetal. For such applications, the use of Quickfit® PTFE joint clips should be considered.





Minimum shank length of joint is 150mm. Component parts RM, RF, RO and RC should be ordered separately.

#### Joints, spherical, male/female glass joints ROTULEX®

- Offers a 'grease-free' spherical joint
- All glass and PTFE pathway is highly resistant to chemical attack
- Can be used at temperatures up to 200°C
- System comprises male ball joint with PTFE covered 'O' ring which fits into a female cup joint
- Joint can be retained together with spring loaded metal clip

Item Code	Joint size	Max O.D. of shank mm	Approx bore mm	Pack qty.	
RM13	13	8	5	5	
RM19	19	12	9	5	
RM29	29	18	15	5	
RM35	35	24	20	5	
RM41	41	28	25	5	
RM64	64	45	40	5	
RF13	13	8	5	5	
RF19	19	12	9	5	
RF29	29	18	15	5	
RF35	35	24	20	5	
RF41	41	28	25	5	
RF64	64	45	40	5	

#### Joints, spherical, PTFE 'O' ring

#### **ROTULEX®**

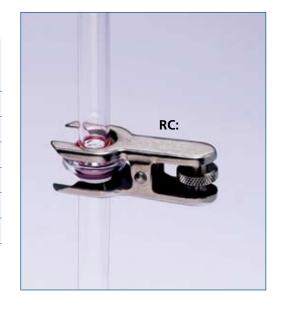
Item Code	Description	Pack qty.
RO13	'O' ring to fit RM:RF13	1
RO19	'O' ring to fit RM:RF19	1
RO29	'O' ring to fit RM:RF29	1
RO35	'O' ring to fit RM:RF35	1
RO41	'O' ring to fit RM:RF41	1
RO64	'O' ring to fit RM:RF64	1



#### Joints, spherical, metal clip

#### **ROTULEX®**

Item Code	Description	Pack qty.
RC13	Metal clip to fit RM:RF13	1
RC19	Metal clip to fit RM:RF19	1
RC29	Metal clip to fit RM:RF29	1
RC35	Metal clip to fit RM:RF35	1
RC41	Metal clip to fit RM:RF41	1
RC64	Metal clip to fit RM:RF64	1





Clip RC64 has 3 equidistant fasteners to provide uniform clamping.

#### Joints, screwthread, unbadged



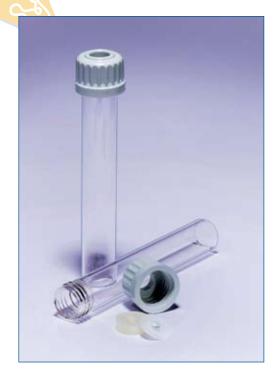
- For use by glassblowers in the construction of laboratory glassware
- Borosilicate glass for highest resistance to thermal shock and chemical corrosion
- Designed for use with the range of plastic screwcaps silicone rubber rings and PTFE washers

Item Code	Thread size	Min. shank length mm	Outside diam. shank mm	Min. bore mm	Pack qty.	
SQ13UB	13	160	11.1	7.5	10	
SQ18UB	18	160	15.4	10.5	10	
SQ24UB	24	140	22.5	15.5	10	
SQ28UB	28	110	24.5	19.7	10	



Unbadged screwthread joints are free from any ceramic inscriptions thus avoiding the aesthetic problem of 'charring' when the badge is subjected to direct heat. SQ13UB screwthread is compatible with 4510/02 and 4510/04 screwthread connectors as detailed on page 100.





# Joints, screwthread fittings, caps, rings & washers



- For use with Quickfit® glass screwthreads
- Melamine screwcaps with aperture at the top
- Silicone rubber rings with PTFE washers
- To determine what components are required:
  - i) Check the size of the glass screwthread (size designation refers to O.D. of thread in mm)
  - ii) Check the O.D. of the sampling tube, thermometer, probe etc that is to be passed through the screwcap
  - iii) Consult the table below: order relevant cap, washer and ring separately

#### Plastic caps

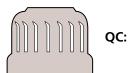
Item Code	Thread size	Acceptable dia. through screwcap mm	Pack qty.
QC13/7	13	6.0 - 7.0	10
QC18/11	18	7.0 - 8.5	10
QC24/12	24	6.0 - 7.0	10
QC28/9	28	6.0 - 7.0	10
QC28/13	28	10.5 - 11.5	10
QC28/21	28	18.0 - 19.0	10

#### Rubber rings

Item Code	Thread size	Acceptable dia. through screwcap mm	Pack qty.
QR13/6	13	6.0-7.0	10
QR18/7	18	7.0-8.5	10
QR24/6	24	6.0-7.0	10
QR24/9	24	8.5-9.5	10
QR24/11	24	10.5-11.5	10
QR28/6	28	6.0-7.0	10
QR28/11	28	10.5-11.5	10
QR28/18	28	18.0-19.0	10

#### **PTFE** washers

Item Code	Thread size	Acceptable dia. through screwcap mm	Pack qty.	
QW13/6	13	6.0-7.0	10	
QW18/7	18	7.0-8.5	10	
QW24/6	24	6.0-7.0	10	
QW24/9	24	8.5-9.5	10	
QW24/11	24	10.5-11.5	10	
QW28/6	28	6.0-7.0	10	
QW28/11	28	10.5-11.5	10	
QW28/18	28	18.0-19.0	10	

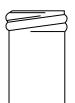




QR:



QW:



SQ:

#### Jugs, printed graduations, polypropylene



- Tapered jugs in high clarity polypropylene
- Crisp blue printed graduations
- Autoclavable at 121°C
- Ergonomically designed handle with thumb grip for easy carrying

Item Code	Capacity ml	Sub div. mm	Rim diam. mm	Height mm	Pack qty.	
JPB0050P	50	10	50.0	60	5	
JPB0100P	100	20	61.0	72	5	
JPB0250P	250	50	80.0	100	1	
JPB0500P	500	50	102.0	120	1	
JPB1000P	1000	100	122.0	150	1	
JPB2000P	2000	100	151.0	187	1	
JPB3000P	3000	200	172.0	215	1	
JPB5000P	5000	500	199.0	253	1	



#### Jugs, moulded graduations, polypropylene





- Tapered jugs in high clarity polypropylene
- Permanent moulded graduations
- Autoclavable at 121°C
- Ergonomically designed handle with thumb grip for easy carrying

Item Code	Capacity ml	Sub div. mm	Rim diam. mm	Height mm	Pack qty.	
JPM0050P	50	2	50.0	60	5	
JPM0100P	100	5	61.0	72	5	
JPM0250P	250	10	80.0	100	1	
JPM0500P	500	10	102.0	120	1	
JPM1000P	1000	20	122.0	150	1	
JPM2000P	2000	50	151.0	187	1	
JPM3000P	3000	50	172.0	215	1	
JPM5000P	5000	100	199.0	253	1	



# Jugs, medicine beakers



#### Jugs, graduated, stainless steel

- Spouted for easy pouring
- Tapered jug features an internal seamless design with a beaded rim for durability and flared base for stability in use
- Suitable for pharmaceutical and laboratory applications since all surfaces are non-reacting and offer zero absorption
- Produced to a durable design with all surfaces being highly polished making cleaning easier
- Moulded graduations on the inside

Item Code	Capacity ml	Diam. mm	Height mm	Pack qty.	
NEJUGS0500H	500	90	135	POA	
NEJUGS1000H	1000	115	155	1	
NEJUGS2000H	2000	150	215	1	



A range of stainless steel funnels are featured on page 185.



#### Medicine beakers/measures, polypropylene





- Translucent and robust graduated medicine measures
- Nest to save space
- Ideal for use when taking pH measurements

Item Code	Capacity ml	Sub div. ml	O.D. mm	Height mm	Pack qty.	
MWY514	30	1.0	37	42	1	
MWY518	50	5.0	50	53	1	

# Mercury collector, mercury tray

#### Mercury collector, polyethylene



- Spilled mercury is collected by pressing the foam pad in the screw top closure against the mercury
- The mercury is drawn into and encapsulated in the pad by releasing the pressure
- The mercury is released by screwing the closure on to the jar

Item Code	Description	Pack qty.
MWY850	Mercury collector	1
MWY851	Replacement pad	1



#### Mercury tray, white PVC





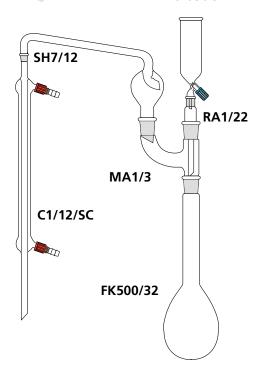
- Angled for the collection of spilled mercury
- Provided with outlet and plug for drainage as required

Item Code	l x w x h mm	Pack qty.
TWR056	400 x 310 x 19	1



# Nitrogen determination





#### Nitrogen determination (Kjeldahl) assembly



- Convenient assembly of Quickfit® glassware for Kjeldahl digestions and distillations
- Flask can be used alone for digestion stage and then fitted to rest of assembly for the distillation process
- Manufactured from heat resistant and chemically durable borosilicate glass

Item Code	Description	Pack qty.
280MC	Complete assembly	1



The determination of nitrogen by the Kjeldahl method imposes severe demands on glassware including high temperatures coupled with alternating acid/alkali conditions.



# Nitrogen determination, distillation unit, (Markham still)

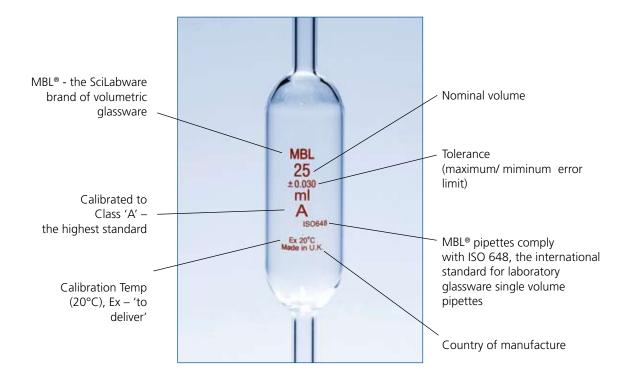


- Complies with BS1428: Part B2
- Enables a large number of distillations to be carried out in rapid succession
- Omprises Markham still body, Liebig condenser and connecting joint clip
- Still has evaporator vessel enclosed in a steam jacket
- When connected to a suitable steam supply the steam passes through the sample to promote distillation
- When steam supply is shut off the apparatus automatically sucks back any residue in the vessel thus preparing itself for the next determination

Item Code	Description	Pack qty.
46MC	Complete assembly	1

#### MBL® pipettes,

The measurement of exact volumes requires high quality volumetric equipment. The SciLabware range of MBL® products comply with international standards for volumetricware and are available in Class A or Class B tolerances. They are all calibrated 'to deliver' and have high quality, durable amber stain inscription. Below is an overview of a typical MBL® product, the One-mark pipette.



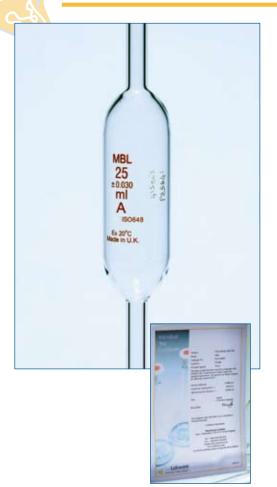
We also offer a range of pipette accessories to use in conjunction with MBL® pipettes including pipette fillers, pipette racks and cleaning solutions. See pages 90, 225-227 and 232.







# **Pipettes**



#### Pipettes, one mark, class A, works certified

**MBL**®

- Complies with ISO 648
- Calibrated for delivery
- Each pipette engraved with individual serial number
- Supplied with calibration certificate which allows traceability to National Standards
- Markings in permanent amber stain which are fused into the glass ensuring highest resistance to aggressive cleaning solutions
- Manufactured from soda-lime glass with tooled jets for extra strength and to ensure correct outflow times

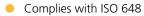
Item Code	Capacity ml	Tolerance +/- ml	Delivery time seconds	Pack qty.	
PRA740WC	1	0.008	10-20	2	
PRA742WC	2	0.010	10-25	2	
PRA744WC	5	0.015	15-30	2	
PRA746WC	10	0.020	15-40	2	
PRA748WC	15	0.030	25-50	2	
PRA750WC	20	0.030	25-50	2	
PRA752WC	25	0.030	25-50	2	
PRA754WC	50	0.050	30-60	2	
PRA756WC	100	0.080	40-60	2	



PRA748WC is supplementary to ISO standard. 1 and 2ml pipettes are straight form and do not feature a bulb.

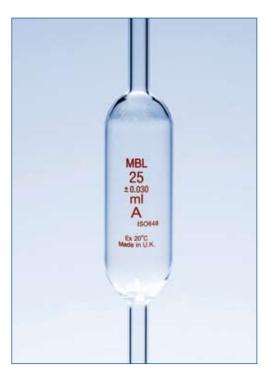
#### Pipettes, one mark, class A





- Calibrated for delivery
- Each pipette engraved with individual serial number
- Markings in permanent amber stain
- Manufactured from soda-lime glass with robust tooled jets

Item Code	Capacity ml	Tolerance +/- ml	Delivery time seconds	Pack qty.	
PRA720A	1	0.008	10-20	2	
PRA722A	2	0.010	10-25	2	
PRA724A	5	0.015	15-30	2	
PRA726A	10	0.020	15-40	2	
PRA728A	15	0.030	25-50	2	
PRA730A	20	0.030	25-50	2	
PRA732A	25	0.030	25-50	2	
PRA734A	50	0.050	30-60	2	
PRA736A	100	0.080	40-60	2	





PRA728 is supplementary to ISO standard.

**Pipettes** 

#### Pipettes, one mark, class B

**MBL**®

- Complies with ISO 648
- Calibrated for delivery
- Manufactured from soda-lime glass with tooled jets to reduce breakage
- Markings in permanent amber stain which are diffused into the surface of the glass for increased chemical resistance

Item Code	Capacity ml	Tolerance +/- ml	Delivery time seconds	Pack qty.	
PRA700B	1	0.015	5-20	5	
PRA702B	2	0.020	5-25	5	
PRA704B	5	0.030	7-30	5	
PRA706B	10	0.040	8-40	5	
PRA708B	15	0.060	9-50	5	
PRA710B	20	0.060	9-50	5	
PRA712B	25	0.060	10-50	5	
PRA714B	50	0.100	13-60	5	
PRA716B	100	0.150	25-60	2	



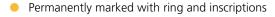


PRA708B is supplementary to ISO standard.

# Pipettes, one mark, class B, polypropylene







Item Code	Capacity ml	Tol. +/- ml	Pack qty.	
PDH601	1	0.02	12	
PDH602	2	0.02	12	
PDH605	5	0.03	12	
PDH610	10	0.04	1	
PDH625	25	0.05	1	
PDH650	50	0.10	1	



Exposure to temperatures above 60°C may affect accuracy. Recommend cleaning with mild alkaline detergents.



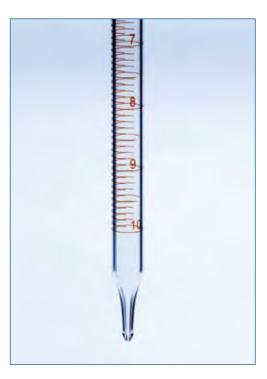


## Pipettes, graduated, type 1, class A, works certified



- Complies with ISO 835
- Calibrated to deliver from zero at the top to any graduation line down to the shoulder
- Each pipette marked with individual serial number and outflow time
- Supplied with a calibration certificate showing actual volume dispensed at 5 points on the scale and providing traceability to national standards
- Manufactured from soda-lime glass with tooled jets for extra strength and to ensure correct outflow times
- Graduations in permanent amber stain which resists aggressive washing solutions

Item Code	Capacity ml	Grads. ml	Tolerance +/- ml	Delivery time seconds	Pack qty.	
PRA780WC	1	0.01	0.007	7-10	2	
PRA782WC	2	0.02	0.010	8-12	2	
PRA784WC	5	0.05	0.030	10-14	2	
PRA786WC	10	0.10	0.050	13-17	2	
PRA788WC	25	0.20	0.100	5-15	2	



#### Pipettes, graduated, type 1, class A



- Complies with ISO 835
- Calibrated to deliver from zero at the top to any graduation line down to the shoulder
- Graduations in permanent amber stain which resists aggressive washing solutions
- Each pipette marked with individual serial number and outflow time
- Manufactured from soda-lime glass with tooled jets for extra strength and to ensure correct outflow times

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Delivery time seconds	Pack qty.	
PRA770A	1	0.01	0.001	7-10	2	
PRA772A	2	0.02	0.01	8-12	2	
PRA774A	5	0.05	0.03	10-14	2	
PRA776A	10	0.10	0.05	13-17	2	
PRA778A	25	0.20	0.10	5-15	2	

#### Pipettes, graduated, type 1, class B

## **MBL**®

- Complies with ISO 835
- Calibrated to deliver from zero at the top to any graduation line down to the shoulder
- Graduations in permanent amber stain which withstands aggressive cleaning solutions
- Manufactured from soda-lime glass with robust tooled jets

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Delivery time seconds	Pack qty.	
PRA760B	1	0.01	0.01	2-11	5	
PRA762B	2	0.02	0.02	2-12	5	
PRA764B	5	0.05	0.05	5-14	5	
PRA766B	10	0.10	0.10	5-17	5	
PRA768B	25	0.20	0.20	5-15	5	

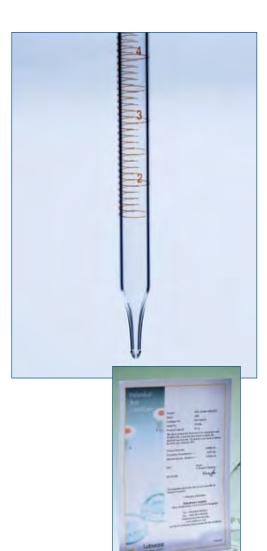


## Pipettes, graduated, type 2, class A, works certified



- Complies with ISO 835
- Calibrated to deliver from any graduation line down to zero at the jet
- Each pipette marked with individual serial number and outflow time
- Supplied with calibration certificate showing actual volume dispensed at 5 points on the scale and providing traceability to National Standards
- Manufactured from soda-lime glass with tooled jets for extra strength and to ensure correct outflow times
- Graduations in permanent amber stain which are diffused into the glass to provide highest resistance to chemical attack

Item Code	Capacity ml	Grads. ml	Tolerance +/- ml	Delivery time seconds	Pack qty.	
PRA820WC	1	0.01	0.007	5-7	2	
PRA822WC	2	0.02	0.010	6-9	2	
PRA824WC	5	0.05	0.030	8-11	2	
PRA826WC	10	0.10	0.050	10-13	2	
PRA828WC	25	0.20	0.100	11-16	2	



# **Pipettes**

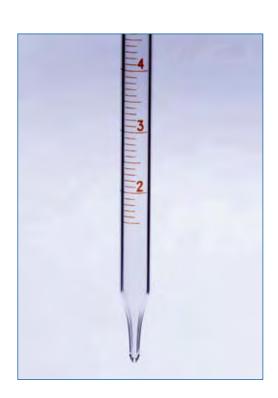


#### Pipettes, graduated, type 2, class A



- Complies with ISO 835
- Calibrated to deliver from any graduation line down to zero at the jet
- Graduations in permanent amber stain which resists aggressive washing solutions
- Each pipette marked with individual serial number and outflow time
- Manufactured from soda-lime glass with tooled jets for extra strength and to ensure correct outflow times

Item Code	Capacity ml	Grads. ml	Tolerance +/- ml	Delivery time seconds	Pack qty.	
PRA810A	1	0.01	0.007	5-7	2	
PRA812A	2	0.02	0.010	6-9	2	
PRA814A	5	0.05	0.030	8-11	2	
PRA816A	10	0.10	0.050	10-13	2	
PRA818A	25	0.20	0.100	11-16	2	



#### Pipettes, graduated, type 2, class B



- Complies with ISO 835
- Calibrated to deliver from any graduation line down to zero at the jet
- Graduations in permanent amber stain which is fused into the glass to ensure highest resistance to aggressive washing solutions
- Manufactured from soda-lime glass with robust tooled jets

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Delivery time seconds	Pack qty.	
PRA800B	1	0.01	0.01	2-11	5	
PRA802B	2	0.02	0.02	2-12	5	
PRA804B	5	0.05	0.05	5-14	5	
PRA806B	10	0.10	0.10	5-17	5	
PRA808B	25	0.20	0.20	9-21	5	

#### Pipettes, graduated, type 3, class B

## **MBL**®

- Complies with ISO 835
- Calibrated to deliver from zero at the top to any graduation line down to the jet
- Graduations in permanent amber stain which resists aggressive washing solutions
- Manufactured from soda-lime glass with robust tooled rims

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Delivery time seconds	Pack qty.	
PRA830B	1	0.01	0.01	2-11	5	
PRA832B	2	0.02	0.02	2-12	5	
PRA834B	5	0.05	0.05	5-14	5	
PRA836B	10	0.1	0.10	5-17	5	
PRA838B	25	0.2	0.20	9-21	5	

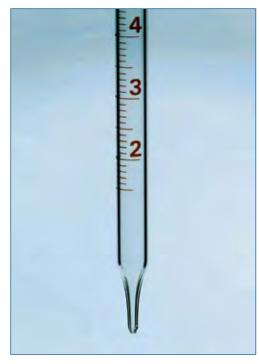


#### Pipettes, graduated, serological, type 4



- Complies with ISO 835
- Calibrated to deliver from any graduation line down to zero at the jet with the last drop expelled by blowing
- Tooled suction ends accept cotton-wool plug
- Graduations in permanent amber stain
- Manufactured from soda-lime glass with robust tooled jets

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Delivery time seconds	Pack qty.	
PRA840S	1	0.01	0.01	2-7	5	
PRA842S	2	0.02	0.02	2-7	5	
PRA844S	5	0.05	0.05	4-10	5	
PRA846S	10	0.10	0.10	4-10	5	
PRA848S	25	0.20	0.20	5-15	5	



# **Pipettes**



#### Pipettes, graduated, class B, polypropylene



& Azlon

- Calibrated to class B tolerances
- Easy to read graduation lines
- Specially manufactured tip to ensure excellent quality

Item Code	Capacity ml	Grads. ml	Tol. +/- ml	Pack qty.	
PDH501	1	0.1	0.02	12	
PDH502	2	0.1	0.02	12	
PDH505	5	0.1	0.05	12	
PDH510	10	0.1	0.10	12	



Exposure to temperatures above 60°C may affect accuracy. Recommend cleaning with mild alkaline detergents.



#### Pipette, weighing



- Complies with BS 2058
- Specifically designed for weighing fuming or corrosive liquids
- Accessory cover tube available

Item Code	Description	Joint size	Max. weight g	Approx capacity ml	Pack qty.	
WB1/0	Pipette	10/19	18	4	1	
MF24/0	Cover tube	10/19	12	4	5	



Cover tube not illustrated. Compatible with FE25/0.

# Pipettes, pipette fillers

#### Pipettes, dropping, polyethylene



Azlon

- Corrosion resistant and unbreakable in normal use
- Both sizes are one-piece bellows dispensers
- Plain stem of 7.5 mm diameter

Item Code	Approx capacity ml	Pack qty.	
PDH404	2.5	10	
PDH406	4.0	10	



#### Pipette filler, Bibbette®



- A novel PTFE and silicone rubber valve assembly controls the vacuum created by simply squeezing the unique rubber bulb
- By moving the thumb lever pipettes from 0.1ml up to 100ml can be easily and accurately filled and emptied
- Blow out pipettes are catered for by the depression of a small thumb operated squeeze ball
- A replaceable PTFE membrane filter ensures liquid is not accidentally drawn into the unit (2 supplied)
- The filter and pipette holding cone can be sterilised by autoclaving

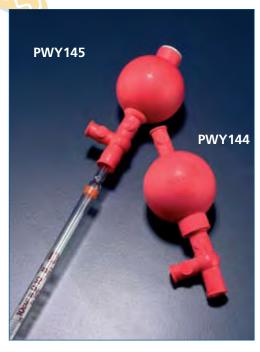
Item Code	Description	Pack qty.
PFL001B	Bibbette pipette controller, Blue	1
PFL001N	Bibbette pipette controller, Plain	1



#### Bibbette® accessories

Item Code	Description	Pack qty.	
PFL002	Spare membrane filters pack of 10	1	
PFL003	Spare suction bulb	1	
PFL004	Spare valve system for Bibbette pipette controller	1	
PFL006	Spare silicone adapter	1	

# Pipette fillers, pipette rack



#### Pipette fillers, rubber



() Azlon

- Suitable for pipettes upto 1000ml
- Pipette filler works via a series of valves for air release, suction and delivery
- PWY145 is suitable for single handed operation

Item Code	Pack qty.	
PWY144	1	
PWY145	1	

#### **Operating instructions for PWY145**



1. Evacuate via the automatic



2. Intake by pressure on • operating point • operating point



3. Drain by pressure on



4. Blow out the pipette (no valve actuation necessary)



valve for easy inside cleaning



6. Replace the valve using a twisting motion



#### Pipette Rack, HDPE





- White moulded polyethylene rack
- Will support 12 straight or small bulb pipettes over 200 mm long.
- Supplied as a kit of two end pieces and three connecting rods for easy push fit assembly

Item Code	Pack qty.	
SWP038	1	

# Pipette stand, pipette support

#### Pipette stand, polypropylene



E Azlon

- White chemically resistant polypropylene stand.
- Very stable with 220mm diameter base.
- Holds up to 44 pipettes vertically

Item Code	Description	Pack qty.
SWP034	Pipette Stand	1



#### Pipette support, polystyrene



() Azlon

- Moulded in white polystyrene
- Simple and efficient pipette rest
- An off-centre support means it is also suitable for short pipettes, burettes,

Item Code	l x w x h mm	Pack qty.
SWP036	280 x 215 x 38	1





#### Pump, industrial, hand, polypropylene



Azlon

- Suitable for the rapid transfer of liquids from drums, barrels and tanks
- Made entirely from heavy duty polypropylene
- Supplied with approximately 20cm of flexible PVC tubing with 25mm I.D. fitted to the outlet
- Will fit into a 50mm diameter aperture to a maximum immersion depth of 640mm
- Drip well is fitted at the top
- Will transfer approximately 5 litres of liquid in 8 strokes in about 15 seconds.

Item Code	Overall length mm	Pack qty.
PWJ002	750-1280mm	1



#### Pumps, polypropylene & PVC



Azlon

- Can be used with various sizes of bottles due to telescopic down tube
- Liquid is forced into the collecting vessel by squeezing the bulb
- The flow can be instantly interrupted by pressing the release button
- Can be used as a siphon by attaching tubing to the outlet tube and after pumping the liquid will flow continuously

Item Code	Flow rate litres/min	Stopper O.D. mm	Tube O.D. x length mm	Pack qty.
PWJ014	4	28 x 44	10 x 45	1
PWJ016	12	44 x 60	12 x 70	1
PWJ018	12	52 x 68	12 x 70	1



Can be used with unistoppers below.



#### Unistoppers, multipurpose, PVC





- For use with or without pumps (above)
- Consists of three parts, one core and two collars
- Can be used in container openings from 30 70mm diameter
- Has 2 apertures, one for inserting tubes as detailed below and a smaller aperture which acts as an air vent to allow siphoning

Item Code	Description	Pack qty.
PWJ020	Unistopper with 12mm hole for PWJ016	1
PWJ021	Unistopper with 15mm hole for PWJ018	1

## Pumps, racks

#### Pump, water jet, polypropylene



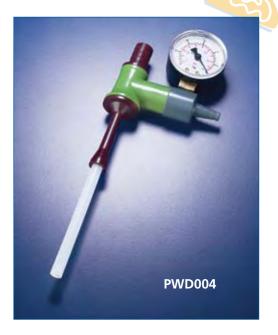
Azlon

- Suitable for most laboratory water pressures
- Complete with an integral non-return valve
- Will operate effectively (half vacuum) at low flow rates of 7 litres per minute
- Will produce maximum vacuum of 20-25 mmHg at a flow rate of 17 litres per minute
- The side arm tapers from 7 to 12mm
- 16mm O.D. inlet tube

Item Code	Description	Pack qty.
PWD002	Without gauge	1
PWD004	With gauge	1



Recommend clipping tube to outlet as large pressure is created by drop in bore size.



#### Racks, draining, coated





- High quality draining racks
- Manufactured from polyamide epoxy coated steel
- Offers a better heat and chemical resistance than other coatings
- There are eight pegs 110mm long and twenty four pegs 80mm in length. Peg diameter is 4.5mm
- Overall dimensions of the rack are 410 x300 mm

Item Code	Description	Pack qty.	
RWK070FS	Rack with integral free standing support	1	
RWK076	Rack complete with backboard and trough	1	



#### Racks, draining, coated, accessories

Item Code	Description	Pack qty.
RWK070	Replacement rack	1
RWK072	Replacement back board	1
RWK073	Replacement trough	1
RWK074	Replacement back board and trough	1



#### Wall mountable draining rack, polystyrene



() Azlon

- Lightweight, easy to assemble polystyrene draining racks designed to be wall mounted
- Pegs simply slot into place on the back board and are spaced to allow various sizes of labware to fit on to the rack
- Water is collected in the trough at the base of the rack and drains away via a rubber tube (not supplied) which can be directed into a nearby sink or container
- Supplied with wall mounting accessories
- A set of narrow pegs for test tubes, volumetric flasks etc. is also available

Item Code	Description	Peg l x O.D. mm	Rack h x w mm	Pack qty.
WRP001P	Rack, including 72 pegs, trough & drain	120 x 16	650 x 450	1
WRP002P	Set of 11 narrow pegs	100 x 6	-	1



#### Rack, microcentrifuge tube, polypropylene



- Economical and sturdy test tube racks supplied in self assembly flat packs
- Choice of 4 colours
- Accepts 1.5ml microcentrifuge tubes
- Autoclavable at 121°C
- Sinks in water baths
- Alpha numeric place coding

Item Code	Colour	l x w x h mm	No. places	Pack qty.	
RPB001P	Blue	265 x 126 x 38	128	5	
RPR001P	Red	265 x 126 x 38	128	5	
RPW001P	White	265 x 126 x 38	128	5	
RPY001P	Yellow	265 x 126 x 38	128	5	



#### Racks, microcentrifuge tube, polypropylene





- Microcentrifuge tube rack with numerical marking.
- Autoclavable at 121°C
- Holds a maximum of 20 tubes.

Item Code	Base dim. l x w x h mm	Hole diam. mm	Pack qty.	
RWK058	210 x 70 x 35	10	1	

#### Rack, test tube, polypropylene



AE Azlon

- Economical and sturdy test tube racks supplied in self assembly flat packs
- Autoclavable at 121°C
- Sinks in water baths
- Alpha numeric place coding

Item Code	Colour	l x w x h mm	Max. tube O.D. mm	No. places	Pack qty.	
RPB013P	Blue	265 x 126 x 75	13	84	5	
RPW013P	White	265 x 126 x 75	13	84	5	
RPB018P	Blue	265 x 126 x 75	18	55	5	
RPW018P	White	265 x 126 x 75	18	55	5	
RPB021P	Blue	265 x 126 x 75	21	40	5	
RPW021P	White	265 x 126 x 75	21	40	5	
RPB026P	Blue	265 x 126 x 88	26	32	5	
RPW026P	White	265 x 126 x 88	26	32	5	
RPB031P	Blue	265 x 126 x 88	31	21	5	
RPW031P	White	265 x 126 x 88	31	21	5	



#### Racks, test tube, kit form, polyethylene





- Simple rack with six holes of 25 mm diameter
- Shape ensures good visibility making the rack ideal for classroom work
- Also has 6 draining pegs
- Supplied flat and is very easy to assemble for use or disassemble for storage

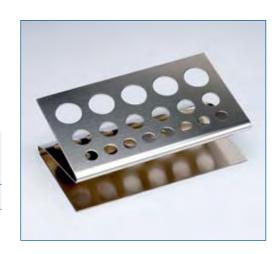
Item Code	Pack qty.	
RWK030	1	



#### Rack, test tube, 'Z' shaped, aluminium

- Aluminium test tube rack
- Accommodates test tubes 8 x 13mm, 6 x 19mm and 5 x 28mm diameter
- Lightweight and heat resistant up to 340°C

Item Code	Width mm	Length mm	Height mm	Pack qty.	
NE6877	114	203	76	1	



# **Rinsing system**



#### Rinsing system, automatic, polyethylene



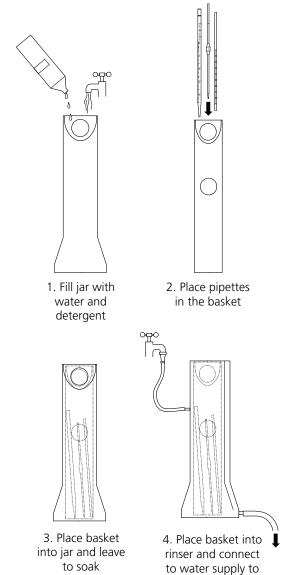
Azlon

- Automatically rinses contents when connected to a tap and drain
- Holds many different types of labware including pipettes up to 460mm long and burettes up to 560mm in length
- All three components are supplied separately

Item Code	Description	I.D. x height mm	Pack qty.	
RDR102	Rinser and outlet	170 x 710	1	
RDR104	Jar	173 x 710	1	
RDR106	Basket	138 x 710	1	



The jar can be used for cleaning and the rinser used for washing with clean water. By using the basket swapping over can be facilitated quickly and easily.



wash off detergent









# Safety



#### Bins, floor standing, beta radiation, acrylic



() Azlon

- Large free-standing floor bin with hinged lid
- This bin can be easily moved as it is mounted on robust casters
- Ideal for protection against beta radiation from contaminated waste

Item Code	Description	Dimensions (h x l x w) mm	Pack qty.
SRS003	Mobile floor bin	600 x 304 x 304	1



#### Bins, benchtop, beta radiation, acrylic



Azlon

- Range of bench-top bins in 10mm thick acrylic
- Protects against beta radiation from contaminated waste
- SRS008 features a covered aperture in the main lid to allow the introduction of contaminated pipette tips / microcentrifuge tubes

Item Code	Description	Dimensions (h x l x w) mm	Pack qty.
SRS006	Waste bin for beta emitters	150 x 150 x 150	1
SRS007	Waste bin for beta emitters	250 x 200 x 200	1
SRS008	Waste bin for tips & tubes	150 x 150 x 150	1

#### Shields, beta radiation, acrylic



Azlon

- High quality shields in 10mm thick acrylic protect against beta radiation
- Angled to allow comfortable working position when examining or handling

Item Code	Description	Shield angle degrees	Dimensions (h x w) mm	Pack qty.	
SRS001	Angled shield	15	445 x 165	1	
SRS002	Dual angled shield	20	445 x 150	1	



#### Storage boxes, beta radiation, acrylic





- Three styles of storage box for use with beta emitters
- SRS004 features disposable foam inserts to accommodate small bottles
- SRS005 consists of a solid block of acrylic that will accommodate 0.5 and 1.5ml microcentrifuge tubes
- SRS009 is ideal for storing or transporting microtubes (racks are supplied separately - each rack holds 32 tubes)

Item Code	Description	Ext. I x w x h mm	Int. l x w x h mm	Pack qty.	
SRS004	Storage box for beta emitters, foam rack included	300 x 230 x 105	280 x 200 x 78	1	
SRS005	Solid microtube rack with cover for beta emitters	191 x 137 x 76	-	1	
SRS009	Storage box for beta emitters, racks separate	184 x 109 x 76	165 x 86 x 54	1	



#### Rack options for SRS009

Racks hold 32 tubes

Item Code	Description	Ext. I x w x h mm	Pack qty.
SRS010	Rack for SRS009, accomodates 0.5 ml microtubes	165 x 83 x 36	1
SRS011	Rack for SRS009, accomodates 1.5 ml microtubes	165 x 83 x 36	1
SRS012	Rack for SRS009, accomodates 2.0 ml microtubes	165 x 83 x 36	1



#### Shield, safety, hinged type, polycarbonate



() Azlon

- Excellent protection in potentially hazardous situations
- Adjustable can be used as a tight triangle or extended out to a straight line configuration
- Incredibly strong and lightweight
- Supplied with two pairs of plastic coated metal feet
- Feet may be clamped or bolted onto the bench to give greater stability

Item Code	Height cm	Outside panel widths mm	Centre panel width mm	Total width mm	Pack qty.	
SGT002	38	180	230	590	1	
SGT004	61	180	230	590	1	
SGT006	61	226	300	750	1	

#### Shield, safety, hinged type, accessories

Item Code	Description	Pack qty.
SGT012	Spare shield feet	1
SGT014	Shield clamp with hand screw for securing shield feet to the bench	1



## Shield, safety, single piece, polycarbonate Azlon





- Excellent protection in potentially hazardous situations
- Incredibly strong and lightweight
- Manufactured from a single piece of 4mm thick sheet of transparent polycarbonate
- Supplied with two pairs of plastic coated metal feet
- Feet may be clamped or bolted onto the bench to give greater stability

Item Code	Height mm	Outside panel widths mm	Centre panel width mm	Pack qty.	
SGT102	608	178	230	1	

#### Scoops, measuring, polypropylene





- Food safe
- Top is flat for levelling off powders
- Base is flat enabling scoops to stand horizontally
- The capacity is clearly moulded on each size

Item Code	Capacity ml	Overall length mm	Pack qty.	
SWL002	2	60	5	
SWL006	5	82	5	
SWL008	10	102	5	
SWL012	25	137	5	
SWL018	50	160	5	
SWL024	100	198	5	
SWL030	250	259	5	
SWL036	500	315	5	
SWL140	1000	385	1	
SWL042	2000	400	1	



#### Scoops, HDPE





- Sturdy scoops in natural rigid polyethylene
- Lightweight with good chemical resistance

Item Code	Max. capacity ml	Overall length mm	Pack qty.	
SWL028	150	250	5	
SWL033	1,000	350	5	
SWL040	1,500	405	1	



# Scoops, seed germination



(table info still repeated!- KS)

#### Scoops, stainless steel, cylindrical, seamed

- Cylindrical laboratory scoop
- Available as seamed for general use or seamless for pharmaceutical use
- Manufactured from high quality 304 (18/8 alloy) stainless steel for improved corrosion resistance

Item Code	Туре	Capacity ml	Handle Length mm	Overall length mm	Diam. mm	Pack qty.	
NE9010	Seamed	100	80	190	50	1	
NE9020	Seamed	250	100	260	75	1	
NE9030	Seamed	500	100	325	105	1	
NE9040	Seamed	1000	100	340	115	1	





#### Scoops, stainless steel, cylindrical, seamless

- As above but with no seams or crevices
- Suitable for pharmaceutical applications
- Carefully manufactured to avoid internal scratches and the possibility of cross contamination

Item Code	Туре	Capacity ml	Handle Length mm	Overall length mm	Diam. mm	Pack qty.	
NE9015	Seamless	150	100	220	50	1	
NE9035	Seamless	500	120	285	75	1	
NE9050	Seamless	1000	120	350	100	1	
NE9060	Seamless	1500	135	370	120	1	
NE9070	Seamless	4000	120	360	180	1	

#### Seed germination kit, polystyrene





- For the study and observation of seed growth under controlled conditions
- Cowled top allows ventilation and observation
- Water feed is by filter paper strip from the bottom vessel and growth takes place on a 70 mm filter paper base

Item Code	Capacity ml	Assembled size mm	Pack qty.
SWY146	250	170 x 78	1

#### Sets

PYREX QUICKFIT®

The following pages of this catalogue feature a series of Quickfit® sets, specially designed to cover the requirements of practical chemistry in its many different fields and levels.

#### Range

Sets are available for both organic and inorganic chemistry, from the simplest inorganic experiment to the complex organic techniques of the advanced research worker.

#### Scope

The scope of Quickfit® sets is wide and varied. There is a set suitable for everyone: the teacher of inorganic chemistry demonstrating the preparation of gases; the student of advanced organic chemistry; the industrial laboratory carrying out only a small amount of preparative work on a microscale or the researcher performing complex multi-stage syntheses.

#### Storage

Storage problems are simplified by using Quickfit® sets. The majority of sets are supplied in boxes designed to house all the parts safely in the minimum amount of space. This greatly simplifies the problems of checking equipment as well as providing safe permanent storage. Sizes ofthe boxes are standardised so that they will fit into the usual laboratory benchdrawer or student locker.

#### Contents

Great attention has been given to the design of the contents of every set, so that each will cover the widest possible range of techniques while keeping the number of different parts as small as possible. The larger kits provide extra numbers of items which are in almost constant use, such as flasks and stoppers; thus several different assemblies can often be operated simultaneuosly.

#### Sets - Single joint size

As the name implies, each of these sets has a common joint size, either 10/19, 14/23 or 19/26, e.g. all the apparatus contained in 27BU had joint size 14/23. This greatly increases the versatility of the sets, since a wide variety of assemblies can be made up from a small number of components. They are the ideal choice where economy is an important consideration.

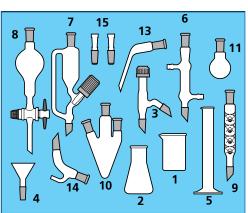
#### Extension

Most Quickfit® sets can be readily expanded by the use of extension kits. A simple starting set can thus be added to as work advances. For example, the basic five component set 29BU/M can be converted by means of 29X/M to the more comprehensive 27BU. This in turn can be extended by extension set 27X/M to the larger 23BU/M.



## Sets





# Sets, MCK2, Microscale chemistry kit, 10/19 joint size



- This comprehensive microscale chemistry kit contains 16 items of Quickfit® products all with a common 10/19 joint size
- The kit allows many micro reactions to be performed under vacuum or under atmospheric pressure
- Suitable for use with starting material quantities of 10 25ml
- Presented in a sturdy hard plastic box with bespoke foam inserts to protect the products in storage and in transit

Item Code	Description	Pack qty.
MCK2	Micro chemistry kit, 16 pieces of glassware with 10/19 joint size as detailed below	1

#### **MCK 2 components**



Item Code	Key	Description
1000/11M	1	Beaker, low form, 25ml
1130/11M	2	Erlenmeyer flask, 25ml
SH8/0	3	Stillhead with screwcap adapter
CF1/0	4	Filter funnel
CRC202	5	MBL® Class B measuring cylinder, 10ml
C1/00	6	Liebig condenser
DEC20/00	7	Pressure equalising funnel, 10ml
D70/20	8	Separating funnel, 30ml with PTFE key
FC3/00	9	Vigreux fractionating column
FP25/0AP	10	Pear shape flask with three necks, 25ml
FR10/0S	11	Round bottom flask, 10ml
KC10	12	Keck clip
RA1/00	13	Short stem receiver adapter
RA2/00	14	Receiver adapter with vent
SB10	15	2 x Stopper

# Set, 17BU, organic chemistry kit, 10/19 joint size



- This set contains 7 essential Quickfit® products all with size 10/19 ground-glass joints
- Covers most of the basic preparative processes including reflux, reflux with addition, distillation, preparation, steam distillation and separation
- Semi-micro scale designed for quantities of starting material up to 15g
- Housed in a robust cardboard box and supplied with instruction manual with details of practical experiments

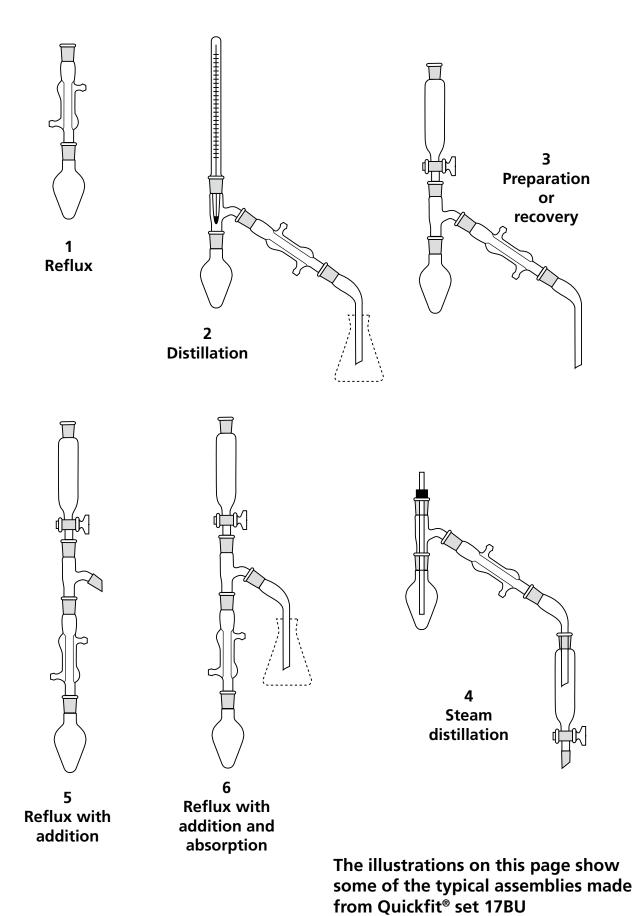
Item Code	Description	Pack qty.
17BU	Complete set comprising 7 items of glassware as listed in the table below	1

# 3

#### Set 17BU, components

Item Code	Key	Description
C1/00	1	Liebig condenser
D1/00	2	Dropping funnel, 20ml
FP25/0	3	Flask, pear shape, 25ml
MF31/0/250	4	Thermometer -10°C to 250°C
SB10	5	Stopper
SH4/0	6	Stillhead
RA1/10	7	Receiver adapter







Ever since we pioneered the concept of interchangeable jointed glassware more than 70 years ago, Quickfit® has been setting standards of excellence for others to follow.

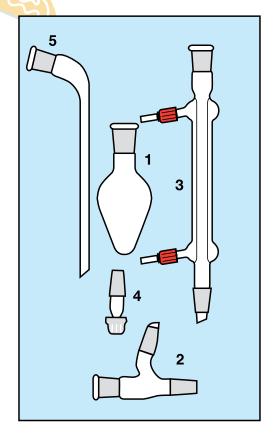
Today over 1200 products carry the famous Quickfit® badge, from adapters and condensers to funnels and flasks, providing the world's widest choice of jointed assemblies.

Manufactured exclusively from Pyrex® borosilicate glass to a specification tighter than those specified by British and international standards, Quickfit® is your guarantee of a leak-free performance and smooth interchangeability, every time.

PYREX® is a registered trademark of Corning Inc.







# Set 29BU/M, organic chemistry kit, 14/23 joint size



- Basic starter kit ideal for introducing students to principal techniques of preparative organic chemistry
- Comprises 5 glassware items all with size 14/23 Quickfit® ground-glass joints giving maximum flexibility
- Scale based on starting material quantities up to 30g
- Both reflux and distillation assemblies can be constructed
- Housed in a robust cardboard box with foam rubber liner for product protection

Item Code	Description	Pack qty.	
29BU/M	Complete set comprising 5 items of glassware as detailed in the table below	1	

#### Set 29BU/M, components



Item Code	Key	Description
FP50/1	1	Pear shaped flask, 50ml
SH4/1	2	Stillhead
C1/11/SC	3	Liebig condenser
ST51/13	4	Screwcap adapter
RA1/11	5	Receiver adapter



#### Set 27BU, organic chemistry kit, 14/23 joint size



- The most popular Quickfit® set for schools, colleges and universities
- Comprises 9 basic items of Quickfit® glassware all with size 14/23 ground-glass joints for compatibility
- Allows the construction of at least 8 assemblies including steam distillation, reflux with addition and preparation
- Scale based on starting material quantities up to 30g
- Housed in a robust cardboard box with foam rubber liner to provide safe storage and transit
- Supplied with instruction booklet which includes practical details of some typical assemblies

Item Code	Description	Pack qty.	
27BU	Complete set comprising 9 items of glassware as detailed below	1	

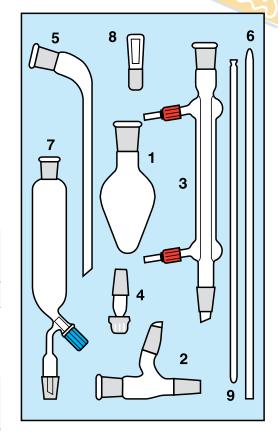


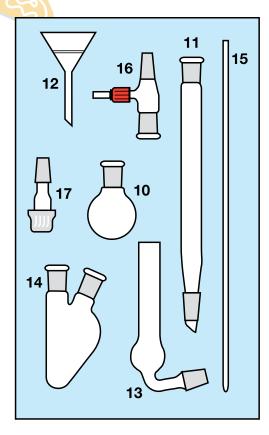
Item Code	Key	Description
FP50/1	1	Pear shaped flask, 50ml
SH4/1	2	Stillhead
C1/11/SC	3	Liebig condenser
ST51/13	4	Screwcap adapter
RA1/11	5	Receiver adapter
MF5	6	Air leak/steam inlet tube
D31/1/50	7	Dropping funnel, 50ml, with GP Rotoflo tap
SB14	8	Stopper
30/110/10	9	Thermometer





Extension kit is available to allow construction of a further 7 assemblies. See 27X/M on page 246.





#### Set 27X/M, extension kit, 14/23 joint size



- Complements the 27BU and allows more assemblies to be constructed
- Comprises 8 items of Quickfit® glassware, all with common joint size of 14/23 for compatability
- Housed in a robust cardboard box with foam liner and supplied with an instruction/experiment booklet
- When extension set 27X/M is added to basic set 27BU they form set 23BU/M with the capability of forming at least 15 assemblies including fractional distillation and vacuum distillation

Item Code	Description	Pack qty.
27X/M	Extension set to convert 27BU to 23BU/M comprising 8 glassware items as detailed below	1

#### Set 27X/M, components

Item Code	Key	Description
FR25/1S	10	25ml flask
C2/11	11	Air condenser/drying tube
3730/04	12	Sintered glass funnel
MF23/1	13	Drying tube
FP50/1/1A	14	Pear shape flask with angled side neck, 50ml
MF5	15	Air leak/steam inlet tube
MF17/1/SC	16	Adapter with 'T' connection
ST51/18	17	Screwcap adapter



A selection of typical assemblies that can be constructed with this kit are shown on pages 248-249.

# Set 23BU/M, organic chemistry kit, 14/23 joint size, 2 boxes

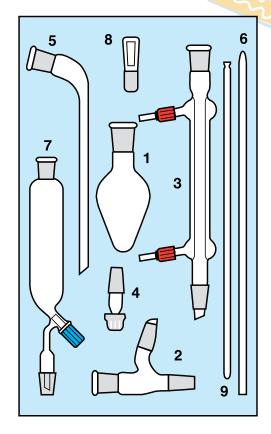


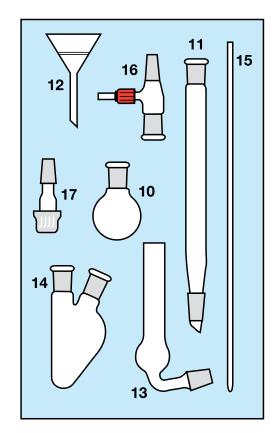
- A two box set comprising all the items in sets 27BU and 27X/M
- Comprehensive range of 17 items of Quickfit® glassware which covers all the requirements up to graduate standard. Also suitable for university and industrial research projects

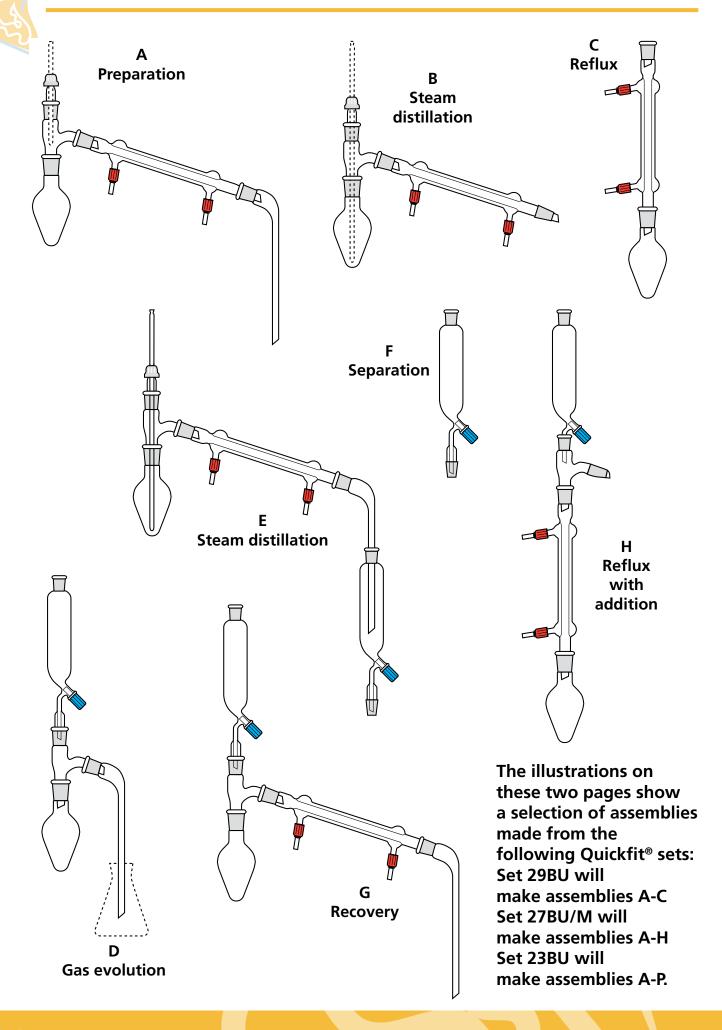
Item Code	Description	Pack qty.	
23BU/M	Complete set comprising 17 items of glassware as detailed in the table below	1	

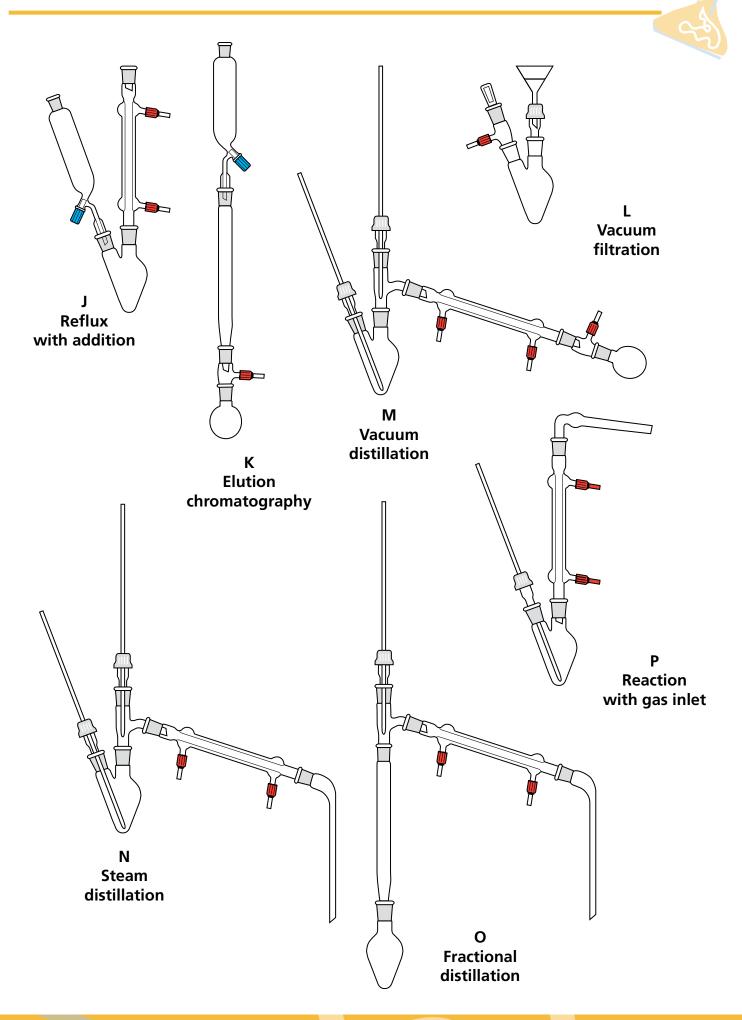
#### Set 23BU/M, components

Item Code	Key	Description
FP50/1	1	Pear shaped flask, 50ml
SH4/1	2	Stillhead
C1/11/SC	3	Liebig condenser
ST51/13	4	Screwcap adapter
RA1/11	5	Receiver adapter
MF5	6 & 15	Air leak/steam inlet tube
D31/1/50	7	Dropping funnel, 50ml, with GP Rotoflo® tap
SB14	8	Stopper
30/110/10	9	Thermometer
FR25/1S	10	25ml flask
C2/11	11	Air condenser/drying tube
3730/04	12	Sintered glass funnel
MF23/1	13	Drying tube
FP50/1/1A	14	Pear shape flask with angled side neck, 50ml
MF17/1/SC	16	Adapter with 'T' connection
ST51/18	17	Screwcap adapter

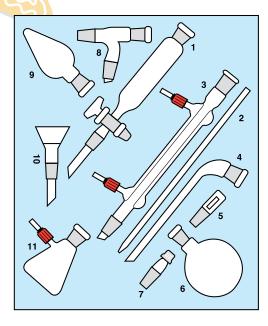








### Sets



#### Set 46BU, organic chemistry kit, 19/26 joint size



- Comprises 11 glassware components all with size 19/26 Quickfit® ground glass joints for maximum versatility
- Allows the construction of at least 6 assemblies including reflux, distillation and filtration
- Scale based on starting material quantities up to 150g
- Housed in a robust cardboard box with foam rubber liner to provide safe storage and transit

Item Code	Description	Pack qty.
46BU	Complete set comprising 11 items as detailed in the table below	1

#### Set 46BU, components

Item Code	Key	Description
D1/22	1	Dropping funnel, 100ml
MF5	2	Air leak/steam inlet tube
C1/12/SC	3	Liebig condenser
RA1/12	4	Receiver adapter
SB19	5	Stopper
FR250/2S	6	Round bottom flask, 250ml
ST52/13	7	Screwcap adapter
SH4/2	8	Stillhead
FP100/2	9	Pear shape flask, 100ml
SF42/2	10	Filter funnel, 24mm diameter perforated plate
FB100/2SC	11	Büchner flask, 100ml

#### Set 46X, extension kit, 19/26 joint size



- Complements set 46BU and allows more assemblies to be made including fractional distillation under vacuum and reflux with stirring
- Comprises 11 items of glassware all with joint size 19/26
- Flask capacities based on starting material quantities of 150g
- Housed in a robust cardboard box with foam rubber liner

Item Code	Description	Pack qty.	
46X	Extension kit comprising 11 glassware items as detailed in the table below	1	

#### Set 46X, components

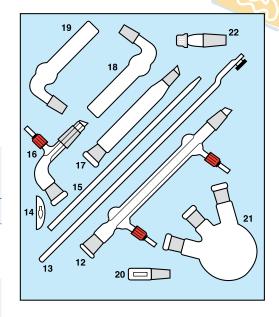
Item Code	Key	Description
C1/12/SC	12	Liebig condenser
ST6/7	13	Stirrer shaft, 450mm long
ST7/2	14	PTFE stirrer blade to fit ST6/7
MF5	15	Air leak/steam inlet tube
RA3/22/SC	16	Receiver bend with vacuum connection
C2/12	17	Air condenser
MF23/2	18, 19	Drying tube x 2
SB19	20	Stopper
FR250/2S/22A	21	Round bottom flask, 250ml, three necks
ST52/13	22	Screwcap adapter

#### 42BU, components

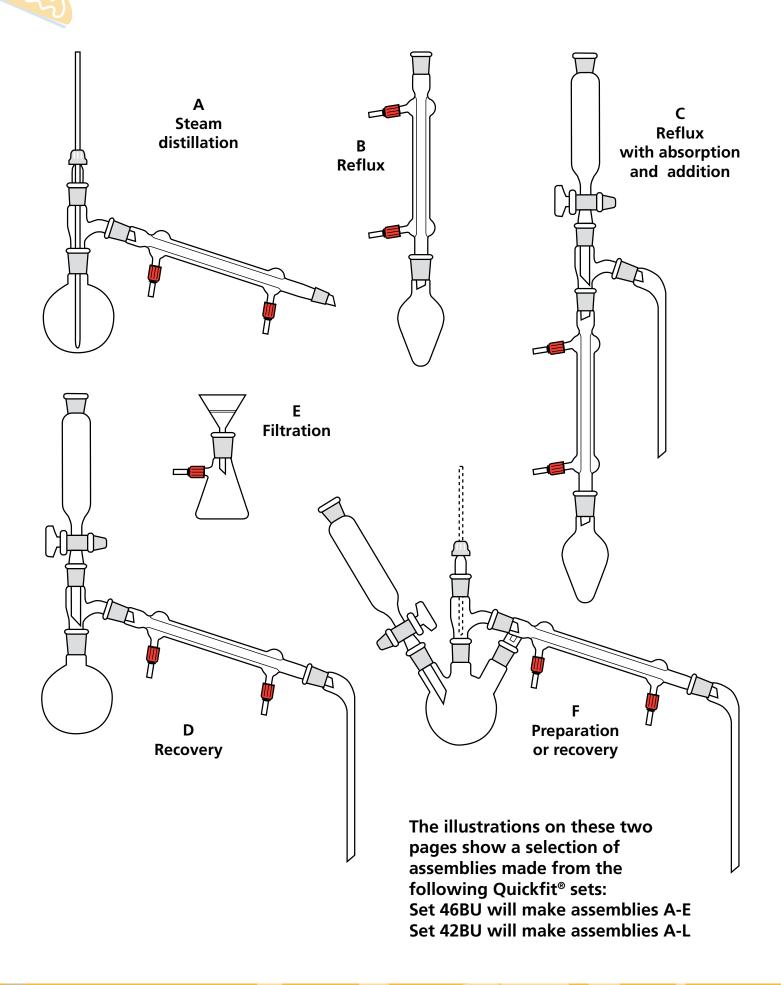


- Two box set comprising all the 22 items contained in Quickfit® sets 46BU and 46X as detailed on pages 250 and 251.
- All glassware features a single joint size to avoid problems of non-compatibility
- Covers a wide range of assemblies used in preparative organic chemistry
- Some duplication of commonly used components to allow multiple assemblies to be performed simultaneously

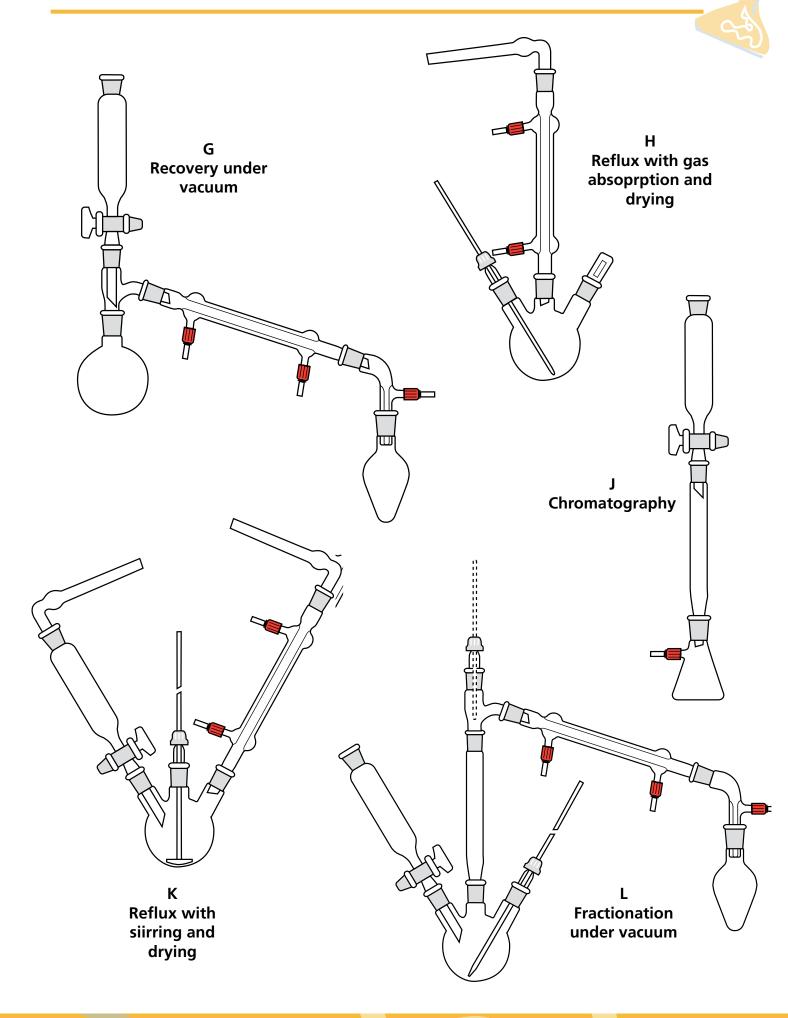
Item Code	Description	Pack qty.	
42BU	Complete set comprising 22 glassware items as detailed in 46BU and 46X	1	













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#### Set 1GS



- An educational kit designed for the preparation of gases
- Contains all the necessary apparatus to prepare 19 gases:

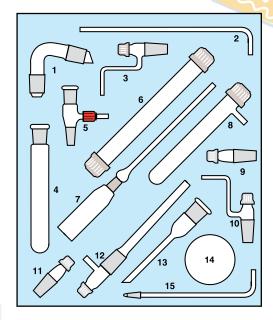
Ammonia	Hydrogen bromide	Nitric oxide
Bromine	Hydrogen chloride	Nitrogen
Carbon dioxide	Hydrogen iodide	Nitrogen dioxide
Carbon monoxide	Hydrogen peroxide	Nitrous oxide
Chlorine	Hydrogen sulphide	Oxygen
Hydrogen	lodine	Sulphur dioxide
		Sulphur trioxide

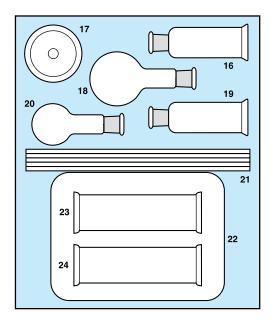
- Comprises 24 components including Quickfit® jointed glassware, glass tubing, plastic trough, gas jars and beehive shelf
- Includes illustrated manual with instructions for carrying out 19 gas preparations
- Housed in 2 robust carboard boxes with integral storage trays

Item Code	Description	Pack qty.	
1GS	Complete kit contained in 2 boxes as detailed below	1	

### Set 1GS, gas preparation kit components

Item Code	Key	Description
SH1/33	1	Recovery bend
GS5	2	Bent tube
MF27/3/13	3, 10	Adjustable wash bottle head
MF24/3/8	4	Test tube
MF18/33/SC	5	'T' adapter
GS6/24	6	Combustion tube
D60/50	7	Dropping funnel, 50ml
VT24/8	8	Test tube with side-arm
ST53/13	9, 11	Cone/screwcap adapter
ST12/133	12	Cone/screwcap adapter
RA1/23	13	Delivery adapter
-	14	2 x gas jar covers, 75mm diameter
D62/0	15	Dropping funnel plug
MF29/3/125	16, 19	Dreschel bottle, 125ml
-	17	Beehive shelf, 75mm diameter
FR250/3M	18	Round bottom flask, 250ml
FR150/3M	20	Round bottom flask, 150ml
-	21	5 x glass tubes, 7mm OD
-	22	Plastic trough
-	23, 24	2 x Gas jar, 200mm x 50mm

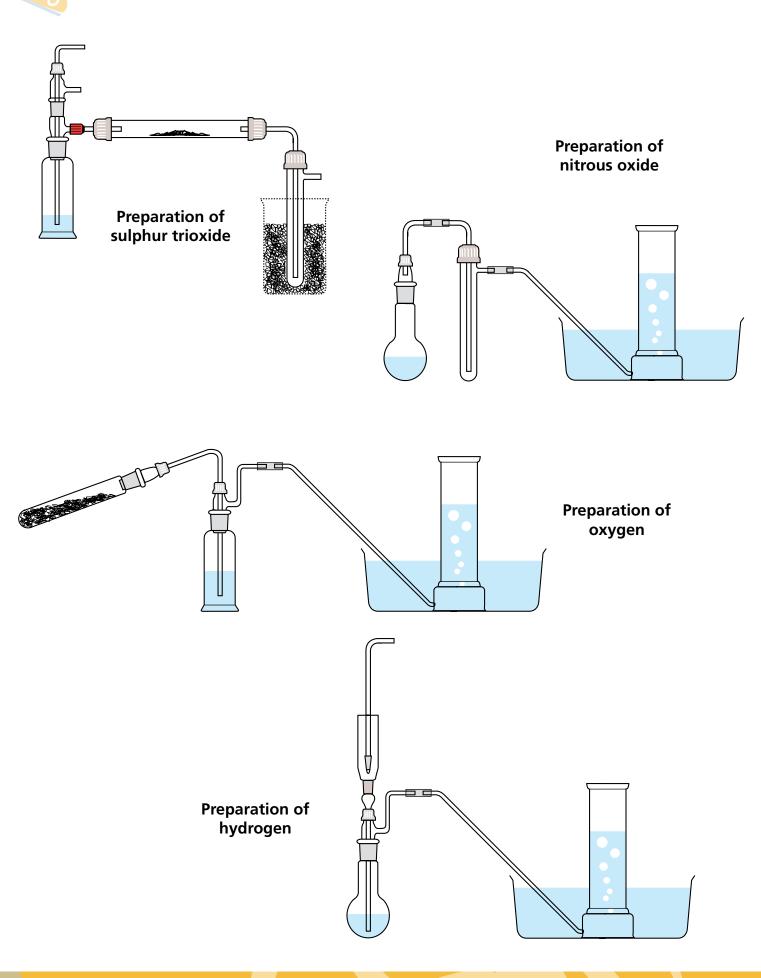




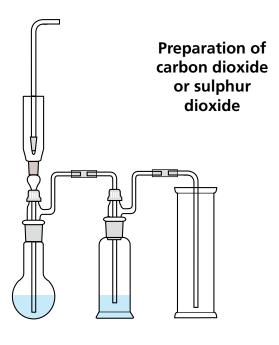


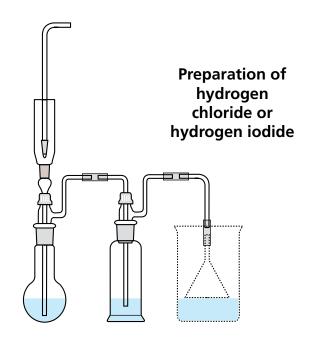
The gas jars, gas jar covers, beehive shelf and plastic trough included in 1GS are those commercially available from most laboratory suppliers and, therefore, are not listed as spare parts.



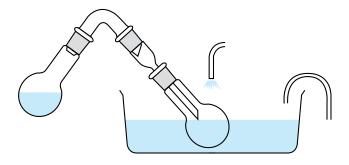




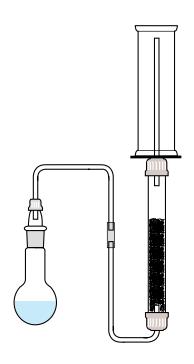




# Preparation of iodine







## **Slide staining**



#### Slide staining kit



Azlon

- Convenient kit for slide staining, storage and transportation
- Comprises three seperate components to be purchased individually

#### Black polyacetal trough (SWM016)

- Dimensions 100 x 85 x 55mm deep
- Supplied complete with a push-fit lid and small adapter to aid drainage

#### Black polyacetal rack (SWM018)

- Has a folding handle for transfer and immersion of slides
- Slotted and numbered for 25 slides
- Fits snugly into the trough whilst the folding handle permits closure of the trough lid during staining

#### Black polystyrene storage box (SWM020)

- Dimensions 190 x 170 x 38mm
- Complete with push-fit lid
- Designed to accommodate four of the above racks
- The lid closes tightly with the rack handles down
- Has numbered index sheets for reference
- The box with four racks can be used to store or transport up to 100 slides

Item Code	Description	Pack qty.
SWM016	Trough	1
SWM018	Rack	1
SWM020	Storage box	1



Polyacetal is resistant to alcohol although it is not suitable for phenol.

## Slide staining jar







- Can hold 10 slides back to back
- Square design conserves space and staining solution
- Useful for staining biochemical tests, small batched or mailing of slides

Item Code	Base O.D. mm	Cap O.D. mm	Height mm	Pack qty.	
SWM012	33	46	83	1	



## **Spatulas**

### Spatulas, polypropylene



- Moulded strong tapered spatulas with chamfered ends
- Virtually unbreakable in normal use and retain shape after flexing
- Good chemical and heat resistance
- Autoclavable at 121°C

Item Code	Length mm	Pack qty.
SWY060P	100	10
SWY062P	152	10
SWY064P	200	10
SWY066P	252	10



### Spatulas, Chatterway, nickel

- Manufactured from commercially pure Nickel 200 spec (minimum 99.6% nickel
- Excellent resistance to many corrosive environments making it particularly useful for maintaining product purity

Item Code	Length mm	Width mm	Weight	Pack qty.	
NE2202	130	8	Light	5	
NE2203	150	8	Light	5	
NE2205	200	8	Light	5	
NE2210	100	10	Medium	5	
NE2211	130	10	Medium	5	
NE2212	150	10	Medium	5	
NE2213	180	10	Medium	5	
NE2214	200	10	Medium	5	
NE2215	230	10	Medium	5	
NE2216	270	10	Medium	5	
NE2250	100	4	Micro	5	
NE2251	130	4	Micro	5	
NE2252	150	4	Micro	5	
NE2254	200	4	Micro	5	



# **Spatulas**



### Spatulas, Chatterway, stainless steel

- Manufactured from high quality 304 (18/8 alloy) stainless steel for improved corrosion resistance
- Maximum temperature 550°C
- Robust seamless construction for long working life
- Smooth finish for easy cleaning

Item Code	Length mm	Width mm	Weight	Pack qty.
NE2303	150	8	Light	5
NE2305	200	8	Light	5
NE2310	100	10	Medium	5
NE2311	130	10	Medium	5
NE2312	150	10	Medium	5
NE2313	180	10	Medium	5
NE2314	200	10	Medium	5
NE2315	230	10	Medium	5
NE2317	305	10	Medium	5
NE2318	350	10	Medium	5
NE2350	100	4	Micro	5
NE2351	130	4	Micro	5
NE2352	150	4	Micro	5
NE2354	200	4	Micro	5



### Spatulas, spoon end, nickel

- Manufactured from commercially pure Nickel 200 spec (minimum 99.6% nickel content)
- Excellent resistance to many corrosive environments making it particularly useful for maintaining product purity
- One end has a spoon and the other a chisel

Item Code	Туре	Length mm	Diam. mm	Capacity ml	Pack qty.	
NE2001	Standard	120	20	2	10	
NE2002	Standard	150	20	2	10	
NE2003	Standard	180	20	2	10	
NE2004	Standard	210	20	2	10	
NE8064	Micro	100	8	0.2	10	
NE8065	Micro	150	8	0.2	10	

## **Spatulas**

### Spatulas, spoon end, stainless steel

- Manufactured from high quality 304 (18/8 alloy) stainless steel for improved corrosion resistance
- Maximum temperature 550°C
- Robust seamless construction for long working life
- Smooth finish for easy cleaning

Item Code	Туре	Length mm	Diam. mm	Capacity ml	Pack qty.	
NE2010	Standard	120	20	2	10	
NE2011	Standard	150	20	2	10	
NE2012	Standard	180	20	2	10	
NE2013	Standard	210	20	2	10	
NE8044	Micro	100	8	0.2	10	
NE8045	Micro	150	8	0.2	10	



#### Spatulas, miscellaneous, stainless steel

- Trulla, Nuffield and Trough spatulas
- Manufactured from high quality 304 (18/8 alloy) Stainless steel for improved corrosion resistance
- Maximum temperature 550°C
- Robust seamless construction for long working life
- Smooth finish for easy cleaning

Item Code	Туре	Length mm	Pack qty.	
NE9370	Trulla	175	5	
NE6850	Nuffield	140	10	
NE8202	Trough	150	5	







# Spotting tiles, stands



### Spotting tile, polypropylene



- High quality spotting tile, unbreakable in normal use
- 12 cavities of approximately 1ml capacity
- Economical alternative to ceramics
- 4mm well depth

Item Code	Dimensions mm	Pack qty.
TWR000P	115 x 95	10



#### Stand, petri dish, coated



- Hold up to six 90mm petri dishes
- Manufactured from polyamide epoxy coated steel
- Offers a better heat and chemical resistance than other coatings
- Ideal for small batch incubation

Item Code	Pack qty.	
SWP062	1	



### Stand, retort, weighted, polyethylene



Azlon

- Weighs 2.5kg ensuring stability
- Corrosion resistant
- Polyethylene coated metal rod screws into the base
- Available with the hole in the centre or at the short edge

Item Code	wxlxhmm	Rod position	Rod size mm	Pack qty.	
SWP012	171 x 248 x 52	Centre	760 x 12.5	1	
SWP014	171 x 248 x 52	Edge	760 x 12.5	1	



A range of burette clamps are featured on page 90.

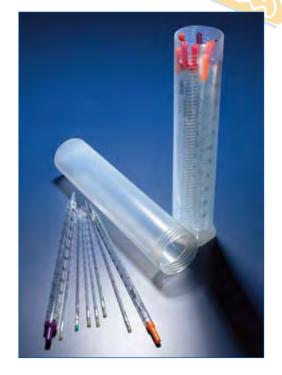
## **Sterilisation**

#### Sterilising boxes, polypropylene



- Unique cylindrical box for pipette sterilisiation
- Autoclavable at 121°C
- The patented telescopic thread closure enables the box length to be altered from 280 to 500mm

Item Code	O.D. mm	Length mm	Pack qty.	
PWP050	65	280-500	1	



#### Sterilising boxes, aluminium

- Popular square pipette cans with permanent cast silicone pads in lid and base, reducing risk of damage to pipette tips during transportation and sterlisation
- Manufactured from aluminium
- Can be steam sterlised at 121°C and withstand dry heat temperatures of up to 180°C

Item Code	Length mm	Width mm	Depth mm	Pack qty.	
NE6700	215	70	70	1	
NE6701	295	70	70	1	
NE6702	345	70	70	1	
NE6703	450	70	70	1	



## Stirrer bars



#### Stirring bars, magnetic, PTFE

- For the stirring of liquids on magnetic stirrers and hot plates stirrers
- Strong alloy magnets sheathed in pure white inert PTFE
- Supplied in polarity aligned packs to ensure maximum coupling strength
- Resistant to virtually all chemical attack and temperatures up to 260°C

## Stirrer bars, magnetic, cylindrical,





Plain design with rounded ends, suitable for a wide range of flat bottomed

Item Code	Length mm	O.D. mm	Pack qty.	
SWN652	6	3	2	
SWN654	8	3	2	
SWN656	12	4.5	2	
SWN658	15	4.5	2	
SWN660	20	6	2	
SWN662	25	6	2	
SWN664	30	6	2	
SWN666	35	6	2	
SWN668	40	8	2	
SWN670	45	8	2	
SWN672	50	8	2	
SWN674	60	9	2	
SWN676	70	9.5	2	
SWN678	80	9.5	2	



### Stirrer bars, magnetic, PTFE, micro





• For use in small vessels, e.g. test tubes, vials etc.

Item Code	Length mm	O.D. mm	Pack qty.	
SWN950	7	2	2	
SWN952	8	1.5	2	
SWN954	10	3	2	
SWN956	13	3	2	

## **Stirrer bars**

#### Stirrer bars, magnetic, octagonal, **PTFE**



- With central pivot ring
- Shape gives increased turbulence at low speeds

Item Code	Length mm	O.D. mm	Pack qty.
SWN708	13	8	2
SWN710	25	8	2
SWN712	38	8	2
SWN714	51	10	2
SWN716	75	12	2



#### Stirrer Bars, Magnetic, PTFE, oval





• For efficient stirring of round bottomed flasks

Item Code	Length mm	O.D. mm	Pack qty.	
SWN520	20	10	2	
SWN522	25	12	2	
SWN524	30	16	2	
SWN525	35	16	2	
SWN526	40	20	2	
SWN528	50	20	2	





## Stirrer bars



### Stirrer bars, magnetic, PTFE, pivot ring



• Central pivot ring ensures efficient spinning even on curved or uneven bases

Item Code	Length mm	0.D. mm	Pack qty.
SWN500	8	3	2
SWN501	15	4.5	2
SWN502	12	4.5	2
SWN503	20	6	2
SWN504	25	6	2
SWN505	35	6	2
SWN506	45	8	2
SWN507	40	8	2
SWN508	60	9.5	2
SWN509	50	8	2
SWN510	70	9.5	2
SWN511	30	6	2



### Stirrer bars, magnetic, PTFE, triangular





- Spins well giving the best possible mixing action
- Ideal for mixing difficult solutions e.g. dissolving solvents or mixing sediments

Item Code	Length mm	O.D. mm	Pack qty.	
SWN532	12	6	2	
SWN534	25	8	2	
SWN536	35	9	2	
SWN538	50	12	2	

## Stirrer bars, stirrers

#### Stirrer bars, magnetic, set, PTFE





- Useful assortment of the most popular types and sizes of PTFE magnetic stirrer bars
- Supplied in a red polypropylene compartmented box with opaque natural lid
- Contains:
  - Pivot ring: two each of 12 x 4.5 25 x 6 45 x 8 and 60 x 9.5mm
  - Oval: two each of 20 x 10, 25 x 12, 35 x 16 and 50 x 20 mm
  - Micro: three each of 7 x 2 and 10 x 3mm

Item Code	Description	Pack qty.
SWN515	Set of 22 PTFE stirrer bars	1



Stirring bars only are autoclavable. (Do not autoclave in box)

#### Stirrer bar, retrievers, PTFE coated





- Magnet permanently embedded in PTFE rod
- Ideal for retrieving magnetic stirrer bars from particularly sensitive or corrosive liquids

Item Code	Length mm	Pack qty.
SWN564	250	1
SWN566	350	1



#### Stirrer shaft, anchor



- Designed for low speed operation
- Ideal for use with Quickfit® wide-neck reaction flasks FR:F series
- Paddle closely follows the contour of the flask walls
- Useful where the build-up of solid material on the walls is likely
- The minimum neck size required for the stirrer is 100mm

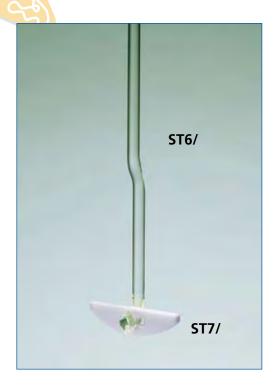
Item Code	Approx shaft diam. mm	Approx shaft length mm	Blade width mm	Pack qty.	
ST1/5	6	450	95	1	
ST1/6	6	600	140	1	
ST1/8	11	750	140	1	



Paddle ST1/5 is suitable for use with Quickfit® reaction flasks FR700F and FR1LF. Paddles ST1/6 and ST1/8 are for larger capacity vessels.

Reaction flasks are detailed on page 158.





#### Stirrer, PTFE blade



- PTFE construction for maximum resistance to chemical attack
- PTFE blades can be pivoted on the glass shaft to allow passage through small apertures e.g. necks and sockets of Quickfit® flasks
- Blades are detachable for cleaning and replacement purposes
- Useful for sweeping close to the vessel walls as they will not cause scratching
- For use with glass stirrer shaft detailed below

Item Code	Blade width mm	Min. neck size for stirrer	Pack qty.
ST7/2	52	19/26 Socket	5
ST7/3	76	24/29 Socket	5
ST7/3L	76	24/29 Socket	5



These PTFE bladed stirrers may be used at temperatures up to 250°C.

#### Stirrer shaft for PTFE blade



- Pyrex<sup>®</sup> borosilicate glass construction
- For use with ST7: series PTFE blades

Item Code	To fit PTFE blade	Approx shaft diam. mm	Approx shaft length mm	Pack qty.	
ST6/7	ST7/2 & ST7/3	6	450	1	
ST11/5	ST7/3L	11	750	1	



### Stirrer shaft, fixed paddle



- Ideal for use with large capacity flasks or Quickfit® wide-neck reaction vessels
- Design of pitched paddle helps to reduce the overall power consumption

Item Code	Approx shaft diam. mm	Approx shaft length mm	Min. neck size for stirrer	Blade width mm	Pack qty.	
ST1/2	6	610	55/44 Socket	50	1	

#### Stirrer guides



- Designed to reduce excessive 'whip' in glass stirrer shafts which can lead to breakage
- A PTFE bearing is fitted to the bottom of guides ST2/33/C and ST2/44/C for additional support
- Features a side-arm with detachable plastic connector for the introduction of gases or connection to a vacuum supply

Item Code	To fit stirrer shaft mm	Socket size	Cone size	Approx. stem length mm	Pack qty.	
ST2/2/SC	6	19/26	19/26	200	1	
ST2/33C/SC	11	24/29	24/29	300	1	
ST2/44C/SC	11	29/32	29/32	300	1	



Spare PTFE bearings are available - Item code ST2C.



#### Stirrer glands, glass



- Used for introducing stirrer paddles into Quickfit® flasks and vessels
- Provides a vapour-tight seal between paddle and flask
- Holds a vacuum down to 0.1 torr (13.3Pa)
- Comprises parallel ground glass sleeve with cup to accept a suitable lubricant (see notes)
- Supplied complete with screwcaps rubber rings and PTFE washers

Item Code	To fit stirrer shaft mm	Cone size	Thread size	Pack qty.	
ST20/2	6	19/26	13	1	
ST20/3	11	24/29	24	1	
ST20/4	11	29/32	24	1	

#### Instructions for use

#### Lubricant:

The lubricant may be any relatively non-volatile compound suitable for use with the reaction in hand, provided its viscosity does not exceed that of glycerol. Typical lubricants are spindle oil and liquid paraffin.

#### Speed:

The stirrer should not be run at speeds in excess of 700rpm. When lubricants of high viscosity are used, rotation should commence at approximately 100rpm and should be gradually increased to maximum speed over 10 minutes.

#### Assembly:

Attach the stirrer to the sleeve of the gland by tightening the plastic screwcap. The gland will be damaged if rotated when dry and the ground surfaces must be smeared with lubricant before assembly. Care must be taken to ensure that the ground surfaces are clean and free from dust or grit before use.



# Stirrers, stirring rods



#### Stirrer glands, PTFE

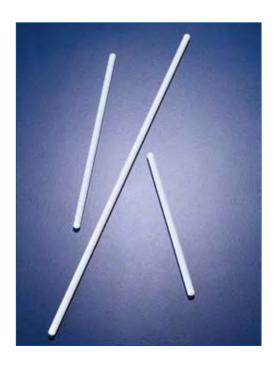


- 'Stuffing box' glands available with either brass or PTFE cones
- Provides a seal to a stirrer shaft by the adjustable compression of rubber 'O' rings and felt washers impregnated with lubricant
- Glands ST4/2 and ST4/2F have integral drive pulleys

Item Code	Description	Material (cone portion)	To fit stirrer shaft mm	Pulley diam. mm	Cone size	Pack qty.	
ST4/2	Gland with pulley	Brass	6	35	19/26	1	
ST4/2F	Gland with pulley	PTFE	6	23	19/26	1	
ST3/2F	Gland only	PTFE	6	35	19/26	1	

#### Spares for PTFE stirrer glands

Item Code	Description	To fit stirrer shaft mm	Pack qty.	
ST4R	Spare 'O' ring	6	10	
ST4W	Spare feltwasher	6	10	



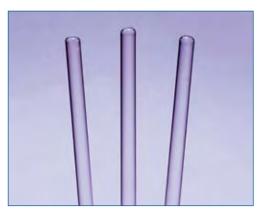
### Rods, stirring, PTFE coated





- Suitable for stirring even the most corrosive liquids
- Will withstand 260°C
- PTFE covered with plain ends
- 6mm diameter

Item Code	Length mm	Pack qty.
SWN542	150	1
SWN544	200	1
SWN546	250	1
SWN548	300	1
SWN550	350	1
SWN552	400	1



## Rods, stirring, glass



- Soda-lime glass rods for general stirring applications
- With rounded ends for extra safety and to minimise scratching

Item Code	Diam. mm	Length mm	Pack qty.
SRF380	6	300	10



When stirring, avoid the end of the rod abrading the inner surface of glass vessels. Scratches seriously impairs the strength of glassware and affected items should not be used.

#### Rotaflo® stopcocks, Introduction

#### **ROTAFLO®**

- The following pages show a range of glass/PTFE stopcocks for the discerning glassblower
- Designs that are proven to give great performance
- High performance (HP) Rotaflo® stopcocks for very demanding applications and high vacuum work
  - Each stopcock individually tested for 10<sup>-9</sup> Torr vacuum performance
- General purpose (GP) Rotaflo® stopcocks for genral laboratory usage offering fine flow control and greasless, trouble-free performance



### High performance (HP) Rotaflo® stopcocks

**ROTAFLO®** 

High performance Rotaflo® vacuum stopcock providing many significant benefits to the user:

- Borosilicate glass with PTFE key for excellent chemical resistance
- No lubrication required no seizure and no contamination
- Temperature range from -20°C to 200°C
- Operates over a pressure range of +1bar to 10<sup>-9</sup> Torr
- Individually tested by mass spectrometer and supplied with certificate for guaranteed performance
- Locking ring to prevent accidental removal of the key
- Fully interchangeable keys
- Ergonomic key for good grip and easy operation



## HP Rotaflo®, plain side-arms, straight pattern ROTAFLO®

Item Code	Key bore mm	Sidearm bore mm	Sidearm O.D. mm	Approx overall length mm	Pack qty.
HP3ST/5	3	5	8	210	1
HP3ST/7	3	7	10	210	1
HP6ST/7	6	7	10	210	1
HP6ST/10	6	10	13	210	1
HP10ST/10	10	10	13	225	1
HP10ST/15	10	15	19	225	1



Side-arms are 100mm in length.





## HP Rotaflo®, plain side-arms, right angle pattern

ROTAFLO®

Item Code	Key bore mm	Sidearm bore mm	Sidearm O.D. mm	Approx overall length mm	Pack qty.	
HP3RA/5	3	5	8	210	1	
HP3RA/7	3	7	10	210	1	
HP6RA/7	6	7	10	210	1	
HP6RA/10	6	10	13	210	1	
HP10RA/10	10	10	13	225	1	



Side-arms are 100mm in length.



### HP Rotaflo®, three way stopcock

**ROTAFLO®** 

Item Code	Key bore mm	Sidearm bore mm	Sidearm O.D. mm	Approx overall length mm	Pack qty.
HP3TW/5	3	5	8	215	1
HP6TW/7	6	7	10	220	1



All HP Rotaflo® stopcocks are individually tested for  $10^9$  Torr vacuum performance and supplied with test certificate.



### HP Rotaflo®, stopcock spare parts

**ROTAFLO®** 

• Replacement keys and locking rings should be ordered separately

Item Code	Description	For bore size mm	Pack qty.
НРЗК	Replacement key	3.0	2
LR3	Locking rings	3.0	5
НР6К	Replacement key	6.0	2
LR6	Locking rings	6.0	5
HP10K	Replacement key	10.0	1
LR10	Locking rings	10.0	5

## GP Rotaflo®, plain side-arms, straight pattern ROTAFLO®

- Rotary design for fine single drop control invaluable on burettes
- Borosilicate glass with PTFE key for excellent chemical resistance
- No lubrication required no seizure and no contamination
- Temperature range -20°C to 200°C
- Vacuum capability to 10<sup>-4</sup> Torr
- Increased barrel diameter for excellent drainage
- Locking ring to prevent accidental removal
- Ergonomic key for good grip and easy operation

Item Code	Key bore mm	Sidearm bore mm	Sidearm O.D. mm	Approx overall length mm	Pack qty.	
GP3ST/5	3	5	8	210	5	
GP6ST/7	6	7	10	210	5	
GP10ST/10	10	10	13	225	2	





Side-arms are 100mm in length.

## GP Rotaflo®, plain side-arms, right angle pattern

#### ROTAFLO®

Item Code	Key bore mm	Sidearm bore mm	Sidearm OD mm	Approx overall length mm	Pack qty.	
GP3RA/5	3	5	8	150	5	
GP6RA/7	6	7	10	165	5	
GP10RA/10	10	10	13	175	2	



Side-arms are 100mm in length.



### GP Rotaflo®, burette repair stopcock

#### **ROTAFLO®**

 With one plain arm and one capillary arm drawn to a jet for the repair of burettes

Item Code	Bore mm	Stem O.D. mm.	Approx overall length mm	Glass type	Pack qty.	
GP3BU/5B	3.0	12	175	Borosilicate	5	
GP3BU/5S	3.0	12	175	Soda	5	





### GP Rotaflo®, stopcock spare parts,

#### **ROTAFLO®**

• Replacement keys and locking rings should be ordered separately

Item Code	Description	Bore mm	Pack qty.
GP3K	Replacement key	3.0	5
LR3	Locking rings	3.0	5
GP6K	Replacement key	6.0	5
LR6	Locking rings	6.0	5
GP10K	Replacement key	10.0	5
LR10	Locking rings	10.0	5



## Stopcocks, plain arms, straight pattern, PTFE key



- Manufactured from borosilicate glass with PTFE keys for highest resistance to chemical attack
- Barrels are highly polished and the keys are self lubricating, avoiding the need for stopcock grease
- Keys are fully interchangeable and supplied complete with plastic screw thread retaining device
- Plastic screw thread retainer for bore sizes 1 4mm
- Made to a taper of 1:10 giving a combination of performance and ease of operation

Item Code	Key bore mm	Sidearm O.D. mm	Sidearm wall thickness mm	Pack qty.
SST102	1.5	8	1.0	5
SST103	2.5	10	1.0	5
SST104	4	10	1.0	5
SST106	6	12	1.0	5
SST108	8	14	1.5	5



Spare PTFE keys are available on page 276.

## Stopcocks, plain arms, double-bore, PTFE key PYREX®

- Manufactured from borosilicate glass with PTFE keys for highest resistance to chemical attack
- Barrels are highly polished and the keys are self lubricating avoiding the need for stopcock grease
- Keys are fully interchangeable and supplied complete with a retaining device
- Made to a 1:10 taper, giving a combination of performance and ease of operation

Item Code	Key bore size mm		Sidearm wall thickness mm	Pack qty.
SST203	2.5	9	1.5	5



#### Stopcocks, plain arms, T-bore, 3-way

#### **PYREX**®

Item Code	Key bore mm	Sidearm O.D. mm	Sidearm wall thickness mm	Pack qty.	
SST302	1.5	8	1.5	5	
SST303	2.5	9	1.5	5	
SST304	4	10	1.5	5	



All side-arms are 100mm in length. Spare PTFE keys are available on page 276.



## Stopcocks, burette repair, single-bore, PTFE key

### PYREX®

Item Code	Key bore mm	Glass type	Plain arm O.D. x wall mm	Pack qty.	
SST502	1.5	Borosilicate	8 x 1.5	5	



One 100mm plain arm and one 70mm capillary arm with drawn jet. For spare PTFE keys, please refer to page 276.





### Stopcocks, funnel repair, PTFE key

**PYREX**®

 With one flared end for connection to the base of the funnel and a 100mm long stem with angled tip

Item Code	Key bore mm	Stem O.D. mm	Sidearm wall thickness mm	Pack qty.	
SST702	1.5	10	2.2	5	
SST703	2.5	10	2.2	5	
SST704	4	10	2.2	5	
SST706	6	14	2.5	5	



For spare PTFE keys, please refer to the table below.



### Stopcocks, spare PTFE keys

**PYREX**®

- Fully interchangeable PTFE keys for Pyrex® stopocks
- Supplied complete with retaining device

Item Code	Key bore mm	Key type	Pack qty.
SST102K	1.5	Straight bore	10
SST103K	2.5	Straight bore	10
SST104K	4.0	Straight bore	10
SST106K	6.0	Straight bore	5
SST202K	1.5	Double oblique	1
SST203K	2.5	Double oblique	10
SST302K	1.5	T-bore	10
SST303K	2.5	T-bore	10
SST304K	4.0	T-bore	5

### Stopcocks, plain arms, straight bore

### **PYREX**®

- A range of glass stopcocks which meet the specifications of DIN 12541
- Manufactured from borosilicate glass with interchangeable key
- Leakage rate meets the requirements of DIN 12540 i.e. 0.1mbar l/s<sup>-1</sup>
- Supplied complete with key retaining device

Item Code	Key bore size mm	Sidearm O.D. mm	Sidearm wall thickness mm	Pack qty.
SSD102	1.5	8	1.5	1
SSD103	2.5	9	1.5	1
SSD104	4.0	10	1.5	1



All side-arms are 100mm in length. See below for spare glass keys.



### Stopcocks, spare glass keys



- Replacement keys for SSD: series stopcocks
- Manufactured from borosilicate glass
- Supplied complete with key retaining device

Item Code	Key bore mm	Pack qty.
SSD102K	1.5	1
SSD103K	2.5	1
SSD104K	4.0	1





#### Stopcocks, single-bore, high vacuum

**PYREX**®

- These stopcocks are specially designed and carefully manufactured for high vacuum applications
- Each stopcock tested for high vacuum performance.
- Borosilicate glass construction
- Keys and barrels are precision ground together in matched pairs for optimum performance
- Each key and barrel are numbered to ensure they are always paired together
- All side-arms are 100mm in length

Item Code	Key bore size mm	Sidearm O.D. mm	Sidearm wall thickness mm	Pack qty.	
SSV102	2	8	1.5	1	
SSV103	3	9	1.5	1	
SSV104	4	10	1.5	1	
SSV106	6	11	1.5	1	



### Stopcocks, double-bore, high vacuum



Item Code	Key bore size mm	Sidearm O.D. mm	Sidearm wall thickness mm	Pack qty.	
SSV202	2	8	1.5	1	
SSV203	3	9	1.5	1	
SSV204	4	10	1.5	1	



All side-arms are 100mm in length.

### Stopcocks, T-bore, 3-way, high vacuum

### **PYREX**®

- Pyrex® borosilicate glass construction
- Each key and barrel are numbered to ensure they are always paired together
- All side-arms are 100mm in length

Item Code	Key bore size mm	Sidearm O.D. mm	Sidearm wall thickness mm	Pack qty.	
SSV304	4	10	1.5	1	



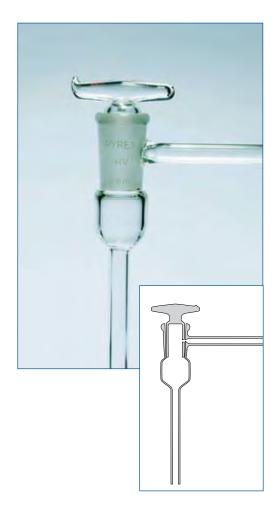
## Stopcocks, pump pattern, right angle, high vacuum PYREX®

- Ideal for the connection of a vacuum line to a pump mounted at a lower level
- When the stopcock is closed the vacuum created by the pump holds the key securely in place

Item Code	Key bore size mm	Sidearm O.D. mm	Sidearm wall thickness mm	Pack qty.
SSV504	4	10	1.5	1



All side-arms are 100mm in length.





#### Stopcocks, safety pattern, single-bore, high vacuum

**PYREX**®

Designed to prevent accidental removal of the key whilst the system is under

Open ended key features an extra bore 'B':

- When connected to side-arm 'A' the bulb is evacuated thus holding the key firmly in place
- Key cannot be removed until the vacuum is released

Item Code	Key bore size mm	Sidearm O.D. mm	Sidearm wall thickness mm	Pack qty.	
SSV802	2	8	1.5	1	
SSV804	4	10	1.5	1	



All side-arms are 100mm in length.



#### Stopcocks, rigid, polyethylene



Azlon

- Efficient and easily turned stopcocks
- 1/2" BSP screw fitting inlet
- Two choices of outlet

Item Code	Overall length mm	Bore I.D. mm	Outlet	Pack qty.	
SWQ012	100	12	1/2" BSP	1	
SWQ014	125	12	90° curved	1	_



### Stopcocks, white polyethylene



E Azlon

- Efficient ball-valve stopcock
- ¾" BSP thread
- Nominally 12mm bore, the outlet tapers to approximately 9mm O.D.

Item Code	Pack qty.	
SWQ018	1	

### Stopcocks, regulating taps, polypropylene

- AB Azlon

- Efficient polypropylene stopcocks
- Excellent chemical and temperature resistance

Item Code	Thread size BSP	Pack qty.
SWQ036	3/8"	1
SWQ038	1/2"	1
SWQ040	3/4"	1



Remove rubber sealing ring prior to autoclaving.



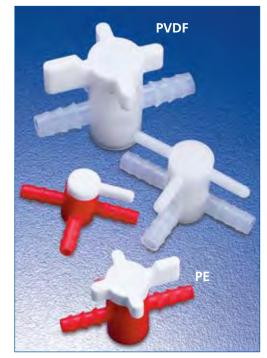
### Stopcocks, 2 way & 3 way, PVDF or Polyethylene





- Range of two and three way stopcocks on PVDF or polyethylene
- PVDF has excellent temperature, chemical and ageing resistance
- Polyethylene available for less stringent requirements

Item Code	Material	Туре	For tube I.D. mm	Pack qty.	
SWQ216	PVDF	2-way	10-11	1	
SWQ218	PVDF	3-way	6-7	1	
SWQ220	PVDF	3-way	8-9	1	
SWQ224	PVDF	3-way	10-11	1	
SWQ200	Polyethylene	2-way	6-7	1	
SWQ202	Polyethylene	2-way	8-9	1	
SWQ204	Polyethylene	2-way	10-11	1	
SWQ206	Polyethylene	3-way	6-7	1	
SWQ208	Polyethylene	3-way	8-9	1	
SWQ210	Polyethylene	3-way	10-11	1	





Polyvinylidene fluoride (PVDF) can be used up to 150°C and has chemical resistance approaching that of PTFE.



#### Stoppers, hollow-blown glass, 'B' length



- Ideally suited for use with Quickfit® jointedware and other glassware having standard ground glass sockets
- All Quickfit® stoppers conform to the standard tapers as outlined in ISO 383
- Borosilicate glass for chemical durability and high temperature performance
- Hollow-blown construction to reduce weight
- Side indentations to provide finger grip
- Top of stopper is flat or slightly concave, allowing them to be stood on end and avoid contamination of the ground surface

Item Code	Cone size	Pack qty.
SB7	7/16	5
SB10	10/19	5
SB12	12/21	5
SB14	14/23	5
SB19	19/26	5
SB24	24/29	5
SB29	29/32	5
SB34	34/35	5
SB40	40/38	2
SB45	45/40	2



#### Stoppers, hollow-blown glass, 'C' length



- Ideally suited for use with Quickfit® jointedware and other glassware having the shorter C length ground glass sockets
- Exceeds the requirements of ISO 383
- Borosilicate glass for chemical durability and high temperature performance
- Hollow-blown construction to reduce weight
- Side indentations to provide finger grip
- Top of stopper is flat or slightly concave, allowing them to be stood on end and avoid contamination of the ground surface

Item Code	Cone size	Overall height mm	Pack qty.	
2595/01M	10/13	42	20	
2595/02M	12/14	47	20	
2595/03M	14/15	50	20	
2595/05M	19/17	55	20	
2595/06M	24/20	61	20	
2595/07M	29/22	68	20	
2595/12M	45/25	84	2	

## Stoppers, hollow-blown glass, with drip tip

## **MBL**®

- Ideally suited for use with volumetric flasks etc.
- Lower closed end of stopper features a 'drip-tip' to ensure adhered liquid is returned to the flask
- Hexagonal head prevents the stopper from rolling and provides a good grip
- Flat head allows stopper to be stood on end, thus preventing contamination of the ground surface
- Hollow-blown to reduce weight

Item Code	Cone size	Pack qty.
TRF690	7/16	10
TRF691	10/19	10
TRF692	12/21	10
TRF693	14/23	10
TRF695	19/26	10
TRF696	24/29	10
TRF697	29/32	10
TRF698	34/35	5



### Stoppers, solid glass



- Ideally suited for use with Pyrex® bottles and aspirators
- Robust, solid glass construction
- Hexagonal head to provide a good grip

Item Code	Cone size	Head diam. mm	Overall height mm	Pack qty.	
1522/02D	14/15	32	27	10	
1522/04D	19/26	36	38	10	
1522/05D	24/29	46	42	10	
1522/06D	29/32	56	46	10	
1522/10D	45/40	77	55	1	
1522/12D	60/46	94	62	1	



The two largest sizes are semi-solid to reduce weight.



## Stoppers



#### Stoppers, polyethylene



Azlon

- Ideally suited for use with glass or plastic volumetric flasks and measuring cylinders etc. which have longer 'B' length sockets
- Manufactured from polyethylene
- Large head provides a good grip and gives protection if glassware is accidently knocked over

Item Code	Joint size	Pack qty.	
TRF590	7/16	10	
TRF591	10/19	10	
TRF592	12/21	10	
TRF593	14/23	10	
TRF595	19/26	10	
TRF596	24/29	10	
TRF597	29/32	10	
TRF598	34/35	10	





#### SVL® glassware

- SVL® glassware has screwthread joints which are easily connected together using purpose made couplings
- Only glass and PTFE come into contact with the chemicals being used to provide a grease-free and corrosion-resistant pathway
- Manufactured from Pyrex® borosilicate glass for maximum resistance to chemical attack and thermal shock
- Screwcaps and couplings in phenolic plastic for heat resistance up to 200°C
- Inserts and sealing rings with PTFE facings for maximum chemical resistance
- Can be assembled to provide sliding and rigid joints. Also positive closures
- No lubrication of joints required, hence no contaminating greases
- Joints and seals can be used under dynamic vacuum conditions. Typical performance 10-3 mbar



#### SVL® connections

Versatile SVL® glassware allows three different types of joints and seals to be made quickly and easily.

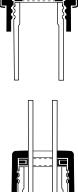
#### **Butt Joint**

A rigid butt joint can be made using two threaded tubes of the same diameter. They are connected via a special plastic coupling fitted with a sealing ring. The coupling is independently threaded on both sides to allow desired alignment of apparatus.



Utilises a plastic screwcap having an aperture in the top for fittings to pass through. The latter is secured in position by compression of a sealing ring inside the cap.

All fittings are readily adjustable and the depth of immersion can be altered quickly by slackening the screwcap.



#### Closure Seal

Utilises a plastic screwcap with a PTFE faced rubber insert. When screwed down onto the glass thread, it provides a closure which is highly resistant to chemical attack.







### SVL® glass screwthreads



- For use by Glassblowers to construct apparatus with SVL® joints
- Borosilicate glass for highest resistance to thermal shock and chemical corrosion

Item Code	SVL® joint size	Overall length mm	O.D. mm	Wall thickness mm	Pack qty.	
703-01	15	165	16.0	1.8	10	
703-02	22	165	22.5	1.8	10	
703-03	30	165	32.0	2.0	10	
703-04	42	165	44.1	3.2	10	



SVL® glass screwthreads are designed specifically for use with SVL® screwcaps and couplings. They are not compatible with the Quickfit® range of screwcap fittings.



### **SVL®** couplings for butt joints



- Plastic coupling and sealing ring designed to secure two SVL® glass screwthreads of the same diameter in a butt joint
- Coupling is manufactured from phenolic plastic and consists of two separately threaded sections
- Sealing ring is manufactured from silicone rubber and sheathed with PTFE for
  protection against chemical attack. Internal diameter of the ring corresponds to
  the bore of the SVL® glass screwthread so that flow is not restricted
- Heat resistant up to 200°C

Item Code	SVL® joint size	Ring I.D. mm	Pack qty.	
701-11	15	10	10	
701-12	22	17	10	
701-13	30	23	10	
701-14	42	34	10	

#### SVL® sealing rings for butt joints

Item Code	SVL® joint size	Ring I.D. mm	Pack qty.	
701-01	15	10	10	
701-02	22	17	10	
701-03	30	23	10	
701-04	42	34	10	



### SVL® screwcaps, for sliding joints



- Phenolic screwcaps (with hole) and sealing rings designed to provide a sliding joint
- Ideal for inserting thermometers and glass tubing etc. into an SVL® system
- Sealing rings manufactured from silicone rubber and sheathed with PTFE for protection against chemical attack
- Wide range of sizes for use with tubing from 4.0 to 32.8mm

Item Code	SVL® joint size	Pack qty.
701-41	15	10
701-42	22	10
701-43	30	10
701-44	42	10



Screwcaps and rings should be ordered separately.



## SVL® sealing rings, for sliding joints

Item Code	SVL® joint size	To accept tubing O.D.	Pack qty.
701-19	15	4.0 - 4.4	10
701-21	15	5.6 - 6.4	10
701-22	15	6.6 - 7.4	10
701-23	15	7.6 - 8.4	10
701-51	22	9.6 - 10.4	10
701-52	22	11.6 - 12.4	10
701-24	22	13.6 - 14.4	10
701-25	22	15.6 - 16.4	10
701-56	30	17.6 - 18.4	10
701-26	30	19.5 - 20.5	10
701-27	30	21.5 - 22.5	10
701-28	42	29.2 - 30.8	10
701-29	42	31.2 - 32.8	10





### SVL® screwcaps, for positive closure



- Designed to act as a positive closure when used with SVL® glass screwthreads
- Manufactured from phenolic plastic with a PTFE faced rubber insert
- Can be autoclaved at 121°C
- Spare rubber/PTFE inserts available

Item Code	Description	SVL® joint size	Pack qty.	
4503/15	Cap with insert	15	20	
4503/22	Cap with insert	22	20	
4503/30	Cap with insert	30	20	
4503/42	Cap with insert	42	10	
4513/15M	Spare insert	15	20	
4513/22M	Spare insert	22	20	
4513/30M	Spare insert	30	20	
4513/42M	Spare insert	42	10	



### SVL® adapter, cone/screwthread



- Facilitates connection between SVL® and Quickfit® glassware
- Features an SVL® screwthread and Quickfit® ground glass cone
- Thread accepts SVL® screwcaps and couplings. Cone accepts Quickfit® sockets
- Manufactured from temperature and chemical resistant borosilicate glass

Item Code	SVL joint size	Cone size	Pack qty.	
670-70	15	14/23	2	
670-77	22	24/29	2	
670-83	30	29/32	2	



Screw cap and adapter should be ordered separately. Screwcaps are not provided.



#### SVL®, adapter, socket/screwthread



- Facilitates connection between SVL® and Quickfit® glassware
- Features an SVL® screwthread and Quickfit® ground glass socket
- Thread accepts SVL® screwcaps and couplings. Socket accepts Quickfit® cones
- Manufactured from temperature and chemical resistant borosilicate glass

Item Code	SVL® joint size	Socket size	Pack qty.	
670-00	15	14/23	2	
670-03	22	24/29	2	
670-05	30	29/32	2	



Screwcap not provided. Screwcap and adapter should be ordered separately.



#### SVL®, Torion joints, glass bodies



- Alternative jointing system for glassblowers to make connections between tubing and glassware
- Only glass and PTFE come into contact with the liquid being used to provide a chemical resistant pathway
- Complete joint comprises borosilicate glass body, glass filled polypropylene fitting and rubber/PTFE sealing ring
- Glass body has an internal screwthread into which is fitted the rubber sealing ring sheathed with PTFE. Tubing is pushed through the screwthread fitting, which is then threaded onto the glass body. As the fitting is tightened, the sealing ring is compressed to form a seal between the tubing and the body

Item Code	Body height mm	Body max O.D. mm	Shank O.D. mm	Shank length mm	Pack qty.	
721-01	27	21	14	8	10	
721-02	32	26	17	9	10	
721-03	42	37	25	15	10	_

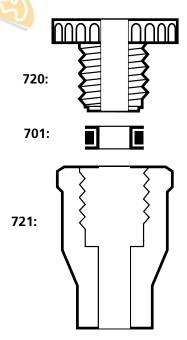


721-01 supplied with 720-01 fitting and 701-20 sealing ring. 721-02 supplied with 720-02 fitting and 701-23 sealing ring. 721-03 supplied with 720-03 fitting and 701-24 sealing ring.

A further range of sealing rings for use with Torion joints are available on the next page. These can be used in place of the sealing ring provided to allow tubing of different diameters to be accommodated.







#### SVL®, Torion joints, spare sealing rings



- Spare sealing rings for use with Torion joints to allow tubing of different diameters to be accommodated
- Manufactured from silicone rubber faced with PTFE to protect against chemical attack

Item Code	To suit glass body	To accept tubing O.D. mm	Pack qty.	
701-19	721-02	4.0 - 4.4	10	
701-20	721-01	4.8 - 5.2	10	
701-21	721-02	5.6 - 6.4	10	
701-22	721-02	6.6 - 7.4	10	
701-23	721-02	7.6 - 8.4	10	
701-24	721-03	13.6 - 14.4	10	
701-25	721-03	15.6 - 16.4	10	
701-51	721-03	9.6 - 10.4	10	
701-52	721-03	11.6 - 12.4	10	

#### SVL®, Torion joints, spare fittings

- For use with Torion glass bodies and rubber/PTFE sealing rings
- Fittings available in choice of materials
  - Glass filled polypropylene for use at temperatures up to 180°C
  - PTFE for use at temperatures up to 250°C

Item Code	Material	Bore mm	Pack qty.	
720-02	Polypropylene	8.7	10	
720-05	PTFE	8.7	10	
720-03	Polypropylene	14.7	10	
720-06	PTFE	14.7	10	



#### SVL®, stirrer shafts



- Designed for use with SVL® stirrer heads and stirrer bearings
- Manufactured from borosilicate glass
  - Lower end with internal screwthread to accept choice of stirrer heads
  - Upper section of shaft is ground to fit choice of stirrer bearings

Item Code	To fit SVL® reaction vessels cap. ml	Shaft length mm	Pack qty.	
588-32	500, 1000, 2000	315	1	
588-33	1000, 2000, 4000	405	1	
588-34	2000, 4000, 6000, 10,000	490	1	
588-35	20,000	580	1	



Diameter is approximately 10mm on the ground part of the shaft. A flexible drive for use with these shafts is featured on page 293.



#### SVL®, stirrer heads



- Designed for use with SVL® stirrer shafts
- Head simply screws into the end of the shaft
- Manufactured from a PTFE based polymer with the Anchor and Helix types stiffens by by a metal core

Item Code	Туре	Application	Diameter swept mm	Pack qty.	
588-93	Collapsible blades	Vessels with SVL® 30 joint or 29/32 socket	70	1	
588-94	Paddle	SVL® thermostatic reactors	70	1	
588-95	Anchor	SVL® reaction vessels	90	1	
588-97	Helix-6 blades	SVL® reaction vessels	80	1	
588-98	Anchor	SVL® reaction vessels	54	1	



Stirrers must be rotated in a clockwise direction to prevent unscrewing of the thread.







#### Stirrer bearings



- Designed to accept SVL® stirrer shafts with ground glass surfaces
- Borosilicate glass complete with fittings
- Glands manufactured from a PTFE based polymer which is self lubricating and corrosion-resistant
- Two types available:
  - With SVL® screwthread to allow connection to SVL® flasks
  - With Quickfit® ground glass cone to allow connection to Quickfit® flasks

Item Code	Cone size	SVL thread size	Pack qty.	
588-03	-	30	1	
588-07	19/26	-	1	
588-08	24/29	-	1	
588-09	29/32	-	1	
588-12	45/40	-	1	



Bearings having an SVL® screwthread can be connected to SVL® reaction flasks via SVL® butt joints.





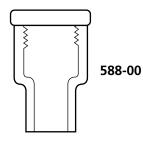






 Range of spare parts enabling the user to replace worn components easily and economically

Item Code	Description	Pack qty.	
588-00	Torion glass body (without glands)	1	
588-92	Spare glands - complete set includes 3 bearings, 2 bushes, 1 spring, 1 washer, 1 screwthread fitting	2	





#### SVL® stirrer flexible drive



- Provides a simple means of connection between a stirrer shaft and motor
- The 150mm flexible section removes the need for precise alignment and positioning of the motor

Item Code	Overall length mm	Diam. mm	Pack qty.	
588-90	187	8	1	



#### SVL®, reaction vessels

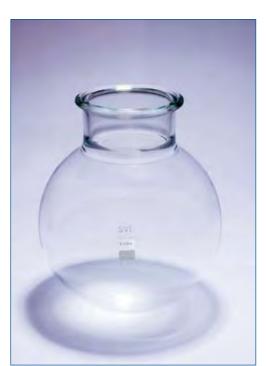


- Manufactured from borosilicate glass for high resistance to chemical attack and thermal shock
- With 100mm wide neck to accept SVL® lids and sealing ring

Item Code	Capacity ml	Body O.D. mm	Overall height mm	Shape	Pack qty.
296-54	500	115	120	Cylindrical	1
296-60	1000	115	200	Cylindrical	1
296-65	2000	140	270	Cylindrical	1
296-72	4000	206	245	Spherical	1
296-75	6000	235	280	Spherical	1
296-80	10000	279	325	Spherical	1
296-84	20000	345	410	Spherical	1



Lids and sealing rings for use with these reaction vessels are detailed on page 295.







#### SVL®, jacketed reaction vessel



- Ideal for temperature controlled reactions
- With outer jacket through which a temperature controlling medium can be circulated (maximum temperature of 200°C)
- Contents of inner chamber can be run off via a Torion PTFE stopcock
- When used with an SVL® lid and PTFE covered sealing ring, the assembly is grease free and resistant to chemical attack

Item Code	Capacity ml	I.D. mm	Total depth mm	Depth of liner mm	Stopcock bore mm	Pack qty.	
295-01	1000	100	245	195	8	1	

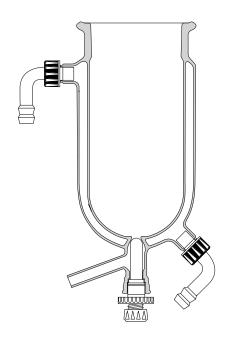


The thermostatic reaction vessel is supplied with the following components: Two olive bends 14mm diameter -

Two olive bends 14mm diameter 7
Two bored caps 701-42
Three sealing rings 701-24
One PTFE stopcock plug 295-00
One screw threaded fitting 720-03

The following parts are required to assemble a complete reaction vessel:

One clamping system 296-91
One pair of support rods 296-92
One sealing ring 296-90
One SVL® cover 296-00/01/02/03



### LIPSOL® LABWARE DETERGENT

- Excellent cleaning performance ideal for use with laboratory glassware and plasticware
- Great value for money
- Totally biodegradable

For full details see page 90





#### SVL® lids for reaction vessels



- For use with SVL® reaction vessels
- Borosilicate glass construction available in 3 styles:
  - Plain with knob (no necks) to act as a cover 296-00
  - With two necks (one vertical central neck and one vertical side neck)
  - With five necks as shown in the table below

Item Code	SVL joint size central	SVL joint size vertical	SVL joint size vertical 2	SVL joint size angled	Pack qty.	
296-00	-	-	-	-	1	
296-01	1 x 30	1 x 15	-	-	1	
296-02	1 x 30	1 x 22	1 x 22	2 x 22	1	
296-03	1 x 30	1 x 30	1 x 30	2 x 30	1	



Any SVL® neck will accept SVL® accessories via the use of either butt or sliding joints. Unused necks may be closed with screwcaps. Lids require the use of sealing ring Item code 296-90 and clamping system Item code 296-91 to effect good fit to reaction vessels.

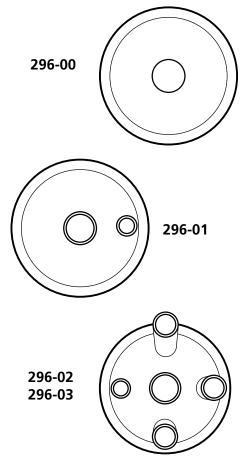
All SVL® reaction vessel lids have an internal diameter of 100mm.



- For fitting between the flanges of SVL® reaction flasks and lids
- Silicone rubber sheathed with PTFE to provide a chemically resistant and grease free seal

Item Code	Description	Pack qty.
296-90	Sealing ring	1









# SVL® clamping system, for reaction vessels and lids



- For securing SVL® lids to reaction vessels
- Manufactured from heat resistant phenolic plastic complete with 6 swivel clamps (296-93) and two milled screws (296-94)

Item Code	Description	Pack qty.
296-91	1 clamping system for 100mm flange (complete)	1
296-93	Pack containing 6 wing nuts, 6 springs and 6 clamps	1
296-94	Pack of 2 milled screws	2



#### **SVL®** support rods



- Accessory for use with 296-91 clamping system
- Useful for supporting SVL® reaction vessels
- Comprises two metal support rods which are attached to the clamping system via the two milled screws
- Rods can be connected by bossheads to a retort stand or scaffold

Item Code	Description	Diam. mm	Length mm	Pack qty.	
296-92	2 rods	16	250	1	



Always use both of the rods when supporting glassware.

## Thermometers, blue spirit filled, white back, partial immersion



- Mercury free filled with safe low toxicity blue indicating fluid
- Calibrated for 'partial immersion' i.e. to give accurate readings when the thermometer is immersed to a specific depth (76mm as marked on thermometer)
- Graduations in permanent amber stain
- White coloured background provides clear observation of blue liquid column
- Reinforced bulb to allow stirring
- With plastic non-roll top and safety suspension ring
- Nominal length 305mm
- Items 60/210/10 and 60/260/10 have a length of 405mm
- Item 60/330/20 has a brown spirit filling

Item Code	Range °C	Grads. °C	Tol. ±°C	Pack qty.	
60/050/05	-10 to 50	0.5	0.5	10	
60/110/10	-10 to 110	1.0	1.5	10	
60/150/10	-20 to 150	1.0	2.0	10	
60/210/10	-10 to 210	1.0	3.0	10	
60/260/10	-10 to 260	1.0	3.0	10	
60/330/20	-10 to 330	1.0	6.0	10	



## Thermometers, blue spirit filled, white back, total immersion



- Mercury free filled with a low toxicity blue spirit
- Calibrated for 'total immersion'
- Permanent amber stain graduations
- White coloured background provides clear observation of blue coloured liquid column
- Reinforced bulb for stirring
- With plastic non-roll top and safety suspension ring
- Nominal length 305mm with item 30/210/10 length 405mm

Item Code	Range °C	Grads. °C	Tol. ±°C	Pack qty.	
30/050/05	-10 to 50	0.5	0.5	10	
30/110/10	-20 to 110	1.0	1.0	10	
30/150/10	-20 to 150	1.0	1.5	10	
30/210/10	-10 to 210	1.0	2.0	10	





If a 'total immersion' thermometer is used with a portion of the spirit column above the liquid level, a correction to the observed reading may be required.



## Thermometers, low temperature, red spirit filled, white back, total immersion



- Mercury free filled with safe, red, low toxicity fluid
- White background provides clear observation of red coloured liquid column
- Calibrated for 'total immersion' i.e. to give accurate readings when the top of the spirit column is level with the liquid level
- 305mm in length

Item Code	Range °C	Grads. °C	Tol. ±°C	Pack qty.	
10/050/10	-100 to +50	1.0	3.0	10	



## Thermometers, mercury filled, yellow back, total immersion



- Calibrated for 'total immersion'
- Permanent amber stain graduations
- Yellow backed tubing for clear observation of mercury column
- Reinforced bulb for stirring
- With plastic non-roll top and safety suspension ring
- Nominal length 305mm

Item Code	Range °C	Grads. °C	Tol. ± °C	Pack qty.	
20/050/05	-10 to 50	0.5	0.5	10	
20/110/05	-20 to 110	0.5	0.5	10	
20/110/10	-20 to 110	1.0	1.0	10	
20/150/10	-20 to 150	1.0	2.0	10	
20/200/10	-10 to 200	1.0	2.0	10	
20/250/10	-10 to 250	1.0	2.0	10	
20/300/10	-10 to 300	1.0	3.0	10	
20/360/10	-10 to 360	1.0	4.0	10	

## Thermometers, precision, mercury filled, yellow back, total immersion



- Precision thermometers calibrated to closer tolerances and graduated at smaller intervals than general purpose thermometers
- Very fine etched graduations with black ceramic filling
- Yellow backed tubing for clear observation of mercury column
- Calibrated for 'total immersion'

Item Code	Range °C	Grads. °C	Tol. ±° C	Length mm	Pack qty.	
40/051/01	-1 to 51	0.1	0.3	350	10	
40/101/02	-1 to 101	0.2	0.3	455	10	



## Thermometers, 'Bee-ka', mercury filled, yellow back, total immersion



- Short length (155mm) for use with small beakers and Erlenmeyer flasks etc.
  - Can be left stood in a 50ml beaker without causing it to fall over
- Calibrated for 'total immersion'
- Permanent amber stain graduations
- Yellow back tubing for clear observation of mercury column

Item Code	Range °C	Grads. °C	Tol. ± °C	Pack qty.	
50/050/05	-10 to 50	0.5	0.5	10	
50/110/10	-10 to 110	1.0	1.0	10	
50/250/50	-10 to 250	5	4	10	



#### Immersion data

MBL® thermometers are calibrateds for use as follows:

**Total immersion:** Calibrated to give accurate readings when thermometer is

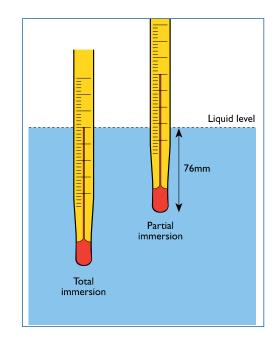
immersed so that the top of the mercury column is level

with the liquid surface.

Partial immersion: Calibrated to give accurate readings when the

thermometer is immersed to a specified depth, usually 76mm. The depth to which the thermometer should be

immersed is clearly marked on the body.





#### Thermometer adapter



- Ideal for incorporating MBL® and plain stemmed thermometers into Quickfit® jointed glassware assemblies
- Screwthread joint allows easy depth adjustment of thermometer
- Complete with cap, ring and washer

Item Code	Thread size	Cone size	Acceptable dia. through screwcap mm	Pack qty.	
ST51/13	13	14/23	6.0 - 7.0	2	
ST52/13	13	19/26	6.0 - 7.0	2	
ST53/13	13	24/29	6.0 - 7.0	2	
ST54/13	13	29/32	6.0 - 7.0	2	



#### Thermometer pocket



- For incorporating thermometers into Quickfit® jointed-ware assemblies
- Pocket fits most Quickfit® still heads

Item Code	Cone size	Approx. stem length mm	Pack qty.	
SH4A	14/23	45	1	

#### Thermometers, mercury, with integral cone



- Features an integral ground glass cone on the stem which allows direct fitting into Quickfit® jointed apparatus
- Mercury filled thermometers with enclosed blue ribbon on scale for improved visibility

Item Code	Cone size	Range °C	Pack qty.
MF31/0/110	10/19	-10 to 110	1
MF31/0/250	10/19	-10 to 250	1
MF31/0/360	10/19	-10 to 360	1
MF31/1	14/23	-10 to 110	1
MF31/2	14/23	-10 to 250	1
MF31/3	14/23	-10 to 360	1



#### Thermometers, spirit, with integral cone





• As above but filled with high visibility blue spirit

Item Code	Cone size	Range °C	Pack qty.
MF31/1S	14/23	-10 to 110	1
MF31/2S	14/23	-10 to 250	1





#### Trays, bottle/spill, white PVC



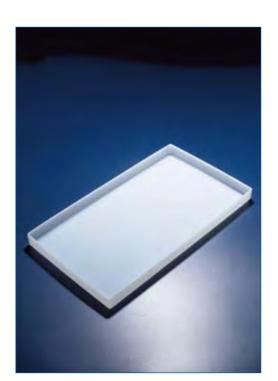


- Rectangular, lightweight and resilient trays
- Suitable for use as drip trays
- Not intended for carrying

Item Code	Dimensions l x w mm	Pack qty.
TWR040	475 x 175	1
TWR042	620 x 166	1
TWR044	890 x 310	1



Not suitable for use with solvents.



#### Trays, instrument, polypropylene







- Rectangular fabricated polypropylene trays
- Rigid and robust
- All sizes have 22mm deep vertical sides
- Can be autoclaved at 121°C

Item Code	Dimensions l x w mm	Pack qty.
TWR018	350 x 200	1
TWR020	350 x 250	1
TWR022	610 x 350	1

#### Trays, laboratory, white PVC



() Azlon

- Rectangular, lightweight and unbreakable in normal use
- Easily cleaned
- Serve as very effective drip trays
- Suitable for carrying

Item Code	l x w x h mm	Pack qty.
TWR046	422 x 231 x 24	1
TWR048	410 x 321 x 25	1
TWR050	524 x 236 x 27	1
TWR052	555 x 406 x 24	1



Not suitable for use with solvents..



### Trays, lab tidy, polystyrene



[] Azlon

- Rectangular lightweight compartmentalised trays
- Three designs with three, five or twelve compartments
- Designed primarily to fit into and remain inside a drawer
- Can be used for light or occasional carrying, but are not suitable for heavy loads

Item Code	No. of compartments	Compartment size mm	Pack qty.
TWR013	3	2 x (100 x 400 x 55 deep) 1 x (140 x 400 x 55 deep)	1
TWR014	12	12 x (95 x 95 x 55 deep)	1
TWR015	5	1 x (95 x 400 x 65 deep) 2 x (120 x 190 x 65 deep) 2 x (90 x 190 x 65)	1



# Troughs



#### Trough, multipurpose, polyethylene



E Azlon

- Rectangular robust 'heavy-walled' moulded troughs
- Will stack inside each other for storage
- Capacity 3 litres

Item Code	External dimensions mm	Pack qty.	
TGJ052	325 x 190 x 75	1	



#### Trough, pneumatic, polyethylene



E Azlon

- Cylindrical one piece pneumatic troughs
- Much lighter than glass
- Will withstand up to 80°C

Item Code	OD x height mm	Pack qty.
TGJ058	200 x 100	1
TGJ060	250 x 100	1
TGJ062	300 x 150	1



### Troughs, sterilising, polypropylene





- Rectangular sterilising troughs
- Robust and deep to accommodate a wide range of instruments etc.
- Can be autoclaved at 121°C

Item Code	Capacity litres	l x w mm	Height without lid mm	Height with lid mm	Pack qty.	
TWR202	1	210 x 122	78	91	1	
TWR204	10	390 x 290	110	130	1	

### Troughs lids, sterilising, polystyrene





• Lids are to be purchased separately and are not autoclavable

Item Code	Description	Pack qty.	
TWR203	Lid for TWR202	1	
TWR205	Lid for TWR204	1	

#### Tube, plain, drawn to jet

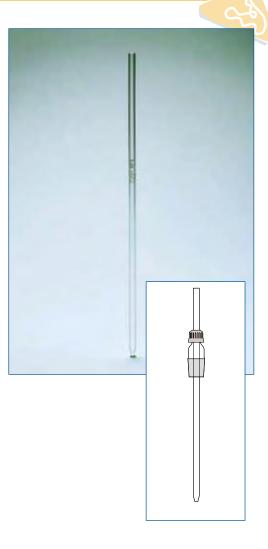


- Plain borosilicate glass tube with jet
- Designed to fit the range of Quickfit® thermometer/inlet adapters having size 13 thread

Item Code	Approx O.D. mm	Approx length mm	Pack qty.
MF5	6	325	5



For thermometer/inlet adapters, please refer to page 300.



#### Tubes, air/steam inlet, straight pattern



- Designed for introducing gases etc. into Quickfit® assemblies
- Stem with integral ground glass cone to fit Quickfit® sockets
- Lower end of tube is left plain for glassblower to cut to length and draw to jet

Item Code	Cone size	Approx. stem length mm	Pack qty.
MF15/1	14/23	150	1
MF15/2	19/26	150	1
MF15/3	24/29	150	1



## **Tubes**



#### Tubes, air/steam inlet, 90° bend



- With detachable plastic screwthread connector to facilitate the attachment of 9mm bore flexible tubing
- Ground glass cone on stem fits Quickfit<sup>®</sup> sockets
- Lower end of tube left plain for glassblower to cut to length and draw to jet

Item Code	Cone size	Approx. stem length mm	Pack qty.	
MF15/1B/SC	14/23	150	1	
MF15/2B/SC	19/26	150	1	
MF15/3B/SC	24/29	150	1	



#### Tube, centrifuge, conical base, graduated

**PYREX**®

- Centrifuge tube with white enamel graduations
- Graduated 0 3ml in 0.1ml divisions and 3 10ml in 0.5ml divisions
- Manufactured from Pyrex® borosilicate glass
- Can be centrifuged up to 3000 RCF values

Item Code	Capacity ml	Highest mark ml	Length mm	O.D. mm	Pack qty.	
3460/02M	15	10	110	17	40	



Always examine centfrifuge tubes before use. Do not use if scratched, chipped or abraded.

#### Tube, centrifuge, conical base, plain



- Manufactured from chemically inert Pyrex® glass for contamination-free performance
- Conical shape with rim
- Can be centrifuged up to 3000 RCF values

Item Code	Capacity ml	Length mm	O.D. mm	Pack qty.	
1680/02M	15	110	17	40	

#### Tube, centrifuge, ground socket



- Borosilicate glass with precision-ground Quickfit® socket to accept tapered stopper
- Conical or cylindrical shape
- Each tube is marked with its weight to the nearest 0.1g to enable tubes of similar weight to be selected from any batch
- Can be centrifuged at RCF values up to 3000

Item Code	Glass stopper to fit Item Code:	Shape	Joint size	Tube capacity ml	Tube O.D. x length mm	Pack qty.	
BC24/C14T	2595/03M	Conical	14/15	10	17 x 115	10	
BC24/C24R	2595/06M	Cylindrical	24/20	30	28.5 x 115	10	



Tubes and stoppers should be ordered separately.



#### Tubes, centrifuge, cylindrical type

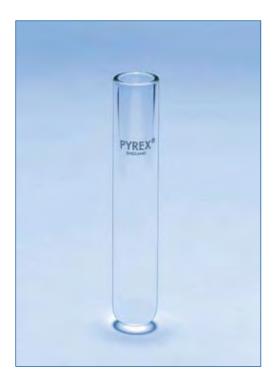


- Cylindrical type, round base
- Uniform glass distribution in wall and base for improved strength
- Manufactured from chemically resistant Pyrex® glass
- Can be centrifuged at RCF values up to 3000

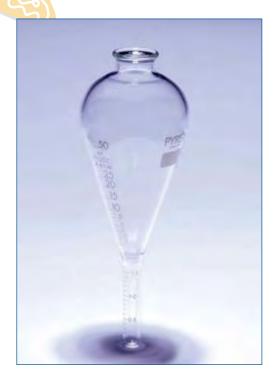
Item Code	Capacity ml	Length mm	O.D. mm	Pack qty.	
1660/02M	10	90	16	40	
1660/06M	25	90	24	40	
1660/08M	45	90	30	40	



Always examine tubes before use. Do not use if scratched, chipped or abraded.



## Tubes



#### Tube, centrifuge, pear shape, ASTM

**PYREX**®

- Omplies with ASTM D96 and D-1966
- For the determination of water and sediment in petroleum products
- Graduated in white enamel:
  - Lower stem graduated 0 to 1.5ml in 0.1ml divisions
  - Upper body graduated 1.5 to 5ml in 0.5ml divisions and from 5 to 10ml in 1ml

Item Code	Capacity ml Appr	ox overall ength mm	eck I.D. mm	Pack qty.	
3440/02M	100	157	17	2	



#### Tube, centrifuge, conical, ASTM



- Omplies with ASTM D96, D91, D-893 and D-1796
- In accordance with standard methods of testing for water and sediment in petroleum products
- Manufactured from chemically resistant Pyrex® borosilicate glass

Item Code	Capacity ml	Approx overall length mm	Neck I.D. mm	Pack qty.	
3450/02MP	100	200	17	2	

#### Tubes, culture

## **PYREX**®

- Ideal for culture work
- Manufactured from Pyrex® borosilicate glass
- High resistance to attack from water reduces leaching of contaminants which can cause pH changes
- Phenolic screwcaps with inert PTFE lined rubber disc
- Cap can withstand repeated dry heat and steam sterilisation cycles (121°C for 2 hours)

Item Code	O.D. x length mm	Wall thickness mm	Thread size mm	Pack qty.	
1636/24MP	14 x 100	1.5	13	40	
1636/26MP	16 x 100	1.8	15	40	
1636/04MP	16 x 125	1.8	15	40	
1636/30MP	16 x 160	1.8	15	40	
1636/32MP	18 x 100	1.8	18	40	
1636/34MP	18 x 180	1.8	18	40	
1636/36MP	20 x 100	1.8	20	40	
1636/38MP	20 x 200	1.8	20	40	
1636/10MP	22 x 200	1.8	22	40	
1636/42MP	26 x 100	2.0	25	40	
1636/44MP	26 x 200	2.0	25	40	





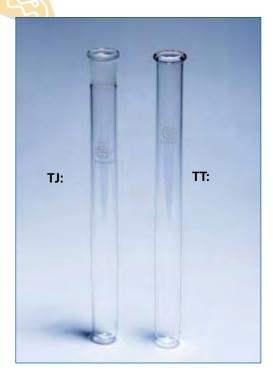
Do not autoclave with a tightly screwed cap, always slacken off. Failure to adopt this procedure may result in tube breakage.

#### Tubes, culture, spares

Item Code	Description	Size	Pack qty.	
4503/13	Cap with insert	13	20	
4503/15	Cap with insert	15	20	
4503/18	Cap with insert	18	20	
4503/20	Cap with insert	20	20	
4503/22	Cap with insert	22	20	
4503/25	Cap with insert	25	20	
4513/13M	Spare insert	13	20	
4513/15M	Spare insert	15	20	
4513/18M	Spare insert	18	20	
4513/20M	Spare insert	20	20	
4513/22M	Spare insert	22	20	
4513/25M	Spare insert	25	20	



## Tubes



#### Tubes, digestion, with socket



- Designed for use with blockheaters
- With Quickfit® precision-ground socket to accept air condensers etc.
- Manufactured from borosilicate glass for highest chemical and thermal durability

Item Code	Capacity ml	Diam. mm	Overall length mm	Joint size	Pack qty.	
TJ15/16/1	15	16	145	14/23	5	
TJ75/26/3	75	26	255	24/29	5	
TJ100/26/3	100	26	300	24/29	5	
TJ250/42/6	250	42	300	40/38	5	

#### Tubes, digestion, plain



- For use with block heaters
- With plain beaded neck
- Manufactured from borosilicate glass for highest chemical and thermal durability

Item Code	Capacity ml	Diam. mm	Overall length mm	Pack qty.	
TT100/26	100	26	300	5	
TT250/42	250	42	300	5	



### Tubes, drying, angled



- For use with a desiccant such as calcium chloride
- Ground glass cone to fit Quickfit® apparatus

Item Code	Cone size	Pack qty.
MF23/1	14/23	1
MF23/2	19/26	1
MF23/3	24/29	1
MF23/4	29/32	1



## Tubes, drying, 'U' shaped



- For use with desiccants such as calcium chloride
- With two ground sockets to accept Quickfit® stopcock/tubing adapters etc.

Item Code	Socket size	Pack qty.	
MF21/2	19/26	1	





#### Tubes, test, with rim, medium wall

**PYREX**®

- Conforms to ISO 4142
- High quality test tubes designed and constructed for optimum performance
- Manufactured from Pyrex® borosilicate glass which gives superior performance to neutral borosilicate and soda-lime glass
  - Allows use at temperatures up to 500°C
  - Excellent resistance to chemical attack

Item Code	Approx capacity to rim ml	Dimensions O.D. x length mm	Wall thickness mm	Pack qty.	
1620/02M	4	10 x 75	1.0	100	
1620/04M	6	12 x 75	1.0	100	
1620/06M	8	12 x 100	1.0	100	
1620/09M	14	16 x 100	1.2	100	
1620/10M	18	16 x 125	1.2	100	
1620/12M	22	16 x 150	1.2	100	
1620/14M	23	16 x 160	1.2	100	
1620/15M	34	18 x 150	1.2	100	
1620/16M	28	18 x 150	1.2	100	
1620/20M	55	24 x 150	1.2	100	
1620/22M	73	24 x 200	1.2	50	



For advice on the safe heating of Pyrex® glassware, please refer to the technical information section.

#### Tubes, test, with rim, heavy wall

**PYREX**®

- Conforms to ISO 4142
- Test tubes with a heavy wall to provide extra mechanical strength
- Robust construction reduces possibility of breakages:
  - Lower replacement costs
  - Improved user safety
- Pyrex® borosilicate glass for high resistance to thermal shock and chemical attack

Item Code	Approx capacity to rim ml	Dimensions O.D. x length mm	Wall thickness mm	Pack qty.	
1624/02M	3	10 x 75	1.5	100	
1624/04M	5	12 x 75	1.5	100	
1624/06M	6	12 x 100	1.5	100	
1624/10M	15	16 x 125	1.8	100	
1624/12M	18	16 x 150	1.8	100	
1624/16M	24	18 x 150	1.8	100	
1624/20M	48	24 x 150	1.8	100	

#### Tubes, test, without rim, medium wall

#### **PYREX**®

- Conforms to ISO 4142
- High quality test tubes designed and constructed for optimum performance
- Manufactured from Pyrex® borosilicate glass which gives superior performance to neutral borosilicate and soda-lime glass
- Allows use at temperatures up to 500°C
- Ideal for microbiology culture work
- Excellent resistance to chemical attack

Item Code	Approx capacity to rim ml	Dimensions O.D. x length mm	Wall thickness mm	Pack qty.	
1622/02M	4	10 x 75	1.0	100	
1622/04M	6	12 x 75	1.0	100	
1622/06M	8	12 x 100	1.0	100	
1622/09M	14	16 x 100	1.2	100	
1622/12M	22	16 x 150	1.2	100	
1622/14M	23	16 x 160	1.2	100	
1622/15M	34	18 x 180	1.2	100	
1622/16M	28	18 x 150	1.2	100	
1622/20M	55	24 x 150	1.2	100	
1622/22M	73	24 x 200	1.2	50	



#### Tubes, test, without rim, heavy wall



- Conforms to ISO 4142
- Rimless test tubes with a heavy wall to provide extra mechanical strength
- Robust construction reduces possibility of breakages:
  - Lower replacement costs
  - Improved user safety
- Manufactured from Pyrex® borosilicate glass for high resistance to thermal shock and chemical attack

Item Code	Approx capacity to rim ml	Dimensions O.D. x length mm	Wall thickness mm	Pack qty.	
1626/02M	3	10 x 75	1.5	100	
1626/04M	5	12 x 75	1.5	100	
1626/06M	6	12 x 100	1.5	100	
1626/10M	15	16 x 125	1.8	100	
1626/12M	18	16 x 150	1.8	100	
1626/16M	24	18 x 150	1.8	100	
1626/20M	48	24 x 150	1.8	100	





#### Tubes, test, ground socket



- High quality test tubes with a precision-ground Quickfit<sup>®</sup> socket
- Accepts Quickfit® glass stoppers
- Manufactured from borosilicate glass for excellent resistance to chemical attack and thermal shock
- Tubes and stoppers should be ordered separately

Item Code	Item code: stopper	Socket size	Dimensions O.D. x length mm	Approx capacity ml	Pack qty.	
MF24/0/4	SB10	10/19	14 x 100	5	5	
MF24/12/4	SB12	12/21	17 x 100	10	5	
MF24/1	SB14	14/23	19 x 100	11	5	
MF24/1/5	SB14	14/23	19 x 125	15	5	
MF24/1/6	SB14	14/23	19 x 150	19	5	
MF24/2	SB19	19/26	23 x 100	19	5	
MF24/2/6	SB19	19/26	23 x 150	31	5	
MF24/3	SB24	24/29	29 x 150	54	5	
MF24/3/8	SB24	24/29	29 x 200	75	5	
MF24/5	SB34	34/35	41 x 250	195	5	



For glass stoppers, please see page 282.



#### Tubes, test, ground socket, with stopper



- Pyrex® borosilicate glass with ground socket
- Supplied with interchangeable polyethylene stopper

Item Code	Dimensions O.D. x length mm	Capacity ml	Stopper size	Pack qty.	
1630/02M	13 x 100	5	10/19	10	
1630/06M	18 x 125	10	14/23	10	
1630/10M	22 x 150	25	19/26	10	
1630/12M	26 x 200	50	24/29	10	



For spare polyethylene stoppers, please see page 284.

#### Tubes, test, graduated, ground socket, with stopper

#### **PYREX**®

- With white enamel graduations to indicate capacity
- Pyrex® borosilicate glass construction provides excellent resistance to chemical attack and thermal shock
- Supplied with interchangeable polyethylene stopper

Item Code	Capacity ml	Dimensions O.D. x length mm	Grads. ml	Stopper size	Pack qty.	
1628/06M	5	13 x 100	0.1	10/19	10	
1628/10M	10	18 x 125	0.2	14/23	10	
1628/18M	25	22 x 150	0.5	19/26	10	
1628/22M	50	26 x 200	1.0	24/29	10	



#### Tweezers, PMP / POM





- High quality autoclavable tweezers
- Available with pointed or rounded ends
- Fine tooth grips for secure handling of samples

Item Code	Material	Colour	Ends	Length mm	Pack qty.	
TWY260	PMP	White	Sharp	115	1	
TWY262	PMP	White	Sharp	145	1	
TWY264	POM	Yellow	Sharp	180	1	
TWY266	POM	Yellow	Round	250	1	



# Watch glasses



#### Watch glasses

**PYREX**®

- For evaporation work and covering heated beakers
- Manufactured from heat resisting Pyrex® borosilicate glass
- Fire-polished edges to reduce chipping and breakage

Item Code	Nom. diam.mm	Pack qty.	
1060/04D	40	10	
1060/06D	50	10	
1060/09D	60	10	
1060/10D	80	10	
1060/14D	100	10	
1060/18D	125	10	
1060/20D	150	10	
1060/21D	200	10	
1060/24D	250	10	



Avoid sudden temperature changes which can result in breakage. Always heat and cool gradually.

#### LIPSOL® LABWARE DETERGENT

- Excellent cleaning performance ideal for use with laboratory glassware and plasticware
- Great value for money
- Totally biodegradable

For full details see page 90



## Water estimators

#### Water estimators, light entrainers



- Complies with BS 756
- Dean & Stark pattern receivers for the determination of the water content in petroleum products
- For use with solvent entrainers which are lighter than water
- Borosilicate glass with graduated tube
- Receiver WE6/23/10T is fitted with PTFE GP Rotaflo® stopcock for easy drainage

Item Code	Description	Capacity ml	Grads. ml	Socket size	Cone size	Pack qty.	
WE6/23/2	Receiver	2.0	0.05	19/26	24/29	1	
WE6/23/7	Receiver	7.5	0.10	19/26	24/29	1	
WE6/23/10T	Receiver with stopcock	10.0	0.10	19/26	24/29	1	
WE6/23/25	Receiver	25.0	0.20	19/26	24/29	1	



#### Water Estimators, heavy entrainers



- Complies with BS 756
- For the determination of water content in petroleum products using a solvent entrainer which is heavier than water
- Also suitable for the estimation of volatile oil content
- Highest quality borosilicate glass with graduated tube and Quickfit® precisionground joints

Item Code	Description	Capacity ml	Grads. ml	Socket size	Cone size	Pack qty.	
WE7/23/3	Receiver	3.0	0.05	19/26	24/29	1	
WE7/23/12	Receiver	12.5	0.1	19/26	24/29	1	



# Water samplers



#### Water samplers, polypropylene





- For sampling of water at specific depths up to 60 metres
- Ideal for trace metal sampling
- Will accept a bottle for BOD tests
- Good stability when submerged
- WWW010 is designed for sampling from bore holes.

Item Code	Capacity ml	Net weight kg	Overall O.D. mm	Pack qty.	
WWW002	1400	3.75	118	1	
WWW004	2000	5	118	1	
WWW006	5000	9	165	1	
WWW010	1000	4	93	1	



#### Water sampler ropes



- Pre-stretched kink resistant nylon terylene
- Supplied in lengths of 15 or 60 meters
- Fitted with strong swivel clip at one end

Item Code	Description	Length metres	Pack qty.	
WWW016	Rope	15	1	
WWW018	Rope	60	1	

#### Water sampler dispensing reel

- Rigid metal and heavy duty plastic construction
- Accepts up to 60 metres of the above rope

Item Code	Description	Pack qty.
WWW024	Reel	1



Ropes and reels should be purchased separately .

## Weighing

#### Weighing scoop, glass

#### **PYREX**®

- Ideal for weighing small quantities of powder
- Easy to use
- With hollow stem to aid introduction of the powder into narrow neck vessels e.g. volumetric flasks
- The flat base ensures stability on the balance pan

Item Code	Nom. capacity ml	Overall length mm	Pack qty.	
2115/02M	3	70	10	
2115/04M	6	85	10	
2115/06M	10	100	10	



#### Weighing scoop, HDPE





- Lightweight HDPE weighing boats
- Good chemical resistance

Item Code	Capacity ml	Body dim. mm	Overall length mm	Pack qty.	
FWC320	2	33 x 15	40	1	
FWC322	10	55 x 24	63	1	
FWC324	35	85 x 38	101	1	



#### Bottles, weighing



- Chemically inert borosilicate glass
- Lightweight construction with ground glass stoppers
- Choice of squat or tall form bottles

Item Code	Description	Joint size	Max. weight g	Min. capacity ml	Pack qty.	
WB10	Lid	24/10	5	-	1	
WB11	Base	24/10	15	16	1	
WB40	Lid	40/13	10	-	1	
WB43	Base	40/13	22	24	1	
WB50L	Lid	50/14	25	-	1	<u> </u>
WB50B	Base	50/14	30	58	1	





Lids and bases should be ordered separately.

A		Bottles, glass		C	
Adapters		amber	55	Caps	
cone/screwthread	21	density	60	bottle	56 58
expansion		Dreschel	200	Quickfit <sup>®</sup>	
multiple necks		dropping	61	SVL®	
Perkin		media-lab	53 - 55	Carboys	
receivers		plastic coated	54	Centrifuge tubes	
reduction		reagent			
		roller		Chatterway, spatula	
reduction, PTFE		weighing		Chemistry sets	
splash head		Bottles, plastic		Chromatography columns	87 - 89
steam distillation head		atomising spray	60	Clamps	
still head		aspirator		burette	
stopcock		·		tubing	90
swan neck		carboy		Claisen	
SVL® cone/screwthread		concertina		head	
thermometer	300	dispensing		flasks	151
tubing	33, 34	Driplok®		Clips	
Ampoule breakers	35	dropping		conical joints	207
Arsenic determination apparatus	36	eye dropper		flat flange joints	208
Aspirators		graduated	64, 67, 68	general	91
glass	37 - 39	gram staining	78	spherical joints	
plastic		HDPE	65 - 68	Cold trap	
Atomiser	•	LDPE	70	Condensers	
		narrow neck	62, 65, 70	air	92
В		PFA	72	Allihn	
Bags, autoclave	11	polypropylene	62 - 64	coil	
Balers	41	powder		cold finger	•
	42	PTFE		Davies	
plastic		pump dispenser			
metal		tracker		distillation apparatus	
Basket	43	wash		ether	
Beakers, glass		Boxes	75 70	inland revenue	
conical			90	jacketed coil	
heavy-duty		airtight		Liebig	
jacketed	46	beta radiation	,	multi-coil	
low form	44	slide storage		twin-coil	96
tall form	45	sterilising	253	Cones	
Beakers, metal		Büchner		Imhoff sedimentation	202
aluminium	51	flasks		Quickfit®	203 - 205
stainless steel	51	funnels	177 - 179	Conical beakers	46
Beakers, plastic		Buckets		Conical flasks	134 - 140
medicine	214	HDPE	81	Connectors	
PMP (TPX)	49, 50	ice	201	non-return valves	101
polypropylene		Bulb pipettes	218, 219	screwthread	
PTFE		Burettes		tubing	
Bibbette® pipette filler		acrylic	87	Containers	
Beta radiation	223	automatic zero	86	Crow receiver	
bins	23/1	class A, works certified .	82	Crucibles	
boxes		class A		adapter	104
shields		class B		Gooch	
	233	modular			
Bins glass disposal	F2	Rotaflo®		nickel	•
glass disposal		Sofnol, auto zero		Crystallising dishes	
incineration		stopcocks		Culture tubes	
Boards, cutting		3ιυμίσικ3	213, 213	Culture vessels	
Boiling flasks				Cutting board	106
Bore-hole sampler				Cylinders, glass	
Bottle carriers	79, 80			class A, works certified	
				class A	107

	100		125 126	-1 - 0	
class B			135, 136	Flat flange	450, 450
heavy-duty		•	139, 140	flasks	
plastic foot		Evaporating dishes		joints	
Nessler		Evaporating flasks		Flow indicator	
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3690/04M		4503/13	309	50/250/50		701-22	290	BDA742P	
3690/08M	104	4503/15	288	588-00	292	701-23	287	BDB312P	
3700/01	178	4503/15	309	588-03	292	701-23	290	BDB318P	
3700/02		4503/18	309	588-07	292	701-24		BDB324P	
3700/04		4503/20	58	588-08	292	701-24		BDB330P	
3700/06		4503/20		588-09		701-25			
3700/08		4503/22		588-12		701-25		BDB334P	
3700/00		4503/22		588-32		701-26		BDB336P	
3700/10		4503/25		588-33		701-20		BDB338P	
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3720/04M	179	4506/25D	56	588-95	291	701-51	287	BGC430P	
3720/06M	179	4506/32D	56	588-97	291	701-51	290	BGC432P	
3720/08M	179	4506/45D	56	588-98	291	701-52		BGC436P	
3722/02M	179	4506/45E		5100-125		701-52			
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3722/06M		4506/45G		5100-250		703-01		BGE212P	
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BGE482P69	BLH0150P66	BRB006		BWN130		C1/14/23/3C	
BGE484P69	BLP0100P63			BWP0030PN		C1/23/SC	
BGE484P 69		BRB042 BRB050P					
	BLP0125P63			BWP0060AP		C1/44/SC	
BGE488P69	BLP0125PGRAD64	BRB056P		BWP0060PGRAD		C11/23/SC	
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BGE514P71	BNH0030PN65	BRB060P		BWP0100PN		C13/55/2	
BGE520P71	BNH0060PN65	BRB070P		BWP0125PN		C2/11	
BGE528P71	BNH0100PN65	BRB074P		BWP0150AP		C2/12	
BGE530P71	BNH0125PN65	BRB075P		BWP0150PN		C2/22	
BGE536P71	BNH0150PN65	BRB076P		BWP0250AP		C3/12/SC	
BGE614P61	BNH0250P65	BRB077P		BWP0250P		C3/13/SC	
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BGE628P61	BNH1000P65	BRB264P		BWP0500AP		C3/22/SC	
BGE630P61	BNH2000P65	BRB266P	84	BWP0500P		C3/23/SC	
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BGG304102	BNL2000P70	BRE000	60	BWX020	42	C6/12/SC	98
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BGG308102	BNP0060PN62	BRE004	60	BWX104	81	CAB10	204
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BGG312102	BNP0125PN62	BRF056	61	BWX108	81	CAB19	204
BGG440P102	BNP0150PN62	BTB0025P		BWX110		CAB24	
BGG442P102	BNP0250P62	BTB0050P		BWX112		CAB29	
BGG444P102	BNP0500P62	BTB0100P		BWX114		CAB34	
BGG446P102	BNP05A40	BTB0250P		BWX116		CAP/045H	
BGG448P102	BNP05B64	BTB0400P		BWX118		CBB7UB	
BGG450P102	BNP1000P62	BTB0500P		BWX200		CBB10UB	
BGG452P102	BNP10A40	BTB0600P		BWX201		CBB14UB	
BGG454P102	BNP10B64	BTB1000P		BWX202		CBB19UB	
BGG456P102	BNP2000P62	BTB2000P		BWX224		CBB24UB	
BGG458P102	BNP20A40	BTB3000P		BWX230		CBB29UB	
BGH02265	BNP20B64	BTB5000P		BWX236		CBB34UB	
BGH02465	BPB0025P48	BWF0100		BWX240		CBB40UB	
BGH02665	BPB0050P48	BWF0500		BWX501P		CBB45UB	
BGH02865	BPB0100P48	BWF1000		BWY030		CBB55UB	
BGH03240		BWH0030PN		BWY032		CF1/0	
	BPB0250P48			BWY034		CF5/1	
BGH03440	BPB0400P48	BWH0060PN				CF5/1	
BGH03640	BPB0500P48	BWH0100PN		BWY036			
BGH03840	BPB0600P48	BWH0125PN		BWY038		CF5/3	
BGH04040	BPB1000P48	BWH0150PN		BWY039		CF5/4	
BGH06841	BPB2000P48	BWH0250PN		BWY200		CF5/5	
BGH07041	BPB3000P48	BWH0500PN		BWY202		CGZ85PP	
BGK926P70	BPB5000P48	BWH1000PN		BWY204		CNB7UB	
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CP0025P 114	CT0010P116	CX6/44/SC		D60/50		DWR004	
CP0050P 114	CT0025P116	CX7/02/SC		D62/0		DWR006	
CP0100P114	CT0050P116	CX7/03/SC	93	D70/20		DWR007	122
CP0250P 114	CT0100P116	CX7/04/SC	93	D91/100	194	DWR008	122
CP0500P114	CT0250P116	CX7/05/SC	93	D92/100	194	DWR010	122
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CPS0500P113	CTB0025P115	D1/32		DA36	22	EX5/63	125
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FV20L	. 159	GP10RA/10	273	JPB0050P		MA1/33	23	MF23/3	311
FV2L		GP10ST/10		JPB0100P		MA1/44		MF23/4	
FV500		GP3BU/5B		JPB0250P		MA2/2	23	MF24/0	224
FV5L		GP3BU/5S		JPB0500P		MA2/3		MF24/0/4	
FWB730		GP3K		JPB1000P		MA4/23		MF24/1	
FWB736		GP3RA/5		JPB2000P		MA6/22		MF24/1/5	
FWB740		GP3ST/5				MA6/33		MF24/1/6	
FWC002		GP6/10W		JPB3000P JPB5000P		MAF1/75		MF24/12/4	
FWC004		GP6K		JPM0050P		MAF2/2		MF24/2	
FWC006		GP6RA/7		JPM0100P		MAF2/32		MF24/2/6	
FWC008		GP6ST/7		JPM0250P		MAF2/41		MF24/3	
FWC010		GS5		JPM0500P		MAF2/52		MF24/3/8	
FWC012		GS6/24				MAF3/52		MF24/5	
FWC014		000/2 :	200	JPM1000P		MAF4/41		MF24/5	
FWC052		H		JPM2000P		MAF5/2		MF27/3/13	
FWC054		HP10K	272	JPM3000P		MCK2		MF28/3/125/SC	
FWC056		HP10RA/10		JPM5000P		MD2/50		MF28/3/250/SC	
FWC058		HP10ST/10		JRV1L		MD3/50		MF28/3/500/SC	
FWC060		HP10ST/15		JRV2L		MD4/100		MF28/52	
FWC062		HP3K		JWH0125P		MD4/50		MF29/3/125	
FWC064		HP3RA/5		JWH0250P		MD60		MF29/3/250	
FWC066		HP3RA/7		JWH0500P		MD61		MF29/3/500	
FWC102		HP3ST/5		JWH1000P		MF10/1B/SC		MF31/0/110	
FWC104		HP3ST/7		JWH2000P		MF10/2B/SC		MF31/0/250	
FWC106		HP3TW/5		JWH2500P		MF10/3B/SC		MF31/0/360	
FWC108		HP6K		JWH5000P		MF10/4B/SC		MF31/1	
FWC110		HP6RA/10		JWP0030P		MF10/5B/SC		MF31/1S	
FWC112		HP6RA/7		JWP0060P		MF11/1/SC		MF31/2	
FWC114		HP6ST/10		JWP0125P		MF11/1B/SC		MF31/2S	
FWC116		HP6ST/7		JWP0250P		MF11/2/SC		MF31/3	
FWC118		HP6TW/7		JWP0500P		MF11/2B/SC		MF48/03/125	
FWC202		111 01 11/7	272	JWP0950P		MF11/3/SC		MF48/03/250	
FWC204		1		JWP1200P	103	MF11/3B/SC		MF48/03/500	
FWC206		IBB001P	201	I/		MF11/4/SC		MF48/13/125	
FWC208		IBB002P		K	20-	MF13/2/SC		MF48/13/250	
FWC210		IBB002F		KC10		MF13/3/SC		MF48/13/500	
FWC212		ייייייין ורסססמיי	201	KC12		MF13/4/SC		MF48/23/250	
FWC212				KC14		MF14/1/SC		MF48/23/500	
FWC214				KC19		MF14/2/SC		MF48/33/250	
FWC320				KC24		MF14/3/SC		MF5	
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MS13CUB209	NE2211 259	NE8044	261	PRA722A	218	PWJ016	228
MS13UB 209	NE2212 259	NE8045		PRA724A		PWJ018	228
MS19UB 209	NE2213 259	NE8064		PRA726A		PWJ020	
MS29UB 209	NE2214 259	NE8065		PRA728A		PWJ021	
MS35UB 209	NE2215 259	NE8202		PRA730A		PWP050	
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MWY514214	NE2250 259	NE9015		PRA734A		PWY145	
MWY518214	NE2250 259 NE2251 259			PRA736A		FVV1143	220
		NE9020				Q	
MWY850 215	NE2252 259	NE9030		PRA740WC			242
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8.1	NE2303 260	NE9040		PRA744WC		QC18/11	
N	NE2305 260	NE9050		PRA746WC		QC24/12	
NB1203114	NE2310260	NE9060		PRA748WC		QC28/9	
NE002 105	NE2311 260	NE9070		PRA750WC		QC28/13	
NE003 105	NE2312 260	NE9370		PRA752WC	218	QC28/21	
NE004 105	NE2313 260	NEFUNSS100H	185	PRA754WC	218	QR13/6	212
NE005 105	NE2314 260	NEFUNSS150H	185	PRA756WC	218	QR18/7	212
NE006 105	NE2315 260	NEFUNSS200H	185	PRA760B	221	QR24/6	212
NE008 105	NE2317 260	NEJUGS0500H	214	PRA762B	221	QR24/9	212
NE010 105	NE2318 260	NEJUGS1000H		PRA764B		QR24/11	
NE014 105	NE2350 260	NEJUGS2000H		PRA766B		QR28/6	
NE015 105	NE2351 260	NWH902P		PRA768B		QR28/11	
NE016 105	NE2352 260	NWH904P		PRA770A		QR28/18	
NE017 105	NE2354 260	NWH906P		PRA772A		QW13/6	
NE019 105	NE402 51	1NVV11900F	101	PRA774A		QW18/7	
NE021 105	NE40451	P		PRA776A			
			225			QW24/6	
NE022 105	NE40751	PDH404		PRA778A		QW24/9	
NE025 105	NE410 51	PDH406		PRA780WC		QW24/11	
NE027 105	NE502 123	PDH501		PRA782WC		QW28/6	
NE028 105	NE504 123	PDH502	224	PRA784WC	220	QW28/11	212
NE037 105	NE5042119	PDH505	224	PRA786WC	220	QW28/18	
NE037 105 NE038 105		PDH505 PDH510	224 224	PRA786WC PRA788WC	220 220	QW28/18	
NE037	NE5042	PDH505 PDH510 PDH601	224 224 219	PRA786WC	220 220	QW28/18	212
NE037       105         NE038       105         NE039       105         NE040       105	NE5042 119 NE505 123	PDH505 PDH510	224 224 219	PRA786WC PRA788WC	220 220 222	QW28/18	212
NE037	NE5042	PDH505 PDH510 PDH601	224 224 219 219	PRA786WC PRA788WC PRA800B	220 220 222 222	QW28/18	212
NE037       105         NE038       105         NE039       105         NE040       105	NE5042       119         NE505       123         NE5052       119         NE506       123	PDH505 PDH510 PDH601 PDH602	224 224 219 219 219	PRA786WC PRA788WC PRA800B PRA802B	220 220 222 222	QW28/18 R	212
NE037       105         NE038       105         NE039       105         NE040       105         NE045       106	NE5042       119         NE505       123         NE5052       119         NE506       123         NE5062       119	PDH505	224 224 219 219 219	PRA786WC PRA788WC PRA800B PRA802B PRA804B	220 220 222 222 222	QW28/18 RA1/00 RA1/01	212 240 24
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NE037       105         NE038       105         NE039       105         NE040       105         NE045       106         NE046       106         NE047       106         NE048       106         NE049       106         NE050       106         NE051       106         NE2021       260         NE2002       260         NE2003       260         NE2004       260         NE201       51         NE201       261         NE201       261         NE201       261         NE201       261         NE201       261         NE203       51         NE204       51         NE205       51         NE207       51         NE209       51	NE5042       119         NE505       123         NE5052       119         NE506       123         NE5062       119         NE5072       119         NE5082       119         NE5092       119         NE541       123         NE541A       123         NE544       123         NE545       123         NE545A       123         NE546       123         NE546A       123         NE602       122         NE603       122         NE604       122         NE640       122         NE642       122         NE643       122         NE644A       122         NE645A       123         NE6700       263         NE6701       263         NE6702       263         NE6703       263         NE6703       263          NE6703       263	PDH505	224 224 219 219 219 219 219 225 225 225 225 129 129 129 129 129 129 201 201 219 219 219 219 219	PRA786WC		RA1/00	2402424242424242424252527262626262626
NE037       105         NE038       105         NE039       105         NE040       105         NE045       106         NE046       106         NE047       106         NE048       106         NE049       106         NE050       106         NE051       106         NE053       106         NE2001       260         NE2002       260         NE2003       260         NE2004       260         NE201       51         NE201       261         NE2011       261         NE2012       261         NE2013       261         NE203       51         NE204       51         NE205       51         NE206       51         NE208       51         NE209       51         NE2002       259	NE5042       119         NE505       123         NE5052       119         NE506       123         NE5062       119         NE5072       119         NE5082       119         NE5092       119         NE541       123         NE541A       123         NE544       123         NE545       123         NE545A       123         NE546A       123         NE546A       123         NE602       122         NE603       122         NE604       122         NE640       122         NE642       122         NE643       122         NE644A       122         NE645       123         NE6701       263         NE6702       263         NE6703       263         NE6703       263         NE6850       261	PDH505	224 224 219 219 219 219 219 225 225 225 225 129 129 129 129 129 129 201 201 219 219 219 219 219 219 219	PRA786WC		RA1/00	240242424242424242425252726262626262626
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NE037       105         NE038       105         NE039       105         NE040       105         NE045       106         NE046       106         NE047       106         NE048       106         NE049       106         NE050       106         NE051       106         NE053       106         NE2001       260         NE2002       260         NE2003       260         NE2004       260         NE201       51         NE201       261         NE2011       261         NE2012       261         NE2013       261         NE203       51         NE204       51         NE205       51         NE206       51         NE208       51         NE209       51         NE2002       259	NE5042       119         NE505       123         NE5052       119         NE506       123         NE5062       119         NE5072       119         NE5082       119         NE5092       119         NE541       123         NE541A       123         NE544       123         NE545       123         NE545A       123         NE546A       123         NE546A       123         NE602       122         NE603       122         NE604       122         NE640       122         NE642       122         NE643       122         NE644A       122         NE645       123         NE6701       263         NE6702       263         NE6703       263         NE6703       263         NE6850       261	PDH505	224 224 219 219 219 219 219 219 225 225 225 225 225 129 129 129 129 129 201 201 201 219 219 219 219 219 219 219 219 219 219 219	PRA786WC		RA1/00	212240242424242424242525272626262626262626

RA5/11/SC	27	S		SIB 24	144	SST106K	276	ST7/2	268
RA5/21/SC		SB7	202	SIB 29		SST108		ST7/3	
RA6/11/SC		SB10		SQ13UB		SST202K		ST7/3L	
RA6/22/SC		SB12		SQ18UB		SST203		SWL002	
RA6/23/SC		SB14		SO24UB		SST203K		SWL006	
RA6/33/SC		SB14DL		SO28UB	211	SST302		SWL008	
RA9/11		SB19		SRB7UB	205	SST302K		SWL012	
RA9/22		SB24		SRB10UB		SST303		SWL018	
RA9/23		SB29		SRB12UB		SST303K		SWL024	
RA9/33		SB34		SRB14UB		SST304		SWL028	
RA9/44		SB40		SRB19UB	205	SST304K		SWL030	
RC13		SB45		SRB24UB		SST502		SWL033	
RC19	211	SCBNP01		SRB29UB		SST702		SWL036	
RC29	211	SF3A32		SRB34UB		SST703		SWL040	
RC35		SF3A33		SRB40UB		SST704		SWL042	
RC41		SF3A34		SRB45UB		SST706		SWL140	
RC64	211	SF3B33		SRB50UB	205	SSV102	278	SWM012	
RDR102	232	SF42/2		SRB55UB	205	SSV103	278	SWM016	258
RDR104		SF4A32		SRB60UB		SSV104		SWM018	
RDR106		SF4B32		SRF380		SSV106		SWM020	
RF13	210	SF4T30		SRS001	235	SSV202	278	SWN500	266
RF19	210	SF4T31		SRS002	235	SSV203	278	SWN501	266
RF29	210	SGT002		SRS003	234	SSV204	278	SWN502	
RF35	210	SGT004		SRS004		SSV304	279	SWN503	266
RF41	210	SGT004		SRS005	235	SSV504	279	SWN504	266
RF64	210	SGT012		SRS006	234	SSV802	280	SWN505	
RM13		SGT014		SRS007		SSV804		SWN506	
RM19	210	SGT102		SRS008	234	ST1/2	268	SWN507	266
RM29	210	SH1/11		SRS009	235	ST1/5	267	SWN508	266
RM35	210	SH1/22		SRS010	235	ST1/6	267	SWN509	266
RM41	210	SH1/23		SRS011	235	ST1/8	267	SWN510	266
RM64	210	SH1/33		SRS012	235	ST11/5	268	SWN511	266
RO13	211	SH1/44		SSD102	277	ST12/133	255	SWN515	267
RO19	211	SH17/23		SSD102K	277	ST2/2/SC	269	SWN520	265
RO29	211	SH2/22		SSD103	277	ST2/33C/SC	269	SWN522	265
RO35	211	SH2/33		SSD103K	277	ST2/44C/SC	269	SWN524	265
RO41	211	SH30/42/SC		SSD104	277	ST20/2	269	SWN525	265
RO64	211	SH4/0		SSD104K	277	ST20/3	269	SWN526	265
RPB001P	230	SH4/1		SSE102K	276	ST20/4	269	SWN528	265
RPB013P	231	SH4/2		SSE103K	276	ST3/2F	270	SWN532	266
RPB018P	231	SH4/22		SSE104K	276	ST4/2	270	SWN534	266
RPB021P	231	SH4/23		SSE106K	276	ST4/2F	270	SWN536	266
RPB026P	231	SH4/24		SSP002	276	ST4R	270	SWN538	266
RPB031P	231	SH4/33		SSP004	276	ST4W	270	SWN542	270
RPR001P	230	SH4/44		SSP010	276	ST51/13	21	SWN544	270
RPW001P	230	SH4/55		SSP101	276	ST51/18	21	SWN546	270
RPW013P	231	SH4A		SSP102	276	ST52/13	21	SWN548	270
RPW018P		SH6/1		SSP104	276	ST52/13	300	SWN550	
RPW021P	231	SH6/22		SSP108	276	ST52/18	21	SWN552	
RPW026P	231	SH6/23		SSP110	276	ST52/24	21	SWN564	267
RPW031P		SH6/33		SSP202	276	ST53/13		SWN566	267
RPY001P	230	SH6/44		SSP303	276	ST53/13		SWN652	264
RWK030		SH7/0/44		SSP304		ST53/18		SWN654	
RWK058		SH7/02		SSP402		ST53/24		SWN656	
RWK070		SH7/03		SST102		ST54/13		SWN658	
RWK070FS		SH7/12		SST102K		ST54/13		SWN660	
RWK072		SH7/13		SST103		ST54/18		SWN662	
RWK073		SH7/23/SC		SST103K		ST54/24		SWN664	
RWK074		SH7/43		SST104		ST54/28		SWN666	
RWK076	229	SH7/53		SST104K		ST55/28		SWN668	
		SH8/0	240	SST106	274	ST6/7	268	SWN670	264

SWN672	264	SWX004	202	TWR204	304	WGW229P	76
SWN674		SWX004		TWR205		WGW2291	
SWN676		SWX008		TWY260		WGW231P	
SWN678		SWY060P		TWY262		WGW232P	
SWN708		SWY062P		TWY264		WGW233P	
SWN710		SWY064P		TWY266		WGW233F	
SWN712		SWY066P		1 1 1 2 0 0	313	WGW235P	
SWN712		SWY146		V		WGW236P	
SWN716		3001140	230	VT24/8	255	WGW237P	
SWN802		Т		V124/8	255	WGW237P	
SWN804		TFR590	201	W		WGW238P	
SWN806		TGJ052		WB1/0	224	WGW443P	
SWN808		TGJ052		WB10		WGW444P	
SWN810		TGJ060		WB11		WGW444P	
SWN812		TGJ060		WB40		WGW445P	
SWN902						WGW446P	
		TJ100/26/3		WB43			
SWN908		TJ15/16/1		WB50B		WGW530P	
SWN909		TJ250/42/6		WB50L		WGW531P	
SWN911		TJ75/26/3		WE12/1		WGW531VT	
SWN950		TM11/10		WE6/23/10T		WGW532P	
SWN952		TM11/20		WE6/23/2		WGW532VT	
SWN954		TM11/25		WE6/23/25		WGW533P	
SWN956		TM11/5		WE6/23/7		WGW533VT	
SWN961		TM28/23		WE7/23/12		WGW534P	
SWN962		TM28/43		WE7/23/3		WGW534VT	
SWN963		TRF591		WGF220P		WGW535P	
SWN964		TRF592		WGF228P		WGW535VT	
SWN965		TRF593		WGF230P		WGW536P	
SWN966		TRF595		WGF236P		WGW537P	
SWN969		TRF596		WGF240P		WGW537VT	
SWP012		TRF597		WGF241P		WGW538P	
SWP014		TRF598		WGF326P		WGW538VT	
SWP018		TRF690		WGF327P		WGW539P	
SWP020		TRF691		WGF330P		WGW539VT	
SWP032		TRF692		WGF331P		WGW540P	
SWP034		TRF693		WGF336P		WGW540VT	
SWP036		TRF695		WGF337P		WGW541P	
SWP038		TRF696		WGF530P		WGW541VT	
SWP062	262	TRF697		WGF531P		WGW600P	
SWQ003		TRF698		WGF532P		WGW601P	
SWQ003		TT100/26		WGF533P		WGW602P	
SWQ012		TT250/42		WGF534P		WGW603P	
SWQ014		TWR000P		WGF535P		WGWPEN01	
SWQ016		TWR013		WGF536P		WGWPEN01	
SWQ018		TWR014		WGF537P		WGWPEN01	
SWQ028T		TWR015	303	WGF538P	77	WRP001P	
SWQ030TAR		TWR018		WGF539P		WRP002P	
SWQ036	281	TWR020	302	WGF540P		WTR250P	75
SWQ038	281	TWR022	302	WGF541P		WTR250VT	
SWQ040		TWR038	153	WGF600P	77	WTR500P	75
SWQ200	281	TWR040	302	WGF601P	77	WTR500VT	
SWQ202	281	TWR042	302	WGR036P		WWW002	318
SWQ204		TWR044		WGR038P		WWW004	
SWQ206	281	TWR046	303	WGR136P	78	WWW006	318
SWQ208	281	TWR048	303	WGR138P	78	WWW010	318
SWQ210	281	TWR050	303	WGW001P	74	WWW016	
SWQ216	281	TWR052	303	WGW001VT	73	WWW018	318
SWQ218	281	TWR056	215	WGW002P	74	WWW024	318
SWQ220	281	TWR200	43	WGW002VT			
SWQ224	281	TWR202	304	WGW013PN	75		

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XA10	21
XA21	21
XA31	21
XA32	21
XA41	21
XA42	21
XA43	21
XA52	21
XA53	21
XA54	21
XA64	21
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### Terms and conditions of sale

#### 1 DEFINITIONS

In these conditions of Sale 'the Company' means Scil. Abware Limited 'the Buyer' means any company, firm, or individual from whom the Company receives an order which the Company has accepted in writing: 'the Goods' means the product, materials, equipment and/or services to be supplied by the Company; 'Specification' means the technical description (if any) of the Goods contained or referred to in the order.

#### 2. APPLICABILITY OF CONDITIONS

The Company accepts orders for the supply of Goods subject only to these conditions. No variation of these conditions shall be valid or binding on the Company and these conditions shall override any inconsistent terms or conditions contained or referred to in any order, or correspondence of the Buyer or elsewhere unless such variation is made and accepted in writing by the Company.

#### 3 PRICES

Unless fixed prices have been specifically agreed in writing by the Company notwithstanding any offer, quotation, tender price or price list, all prices are subject to alteration without notice and Goods will be invoiced at prices and, where applicable, exchange rates ruling at time of despatch. Unless otherwise agreed in writing all prices are strictly net of delivery charges, VAT and any other tax or duty which shall be added to the price payable by the Buyer.

#### 4. TERMS OF PAYMENT

Accounts are payable strictly as specified on the Company's invoice. Usually this will be 30 days end of month, that is payment required the end of the month following invoice date. Where agreed credit limits have been exceeded, the company may request payment of current invoices before releasing further shipments. Without prejudice to the Company's rights, such payment shall be a condition precedent to any further deliveries. The Company reserves the right to charge interest on late payment of 2% per month above the base rate quoted by HSBC from time to time from the due date until full payment is received. Unless otherwise agreed in writing, the contract price shall be paid in Pound sterling. The Company may request for overseas orders, payment by letter of credit established in favour of the Company at the time of placing of the order by the Buyer. This must be advised via a first class British Clearing Bank acceptable to the Company and maintained valid for cash drawings against presentation of the Company's invoice(s) until final contract payment but in any case for at least 3 months after scheduled completion of the contract taking into account any agreed extensions. The acceptance by the Company of the Buyer's order is conditional upon such letter of credit being received with the order. The Buyer agrees to arrange extension of such letter of credit for such period as may be requested by the Company from time to time. Other payment terms may be requested from time to time, depending upon individual orders, customer risk or country risk and will be discussed and agreed between the Company and the Buyer before despatch. No claim by the Buyer under warranty or otherwise shall entitle the Buyer to any deduction, retention or withholding of any part of any sums due for payment hereunder. The Buyer shall not be entitled to any set off or obligations within or between contracts with the Company. All consular and bank charges and import and customs duties and taxes arising from or by virtue of the contract must be paid by the Buyer.

#### 5. TIME FOR DELIVERY

Dates quoted for delivery are estimated only and not conditions of sale. No claim shall be made by the Buyer nor shall the Buyer refuse to accept delivery on the grounds of any failure to deliver on any particular date or dates.

### 6. DELIVERY

Delivery shall be deemed to be effective when the Goods are unloaded at the delivery address nominated by the Buyer or his agent for delivery, save where the Goods are to be collected by the Buyer or his Agent, when the Goods are loaded onto the vehicle collecting them. The Company reserves the right to deliver goods by instalments and in such event each instalment shall be treated as a separate contract provided that deliveries of further instalments may be withheld until the Goods or materials comprised in earlier instalments have been paid for in full.

### 7. QUANTITY ORDERED AND DELIVERED

Goods can only be supplied in the 'standard pack or quantity' or 'minimum buying quantity' shown in the Company price lists or in multiples thereof. The Company will use all reasonable endeavours to produce and deliver the quantity of Goods ordered but every contract and delivery is subject to the margins of tolerances (whether over or under the quantity stipulated) customary in the trade and no guarantee or warranty is given or implied on the part of the Company which is incompatible with this provision.

### 8. C & F AND CIFTERMS

CFR and CIF prices where appropriate will be based on the current rates of freight and insurance. Should any fluctuations in freight and insurance rates occur before completion of a contract the Company reserves the right to amend such prices effective from the date of such changes in rates. CFR prices will include cost and freight by direct routes to principle ports, airports or railheads in a Buyer's territory relevant to the means of transport and at the Company's discretion. CIF prices will, in addition to CFR terms, include insurance for breakage and/or loss on the basis of CIF value plus 10%. Any additional insurance will be for the Buyer's account. Cover notes will be issued for claims payable at destination and carrying an excess clause. It will be the Buyer's responsibility to present the claim in accordance with the provisions of these conditions.

### 9. PACKAGING

Prices shown in quotations or contracts will include the cost of the Company's normal packaging for destinations in the UK or for export unless stated otherwise. Any other forms of packaging supplied at customer's request will be charged extra and will be non-returnable.

### 10. NON-ACCEPTANCE OF DELIVERY

If the Buyer refuses or fails to take or accept delivery of the Goods at the time specified, the contract price shall nevertheless be paid as if delivery has taken place. The Company shall be entitled at its option to terminate the contract with immediate effect to dispose of the Goods as the Company may determine and to recover from the Buyer any loss and additional costs incurred as a result of such refusal or failure or to charge the Buyer for storage and other loss and expense reasonably incurred or suffered by the Company as a result of such refusal or failure but the Company shall not be bound to take any steps for the custody and care of such Goods or shall not be liable for any loss or damage suffered by the Buyer arising therefrom.

### 11. PASSING OF TITLE

(a) The absolute legal and beneficial ownership in all Goods shall remain vested in the Company and shall not pass to the Buyer until the purchase price of the order of which they form part (each order being considered as a whole) and all other monies owing by the Buyer to the Company on any account shall have been paid in full by the Buyer to the Company.

(b) Until such payment has been made, the Buyer shall hold the Goods sold as bailee of the Company and in a fiduciary capacity and shall not sell, dispose of, process or use the Goods except with the express written permission of the Company and on condition that if authorised to resell the Goods to a third party,

the Buyer shall not mingle any proceeds of sale with any other monies and shall at all times keep them in a separate bank account and identifiable as the Company's monies and shall forthwith account to the Company for the proceeds of sale to the extent of the Buyer's indebtedness to the Company.

(c) Pending receipt of payment made in accordance with these conditions the Goods shall be set aside and stored separately from other Goods in the possession of the Buyer so as to be clearly and separately identifiable and the Buyer shall deliver them upto the Company at any time on demand.

(d) In the event that the Buyer shall breach any of its obligations under these conditions or under any other agreement between the parties, the Company reserves the immediate right to repossess all or any of the Goods to which it has retained title aforesaid and thereafter to resell the same and for this purpose the Buyer hereby grants an irrevocable right of licence to the Company's servants and agents to enter upon all or any of its premises with or without vehicles during business hours. This right shall continue to subsist notwithstanding the termination of the contract for any reason and is without prejudice to any accrued rights of the Company hereunder or otherwise.

#### 12. PASSING THE RISK

The risk in the Goods shall pass to the Buyer upon delivery. The Buyer shall insure the Goods with a reputable insurance company and if the same are damaged or destroyed, then such insurance monies as are payable shall be immediately paid by the Buyer to the Company to the extent of the indebtedness of the Buyer to the Company and without prejudice to any right of the Company to recover from the Buyer any balance of the purchase price remaining due under the contract.

#### 13. CLAIMS

In the event of any loss or damage or delay to any Goods delivered at our risk to the Buyer or to his agent or otherwise to his order notice of the same shall be given to us in writing by the Buyer forthwith upon delivery (or, in the case of loss of any Goods, at the time when the Goods should have been delivered) and the Buyer shall at the same time take all necessary steps to notify the carrier in writing of any such loss damage or delay and where practicable shall enter a note of the same upon the carriers receipt. If by reason of the failure of the Buyer to give any such notice as provided above, the Company is precluded from making a recovery from the carrier in respect of the loss damage or delay complained of then the Company shall not be liable for any claim by the Buyer in respect thereof and the Buyer shall be liable to pay for the Goods as though no such loss damage or delay had occurred.

#### 14 WARRANTY

The Company warrants that the Goods shall be in conformity with the Specification or be within its usual tolerances as to quality and finish. The Company shall replace or at its option refund the purchase price as applicable to any Goods which do not in its sole opinion comply with this warranty, provided always that any claim under this warranty is made within 24 hours of commencement of the processing of the Goods or (if earlier) within 28 days of delivery of the Goods alleged to be defective.

It is the Buyer's responsibility to determine whether the Goods are suitable for the contemplated use, whether or not such use is known to the Company. No warranty, condition or representation is given or made as to the quality of the Goods supplied hereunder their condition or their fitness for any particular purpose and any such warranty, condition or representation whether express or implied whether by statute, by collateral agreement or otherwise is hereby excluded.

### 15. LIMITATION OF LIABILITY

Except for death or personal injury caused by the negligence of the Company, the Company's aggregate liability to the Buyer howsoever arising whether for negligence, breach of contract, misrepresentation or otherwise shall under no circumstances exceed the cost of the defective, damaged or undelivered Goods which give rise to such liability as determined by the net price invoiced to the Buyer in respect of any occurrence or series of occurrences.

### 16. CANCELLATION BY THE BUYER

The Buyer may cancel or suspend the contract only with the Company's prior written consent following agreement by the Buyer to reimburse the Company in an amount to be determined by the Company or the Buyer may, not later than 3 days before the scheduled delivery date, by written notice, cancel the order for Goods provided that the Buyer shall reimburse the Company for any costs incurred up to the date of receipt of the notice of such cancellation.

### 17. TERMINATION BY THE COMPANY

The Company shall (without prejudice to any of its other rights hereunder) be entitled to terminate any contract forthwith by written notice to the Buyer if the Buyer shall:

- a. Become insolvent
- b. Fail to pay any amounts falling due (whether under these conditions or otherwise) to the Company within 30 days of the date payment is due.
- c. Have a Receiver appointed
- d. Pass a resolution for winding-up (other than for purposes of reconstruction or amalgamation)
- e. Commit a breach of any term of the contract or any other contract with the Company.

### 18 FORCE MAIFURE

If the commencement, continuation or complete performance by the Company of its obligations under this contract is prevented, hindered, delayed or rendered uneconomic by reason of force majeure then the Company shall not be responsible to the Buyer for any loss or damage incurred or sustained by the Buyer as a result. For the purpose of this condition, the term Force Majeure shall include any factor affecting the performance of this contract attributable to acts, events, non-happenings, omissions or incidents beyond the reasonable control of the Company and, in particular, (but without limiting the generality of the foregoing), the following, namely: strikes, lock-outs, riots, civil revolution, war, state of national emergency of governmental action, trade dispute or labour disturbance, accident, break down of plant or machinery, difficulty or increased expense in obtaining workmen, materials or transport, fire, explosion, storm, flood, earthquake or other natural physical disaster or circumstances affecting the supply of the Goods (or the raw materials therefore) by a Company's normal source of supply or the delivery of the Goods by the Company's normal route or means of delivery.

### 19. IMPORT LICENCES

The Buyer's order must specify the number, date of expiry and value of any necessary Import Licence.

### 20. NOTICES

Any notice hereunder shall be deemed to have been given if sent by pre-paid, first class post, fax or email to the party concerned at its last known address. Notices sent by first-class post shall be deemed to have been given 7 days after dispatch and notices sent by fax or email shall be deemed to have given on the date of dispatch.

### 21. CONSTRUCTION

All contracts made with the Company shall be governed by and construed according to the laws of England and the parties hereby submit to the jurisdiction of the English courts.

April 2009