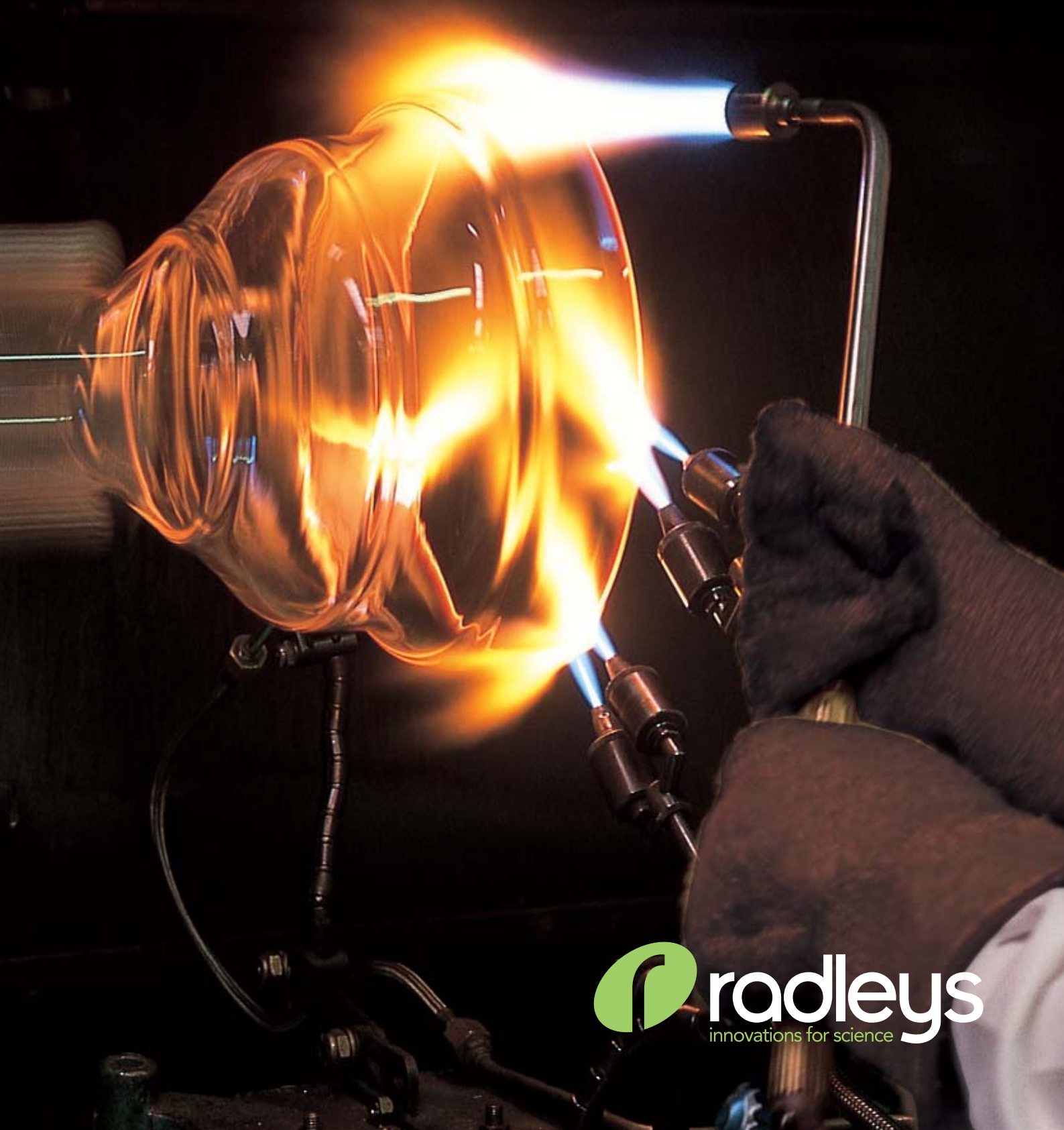
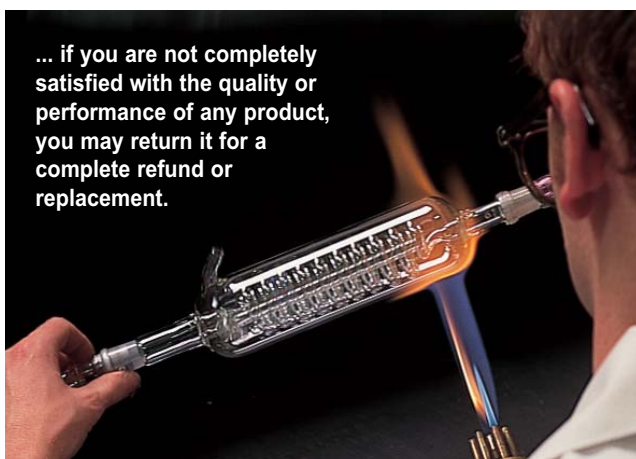
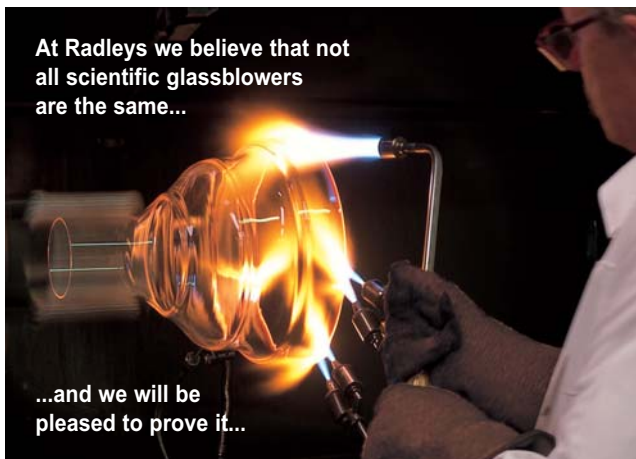


# Scientific Glassware

## International Mini Catalogue



# Specialist Scientific Glassblowing



## Specialist Scientific Glassblowing

### Radleys first established a glassblowing facility in 1968.

Whilst there have been many changes since then, specialised scientific glassblowing still remains a highly skilled hand craft.

Indeed it takes years to perfect the skill of glassblowing to any degree of proficiency and our team of highly skilled glassblowers and glass technologists have many years of glassblowing experience to their credit.

### Flexibility...

In the last 35 years Radleys have been asked to make a multitude of diverse items, for a wealth of industries and applications - from pharmaceuticals to agrochemicals, from medical research to environmental monitoring, from hospitals to refineries, from mechanical engineering to electronics, from power stations to universities and from dairies to breweries.

### Quality Assurance

Quality is the essence of good scientific glassblowing and our customers quite rightly demand the best. Indeed, we are proud to say, that some of our best customers are glassblowers.

Product excellence comes from strict quality standards; and as such Radleys operate a ISO9002 approved Quality Assurance System.

### A commitment to safety...

Safety is a very important factor in the manufacture of laboratory glassware. We ensure that all our glassware is annealed and stress free before leaving our factory, and that any important safety requirements that may have been specified, have been complied with in full.

### Working to your precise scientific specifications...

Precision goes hand in hand with quality. Regardless of whether we are working from a sketch, drawing or a sample, precision is our highest priority. Throughout the glassblowing process constant checks are made on tolerances, seals, joint sizes, wall thickness and any other important specifications. Ensuring that the end product meets your requirements exactly. All our glassware is hand-made and free of imperfections, such as: air lines, scratches, stones and strain. Giving you consistent and reliable glassware that you can trust in.

### Fast delivery...

Our large team of skilled scientific glassblowers means that we have the capacity to deal with your urgent projects. Whether you need a quick repair or urgently require a new or replacement item, we will be pleased to accommodate your needs.

### No Hassle Policy...

At Radleys, our customers are our future. Customer care is our first priority and we aim to keep it that way. Therefore, if you are not completely satisfied with the quality or performance of any product purchased, you may return it for a complete refund or replacement.

### Versatility...

Whether you require a small, precision made specialised item or a large vessel, for single or large contract quantities... Radleys will provide you with an unrivalled scientific glassblowing service...

t: +44-(0)1799-513320

f: +44-(0)1799-513283

e: [sales@radleys.co.uk](mailto:sales@radleys.co.uk)

## Custom Glassblowing Service

Radleys' team of glass technologist and product specialists have a vast experience in the design of all types of scientific glassware.

### Fax us a sketch and we'll send you a quote...

Free quotations are given for any item regardless of size or complexity. Simply fax or send us a sketch, or sample, with the relevant dimensions and specifications, and we will provide you with a detailed faxed quotation by return. Alternatively, describe what you want and we will provide you with a drawing to approve.

### OEM/Contract enquiries welcome...

We will be pleased to quote for your OEM equipment requirements. FREE quotations are given for any quantity.

### Need a modification or something slightly different...

If you have an existing piece of glassware you want modified or would like a new item altered during manufacture to suit your requirements, we can help.

## Glassware Design Service

### Need some help designing your glassware or system?

#### Give us a call...

Whether you require a large process rig or have a small prototype project, we will be happy to assist in all aspects of the design stage. Our experienced glass technologists and product specialists have many years of experience in project development and problem solving.

We have a particular expertise in the design and manufacture of glass reaction vessels, from 250ml to 30 litres - including the full range of reaction system accessories such as frameworks, overhead stirrers, lids, thermoregulators and probes.

We can also provide custom engineering solutions in a wide range of materials, including: PTFE, PEEK, Acrylic, Aluminium, Stainless Steel, Polycarbonate, HDPE and Polypropylene.

Advice can be given **FREE of Charge** by telephone, email or via on-site visits.

## Scope of Our Services

### Glassware Repairs

Our glassware repair service will save you money and reduce unnecessary waste. FREE of charge quotations, with a collection and delivery service available. Please see overleaf for more details.

### Services

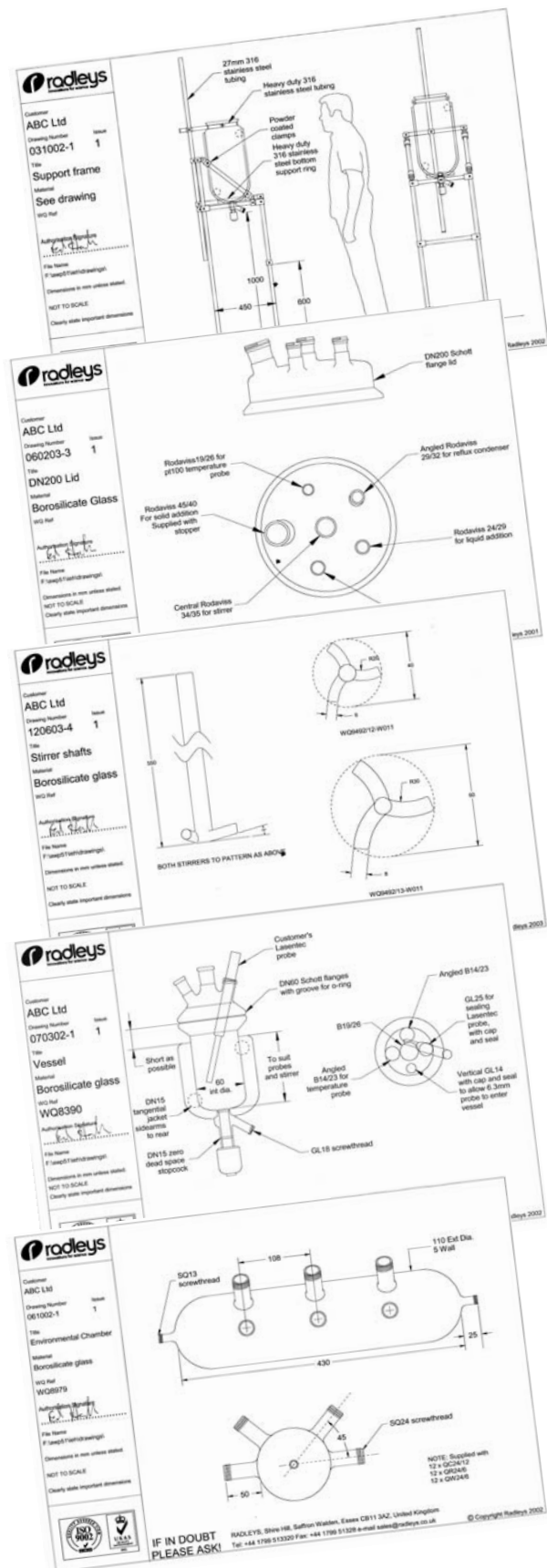
- Borosilicate & Quartz Scientific Glassblowing
- Custom Glass Fabrication
- Prototype & Development Projects
- Large Production Runs
- Graduating, Grinding & Cutting
- Enamel Transfers & Screen Printing
- Amber Staining & Plastic Coating
- Installation of large systems or complex assemblies
- Glassware safety audits

Contact us today on...

t: +44-(0)1799-513320

f: +44-(0)1799-513283

e: sales@radleys.co.uk





## Glassware Repair Service

**Save £££'s on our glassware repair service..**

We believe that the quality of our manufactured glassware is second-to-none, and it is with the same attention to quality that we undertake to repair broken glassware. As a rule-of-thumb, it generally costs between a 1/3 and 1/2 of the new price to repair a broken glass item.

**Our Repair Service includes:-**

- We can arrange for a regular collection and delivery.
- We will provide a heavy duty plastic Repairs Collection Box.
- Included with each Repairs Box will be a dedicated sheet for the listing of items for repair. This helps departmental costing and avoids any confusion within departments with regard to ownership of returned items.
- Included with each Repairs Box is a full set of safety instructions for the safe handling, packing and cleaning of broken glassware. Plus a pair of cut resistant Polysafe Glass Gloves.
- We will provide a free of charge written quotation, which will be faxed to you by return.
- If an item is unrepairable or it is not economical to repair, we will inform you and either return the glassware to you, or dispose of it.
- We will proceed with the repairs only on receipt of your authorisation.



## Amber Staining Service

**Amber staining is cost effective to apply to one or a hundred pieces of glassware...**

Amber stained glassware is often essential when working with photosensitive substances. It has been shown that glass which has been ambered can absorb short wavelengths up to approximately 500nm. The quantities of glassware requiring ambering are usually small, making production in coloured glass, both impractical and uneconomic. Amber staining overcomes these problems, because it is as cost effective to apply to one or a hundred pieces of glassware.

We undertake to amber all types of glassware, including that supplied by the customer, in addition to specialising in the manufacture and ambering of our own glassware. Some of the most common items we amber are Separating Funnels, Reaction Vessels, Burettes, Flasks, Beakers, Cylinders, Test Tubes, Bottles etc. However this is by no means a complete list and we will be pleased to amber stain any standard or specialist item you may require.

**Contact us today for a FREE quotation**



## NEW Fluoralon® 'G' Safety Coating for Glassware

**This unique Fluoropolymer coating can be applied to almost any borosilicate scientific glassware item and offers exceptional chemical resistance and temperature range...**

The Fluoralon 'G' safety coating has been developed to protect users of glassware from dangerous shards and contamination of work areas in the event of breakage. The coating is applied to the exterior surfaces of the glassware providing an immensely strong 'plastic' safety barrier.

Fluoralon 'G' is sprayed on and then heat cured. It is therefore capable of following the most complex geometry with complete integrity, unlike conventional protective sleeving which tends to 'web'. Fluoralon 'G' has an exceptionally wide temperature tolerance from -200°C to +250°C.

**Benefits**

- Reduces risk of injury due to glassware cuts
- Reduces liability risk for schools
- Improves the resistance of the glass to thermal shock
- Protects user from hazardous spilled liquids

**Contact us today on +44-(0)1799-513320 for more information**

## Certificates of Conformity

Available for all standard and custom glassware items...

Single certificates for complete orders or single certificates for each item @ £12.50 per certificate. Cat No. 810001.

A single certificate with each item individually numbered, @ £12.50 per certificate plus £2.50 per item. Cat No. 810002.

Contact us today on +44-(0)1799-513320 for more information



## On-site Glassblowing Service

Need an on-site temporary or back-up glassblower ? Give us a call...

Even glassblowers need to have holidays... so if you need temporary cover we can help. Skilled glassblowers are provided on a daily or weekly basis. Glassblowers are also available for on-site work such as assembling vacuum rigs, on-site emergency repairs, glassware safety audits etc.

Contact us today on +44-(0)1799-513320 for more information



## Pressure & Vacuum Safety Procedures - Testing of Glassware

Subjecting laboratory glassware to pressure can be very hazardous, and should therefore be avoided if possible.

If you do wish to subject your glassware to pressure or vacuum, the following safety precautions should be taken...

- Obtain independent pressure/vacuum certification of individual vessels.
- Always enclose vessels with safety shields.
- Use safety netting or plastic coatings.
- Avoid over-clamping, which can cause stress within the vessel.
- Check glassware for damage, such as chips or cracks. Even the smallest defects can significantly affect the strength of your glassware.
- Always apply or release the pressure or vacuum gradually.
- Generally speaking, flat bottomed vessels should not be used under vacuum as they are likely to implode.

### Pressure & Vacuum Testing

We are pleased to be able to offer this service for all types of vessel. Individual glassware items are independently tested to; twice the maximum working pressure; or in the case of a vacuum, at a predetermined level. Certification includes an individual record for each item and certification of equipment used, traceable to national standards. Quotations are given for individual or multiple items on request.

Please note that whilst pressure/vacuum testing and certification will indicate the performance of the glassware under specific test conditions, no guarantee of its performance under actual operating conditions can be given or implied. The nature of glass and the variability of operating conditions make this impractical.

For advice on working with vacuum/pressure, or for more information on vacuum or pressure testing please contact us today on +44-(0)1799-513320 for more information

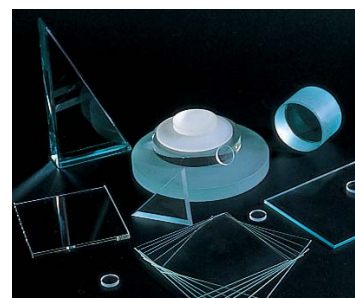


## Cold Glass Working

Our range of specialist cold glass working services include...

Drilling, cutting, flat grinding, parallel grinding of tube ends, centreless grinding, polishing, etching, graduating, sand blasting, optical discs and prisms, glass plate, screen printing, enamel transfers and much more...

Contact us today on +44-(0)1799-513320 for more information



# Specialist Scientific Glassblowing



## Glassware For Standard Test Methods

Manufacture of glassware to meet the requirements of international test methods including, BS, ASTM, IP, EPA, FDA, European and British Pharmacopea...

Whatever your specialist area we will be pleased to quote for complete glassware systems to meet the requirements of a large range of standard test methods, both in the UK and abroad. Our service includes the sourcing of methods and where requested, the certification of conformance with those methods.

Contact us today on +44-(0)1799-513320 for more information

## Sintered Glassware Porosity Grade Guide

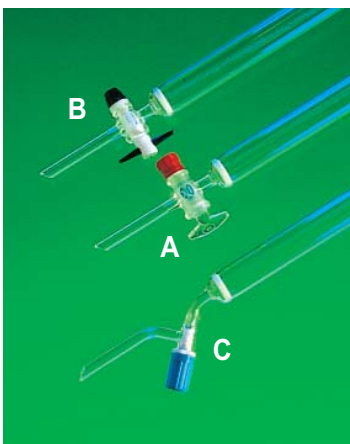
POROSITY	ISO 4793 DESIGNATION	NOMINAL PORE SIZE	EXAMPLE APPLICATIONS	POROSITY	ISO 4793 DESIGNATION	NOMINAL PORE SIZE	EXAMPLE APPLICATIONS
	P250	160 - 250µm	Coarse filtration, Gas Distribution		P40	16 - 40µm	Analytical filtration of medium precipitation. Fine gas filtration, Extraction apparatus for fine grained material
	P160	100 - 160µm	Coarse filtration, Gas Distribution Extraction apparatus for Coarse grained material		P16	10 - 16µm	Analytical work with fine precipitates
	P100	40 - 100µm	Preparative fine filtration, Mercury filtration, Gas washing, Crystalline precipitate filtration		P10	4 - 10µm	Ultrafine filtration



## Clear Fused Quartz Glassware

Fused Quartz Glass is a unique material with an unrivalled combination of purity, high temperature resistance, thermal shock resistance, high electrical insulation, optical transparency and chemical inertness. Whether you require a simple beaker, furnace tube or a more complicated photo-chemical reactor, we will be pleased to help.

Contact us today on +44-(0)1799-513320 for a FREE quotation



## Stopcock Selection Guide

### A PTFE Key Stopcock

This stopcock has a highly polished borosilicate glass barrel with a PTFE key which will not stick or seize. Does not need grease and therefore avoids problem of blockage or contamination.

### B Glass Key Stopcock

General purpose stopcock with interchangeable borosilicate glass key and barrel. Must be lightly lubricated with a good quality stopcock grease before use

### C Rotaflo® Stopcock

The Rotaflo stopcock combines an all borosilicate glass and PTFE pathway with fine flow control. Vacuum capability to 10<sup>4</sup> Torr.

Prices for these and other stopcocks and spare keys etc are available on request, please call +44-(0)1799-513320 for more information

## Sidearm Selection Guide

Radleys glassware is typically offered with a choice of sidearm types: 11mm olive, SQ13 screwthread or GL14 screwthread.

**Olive** - The most basic form of connection (see Fig 1). Also known as a nipple or hose barb. This traditional style allows rubber tubing to be pushed directly onto the glassware. This option is considered to be the least safe due to the risk of injury due to glass breakages when connecting or removing the tubing.

**SQ13 and GL14** - are both screwthreads, which are intended for use with plastic hose connectors. The rubber tubing is pushed onto the plastic hose connector and the connector is, in turn, screwed onto the thread – a much safer alternative.

**So, which one to choose, SQ13 or GL14? They are actually almost identical!**

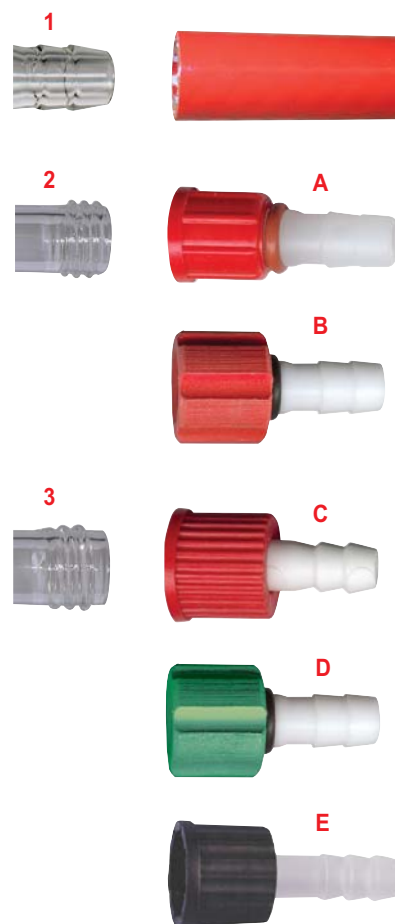
If you have used Quickfit® apparatus, then you may already be familiar with SQ13 (Fig 2) which is commonly supplied on all Quickfit condensers. The standard SQ13 hose connector (Fig A) has a maximum operating temperature of 80°C. The cap is made from glass filled polypropylene, the hose connector is polyacetal and the O-rings are silicone.

An alternative hose connector (Fig B) is available for applications which demand better chemical resistance and a higher temperature range. The red cap is glass filled PTFE, the hose connector is pure PTFE and the O-rings are viton. Max operating temperature is 200°C.

Alternatively, you may be familiar with the GL14 type (Fig 3), which is used on equipment from continental Europe e.g. Buchi® or Schott (Duran®). This standard GL14 hose connector (Fig C) has a maximum operating temperature of 140°C. The cap is PBTP, the hose connector is polypropylene and the sealing washer is silicone.

An alternative high performance GL14 hose connector (Fig D) is available for applications which demand better chemical resistance and a higher temperature range. The green cap is glass filled PTFE, the hose connector is pure PTFE with a O-rings are viton. Max operating temperature is 200°C.

A third GL14 connector is available (Fig E) which has a maximum operating temperature of 250°C. The black cap is glass-fibre reinforced PPS, the hose connector is PFA with an elastomer PFA sealing lip with FPM O-ring.



## Safe Handling of Laboratory Glassware

**Handled with care your laboratory glassware will last a lifetime...**

To ensure the maximum life for your glassware and to protect users from injury please consider the following...

- Always wear the appropriate protective clothing e.g. cut resistant gloves, eye protection, lab coats etc when undertaking experiments using glassware.
- Use safety shielding, plastic netting or plastic coatings to protect you and your glassware.
- Check all glassware for damage, such as scratches, chips or cracks. Even the smallest defects can significantly affect the strength of your glassware.
- Never heat glassware with scratches, chips or cracks, as such defects can make the glass prone to premature failure.
- Avoid subjecting laboratory glassware to pressure or vacuum (See page 567 for further advice).
- Never force tubing onto sidearms. Use the GL or SQ plastic screwthread type hose connectors where possible.
- If jointed glassware becomes stuck or frozen, do not use excessive force to free the joints. A gentle tapping or rocking of the two sides of the joint can often release them. If you are unsuccessful please call for advice.
- The use of Rodaviss® safety joints will prevent frozen joints (please see pages 570 & 571).
- Do not lift or carry glassware by the rim or side arm, always support the main body.
- Whilst borosilicate glassware offers superior chemical resistance, the use of hydrofluoric acid, hot phosphoric acid and strong alkalis should be avoided.
- When heating or autoclaving glass bottles always slightly loosen the cap to allow venting.
- Whilst borosilicate glass has excellent heat resistance, it should not be subjected to sudden temperature changes or thermal shock.
- Always heat glassware slowly and evenly.
- The maximum recommended working temperature for borosilicate glass is 500°C. Care should always be taken when heating above 150°C to ensure that heating and cooling is done in a slow and uniform manner.

**For more information on any aspects of glassware safety please call +44-(0)1799-513320**



# Rodaviss®

The alternative  
glass joint...



---

Interchangeable

---

Will Not Stick or Jam

---

Leakproof Under Vacuum and Pressure

---

Grease Free - Maintaining Sample Integrity

---

Safe and Extremely Strong

---

Remains Secure for Temperatures up to 200°C

---

Convenient Sealing Caps

---

Competitively Priced

---

# Rodaviss® Interchangeable Glass Joints



## Rodaviss the alternative joint...

Rodaviss is a revolutionary, new, extra-safe borosilicate glass joint for connecting laboratory glassware. Rodaviss is safe under vacuum or pressure, grease free, interchangeable with standard 1:10 tapered ground joints, will not stick or jam, is extremely strong, can be used up to 200°C and is competitively priced.

## Interchangeable

Rodaviss is completely interchangeable with ordinary 1:10 tapered

ground glass joints. Both the cone and socket joints of Rodaviss will fit perfectly with any ordinary glass joint of equal size. This means that to change to Rodaviss, you do not have to throw away all your old glassware. Simply specify Rodaviss joints on all your new glassware, and very soon you will have a comprehensive range of laboratory glassware giving you all the benefits of Rodaviss many safety features.

## Will not stick or jam

Rodaviss incorporates a patented non-jam method which prevents the male and female joints from becoming 'frozen' together. The combination of a small glass rim on the outside of the male joint and a plastic loosening ring, allows you to free the two parts of the joint should they become jammed, without the need to apply dangerous pressure.



## Leak-proof under vacuum and pressure

The combination of a screwthread connecting cap and O-ring gives the Rodaviss joint a perfect airtight seal, ideal for work involving vacuum or pressure, remaining leak-proof even without grease or PTFE surfacing.



## Grease free, maintaining sample integrity

Ordinary ground glass joints require either grease or a PTFE sleeve to ensure a good seal and to prevent jamming, but Rodaviss patented design requires neither, maintaining absolute sample integrity.

## Extremely Strong

Because Rodaviss joints are so secure, they improve apparatus stability and rigidity, thus reducing the need for as many clamps and supports as conventional connecting methods. With Rodaviss there is no need for additional lugs or clips. Rodaviss sockets are available in two wall thicknesses, with the heavy wall option being particularly useful for larger apparatus assemblies.

## Convenient Sealing Cap

The convenient screwthread design on the outside of the Rodaviss female joint enables you to easily and safely seal your vessel with a Rodaviss screwthread sealing cap. All Rodaviss sealing caps have an internal PTFE face for an air-tight seal.

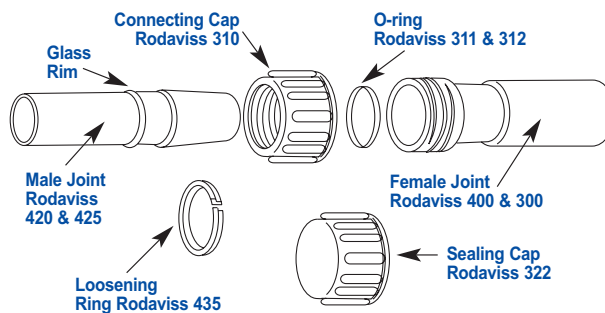


## Rodaviss assembly...

Place the male cone through the connecting cap, and then through the O-ring. After matching up the cone and socket halves of the joint, screw down the connecting cap to compress the O-ring, thus ensuring a perfect seal, and a good rigid assembly. Clip the loosening ring between the connecting cap and glass rim on the male joint. In the event of any difficulty in undoing the joint because the surfaces are jammed, simply unscrew the connecting cap back onto the loosening ring, which will push the joints easily apart. This system will release even the most 'frozen' joints. A Rodaviss sealing cap may then be screwed onto the threaded socket to close the apparatus or vessel.

## Get your old glassware modified...

We will be pleased to quote to modify your existing glassware to incorporate Rodaviss joints. It can be particularly cost effective to make such conversions during the repair of your glassware.



CAT NO	JOINT SIZE	TUBE OD	TOTAL LENGTH	PACK SIZE	PRICE PER PK
<b>Rodaviss 400 Medium Wall Sockets</b>					
400-1423	14/23	18mm	120mm	10	
400-1926	19/26	22mm	127mm	10	
400-2429	24/29	28mm	130mm	10	
400-2932	29/32	34mm	140mm	10	
400-3435	34/35	38mm	140mm	10	
400-4540	45/40	50mm	150mm	10	
<b>Rodaviss 300 Heavy Wall Sockets</b>					
300-1423	14/23	20mm	125mm	10	
300-1926	19/26	24mm	125mm	10	
300-2429	24/29	30mm	135mm	10	
300-2932	29/32	34mm	140mm	10	
300-3435	34/35	40mm	150mm	10	
300-4540	45/40	50mm	165mm	10	
<b>Rodaviss 310 Connecting Cap</b>					
310-1423	14/23			10	
310-1926	19/26			10	
310-2429	24/29			10	
310-2932	29/32			10	
310-3435	34/35			10	
310-4540	45/40			10	

CAT NO	JOINT SIZE	TUBE OD	TOTAL LENGTH	PACK SIZE	PRICE PER PK
<b>Rodaviss 420 Medium Wall Cones</b>					
420-1423	14/23	13mm	115mm	10	
420-1926	19/26	16mm	130mm	10	
420-2429	24/29	22mm	125mm	10	
420-2932	29/32	26mm	135mm	10	
420-3435	34/35	32mm	140mm	10	
420-4540	45/40	40mm	155mm	10	
<b>Rodaviss 425 Medium Wall Drip Cones</b>					
425-1423	14/23	13mm	125mm	10	
425-1926	19/26	16mm	128mm	10	
425-2429	24/29	22mm	135mm	10	
425-2932	29/32	26mm	140mm	10	
425-3435	34/35	32mm	140mm	10	
425-4540	45/40	40mm	165mm	10	
<b>Rodaviss 322 Sealing Cap (with PTFE face)</b>					
322-1423	14/23			10	
322-1926	19/26			10	
322-2429	24/29			10	
322-2932	29/32			10	
322-3435	34/35			10	
322-4540	45/40			10	

CAT NO	JOINT SIZE	PACK SIZE	PRICE PER PK
<b>Rodaviss 311 Nitrile O-Rings</b>			
311-1423	14/23	10	
311-1926	19/26	10	
311-2429	24/29	10	
311-2932	29/32	10	
311-3435	34/35	10	
311-4540	45/40	10	
<b>Rodaviss 312 Viton O-ring</b>			
312-1423	14/23	10	
312-1926	19/26	10	
312-2429	24/29	10	
312-2932	29/32	10	
312-3435	34/35	10	
312-4540	45/40	10	
<b>Rodaviss 435 Loosening Ring</b>			
435-1423	14/23	10	
435-1926	19/26	10	
435-2429	24/29	10	
435-2932	29/32	10	
435-3435	34/35	10	
435-4540	45/40	10	

# ZerØair™ Air-Free Laboratory Glassware

ZerØair™ - for carefree, airfree handling...

**ZerØair™ glassware designed especially for the manipulation of air-sensitive compounds.**

The essential feature of the ZerØair apparatus is a sidearm fitted with a simple stopcock control, which enables the apparatus to be evacuated to eliminate air and allow the introduction of inert gas.

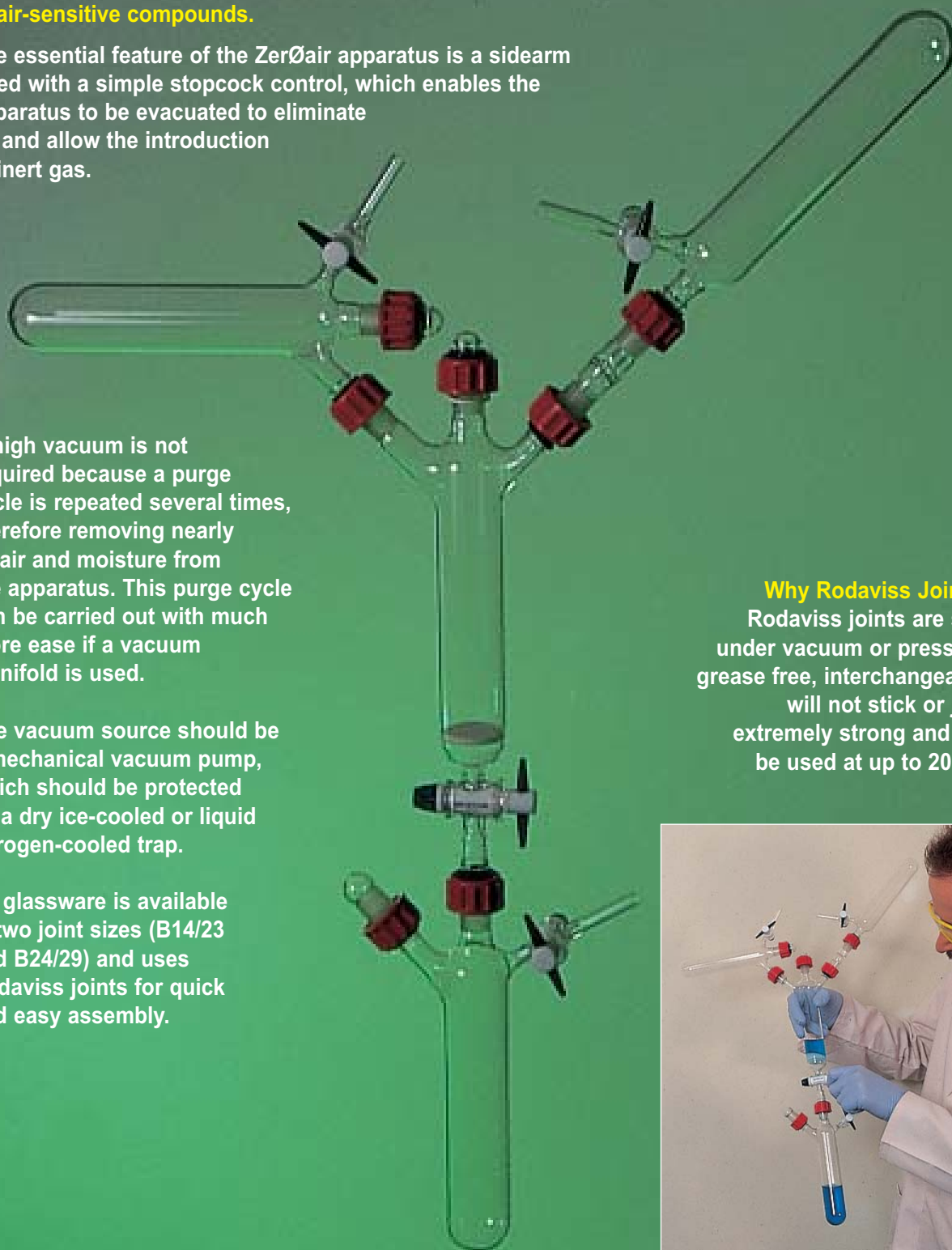
A high vacuum is not required because a purge cycle is repeated several times, therefore removing nearly all air and moisture from the apparatus. This purge cycle can be carried out with much more ease if a vacuum manifold is used.

The vacuum source should be a mechanical vacuum pump, which should be protected by a dry ice-cooled or liquid nitrogen-cooled trap.

All glassware is available in two joint sizes (B14/23 and B24/29) and uses Rodaviss joints for quick and easy assembly.

### Why Rodaviss Joints?

Rodaviss joints are safe under vacuum or pressure, grease free, interchangeable, will not stick or jam, extremely strong and can be used at up to 200°C.



### Complete Rodaviss connections...

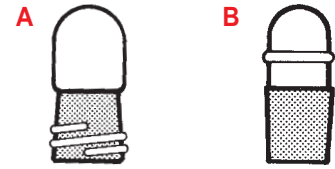
All apparatus which incorporates a Rodaviss cone will come supplied with the appropriate O-rings, Loosening Rings and Connecting Caps required for assembly.

### If you prefer ordinary joints...

Whilst Rodaviss joints are completely interchangeable with ordinary joints, we will be pleased to offer any item from our range with ordinary ground joints instead of Rodaviss at no extra charge

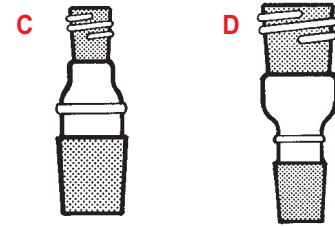
## A ZerØair™ Stopper - with socket

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
561300	Socket Stopper	14/23	1	
571300	Socket Stopper	24/29	1	



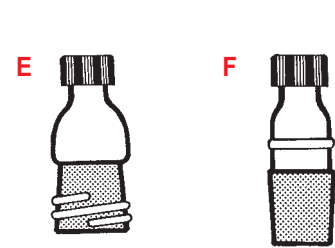
## B ZerØair™ Stopper - with cone

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
561400	Cone Stopper	14/23	1	
571400	Cone Stopper	24/29	1	



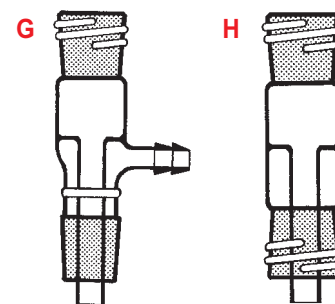
## C ZerØair™ Reducing Adapter

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
562900	14/23 Socket to 24/29 Cone	1	



## D ZerØair™ Enlarging Adapter

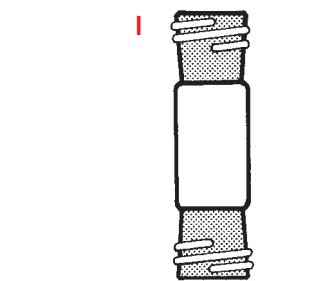
CAT NO	DESCRIPTION	PK QTY	PRICE EACH
572900	24/29 Socket to 14/23 Cone	1	



## E ZerØair™ Septum Inlet Adapter - with socket

This septum inlet adapter is supplied with one cap and PTFE/Silicone septum. Spare pre-assembled caps with PTFE/Silicone septa are available.

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
560200	Septum Inlet Adapter Socket	14/23	1	
570200	Septum Inlet Adapter Socket	24/29	1	
565800	Pre-assembled Caps with PTFE/Silicone Septa		10	
565805	Pre-assembled Caps with PTFE/Silicone Septa		100	



## F ZerØair™ Septum Inlet Adapter - with cone

This septum inlet adapter is supplied with one cap and PTFE/Silicone septum. Spare pre-assembled caps with PTFE/Silicone septa are available.

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
560100	Septum Inlet Adapter Cone	14/23	1	
570100	Septum Inlet Adapter Cone	24/29	1	
565800	Pre-assembled Caps with PTFE/Silicone Septa		10	
565805	Pre-assembled Caps with PTFE/Silicone Septa		100	

## G ZerØair™ Straight Adapter - with stem & vacuum

This straight adapter has an internal stem and vacuum take-off.

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
561200	Cone/Socket Straight Adapter, Stem & Vacuum	14/23	1	
571200	Cone/Socket Straight Adapter, Stem & Vacuum	24/29	1	

## H ZerØair™ Straight Adapter - with stem

This straight adapter is supplied with an internal stem.

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
561100	Cone/Socket Straight Adapter with Internal Stem	14/23	1	
571100	Cone/Socket Straight Adapter with Internal Stem	24/29	1	

## I ZerØair™ Straight Adapter

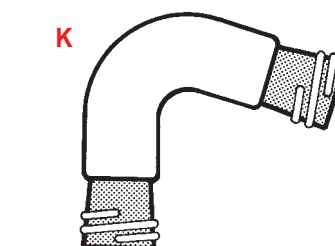
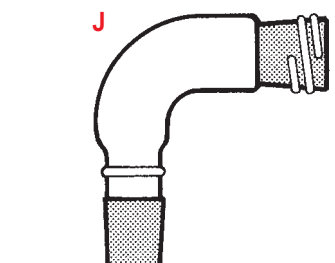
CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
561000	Socket Straight Adapter	14/23	1	
571000	Socket Straight Adapter	24/29	1	

## J ZerØair™ 90° Adapter

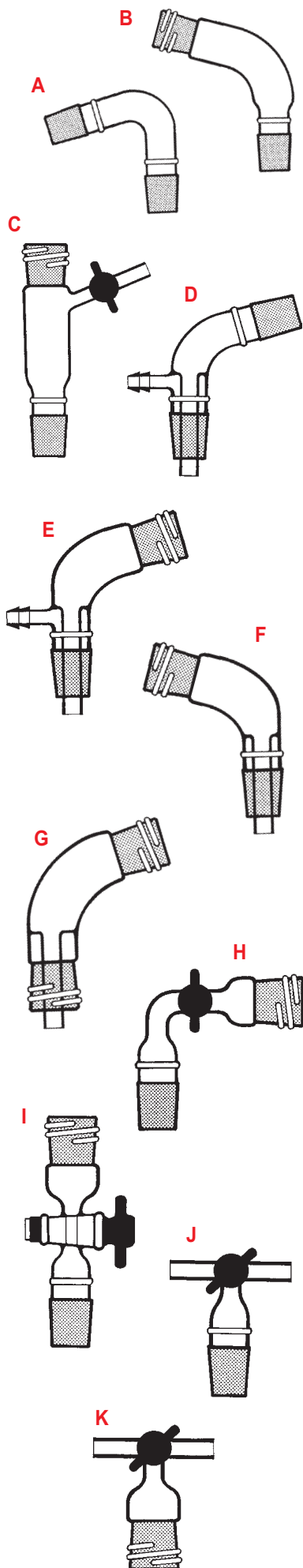
CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
561500	Socket/Cone 90° Adapter	14/23	1	
571500	Socket/Cone 90° Adapter	24/29	1	

## K ZerØair™ 75° Adapter

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
562100	75° Socket Adapter	14/23	1	
572100	75° Socket Adapter	24/29	1	



# ZerØair™ Adapters



## A ZerØair™ 75° Adapter

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
562200	75° Cone Adapter	14/23	1	
572200	75° Cone Adapter	24/29	1	

## B ZerØair™ 105° Adapter

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
562000	Socket/Cone 105° Adapter	14/23	1	
572000	Socket/Cone 105° Adapter	24/29	1	

## C ZerØair™ Adapter - with PTFE key stopcock

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
562300	Socket/Cone Adapter with Stopcock	14/23	1	
572300	Socket/Cone Adapter with Stopcock	24/29	1	

## D ZerØair™ 105° Adapter - with cone, stem & vacuum take-off

This 105° adapter has cone ends with internal stem and vacuum take-off.

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
562500	105° Cone Adapter, Stem & Vacuum	14/23	1	
572500	105° Cone Adapter, Stem & Vacuum	24/29	1	

## E ZerØair™ 105° Adapter - with stem & vacuum take-off

This 105° adapter has an internal stem and vacuum take-off.

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
562600	socket/cone 105° Adapter, Stem & Vacuum	14/23	1	
572600	socket/cone 105° Adapter, Stem & Vacuum	24/29	1	

## F ZerØair™ 105° Adapter - with internal stem

This 105° adapter has an internal stem.

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
562400	Socket/Cone 105° Adapter, Internal Stem	14/23	1	
572400	Socket/Cone 105° Adapter, Internal Stem	24/29	1	

## G ZerØair™ 105° Adapter - with socket & internal stem

This 105° adapter has socket ends with internal stem.

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
562700	105° Socket Adapter, Internal Stem	14/23	1	
572700	105° Socket Adapter, Internal Stem	24/29	1	

## H ZerØair™ 90° Adapter - with stopcock

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
562800	Socket/Cone 90° Adapter with Stopcock	14/23	1	
572800	Socket/Cone 90° Adapter with Stopcock	24/29	1	

## I ZerØair™ Adapter - with PTFE key stopcock

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
560900	Socket/Cone Stopcock Adapter	14/23	1	
570900	Socket/Cone Stopcock Adapter	24/29	1	

## J ZerØair™ Adapter - cone with PTFE key stopcock

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
560700	Cone Stopcock Adapter	14/23	1	
570700	Cone Stopcock Adapter	24/29	1	

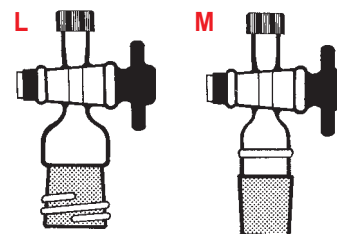
## K ZerØair™ Adapter - socket with PTFE key stopcock

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
560800	Socket Stopcock Adapter	14/23	1	
570800	Socket Stopcock Adapter	24/29	1	

## L ZerØair™ Septum Inlet Adapter - with socket

This septum inlet adapter with PTFE key stopcock is supplied with one cap and PTFE/Silicone septum. Spare pre-assembled caps with PTFE/Silicone septa are available.

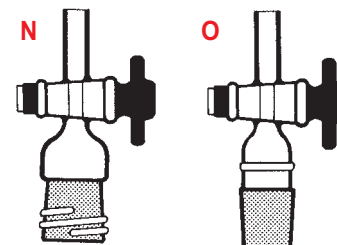
CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
560400	Socket Septum Inlet Adapter with Stopcock	14/23	1	
570400	Socket Septum Inlet Adapter with Stopcock	24/29	1	
565800	Pre-Assembled Caps with PTFE/Silicone Septa		10	
565805	Pre-Assembled Caps with PTFE/Silicone Septa		100	



## M ZerØair™ Septum Inlet Adapter - with cone

This septum inlet adapter with PTFE key stopcock is supplied with one cap and PTFE/Silicone septum. Spare pre-assembled caps with PTFE/Silicone septa are available.

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
560300	Cone Septum Inlet Adapter with Stopcock	14/23	1	
570300	Cone Septum Inlet Adapter with Stopcock	24/29	1	
565800	Pre-Assembled Caps with PTFE/Silicone Septa		10	
565805	Pre-Assembled Caps with PTFE/Silicone Septa		100	

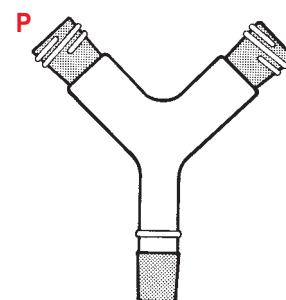


## N ZerØair™ Adapter - socket with PTFE key stopcock

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
560500	Socket Stopcock Adapter	14/23	1	
570500	Socket Stopcock Adapter	24/29	1	

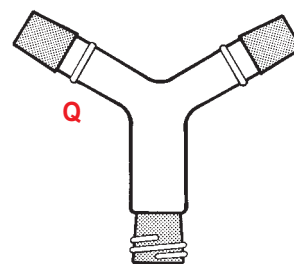
## O ZerØair™ Adapter - cone with PTFE key stopcock

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
560600	Cone Stopcock Adapter	14/23	1	
570600	Cone Stopcock Adapter	24/29	1	



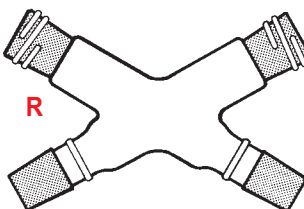
## P ZerØair™ 3 Way Adapter - with cone/socket

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
561800	1 Cone, 2 Socket 3 Way Adapter	14/23	1	
571800	1 Cone, 2 Socket 3 Way Adapter	24/29	1	



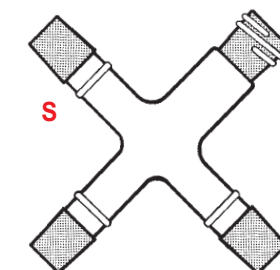
## Q ZerØair™ 3 Way Adapter - with cone/socket

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
561700	2 Cone, 1 Socket 3 Way Adapter	14/23	1	
571700	2 Cone, 1 Socket 3 Way Adapter	24/29	1	



## R ZerØair™ 4 Way Adapter - with cone/socket

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
561600	2 Cone, 2 Socket 4 Way Adapter	14/23	1	
571600	2 Cone, 2 Socket 4 Way Adapter	24/29	1	



## S ZerØair™ 4 Way Adapter - with cone/socket

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
561900	3 Cone, 1 Socket 4 Way Adapter	14/23	1	
571900	3 Cone, 1 Socket 4 Way Adapter	24/29	1	

### If you prefer ordinary joints...

Whilst Rodaviss joints are completely interchangeable with ordinary joints, we will be pleased to offer any item from our range with ordinary ground joints instead of Rodaviss at no extra charge.

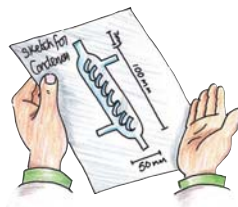
### Fax us a sketch and we'll send you a quote...

Free quotations are given for any item regardless of size or complexity. Simply fax or send us a sketch, or sample, with the relevant dimensions and specifications, and we will provide you with a detailed faxed quotation by return. Alternatively, describe what you want and we will provide you with a drawing to approve. Contact us today on...

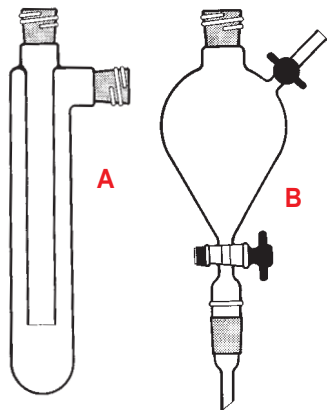
t: +44-(0)1799-513320

f: +44-(0)1799-513283

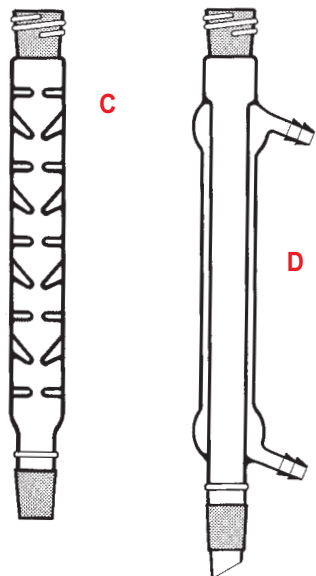
e: sales@radleys.co.uk



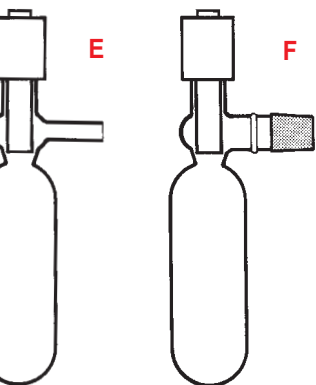
## ZerØair™ Laboratory Glassware

**A ZerØair™ Cold Trap - with socket**

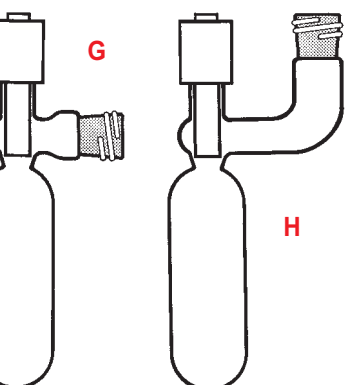
CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
563100	Socket Cold Trap	14/23	1	
573100	Socket Cold Trap	24/29	1	

**B ZerØair™ Addition Funnel - with PTFE key stopcock**

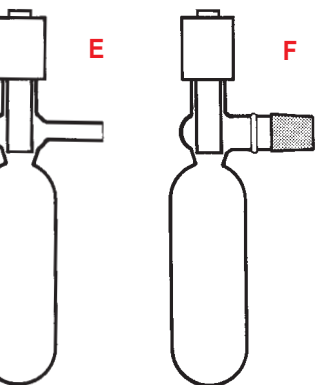
CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
563510	100ml Addition Funnel	14/23	1	
573512	250ml Addition Funnel	24/29	1	

**C ZerØair™ Vigreux Column - with cone/socket**

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
563300	Cone/Socket Vigreux Column	14/23	1	
573300	Cone/Socket Vigreux Column	24/29	1	

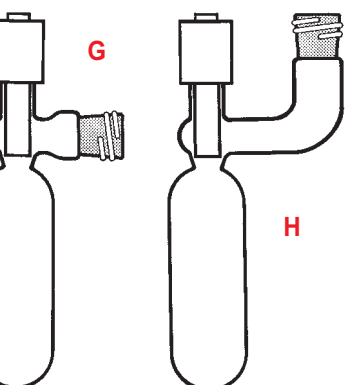
**D ZerØair™ Liebig Condenser**

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
563200	Socket Liebig Condenser	14/23	1	
573200	Socket Liebig Condenser	24/29	1	

**E ZerØair™ Schlenk Tube - with sidearm**

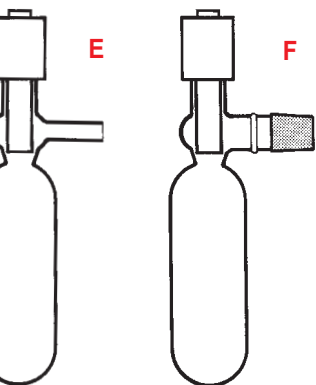
This Schlenk tube is available in 4 volume sizes ideal for reaction or storage, with 10mm bore youngs PTFE high vacuum stopcock.

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
564206	25ml Schlenk Tube		1	
564208	50ml Schlenk Tube		1	
564210	100ml Schlenk Tube		1	
564212	250ml Schlenk Tube		1	

**F ZerØair™ Schlenk Tube - with cone**

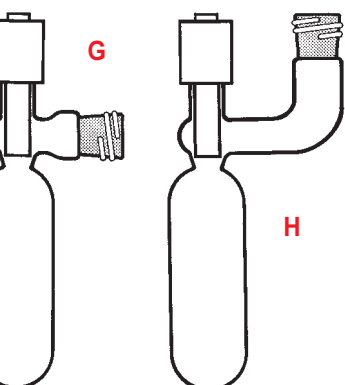
This Schlenk tube with cone joint is available in 4 volume sizes. Ideal for reaction or storage, with 10mm bore Youngs PTFE high vacuum stopcock.

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
564406	25ml Schlenk Tube with Cone	14/23	1	
564408	50ml Schlenk Tube with Cone	14/23	1	
564410	100ml Schlenk Tube with Cone	14/23	1	
574410	100ml Schlenk Tube with Cone	24/29	1	
574412	250ml Schlenk Tube with Cone	24/29	1	

**G ZerØair™ Schlenk Tube - with socket**

This Schlenk tube with cone joint is available in 4 volume sizes. Ideal for reaction or storage, with 10mm bore Youngs PTFE high vacuum stopcock.

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
564306	25ml Schlenk Tube with Socket	14/23	1	
564308	50ml Schlenk Tube with Socket	14/23	1	
564310	100ml Schlenk Tube with Socket	14/23	1	
574310	100ml Schlenk Tube with Socket	24/29	1	
574312	250ml Schlenk Tube with Socket	24/29	1	

**H ZerØair™ Schlenk Tube - with socket**

This Schlenk tube with socket joint and 90° elbow, is for use with the double vacuum manifold Cat No. 565400 on page 580. It is available in 4 volume sizes and ideal for reaction or storage, fitted with 10mm bore Youngs PTFE high vacuum stopcock.

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
564106	25ml Schlenk Tube with Socket	14/23	1	
564108	50ml Schlenk Tube with Socket	14/23	1	
564110	100ml Schlenk Tube with Socket	14/23	1	
564112	250ml Schlenk Tube with Socket	14/23	1	

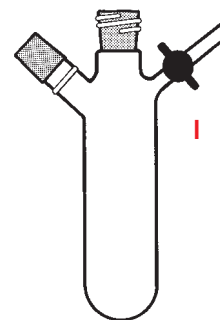
**If you prefer ordinary joints...**

Whilst Rodaviss joints are completely interchangeable with ordinary joints, we will be pleased to offer any item from our range with ordinary ground joints instead of Rodaviss at no extra charge.

## I ZerØair™ Schlenk Tube - with cone and socket

This Schlenk tube with cone and socket joint is available in 4 volume sizes and ideal for reaction or storage. Fitted with PTFE key stopcock.

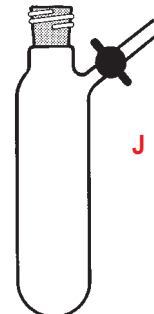
CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
565906	25ml Schlenk Tube with Cone/Socket	14/23	1	
565908	50ml Schlenk Tube with Cone/Socket	14/23	1	
565910	100ml Schlenk Tube with Cone/Socket	14/23	1	
575908	50ml Schlenk Tube with Cone/Socket	24/29	1	
575910	100ml Schlenk Tube with Cone/Socket	24/29	1	
575912	250ml Schlenk Tube with Cone/Socket	24/29	1	



## J ZerØair™ Schlenk Tube - with socket

This Schlenk tube with socket joint is available in 3 volume sizes and ideal for reaction or storage. Fitted with PTFE key stopcock.

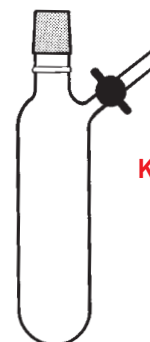
CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
564506	25ml Schlenk Tube with Socket	14/23	1	
564508	50ml Schlenk Tube with Socket	14/23	1	
564510	100ml Schlenk Tube with Socket	14/23	1	
574508	50ml Schlenk Tube with Socket	24/29	1	
574510	100ml Schlenk Tube with Socket	24/29	1	
574512	250ml Schlenk Tube with Socket	24/29	1	



## K ZerØair™ Schlenk Tube - with cone

This Schlenk tube with cone joint is available in 4 volume sizes and ideal for reaction or storage. Fitted with PTFE key stopcock.

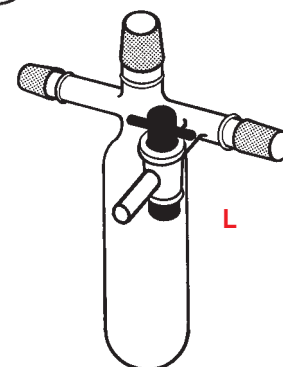
CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
564606	25ml Schlenk Tube with Cone	14/23	1	
564608	50ml Schlenk Tube with Cone	14/23	1	
564610	100ml Schlenk Tube with Cone	14/23	1	
574608	50ml Schlenk Tube with Cone	24/29	1	
574610	100ml Schlenk Tube with Cone	24/29	1	
574612	250ml Schlenk Tube with Cone	24/29	1	



## L ZerØair™ Solid Transfer Vessel - with cone

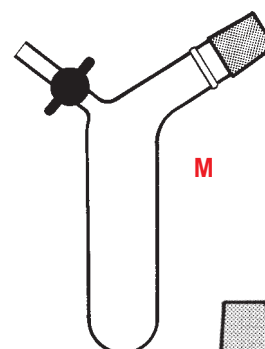
This vessel is for the safe transfer and packaging of air sensitive solid compounds under inert atmosphere. The entry joint has a choice of either 14/23 or 24/29 joint size, with two 14/23 joint side arms. The gas inlet is fitted with PTFE key stopcock.

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
563410	Solid Transfer Vessel with Cone	14/23	1	
573410	Solid Transfer Vessel with Cone	24/29	1	



## M ZerØair™ Storage Tube - with cone

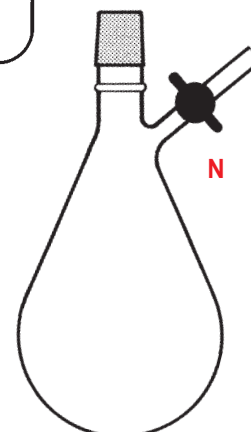
CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
563006	25ml Storage Tube with Cone	14/23	1	
563008	50ml Storage Tube with Cone	14/23	1	
563010	100ml Storage Tube with Cone	14/23	1	
573008	50ml Storage Tube with Cone	24/29	1	
573010	100ml Storage Tube with Cone	24/29	1	



## N ZerØair™ Schlenk Flask - with cone

This Schlenk flask with cone joint is available in 5 volume sizes and ideal for reaction or storage. Fitted with PTFE key stopcock.

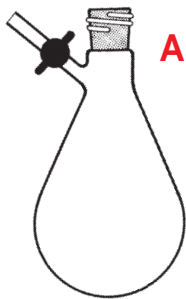
CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
563906	25ml Schlenk Flask with Cone	14/23	1	
563908	50ml Schlenk Flask with Cone	14/23	1	
563910	100ml Schlenk Flask with Cone	14/23	1	
563912	250ml Schlenk Flask with Cone	14/23	1	
573908	50ml Schlenk Flask with Cone	24/29	1	
573910	100ml Schlenk Flask with Cone	24/29	1	
573912	250ml Schlenk Flask with Cone	24/29	1	
573914	500ml Schlenk Flask with Cone	24/29	1	



### If you prefer ordinary joints...

Whilst Rodaviss joints are completely interchangeable with ordinary joints, we will be pleased to offer any item from our range with ordinary ground joints instead of Rodaviss at no extra charge.

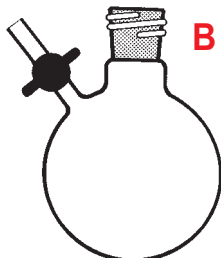
# ZerØair™ Laboratory Glassware



## A ZerØair™ Schlenk Flask

This Schlenk flask with socket joint is available in 5 volume sizes and ideal for reaction or storage. Fitted with PTFE key stopcock.

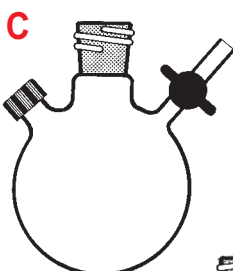
CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
564006	25ml Schlenk Flask with Socket	14/23	1	
564008	50ml Schlenk Flask with Socket	14/23	1	
564010	100ml Schlenk Flask with Socket	14/23	1	
564012	250ml Schlenk Flask with Socket	14/23	1	
574008	50ml Schlenk Flask with Socket	24/29	1	
574010	100ml Schlenk Flask with Socket	24/29	1	
574012	250ml Schlenk Flask with Socket	24/29	1	
574014	500ml Schlenk Flask with Socket	24/29	1	



## B ZerØair™ Solvent Storage Flask

Flask for storing solvents. Fitted with PTFE key stopcock.

CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
563708	50ml Solvent Storage Flask with Socket	14/23	1	
563710	100ml Solvent Storage Flask with Socket	14/23	1	
563712	250ml Solvent Storage Flask with Socket	14/23	1	
573708	50ml Solvent Storage Flask with Socket	24/29	1	
573710	100ml Solvent Storage Flask with Socket	24/29	1	
573712	250ml Solvent Storage Flask with Socket	24/29	1	



## C ZerØair™ Septum Inlet Flask

This septum inlet flask with PTFE key stopcock is supplied with one cap and PTFE/Silicone septum. Spare pre-assembled caps with PTFE/Silicone septa are available.

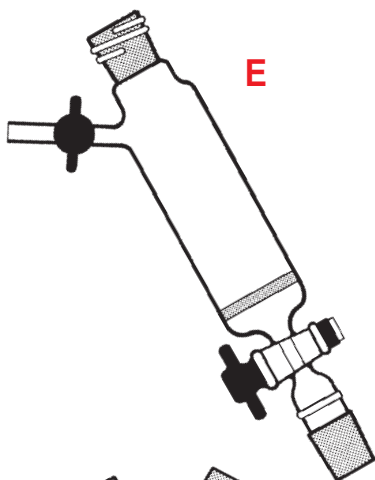
CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
563610	100ml Socket Septum Inlet Flask with Stopcock	14/23	1	
563612	250ml Socket Septum Inlet Flask with Stopcock	14/23	1	
573610	100ml Socket Septum Inlet Flask with Stopcock	24/29	1	
573612	250ml Socket Septum Inlet Flask with Stopcock	24/29	1	
565800	Pre-assembled Caps with PTFE/Silicone Septa,		10	
565805	Pre-assembled Caps with PTFE/Silicone Septa		100	



## D ZerØair™ Septum Inlet Flask

This septum inlet flask is supplied with one cap and PTFE/Silicone septum. Spare pre-assembled caps with PTFE/Silicone septa are also available.

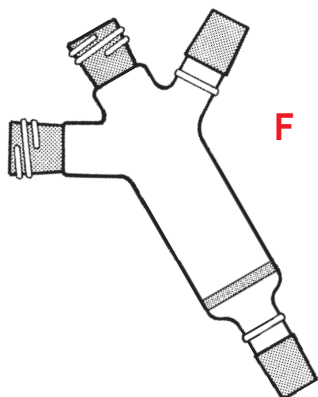
CAT NO	DESCRIPTION	SIZE	PK QTY	PRICE EACH
563808	50ml Septum Inlet Flask with Socket	14/23	1	
563810	100ml Septum Inlet Flask with Socket	14/23	1	
563812	250ml Septum Inlet Flask with Socket	14/23	1	
573808	50ml Septum Inlet Flask with Socket	24/29	1	
573810	100ml Septum Inlet Flask with Socket	24/29	1	
573812	250ml Septum Inlet Flask with Socket	24/29	1	
565800	Pre-assembled Caps with PTFE/Silicone Septa		10	
565805	Pre-assembled Caps with PTFE/Silicone Septa		100	



## E ZerØair™ Filter Funnel - with sintered disc

This filter funnel with socket and cone is supplied with sintered disc in a choice of 2 diameters and 2 porosities. PTFE key stopcocks.

CAT NO	DESCRIPTION	SIZE	POR	DISC Ø	CAPACITY	PK QTY	PRICE EACH
566008	Filter Funnel Socket	14/23	2	30mm	50ml	1	
566108	Filter Funnel Socket	14/23	3	30mm	50ml	1	
576010	Filter Funnel Socket	24/29	2	40mm	100ml	1	
576110	Filter Funnel Socket	24/29	3	40mm	100ml	1	



## F ZerØair™ Schlenk Storage Tube - with sintered disc

This storage tube with 1 cone and 2 socket joints is supplied with sintered disc in a choice of 2 diameters and 2 porosities.

CAT NO	DESCRIPTION	SIZE	POR	DISC Ø	CAPACITY	PK QTY	PRICE EACH
565208	Schlenk Storage Tube	14/23	2	30mm	50ml	1	
565308	Schlenk Storage Tube	14/23	3	30mm	50ml	1	
575210	Schlenk Storage Tube	24/29	2	40mm	100ml	1	
575310	Schlenk Storage Tube	24/29	3	40mm	100ml	1	

## G ZerØair™ Schlenk Storage Tube - cone/socket & sintered disc

This storage tube with 2 cone and 2 socket joints is supplied with sintered disc in a choice of 2 diameters and 2 porosities. PTFE key stopcock.

CAT NO	DESCRIPTION	SIZE	POR	DISC Ø	CAPACITY	PK QTY	PRICE EACH
565008	Schlenk Tube	14/23	2	30mm	50ml	1	
565108	Schlenk Tube	14/23	3	30mm	50ml	1	
575010	Schlenk Tube	24/29	2	40mm	100ml	1	
575110	Schlenk Tube	24/29	3	40mm	100ml	1	

## H ZerØair™ Double Ended Filter - cone & sintered disc

This double ended filter with cone joints is supplied with sintered disc in a choice of 2 diameters and 2 porosities. PTFE key stopcocks.

CAT NO	DESCRIPTION	SIZE	POR	DISC Ø	CAPACITY	PK QTY	PRICE EACH
566208	Filter Tube	14/23	2	30mm	50ml	1	
566308	Filter Tube	14/23	3	30mm	50ml	1	
576210	Filter Tube	24/29	2	40mm	100ml	1	
576310	Filter Tube	24/29	3	40mm	100ml	1	

## I ZerØair™ Double Tube Recrystalliser - with sockets

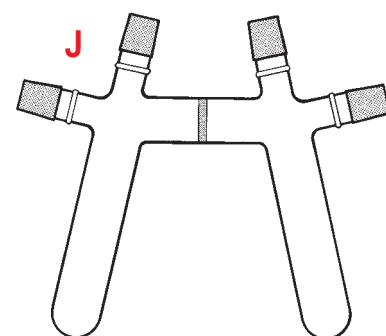
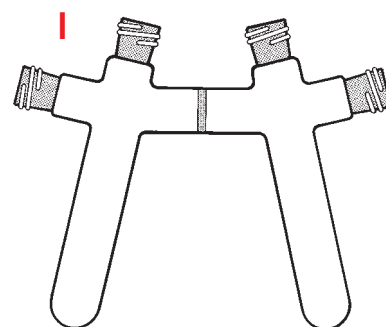
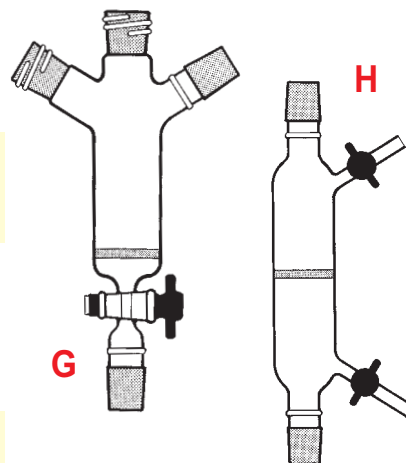
For multiple crystallisation of air sensitive compounds. Compounds crystallised in one arm can be recrystallised in a closed system. This is achieved by decanting the supernatant liquid into the other arm and vacuum distilling the solvent back into the crystals in the first arm. This process may be repeated. Dried crystals may then be transferred to a Schlenk tube. Sintered disc porosity 2.

CAT NO	DESCRIPTION	SIZE	POR	CAPACITY	PK QTY	PRICE EACH
564809	Recrystalliser Socket	14/23	2	75ml per arm	1	

## J ZerØair™ Double Tube Recrystalliser - with cones

For multiple crystallisation of air sensitive compounds. Compounds crystallised in one arm can be recrystallised in a closed system. This is achieved by decanting the supernatant liquid into the other arm and vacuum distilling the solvent back into the crystals in the first arm. This process may be repeated. Dried crystals may then be transferred to a Schlenk tube. Sintered disc porosity 2.







CAT NO	DESCRIPTION	SIZE	POR	CAPACITY	PK QTY	PRICE EACH
574809	Recrystalliser Cone	14/23	2	75ml per arm	1	



### If you prefer ordinary joints...

Whilst Rodaviss joints are completely interchangeable with ordinary joints, we will be pleased to offer any item from our range with ordinary ground joints instead of Rodaviss at no extra charge.

## Sintered Glassware Porosity Grade Guide

POROSITY	ISO 4793 DESIGNATION	NOMINAL PORE SIZE	EXAMPLE APPLICATIONS	POROSITY	ISO 4793 DESIGNATION	NOMINAL PORE SIZE	EXAMPLE APPLICATIONS
	P250	160 - 250µm	Coarse filtration, Gas Distribution		P40	16 - 40µm	Analytical filtration of medium precipitation. Fine gas filtration, Extraction apparatus for fine grained material
	P160	100 - 160µm	Coarse filtration, Gas Distribution Extraction apparatus for Coarse grained material		P16	10 - 16µm	Analytical work with fine precipitates
	P100	40 - 100µm	Preparative fine filtration, Mercury filtration, Gas washing, Crystalline precipitate filtration		P10	4 - 10µm	Ultrafine filtration

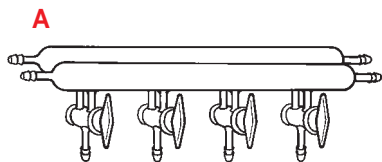
### Fax us a sketch and we'll send you a quote...

Free quotations are given for any item regardless of size or complexity. Simply fax or send us a sketch, or sample, with the relevant dimensions and specifications, and we will provide you with a detailed faxed quotation by return. Alternatively, describe what you want and we will provide you with a drawing to approve. Contact us today on...

t: +44-(0)1799-513320

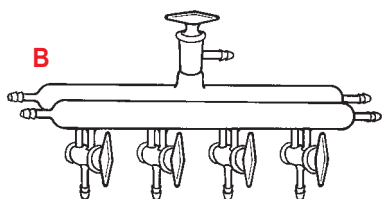
f: +44-(0)1799-513283

# ZerØair™ Vacuum Manifolds



## ZerØair™ Vacuum Manifolds

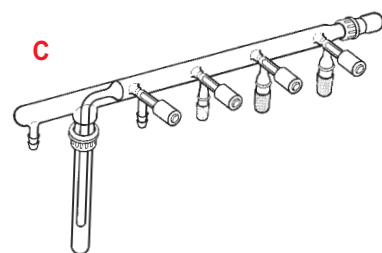
When connected to a vacuum and a suitable inert gas these manifolds provide a convenient and efficient method of eliminating air or moisture vapours from ZerØair™ apparatus. Using repeated purge cycles a high vacuum is not required.



### A ZerØair™ Dual Bank Vacuum Manifold

This dual bank vacuum manifold has 3mm glass key general purpose double oblique stopcocks, with plastic retaining device. Connections are 11mm olive.

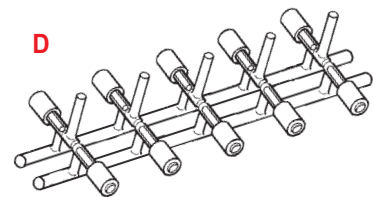
CAT NO	DESCRIPTION	PK QTY	PRICE EACH
599033	3 Position Dual Bank Vacuum Manifold	1	
599034	4 Position Dual Bank Vacuum Manifold	1	
599035	5 Position Dual Bank Vacuum Manifold	1	



### B ZerØair™ Dual Bank Vacuum Manifold

This dual bank vacuum manifold has 3mm glass key general purpose double oblique stopcocks, with plastic retaining device and pressure relief stopcock. Connections are 11mm olive.

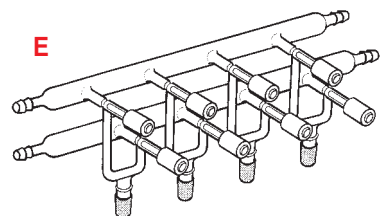
CAT NO	DESCRIPTION	PK QTY	PRICE EACH
599023	3 Position Dual Bank Vacuum Manifold	1	
599024	4 Position Dual Bank Vacuum Manifold	1	
599025	5 Position Dual Bank Vacuum Manifold	1	



### C ZerØair™ Vacuum Manifold - with trap

This manifold comes with integral trap which eliminates the need for an extra connection, and therefore improves vacuum performance. Various connections consisting of:- two 24/29 cones, one 14/23 cone and one 11mm olive, make this a very flexible system. Removable end cap allows for cleaning. Fitted with 10mm bore Youngs PTFE high vacuum stopcocks.

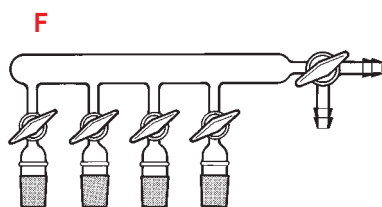
CAT NO	DESCRIPTION	PK QTY	PRICE EACH
565500	Vacuum Manifold with Trap	1	



### D ZerØair™ Dual Bank Vacuum Manifold

Dual bank manifold with 3 way, 10mm bore Youngs PTFE high vacuum stopcocks. Supplied with 13mm O.D. plain ends for glassblower to join directly to system or for connection to tubing. Other connections are also available, please call our sales team on 01799-513320 for further details.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
565600	3 Position Dual Bank Vacuum Manifold	1	
565700	5 Position Dual Bank Vacuum Manifold	1	



### E ZerØair™ Dual Bank Vacuum Manifold

This dual bank manifold has 10mm bore Youngs PTFE high vacuum stopcocks, which are forward facing for ease of access. Designed for use with Schlenk tubes shown on previous pages. Fitted with four 14/23 cones and 11mm olives for access to gas or vacuum.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
565400	Dual Bank Vacuum Manifold	1	

### F ZerØair™ Single Bank Manifold

This single bank manifold with spring loaded high vacuum glass key stopcock. Fitted with 2mm stopcock and 14/23 cones for connection to ZerØair apparatus, and a 4mm T-bore stopcock, for access to inert gas or vacuum. Hose connections are 11mm olive.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
599013	3 Position Single Bank Manifold	1	
599014	4 Position Single Bank Manifold	1	
599015	5 Position Single Bank Manifold	1	

#### Fax us a sketch and we'll send you a quote...

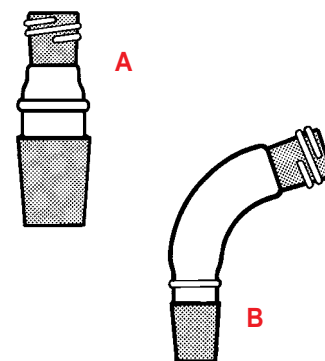
Free quotations are given for any item regardless of size or complexity. Simply fax or send us a sketch, or sample, with the relevant dimensions and specifications, and we will provide you with a detailed faxed quotation by return. Alternatively, describe what you want and we will provide you with a drawing to approve. Contact us today on...

t: +44-(0)1799-513320  
 f: +44-(0)1799-513283  
 e: sales@radleys.co.uk



**A Rodaviss Reduction Adapter**

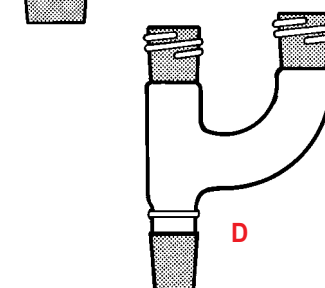
CAT NO	DESCRIPTION	SOCKET	CONE	PK QTY	PRICE EACH
310012	Reduction Adapter	14/23	19/26	1	
310013	Reduction Adapter	14/23	24/29	1	
310023	Reduction Adapter	19/26	24/29	1	
310024	Reduction Adapter	19/26	29/32	1	
310025	Reduction Adapter	19/26	34/35	1	
310034	Reduction Adapter	24/29	29/32	1	
310035	Reduction Adapter	24/29	34/35	1	

**B Rodaviss Plain Bend Adapter**

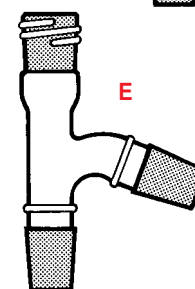
CAT NO	DESCRIPTION	SOCKET	CONE	PK QTY	PRICE EACH
311022	Plain Bend Adapter	19/26	19/26	1	
311023	Plain Bend Adapter	19/26	24/29	1	
311033	Plain Bend Adapter	24/29	24/29	1	

**C Rodaviss Right Angle Tubing Adapter**

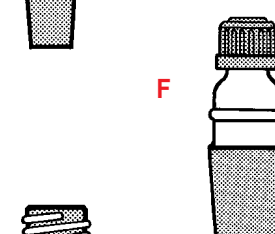
CONE SIZE	CAT NO 11MM OLIVE	CAT NO GL14 THREAD	CAT NO SQ13 THREAD	PK QTY	PRICE EACH
14/23	312201	312401	312601	1	
19/26	312202	312402	312602	1	
24/29	312203	312403	312603	1	
29/32	312204	312404	312604	1	
34/35	312205	312405	312605	1	
45/40	312207	312407	312607	1	

**D Rodaviss Parallel Neck Adapter**

CAT NO	DESCRIPTION	SOCKET	CONE	PK QTY	PRICE EACH
314022	Parallel Neck Adapter	19/26	19/26	1	
314023	Parallel Neck Adapter	19/26	24/29	1	
314033	Parallel Neck Adapter	24/29	24/29	1	

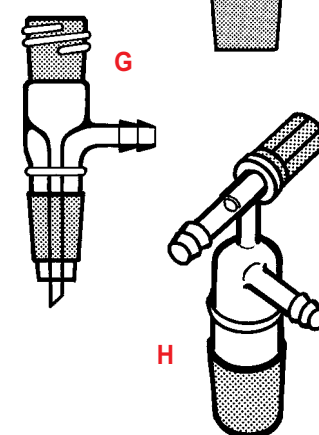
**E Rodaviss Distillation Neck Adapter**

CAT NO	DESCRIPTION	SOCKET	CONE	PK QTY	PRICE EACH
316022	Distillation Adapter	19/26	19/26	1	
316023	Distillation Adapter	19/26	24/29	1	
316033	Distillation Adapter	24/29	24/29	1	

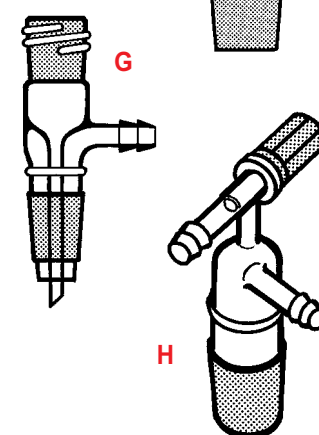
**F Rodaviss Cone/Screwthread Adapter**

This versatile adapter has a Rodaviss cone and SQ13 screwthread. Ideal for holding thermometers, or as a low speed stirrer guide. Adapter is suitable for holding items with a diameter of between 6 and 7mm.

CAT NO	DESCRIPTION	SOCKET	PK QTY	PRICE EACH
313601	Cone/Screwthread Adapter	14/23	1	
313602	Cone/Screwthread Adapter	19/26	1	
313603	Cone/Screwthread Adapter	24/29	1	

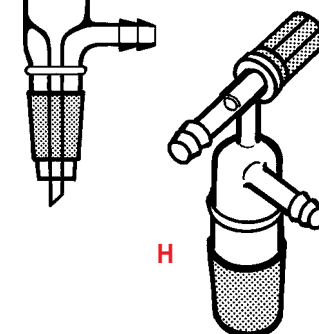
**G Rodaviss Adapter with Vacuum Connector**

SOCKET SIZE	CONE SIZE	CAT NO 11MM OLIVE	CAT NO GL14 THREAD	CAT NO SQ13 THREAD	PK QTY	PRICE EACH
19/26	19/26	318222	318422	318622	1	
19/26	24/29	318223	318423	318623	1	
24/29	24/29	318233	318433	318633	1	

**H Rodaviss Flow Controller**

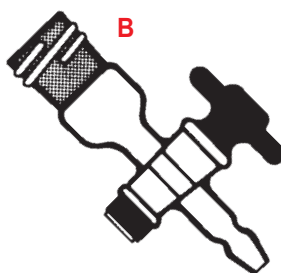
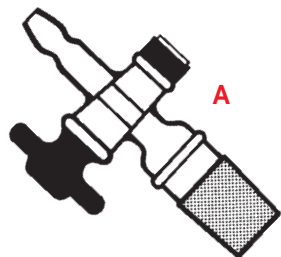
This new Flow Controller is ideal for use in Flash Chromatography and other applications requiring precision flow control. Stopcocks are Rotafllo.

SOCKET SIZE	CONE SIZE	CAT NO 11MM OLIVE	CAT NO GL14 THREAD	CAT NO SQ13 THREAD	PK QTY	PRICE EACH
14/23	3	386314	386414	386514	1	
19/26	3	386319	386419	386519	1	
24/29	3	386324	386424	386524	1	
29/32	6	386329	386429	386529	1	
34/35	6	386334	386434	386534	1	
45/40	6	386345	386445	386545	1	

**If you prefer ordinary joints...**

Whilst Rodaviss joints are completely interchangeable with ordinary joints, we will be pleased to offer any item from our range with ordinary ground joints instead of Rodaviss at no extra charge.

# Adapter - Beakers



## Rodaviss® Stopcock Adapters

For flow control or venting. B14 to B24 cone/socket sizes are supplied with 2mm glass or PTFE key or 3mm Rotafllo. B29 to B45 cone/socket sizes are supplied with 4mm glass or PTFE key or 6mm Rotafllo. Adapters are supplied with 9mm olive connections as standard, but are also available with GL14 or SQ13 screwthread connectors.

### A Cone/Stopcock Adapter

CONE SIZE	CAT NO GLASS KEY	CAT NO PTFE KEY	PRICE EACH	CAT NO ROTAFLO	PRICE EACH
14/23	382114	384114	£28.25	386114	
19/26	382119	384119	£29.58	386119	
24/29	382124	384124	£31.47	386124	
29/32	382129	384129	£35.30	386129	
34/35	382134	384134	£39.92	386134	
45/40	382145	384145	£49.86	386145	

### B Socket/Stopcock Adapter

SOCKET SIZE	CAT NO GLASS KEY	CAT NO PTFE KEY	PRICE EACH	CAT NO ROTAFLO	PRICE EACH
14/23	382214	384214	£25.84	386214	
19/26	382219	384219	£26.71	386219	
24/29	382224	384224	£28.31	386224	
29/32	382229	384229	£31.43	386229	
34/35	382234	384234	£34.45	386234	
45/40	382245	384245	£40.92	386245	

## Quartz Beakers - Low and Tall Form

Clear Fused Quartz Glass is a unique material with an unrivaled combination of purity, high temperature resistance, thermal shock resistance, high electrical insulation, optical transparency and chemical inertness. Continuous operating temperature of up to 1000°C.



CAT NO	DESCRIPTION	PK QTY	PRICE EACH
RQWF/5	5ml Quartz wide beaker - 30mm x 22mm ø	1	
RQWF/10	10ml Quartz wide beaker - 35mm x 26mm ø	1	
RQWF/25	25ml Quartz wide beaker - 49mm x 34mm ø	1	
RQWF/50	50ml Quartz wide beaker - 56mm x 45mm ø	1	
RQWF/100	100ml Quartz wide beaker - 66mm x 52mm ø	1	
RQWF/150	150ml Quartz wide beaker - 84mm x 67mm ø	1	
RQWF/250	250ml Quartz wide beaker - 94mm x 69mm ø	1	
RQWF/400	400ml Quartz wide beaker - 108mm x 76mm ø	1	
RQWF/500	500ml Quartz wide beaker - 118mm x 82mm ø	1	
RQWF/600	600ml Quartz wide beaker - 123mm x 88mm ø	1	
RQWF/800	800ml Quartz wide beaker - 134mm x 98mm ø	1	
RQWF/1000	1000ml Quartz wide beaker - 146mm x 106mm ø	1	
HQTF/50	50ml Quartz tall beaker - 70mm x 38mm ø	1	
HQTF/100	100ml Quartz tall beaker - 78mm x 47mm ø	1	
HQTF/150	150ml Quartz tall beaker - 98mm x 52mm ø	1	
HQTF/250	250ml Quartz tall beaker - 118mm x 60mm ø	1	
HQTF/400	400ml Quartz tall beaker - 124mm x 70mm ø	1	
HQTF/600	600ml Quartz tall beaker - 152mm x 81mm ø	1	
HQTF/1000	1000ml Quartz tall beaker - 189mm x 91mm ø	1	

## Beakers, Heavy Duty - Safe-Grip™

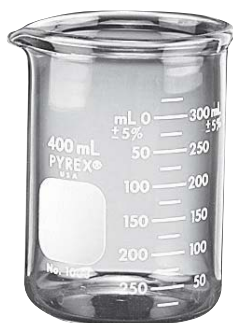
The Safe-Grip Laboratory Beaker from Radleys is manufactured from best quality, heat resistant borosilicate glass, giving long term wear and chemical resistance. The combination of a high performance glass beaker with a sturdy fused glass handle provide for the perfect laboratory accessory. Graduated with pouring spout. Ideal for the safe pouring of very hot or cold liquids.



CAT NO	DESCRIPTION	PK QTY	PRICE EACH
430400	400ml Safe-Grip Beaker	1	
430600	600ml Safe-Grip Beaker	1	
430800	800ml Safe-Grip Beaker	1	
430100	1000ml Safe-Grip Beaker	1	

## NEW Heavy Duty Beakers - Pyrex Low Form

Pyrex heavy duty beakers are mechanically stronger than standard beakers to provide longer life and increased user safety. They feature thicker walls and heavier bases plus reinforced rims and spout which are less prone to breakage during washing etc. White graduations and marking spot.



CAT.NO	DESCRIPTION	CAPACITY ML	HEIGHT MM	OUTSIDE DIAMETER MM	QTY	PRICE
1003-150	Low Form Pyrex Beakers	150	89	57	48	
1003-250	Low Form Pyrex Beakers	250	90	68	48	
1003-400	Low Form Pyrex Beakers	400	110	77	48	
1003-600	Low Form Pyrex Beakers	600	124	90	36	
1003-1L	Low Form Pyrex Beakers	1000	156	108	24	
1003-2L	Low Form Pyrex Beakers	2000	179	131	2	
1003-4L	Low Form Pyrex Beakers	4000	250	160	4	

# Beakers - Chromatography Columns

## NEW Beakers - Pyrex® Low Form

Pyrex borosilicate glass beakers combine an excellent thermal performance with high resistance to chemical attack. Comply with ISO 3819 and have white graduations and marking spot.

CAT.NO	DESCRIPTION	CAPACITY ML	HEIGHT MM	OUTSIDE DIAMETER MM	QTY	PRICE
1000/03M	Low Form Pyrex Beakers	5	30	22	10	
1000/05M	Low Form Pyrex Beakers	10	35	26	10	
1000/11M	Low Form Pyrex Beakers	25	50	34	10	
1000/02M	Low Form Pyrex Beakers	50	60	42	10	
1000/04D	Low Form Pyrex Beakers	100	70	50	10	
1000/06D	Low Form Pyrex Beakers	150	80	60	10	
1000/10D	Low Form Pyrex Beakers	250	95	70	10	
1000/14D	Low Form Pyrex Beakers	400	110	80	10	
1000/18D	Low Form Pyrex Beakers	600	125	90	10	
1000/20D	Low Form Pyrex Beakers	800	135	100	10	
1000/22D	Low Form Pyrex Beakers	1000	145	105	10	
1000/28D	Low Form Pyrex Beakers	2000	185	130	10	
1000/30D	Low Form Pyrex Beakers	3000	210	150	4	
1000/34D	Low Form Pyrex Beakers	5000	270	170	1	
1000/38D	Low Form Pyrex Beakers	10000	350	217	1	



## Warming Beaker - Borosilicate Glass

These jacketed beakers allow liquids at above or below ambient temperature to circulate around your sample, maintaining a constant temperature.

CAPACITY	DEPTH X ID MM	CAT NO 11MM OLIVE	CAT NO GL14 THREAD	CAT NO SQ13 THREAD	PACK QTY	PRICE EACH
250ml	90 x 60	440212	440412	440612	1	
500ml	110 x 80	440214	440414	440614	1	
1000ml	130 x 100	440216	440416	440616	1	
2000ml	165 x 125	440218	440418	440618	1	



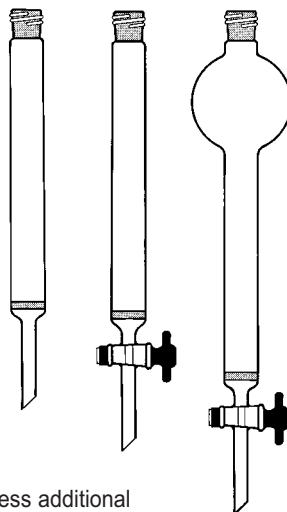
## Chromatography Columns - for sample preparation

This extended range of chromatography columns is ideal for use in many preparative methods.

All columns have a minimum dead space below the sintered disc and a choice of three stopcock types. This wide range of combinations allows you to select the length and diameter of your column. Porosity 0 sinters will be fitted unless specified otherwise. All chromatography columns are available with either Rodaviss or ordinary ground glass sockets.

### Rodaviss - the advantages...

- Rodaviss joints are ideal for use on chromatography columns because of their excellent performance under low pressure.
- No matter how long your apparatus is left assembled, your Rodaviss joints will not jam or stick when disassembling for packing or cleaning.
- Rodaviss patented sealing method is also grease free, maintaining your valuable samples integrity at all times.
- Rodaviss joints are extremely strong and secure, requiring much less additional support than conventional connecting methods.

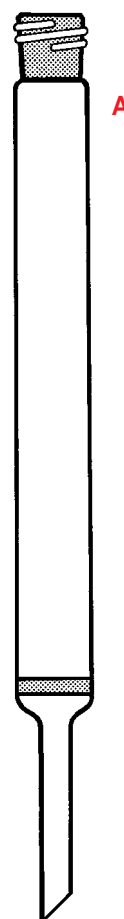


### Porosity

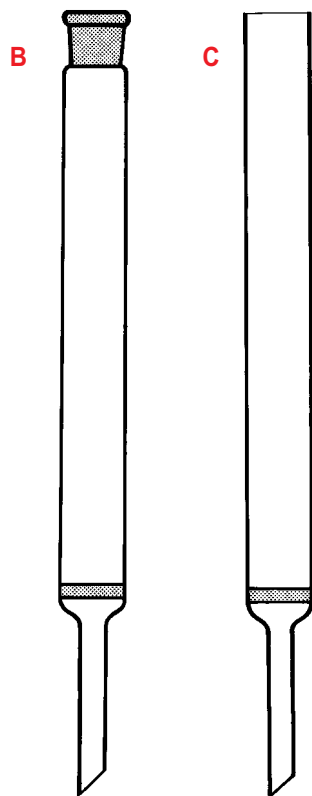
All Radleys chromatography columns are provided with a porosity 0 (zero) sintered disc by default. However as this has occasionally causes some confusion in the past - please add the required porosity as a suffix to the Cat No., e.g. to order column 114010 with a sintered disc of porosity 2, please order under Cat No. 114010/2.

## A Rodaviss Chromatography Columns

COLUMN BORE X LENGTH	SOCKET SIZE	CAT NO	PRICE EACH
10 x 100mm	14/23	150001	
10 x 200mm	14/23	150002	
10 x 300mm	14/23	150003	
10 x 300mm	19/26	150004	
20 x 200mm	19/26	150005	
20 x 300mm	19/26	150006	
20 x 300mm	24/29	150007	
25 x 300mm	24/29	150010	
25 x 400mm	24/29	150011	
30 x 300mm	29/32	150013	
30 x 400mm	34/35	150016	
40 x 400mm	34/35	150018	
40 x 500mm	45/40	150019	
50 x 500mm	45/40	150020	
65 x 600mm	45/40	150021	



# Chromatography Columns



## B Chromatography Columns - with ordinary socket

COLUMN BORE X LENGTH	SOCKET SIZE	CAT NO	PRICE EACH
10 x 100mm	14/23	140001	
10 x 200mm	14/23	140002	
10 x 300mm	14/23	140003	
10 x 300mm	19/26	140004	
20 x 200mm	19/26	140005	
20 x 300mm	19/26	140006	
20 x 300mm	24/29	140007	
25 x 300mm	24/29	140010	
25 x 400mm	24/29	140011	
30 x 300mm	29/32	140013	
30 x 400mm	34/35	140016	
40 x 400mm	40/38	140018	
40 x 500mm	50/42	140019	
50 x 500mm	60/46	140020	
65 x 600mm	70/52	140021	

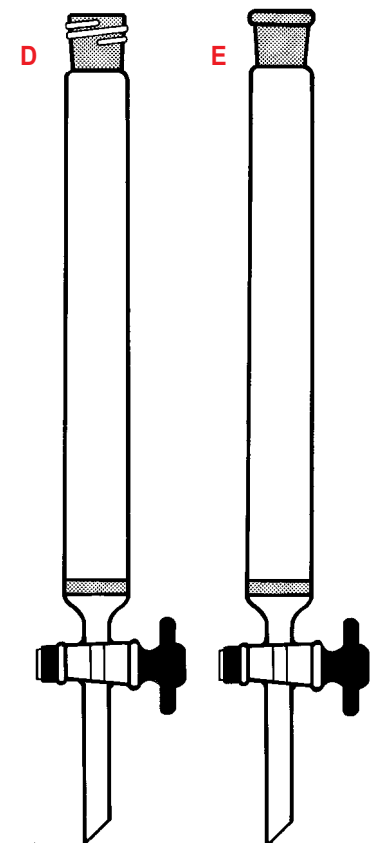
## C Plain Chromatography Columns

COLUMN BORE X LENGTH	CAT NO	PRICE EACH	COLUMN BORE X LENGTH	CAT NO	PRICE EACH
10 x 100mm	141001		25 x 500mm	141012	
10 x 200mm	141002		30 x 300mm	141013	
10 x 300mm	141003		30 x 400mm	141014	
20 x 200mm	141005		30 x 500mm	141015	
20 x 300mm	141006		40 x 400mm	141018	
20 x 400mm	141008		40 x 500mm	141019	
20 x 500mm	141009		50 x 500mm	141020	
25 x 300mm	141010		65 x 600mm	141021	
25 x 400mm	141011				

All Radleys chromatography columns are provided with a porosity 0 (zero) sintered disc by default. However as this has occasionally causes some confusion in the past - please add the required porosity as a suffix to the Cat No, e.g. to order column 114010 with a sintered disc of porosity 2, please order under Cat No 114010/2.

## D Rodaviss Chromatography Columns

COLUMN BORE X LENGTH	RODAVISS SOCKET SIZE	STOPCOCK BORE	CAT NO GLASS KEY	CAT NO PTFE KEY	PRICE EACH	STOPCOCK BORE	CAT NO ROTAFLO	PRICE EACH
10 x 100mm	14/23	2mm bore	112001	114001		3mm bore	116001	
10 x 200mm	14/23	2mm bore	112002	114002		3mm bore	116002	
10 x 300mm	14/23	2mm bore	112003	114003		3mm bore	116003	
10 x 300mm	19/26	2mm bore	112004	114004		3mm bore	116004	
20 x 200mm	19/26	2mm bore	112005	114005		3mm bore	116005	
20 x 300mm	19/26	2mm bore	112006	114006		3mm bore	116006	
20 x 300mm	24/29	2mm bore	112007	114007		3mm bore	116007	
20 x 400mm	24/29	2mm bore	112008	114008		3mm bore	116008	
20 x 500mm	24/29	2mm bore	112009	114009		3mm bore	116009	
25 x 300mm	24/29	4mm bore	112010	114010		3mm bore	116010	
25 x 400mm	24/29	4mm bore	112011	114011		3mm bore	116011	
25 x 500mm	24/29	4mm bore	112012	114012		3mm bore	116012	
30 x 300mm	29/32	4mm bore	112013	114013		6mm bore	116013	
30 x 400mm	29/32	4mm bore	112014	114014		6mm bore	116014	
30 x 500mm	29/32	4mm bore	112015	114015		6mm bore	116015	
30 x 400mm	34/35	4mm bore	112016	114016		6mm bore	116016	
30 x 500mm	34/35	4mm bore	112017	114017		6mm bore	116017	
40 x 400mm	34/35	4mm bore	112018	114018		6mm bore	116018	
40 x 500mm	45/40	4mm bore	112019	114019		6mm bore	116019	
50 x 500mm	45/40	6mm bore	112020	114020		6mm bore	116020	
65 x 600mm	45/40	6mm bore	112021	114021		6mm bore	116021	
90 x 900mm	45/40	8mm bore	112022	114022		10mm bore	116022	

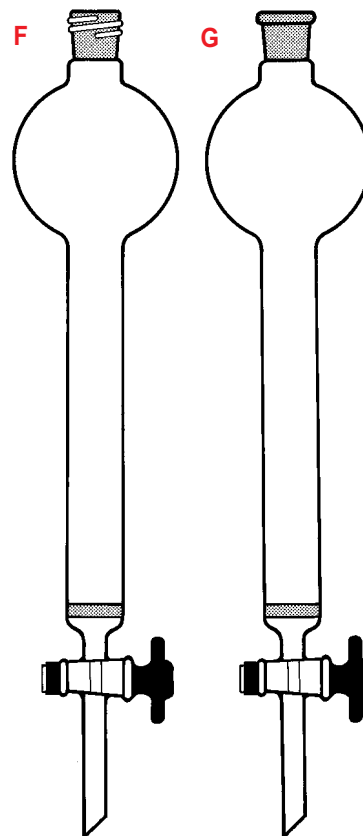


## E Chromatography Columns - with ordinary sockets

COLUMN BORE X LENGTH	SOCKET SIZE	STOPCOCK BORE	CAT NO GLASS KEY	CAT NO PTFE KEY	PRICE EACH	STOPCOCK BORE	CAT NO ROTAFLO	PRICE EACH
10 x 100mm	14/23	2mm bore	102001	104001		3mm bore	106001	
10 x 200mm	14/23	2mm bore	102002	104002		3mm bore	106002	
10 x 300mm	14/23	2mm bore	102003	104003		3mm bore	106003	
10 x 300mm	19/26	2mm bore	102004	104004		3mm bore	106004	
20 x 200mm	19/26	2mm bore	102005	104005		3mm bore	106005	
20 x 300mm	19/26	2mm bore	102006	104006		3mm bore	106006	
20 x 300mm	24/29	2mm bore	102007	104007		3mm bore	106007	
20 x 400mm	24/29	2mm bore	102008	104008		3mm bore	106008	
20 x 500mm	24/29	2mm bore	102009	104009		3mm bore	106009	
25 x 300mm	24/29	4mm bore	102010	104010		3mm bore	106010	
25 x 400mm	24/29	4mm bore	102011	104011		3mm bore	106011	
25 x 500mm	24/29	4mm bore	102012	104012		3mm bore	106012	
30 x 300mm	29/32	4mm bore	102013	104013		6mm bore	106013	
30 x 400mm	29/32	4mm bore	102014	104014		6mm bore	106014	
30 x 500mm	29/32	4mm bore	102015	104015		6mm bore	106015	
30 x 400mm	34/35	4mm bore	102016	104016		6mm bore	106016	
30 x 500mm	34/35	4mm bore	102017	104017		6mm bore	106017	
40 x 400mm	40/38	4mm bore	102018	104018		6mm bore	106018	
40 x 500mm	50/42	4mm bore	102019	104019		6mm bore	106019	
50 x 500mm	60/46	6mm bore	102020	104020		6mm bore	106020	
65 x 600mm	70/52	6mm bore	102021	104021		6mm bore	106021	
90 x 900mm	90/61	8mm bore	102022	104022		10mm bore	106022	

## F Rodaviss Chromatography Columns

RESERVOIR CAPACITY	COLUMN BORE X LENGTH	SOCKET SIZE	STOPCOCK BORE	CAT NO GLASS KEY	CAT NO PTFE KEY	PRICE EACH	CAT NO ROTAFLO	STOPCOCK BORE	PRICE EACH
90ml	20 x 200mm	19/26	2mm bore	172005	174005		3mm bore	176005	
90ml	20 x 300mm	19/26	2mm bore	172006	174006		3mm bore	176006	
90ml	20 x 300mm	24/29	2mm bore	172007	174007		3mm bore	176007	
90ml	20 x 400mm	24/29	2mm bore	172008	174008		3mm bore	176008	
120ml	25 x 300mm	24/29	4mm bore	172010	174010		3mm bore	176010	
120ml	25 x 400mm	24/29	4mm bore	172011	174011		3mm bore	176011	
120ml	25 x 500mm	24/29	4mm bore	172012	174012		3mm bore	176012	
200ml	30 x 300mm	29/32	4mm bore	172013	174013		6mm bore	176013	
200ml	30 x 400mm	29/32	4mm bore	172014	174014		6mm bore	176014	
200ml	30 x 500mm	29/32	4mm bore	172015	174015		6mm bore	176015	
200ml	30 x 400mm	34/35	4mm bore	172016	174016		6mm bore	176016	
200ml	30 x 500mm	34/35	4mm bore	172017	174017		6mm bore	176017	



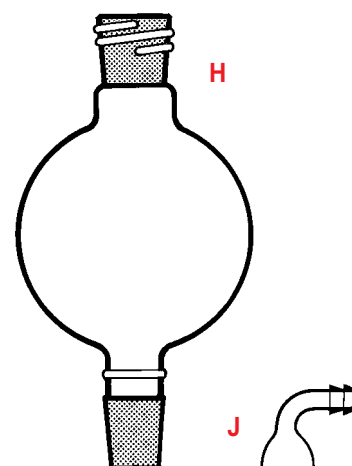
## G Chromatography Columns - with ordinary sockets

RESERVOIR CAPACITY	COLUMN BORE X LENGTH	SOCKET SIZE	STOPCOCK BORE	CAT NO GLASS KEY	CAT NO PTFE KEY	PRICE EACH	CAT NO ROTAFLO	STOPCOCK BORE	PRICE EACH
90ml	20 x 200mm	19/26	2mm bore	162005	164005		3mm bore	166005	
90ml	20 x 300mm	19/26	2mm bore	162006	164006		3mm bore	166006	
90ml	20 x 300mm	24/29	2mm bore	162007	164007		3mm bore	166007	
90ml	20 x 400mm	24/29	2mm bore	162008	164008		3mm bore	166008	
120ml	25 x 300mm	24/29	4mm bore	162010	164010		3mm bore	166010	
120ml	25 x 400mm	24/29	4mm bore	162011	164011		3mm bore	166011	
120ml	25 x 500mm	24/29	4mm bore	162012	164012		3mm bore	166012	
200ml	30 x 300mm	29/32	4mm bore	162013	164013		6mm bore	166013	
200ml	30 x 400mm	29/32	4mm bore	162014	164014		6mm bore	166014	
200ml	30 x 500mm	29/32	4mm bore	162015	164015		6mm bore	166015	
200ml	30 x 400mm	34/35	4mm bore	162016	164016		6mm bore	166016	
200ml	30 x 500mm	34/35	4mm bore	162017	164017		6mm bore	166017	

All Radleys chromatography columns are provided with a porosity 0 (zero) sintered disc by default. However as this has occasionally causes some confusion in the past - please add the required porosity as a suffix to the Cat No, e.g. to order column 114010 with a sintered disc of porosity 2, please order under Cat No 114010/2.

## H Chromatography Reservoirs - with Rodaviss or ordinary joint

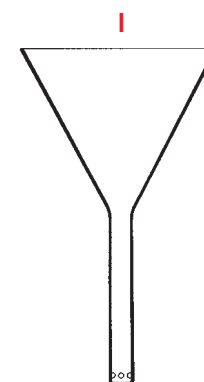
CAPACITY	SOCKET SIZE	CONE SIZE	CAT NO ORD JOINT	PRICE EACH	CAT NO RODAVISS	PRICE EACH
250ml	24/29	19/26	182250		192250	
250ml	24/29	24/29	183250		193250	
500ml	24/29	24/29	183500		193500	
500ml	29/32	29/32	184500		194500	
500ml	34/35	34/35	185500		195500	



## I Solvent Pouring Funnel

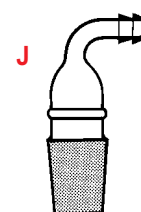
This heavy duty funnel has a closed end with small holes in the stem to allow addition of solvent with minimal disturbance of the bed. Diameter of the funnel is 100mm, stem 10mm OD, 90mm long.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
188000	Solvent Pouring Funnel	1	



## J Rodaviss Right Angle Tubing Adapter

CONE SIZE	CAT NO 11MM OLIVE	CAT NO GL14 THREAD	CAT NO SQ13 THREAD	PK QTY	PRICE EACH
14/23	312201	312401	312601	1	
19/26	312202	312402	312602	1	
24/29	312203	312403	312603	1	
29/32	312204	312404	312604	1	
34/35	312205	312405	312605	1	
45/40	312207	312407	312607	1	



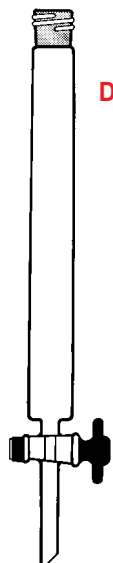
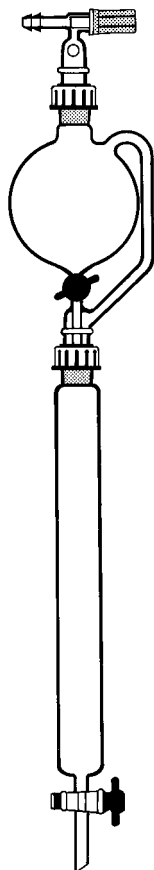
## K Rodaviss Flow Controller

This new Flow Controller is ideal for use in Flash Chromatography and other applications requiring precision flow control. Stopcock is Rotaflo.

CONE SIZE	STOPCOCK BORE	CAT NO 11MM OLIVE	CAT NO GL14 THREAD	CAT NO SQ13 THREAD	PK QTY	PRICE EACH
14/23	3	386314	386414	386514	1	
19/26	3	386319	386419	386519	1	
24/29	3	386324	386424	386524	1	
29/32	6	386329	386429	386529	1	
34/35	6	386334	386434	386534	1	
45/40	6	386345	386445	386545	1	



# Flash Chromatography System



## Flash Chromatography Systems

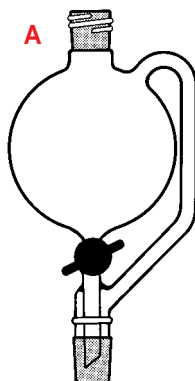
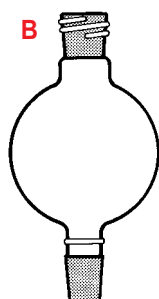
These new Flash Columns are manufactured without a sinter, and are designed for use with a plug of glass wool. Choose from two ranges, each of which has uniform effective length and socket sizes for ease of use and interchangeability in the laboratory. Also avoid unnecessary expenditure on accessories with many different joint sizes, where one would do the job. All joints are either Rodaviss B29/32 or B45/40.

### A 29/32 Rodaviss Solvent Reservoirs - with stopcock/pressure tube

CAPACITY	STOPCOCK BORE	CAT NO GLASS KEY	CAT NO PTFE KEY	PRICE EACH	STOPCOCK BORE	CAT NO ROTAFLO	PRICE EACH
100ml	2mm	196210	196410		3mm	196610	
250ml	4mm	196212	196412		3mm	196612	
500ml	4mm	196214	196414		3mm	196614	
1000ml	4mm	196216	196416		3mm	196616	
2000ml	6mm	196218	196418		3mm	196618	

### A 45/40 Rodaviss Solvent Reservoirs - with stopcock/pressure tube

CAPACITY	STOPCOCK BORE	CAT NO GLASS KEY	CAT NO PTFE KEY	PRICE EACH	STOPCOCK BORE	CAT NO ROTAFLO	PRICE EACH
250ml	4mm	197212	197412		6mm	197612	
500ml	4mm	197214	197414		6mm	197614	
1000ml	4mm	197216	197416		6mm	197616	
2000ml	6mm	197218	197418		6mm	197618	



### B 29/32 Rodaviss Solvent Reservoirs

CAT NO	CAPACITY	PRICE EACH
196010	100ml	
196012	250ml	
196014	500ml	
196016	1000ml	
196018	2000ml	

### B 45/40 Rodaviss Solvent Reservoirs

CAT NO	CAPACITY	PRICE EACH
197012	250ml	
197014	500ml	
197016	1000ml	
197018	2000ml	

### C 29/32 Rodaviss Flow Controllers

CONE SIZE	STOPCOCK BORE	CAT NO 11MM OLIVE	CAT NO GL14 THREAD	CAT NO SQ13 THREAD	PK QTY	PRICE EACH
29/32	6	386329	386429	386529	1	

### C 45/40 Rodaviss Flow Controllers

CONE SIZE	STOPCOCK BORE	CAT NO 11MM OLIVE	CAT NO GL14 THREAD	CAT NO SQ13 THREAD	PK QTY	PRICE EACH
45/40	6	386345	386445	386545	1	

### D 29/32 Rodaviss Chromatography Columns - 400mm effective length

COLUMN BORE	APPROX CAPACITY	STOPCOCK BORE	CAT NO GLASS KEY	CAT NO PTFE KEY	PRICE EACH	STOPCOCK BORE	CAT NO ROTAFLO	PRICE EACH
20mm	100ml	2mm	142220	142420		3mm	142620	
30mm	250ml	4mm	142230	142430		6mm	142630	
40mm	500ml	4mm	142240	142440		6mm	142640	
50mm	800ml	6mm	142250	142450		6mm	142650	
70mm	1500ml	6mm	142270	142470		6mm	142670	
80mm	2000ml	8mm	142280	142480		10mm	142680	

### D 45/40 Rodaviss Chromatography Columns - 500mm effective length

COLUMN BORE	APPROX CAPACITY	STOPCOCK BORE	CAT NO GLASS KEY	CAT NO PTFE KEY	PRICE EACH	STOPCOCK BORE	CAT NO ROTAFLO	PRICE EACH
30mm	350ml	4mm	143230	143430		6mm	143630	
40mm	600ml	4mm	143240	143440		6mm	143640	
50mm	1000ml	6mm	143250	143450		6mm	143650	
70mm	2000ml	6mm	143270	143470		6mm	143670	
80mm	2500ml	8mm	143280	143480		6mm	143680	
90mm	3000ml	8mm	143290	143490		6mm	143690	

## Quick-Sep™ Lateral Reservoir Flash Chromatography

The Quick-Sep is a refinement of Flash Chromatography whereby solvent is introduced into the side of the column from a solvent reservoir. This permits solvent to be introduced into the column without disassembly of the air-pressure inlet adapter. Consequently the preparative purification of organic compounds by the Quick-Sep system is more operationally convenient and more rapid than conventional flash chromatography. The essential feature of the apparatus is a solvent reservoir attached to the side of the column so that the inlet is above the height of the stationary phase, with a Rotaflor stopcock fitted at the reservoir to column inlet. A second stopcock is also required at the top of the column to release air-pressure from the pump. The solvent reservoir is configured so that its volume is approximately 1.5 times that of the column to allow for sufficient solvent header pressure.

### Quick-Sep Features and Benefits

- The eluting solvent is introduced, without disassembly of the air-pressure inlet adapter, simply by opening two taps and is therefore more operationally convenient.
- The overall purification time is faster due to the time saved in introducing the solvent.
- The solvent is introduced with minimal disturbance of the stationary phase, ensuring optimal resolution is obtained.
- Variable or fixed aliquots can be dispensed from the column, as required.
- Gradient elution is more convenient since the solvent polarity is conveniently varied in the lateral solvent reservoir.

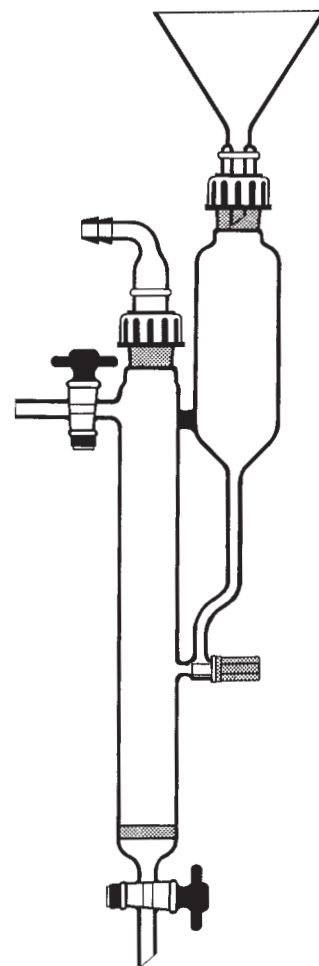
### Specification

Each set of Quick-Sep apparatus includes one column with integral reservoir attached, inlet adapter and vented filling funnel. All glass joints are Rodaviss, and come complete with appropriate connecting parts for assembly. Apparatus incorporates two 4mm PTFE stopcocks and one 3mm PTFE Rotaflor stopcock. Sinters are Porosity 2 as standard.

**Custom Configurations Available - The Quick-Sep is available in any combination of custom sizes. For a quotation please call +44-(0)1799-513320 for quotation.**

CAT NO	DESCRIPTION	COLUMN CAPACITY	COLUMN BORE	LOADING MASS	VOLUME OF RESERVOIR	PK QTY	PRICE EACH
124210	Quick-Sep	100ml	30mm	1g	160ml	1	
124220	Quick-Sep	175ml	40mm	2g	270ml	1	
124230	Quick-Sep	250ml	50mm	3g	350ml	1	

The Quick-Sep is available exclusively from Radleys, under license from CRC Technology Ltd.



## Standard Ground Tube Fittings - PTFE

Solid PTFE body. For connecting tubing to jointed glassware, available with polypropylene or Teflon nut.

CAT NO	DESCRIPTION	CONE	NUT	FOR TUBING OD	PK QTY	PRICE EACH
H1001-03	Tube Connector with cone	B14/23	polypropylene	6mm ø	1	
H1001-04	Tube Connector with cone	B14/23	Teflon	6mm ø	1	
H1001-05	Tube Connector with cone	B19/26	polypropylene	6mm ø	1	
H1001-06	Tube Connector with cone	B19/26	Teflon	6mm ø	1	
H1001-21	Tube Connector with cone	B29/32	polypropylene	4mm ø	1	
H1001-22	Tube Connector with cone	B29/32	Teflon	4mm ø	1	
H1001-09	Tube Connector with cone	B29/32	polypropylene	6mm ø	1	
H1001-10	Tube Connector with cone	B29/32	Teflon	6mm ø	1	
H1001-11	Tube Connector with cone	B29/32	polypropylene	8mm ø	1	
H1001-12	Tube Connector with cone	B29/32	Teflon	8mm ø	1	
H1001-13	Tube Connector with cone	B29/32	polypropylene	10mm ø	1	
H1001-14	Tube Connector with cone	B29/32	Teflon	10mm ø	1	



## Cone with Straight Hose Connector - PTFE

Solid PTFE body. For connecting tubing to jointed glassware.

CAT NO	DESCRIPTION	CONE	CONNECTOR LENGTH	CONNECTOR OD	PK QTY	PRICE EACH
H1000-02	Cone with straight tubing connector	B14/23	20mm	4.5mm ø	1	
H1000-04	Cone with straight tubing connector	B19/26	25mm	6.8mm ø	1	
H1000-06	Cone with straight tubing connector	B29/32	30mm	9mm ø	1	
H1000-08	Cone with straight tubing connector	B29/32	35mm	11mm ø	1	



### If you prefer ordinary joints...

Whilst Rodaviss joints are completely interchangeable with ordinary joints, we will be pleased to offer any item from our range with ordinary ground joints instead of Rodaviss at no extra charge.

# Connectors & Adapters



## GL Hose Connectors - PFA

Straight and bent versions with glass-fibre reinforced PPS screw caps with aperture (max. 250°C), hose connector made of PFA, with elastic PFA sealing lip and FPM O-ring. The medium is exposed only to PFA (GL25 and GL32 PTFE).

CAT NO	THREAD	HOSE CONNECTOR OD	HOSE CONNECTOR ID	LENGTH CONNECTOR STRAIGHT	LENGTH CONNECTOR ELBOW	PK QTY	PRICE EACH
<b>Straight</b>							
D581-02	GL14	8.7mm	6mm	45mm	49mm	1	
D581-04	GL18	10.5mm	7mm	51mm	65mm	1	
D581-06	GL25	16mm	10mm	68mm	-	1	
D581-08	GL32	21mm	16mm	80mm	-	1	
<b>Bent</b>							
D582-02	GL14	8.7mm	6mm	45mm	49mm	1	
D582-04	GL18	10.5mm	7mm	51mm	65mm	1	

## PTFE Hose Connectors - for GL14 & SQ13 screwthreads

Choose from standard SQ13 and GL14 screwthreaded formats. Connectors are chemically inert, suitable for use up to 200°C. Connectors feature a Teflon/Glass-Fibre reinforced screw cap with aperture, solid PTFE hose connector and Viton O-ring.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
451006	PTFE Hose Connector for SQ13 Thread - Green	2	
451008	PTFE Hose Connector for GL14 Thread - Red	2	

## Wide Bore PTFE Hose Connectors - Rodaviss® connection

These new wide bore PTFE connectors come complete with Rodaviss PBTP connecting cap and o-ring for attachment to a Rodaviss socket. Ideal for high flow rates, temperature resistant up to 200°C.

CAT NO	DESCRIPTION	CONE	PK QTY	PRICE EACH
451010	10mm Bore PTFE Hose Connector with Rodaviss	19/26	2	
451012	15mm Bore PTFE Hose Connector with Rodaviss	24/29	2	

## NEW PTFE Stoppers - for all ground glass joints

These pure PTFE stoppers suit all ground glass joints. Trapezoidal seals give medium to high vacuum performance, usable to 280°C.

CAT NO	DESCRIPTION	JOINT SIZE	TOTAL HEIGHT	PK QTY	PRICE EACH
<b>'A' Length Cone - USA</b>					
010.110	PTFE Stopper	10/30	40mm	5	
010.114	PTFE Stopper	14/35	46mm	5	
010.119	PTFE Stopper	19/38	50mm	5	
010.124	PTFE Stopper	24/40	55mm	5	
010.129	PTFE Stopper	29/42	57mm	5	
010.134	PTFE Stopper	34/45	60mm	5	
<b>'B' Length Cone - Europe</b>					
010.210	PTFE Stopper	10/19	31mm	5	
010.214	PTFE Stopper	14/23	34mm	5	
010.219	PTFE Stopper	19/26	38mm	5	
010.224	PTFE Stopper	24/29	44mm	5	
010.229	PTFE Stopper	29/32	47mm	5	
010.234	PTFE Stopper	34/35	51mm	5	

## NEW Penny Head Stoppers - PTFE

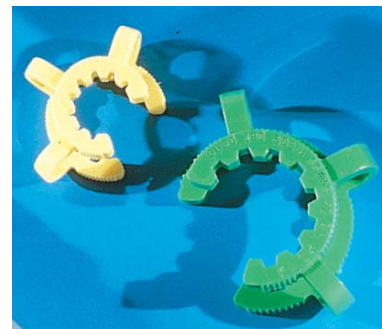
Hollow stopper for standard taper joints, no sealing rings.

CAT NO	DESCRIPTION	SIZE	JOINT	TOTAL HEIGHT	PK QTY	PRICE EACH
010.3.1420	PTFE Penny Head Stopper	9	14/20	42mm	1	
010.3.1922	PTFE Penny Head Stopper	13	19/22	47mm	1	
010.3.2425	PTFE Penny Head Stopper	16	24/25	50mm	1	
010.3.2440	PTFE Penny Head Stopper	19	24/40	70mm	1	
010.3.2926	PTFE Penny Head Stopper	22	29/26	50mm	1	
010.3.2942	PTFE Penny Head Stopper	27	29/42	75mm	1	
010.3.3445	PTFE Penny Head Stopper	32	34/45	80mm	1	
010.3.4550	PTFE Penny Head Stopper	38	45/50	90mm	1	

## Keck™ Plastic Joint Clips

Joint Clips are available in a full range of sizes and are specifically designed for use with jointed glassware. Manufactured from tough Delrin polyacetal, each clip provides a positive closure, offering major benefits over traditional methods of clamping. **Safe** - Easier and safer to fit and remove than steel wire clips. No risk of scratching or damaging the glass. **Durable** - Manufactured from sturdy polyacetal plastic, the clips will not corrode or bend and have excellent chemical and heat resistance. May be autoclaved to 150°C. **Convenient** - Joint Clips are available for the full range of joint sizes. The use of joint clips can considerably reduce the need for clamping.

JOINT SIZE	COLOUR	CAT NO	PK QTY	PRICE EACH	CAT NO	PK QTY	PRICE EACH
14/23	Yellow	460514	5		462014	20	
19/26	Blue	460519	5		462019	20	
24/29	Green	460524	5		462024	20	
29/32	Red	460529	5		462029	20	
34/35	Orange	460534	5		462034	20	
40/38	Ochre	460540	5		462040	20	



## Joint Clips - PTFE

A new range of all PTFE joint clips for retaining both conical and spherical joints. Clips are colour coded for ease of identification and contain a fully encapsulated steel spring for a firm grip.

- Chemically inert and suitable for use up to 250°C
- Colour Coded with numbered joint sizes
- Will not scratch or score your glassware

CAT NO	DESCRIPTION	JOINT SIZE	TYPE	COLOUR	PK QTY	PRICE EACH
030.010.1	PTFE Joint Clips	10/19	Conical	Green	5	
030.012.1	PTFE Joint Clips	12/21	Conical	Purple	5	
030.014.1	PTFE Joint Clips	14/23	Conical	Yellow	5	
030.019.1	PTFE Joint Clips	19/26	Conical	Blue	5	
030.024.1	PTFE Joint Clips	24/29	Conical	Green	5	
030.029.1	PTFE Joint Clips	29/32	Conical	Red	5	
030.034.1	PTFE Joint Clips	34/35	Conical	Orange	5	
030.040.1	PTFE Joint Clips	40/38	Conical	Yellow	5	
030.045.1	PTFE Joint Clips	45/40	Conical	Brown	5	



## Sleeves for Ground Glass Joints - PTFE

Insert these PTFE sleeves between all ground glass joints to prevent sticking, and therefore eliminating the need for grease. The sleeves have a wall thickness of 0.05mm, are inert, useable to 280°C and will withstand low to medium vacuum.

CAT NO	DESCRIPTION	JOINT SIZE	PK QTY	PRICE EACH
019.107	PTFE Sleeves	7/16	25	
019.110	PTFE Sleeves	10/19	25	
019.112	PTFE Sleeves	12/21	25	
019.114	PTFE Sleeves	14/23	25	
019.119	PTFE Sleeves	19/26	25	
019.124	PTFE Sleeves	24/29	25	
019.129	PTFE Sleeves	29/32	25	
019.134	PTFE Sleeves	34/35	25	
019.140	PTFE Sleeves	40/38	25	
019.145	PTFE Sleeves	45/40	25	
019.150	PTFE Sleeves	50/42	25	
019.155	PTFE Sleeves	55/44	25	
019.160	PTFE Sleeves	60/46	25	



## Rigid Sleeves/Adapters for Ground Glass Joints - PTFE

Rigid PTFE sleeves & adapters are ideal for grease free, high vacuum seals in all ground glass joints are inert & useable to 280°C. They will withstand high vacuum - leakage rate less than  $1 \times 10^{-4}$  torr, litre, sec<sup>-1</sup>. High vacuum performance is obtained using transverse trapezoidal sealing rings on the contacting surfaces. These rings compress on assembly to give liquid & gas tight seals.

CAT NO	DESCRIPTION	JOINT SIZE	PK QTY	PRICE EACH
020.010	PTFE Rigid Sleeves	10/19	5	
020.014	PTFE Rigid Sleeves	14/23	5	
020.019	PTFE Rigid Sleeves	19/26	5	
020.024	PTFE Rigid Sleeves	24/29	5	
020.029	PTFE Rigid Sleeves	29/32	5	
020.034	PTFE Rigid Sleeves	34/35	5	
021.1014	PTFE Adapters	10/19 to 14/23	5	
021.1019	PTFE Adapters	10/19 to 19/26	5	
021.1419	PTFE Adapters	14/23 to 19/26	5	
021.1424	PTFE Adapters	14/23 to 24/29	5	
021.1924	PTFE Adapters	19/26 to 24/29	5	
021.1929	PTFE Adapters	19/26 to 29/32	5	
021.1934	PTFE Adapters	19/26 to 34/35	5	
021.2429	PTFE Adapters	24/29 to 29/32	5	
021.2434	PTFE Adapters	24/29 to 34/35	5	
021.2934	PTFE Adapters	29/32 to 34/35	5	



## Connectors &amp; Adapters

**NEW Spherical Ground Joint Sleeves - PTFE**

For gas tight, liquid tight and vacuum tight spherical ground joint connections. The outer reinforced ribs of the spherical ground joint sleeve provide high vacuum-tight sealing (leak rate:  $<1 \times 10^{-2}$  mbar x l x sec<sup>-1</sup>). The gripping ring jutting over the rim assures very easy removal of the spherical ground joint sleeve and makes it reusable. No grease required. Sleeves are compatible with standard metal spherical joint clips.

CAT NO	DESCRIPTION	JOINT SIZE	PK QTY	PRICE EACH
H934-02	PTFE Spherical Ground Joint Sleeves	13	1	
H934-04	PTFE Spherical Ground Joint Sleeves	19	1	
H934-06	PTFE Spherical Ground Joint Sleeves	29	1	
H934-08	PTFE Spherical Ground Joint Sleeves	35	1	
H934-12	PTFE Spherical Ground Joint Sleeves	40	1	
H934-16	PTFE Spherical Ground Joint Sleeves	51	1	
H934-18	PTFE Spherical Ground Joint Sleeves	64	1	

**NEW Sleeves with Ribs - PTFE**

For gas tight and liquid tight standard ground joint connections; suitable for a vacuum up to 0.1mbar. The outer ribs prevent sticking together of the standard ground joints, assure very easy removal of the sleeve with ribs and make it reusable. No grease required.

CAT NO	DESCRIPTION	JOINT SIZE	PK QTY	PRICE EACH
H930-01	PTFE Sleeves with Ribs	7/16	10	
H930-02	PTFE Sleeves with Ribs	10/19	10	
H930-03	PTFE Sleeves with Ribs	12/21	10	
H930-04	PTFE Sleeves with Ribs	14/23	10	
H930-05	PTFE Sleeves with Ribs	19/26	10	
H930-06	PTFE Sleeves with Ribs	24/29	10	
H930-07	PTFE Sleeves with Ribs	29/32	10	
H930-08	PTFE Sleeves with Ribs	34/35	5	
H930-09	PTFE Sleeves with Ribs	40/38	5	
H930-10	PTFE Sleeves with Ribs	45/40	5	
H930-11	PTFE Sleeves with Ribs	50/42	1	
H930-12	PTFE Sleeves with Ribs	55/44	1	
H930-13	PTFE Sleeves with Ribs	60/46	1	
H930-14	PTFE Sleeves with Ribs	71/51	1	
H930-15	PTFE Sleeves with Ribs	85/55	1	
H930-16	PTFE Sleeves with Ribs	100/60	1	

**NEW Sleeves with Gripping Ring - PTFE**

For gas tight, liquid tight and vacuum-tight standard ground joint connections. The outer reinforced ribs of the standard ground joint sleeve provide vacuum-tight sealing (leak rate:  $<1 \times 10^{-2}$  mbar x l x sec<sup>-1</sup>) and prevent sticking together of the standard ground joints. The gripping ring jutting over the rim assures very easy removal of the sleeve with gripping ring and makes it reusable. No grease required.

CAT NO	DESCRIPTION	JOINT SIZE	PK QTY	PRICE EACH
H933-01	PTFE Sleeves with Gripping Ring	10/19	1	
H933-02	PTFE Sleeves with Gripping Ring	12/21	1	
H933-03	PTFE Sleeves with Gripping Ring	14/23	1	
H933-04	PTFE Sleeves with Gripping Ring	19/26	1	
H933-05	PTFE Sleeves with Gripping Ring	24/29	1	
H933-06	PTFE Sleeves with Gripping Ring	29/32	1	
H933-07	PTFE Sleeves with Gripping Ring	34/35	1	
H933-08	PTFE Sleeves with Gripping Ring	40/38	1	
H933-09	PTFE Sleeves with Gripping Ring	45/40	1	
H933-10	PTFE Sleeves with Gripping Ring	50/42	1	
H933-11	PTFE Sleeves with Gripping Ring	55/44	1	
H933-12	PTFE Sleeves with Gripping Ring	60/46	1	
H933-13	PTFE Sleeves with Gripping Ring	71/51	1	
H933-14	PTFE Sleeves with Gripping Ring	85/55	1	
H933-15	PTFE Sleeves with Gripping Ring	100/60	1	

**Bellows Connector for GL Threads - PTFE**

PTFE bellows with screw caps are very flexible, up to 120°, and eliminates stresses between GL connections.

CAT NO	DESCRIPTION	FOR THREAD	MAX. EXTENSION	PK QTY	PRICE EACH
H902-05	Bellows for GL-Threads	GL25	50mm	1	
H902-10	Bellows for GL-Threads	GL32	75mm	1	
H902-15	Bellows for GL-Threads	GL45	140mm	1	



## Bellows Connector - PTFE

Flexible bellows connect directly to joints, ideal for areas where misalignment and stress may occur.

CAT NO	SOCKET SIZE	CONE SIZE	PK QTY	PRICE EACH
008.01414	14/23	14/23	1	
008.01429	14/23	29/32	1	
008.01919	19/26	19/26	1	
008.01924	19/26	24/29	1	
008.02424	24/29	24/29	1	
008.02929	29/32	29/32	1	
008.02934	29/32	34/35	1	
008.03434	34/35	34/35	1	



PTFE Bellows Connector

PTFE Bellows Connector with Round Folds



## Bellows Connector with Round Folds - PTFE

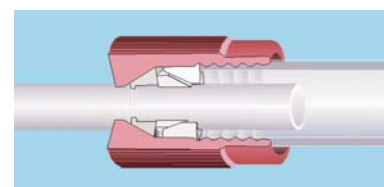
PTFE bellows with round folds, flexible up to 40°, eliminates stresses between all ground joint connections and is suitable for vacuum.

CAT NO	SOCKET SIZE	CONE SIZE	PK QTY	PRICE EACH
H907-03	14/23	14/23	1	
H907-10	29/32	29/32	1	
H907-15	45/40	45/40	1	

## NEW Laboratory Screw Joints

The medium is exposed only to fluoroplastic; screw cap made of glass-fibre reinforced ETFE (max. 150°C). Ideal for connecting glass tubes with PTFE, plastic, glass and metal tubes. In addition, these couplings are also suitable for locking probes, thermometers, laboratory stopcocks, immersion tubes or for cables.

CAT NO	DESCRIPTION	THREAD	FOR TUBING OD	PK QTY	PRICE EACH
D593-02	PTFE Laboratory Screw Joint	GL14	0.8mm	1	
D593-04	PTFE Laboratory Screw Joint	GL14	1mm	1	
D593-06	PTFE Laboratory Screw Joint	GL14	1.6mm	1	
D593-10	PTFE Laboratory Screw Joint	GL14	2mm	1	
D593-12	PTFE Laboratory Screw Joint	GL14	2.4mm	1	
D590-02	PTFE Laboratory Screw Joint	GL14	3mm	1	
D590-08	PTFE Laboratory Screw Joint	GL14	3.2mm	1	
D590-04	PTFE Laboratory Screw Joint	GL14	4mm	1	
D590-06	PTFE Laboratory Screw Joint	GL14	6mm	1	
D590-62	PTFE Laboratory Screw Joint	GL14	6.35mm	1	



## NEW High Temperature GL Screw Caps - PTFE

Glass-fibre reinforced PPS (black) sealing cap, offering resistant to high mechanical stresses even up to +250°C. Featuring a virgin PTFE faced septa to ensure a good seal. This unique PTFE sealing insert has an elastic quality which compensates for any unevenness in the vessel top, ensuring an excellent inert seal up to 250°C. Meets the requirements of FDA21 CFR 177-1550.

CAT NO	DESCRIPTION	THREAD	BORE Ø	FOR TUBING OD	PK QTY	PRICE EACH
H994-14	High Temp GL Cap	GL14		9.2mm	3	
H994-18	High Temp GL Cap	GL18		11mm	3	
H994-25	High Temp GL Cap	GL25		15mm	3	
H994-32	High Temp GL Cap	GL32		20mm	3	
H994-45	High Temp GL Cap	GL45		34mm	1	



## NEW GL Screw Caps - PTFE, PPS or PBTP

Choose from; solid PTFE (white) for the ultimate in chemical resistance; glass-fibre reinforced PPS (black), offering resistant to high mechanical stresses even up to +250°C; or PBTP (red) thermoplastic polyester, a lower cost material with limited chemical and mechanical resistance. The PPS and PBTP sealing caps feature a PTFE faced silicone septa to ensure good seal. All styles are knurled for safe closing and opening of the screw caps. Also available with aperture.

PTFE CAPS			PPS CAPS			PBTP CAPS			THREAD	BORE Ø
CAT NO	QTY	PRICE	CAT NO	QTY	PRICE	CAT NO	QTY	PRICE		
<b>Sealing Cap</b>										
H986-01	1		H993-14	3		H987-01	3		GL14	9.2mm
H986-02	1		H993-18	3		H987-02	3		GL18	11mm
H986-03	1		H993-25	3		H987-03	3		GL25	15mm
H986-04	1		H993-32	3		H987-04	3		GL32	20mm
H986-05	1		H993-45	1		H987-05	1		GL45	34mm

PTFE CAPS			PPS CAPS			PBTP CAPS			THREAD	BORE Ø
CAT NO	QTY	PRICE	CAT NO	QTY	PRICE	CAT NO	QTY	PRICE		
<b>Cap with Aperture</b>										
H983-01	1		H995-14	10		H984-01	3		GL14	9.2mm
H983-02	1		H995-18	3		H984-02	3		GL18	11mm
H983-03	1		H995-25	3		H984-03	3		GL25	15mm
H983-04	1		H995-32	3		H984-04	3		GL32	20mm
H983-05	1		H995-45	3		H984-05	3		GL45	34mm



GL Screw Caps

GL Screw Caps with Aperture

# Connectors & Adapters - Cold Traps



## NEW GL Screw Thread Couplings - PTFE/PBTP

For flexible coupling of two glass GL screw threads. PTFE sleeve with PBTP plastic GL connectors. Medium is exposed only to PTFE. Up to 180°C.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
29226055	PTFE/PBTP Screw Thread Couplings for GL14 Thread	1	
29226065	PTFE/PBTP Screw Thread Couplings for GL18 Thread	1	
29226095	PTFE/PBTP Screw Thread Couplings for GL25 Thread	1	
29226085	PTFE/PBTP Screw Thread Couplings for GL32 Thread	1	

## NEW GL Screw Thread Couplings - PTFE/PPS

For flexible coupling of two glass GL screw threads. PTFE sleeve with glass reinforced PPS GL connectors. Medium is exposed only to PTFE. Up to 250°C.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
H900-01	PTFE/PPS Screw Thread Couplings for GL14 Thread	1	
H900-02	PTFE/PPS Screw Thread Couplings for GL18 Thread	1	
H900-03	PTFE/PPS Screw Thread Couplings for GL25 Thread	1	
H900-04	PTFE/PPS Screw Thread Couplings for GL32 Thread	1	
H900-05	PTFE/PPS Screw Thread Couplings for GL45 Thread	1	

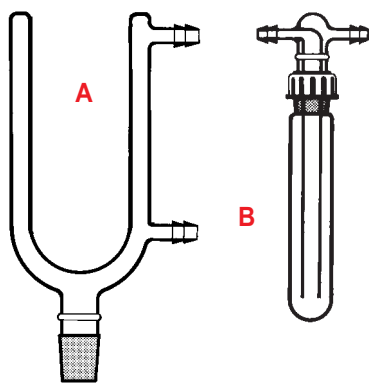
## NEW GL Screw Thread Reducer Couplings - PTFE/PPS

For flexible coupling of two glass GL screw threads of different sizes. PTFE sleeve with glass reinforced PPS GL connectors. Medium is exposed only to PTFE. Up to 250°C.

CAT NO	DESCRIPTION	THREAD SIZE	PK QTY	PRICE EACH
H904-02	PTFE/PPS Screw Thread Reducer	GL18 to GL14	1	
H904-03	PTFE/PPS Screw Thread Reducer	GL25 to GL14	1	
H904-04	PTFE/PPS Screw Thread Reducer	GL25 to GL18	1	
H904-05	PTFE/PPS Screw Thread Reducer	GL32 to GL18	1	
H904-06	PTFE/PPS Screw Thread Reducer	GL32 to GL25	1	
H904-07	PTFE/PPS Screw Thread Reducer	GL45 to GL25	1	
H904-08	PTFE/PPS Screw Thread Reducer	GL45 to GL32	1	

## Vacuum Cold Traps

For use in vacuum systems. The cold traps may be attached to the vacuum pump or incorporated at some point in the vacuum system. Traps may be used singularly or in series. Entrainment of volatile materials into the vacuum pump is thus eliminated. The bottom opening permits removal and recovery of condensate from the walls.



### A Rodaviss Cold Trap - with side-arms

COOLANT CAPACITY	CONE SIZE	CAT NO 11MM OLIVE	CAT NO GL14 THREAD	CAT NO SQ13 THREAD	PK QTY	PRICE EACH
250ml	24/29	723212	723412	723612	1	
500ml	24/29	723214	723414	723614	1	
1000ml	34/35	723216	723416	723616	1	

### A Cold Trap - with side-arms and ordinary cone

COOLANT CAPACITY	CONE SIZE	CAT NO 11MM OLIVE	CAT NO GL14 THREAD	CAT NO SQ13 THREAD	PK QTY	PRICE EACH
250ml	24/29	722212	722412	722612	1	
500ml	24/29	722214	722414	722614	1	
1000ml	34/35	722216	722416	722616	1	

### B Small Cold Trap - with detachable Rodaviss head

Supplied with 11mm olives as standard, also available with either SQ13 or GL14.

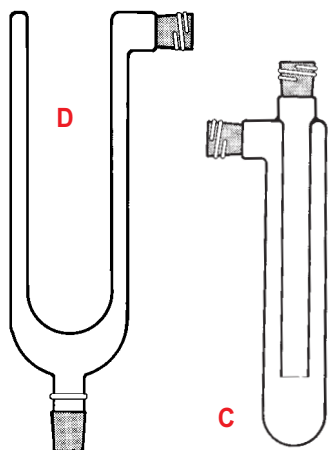
CAT NO	JOINT SIZE	BODY OD	LENGTH	PK QTY	PRICE EACH
724010	34/35	38mm	260mm	1	
724020	45/40	50mm	345mm	1	

### C ZerØair™ Cold Trap - with socket

CAT NO	SIZE	DESCRIPTION	PK QTY	PRICE EACH
563100	14/23	Socket Cold Trap	1	
573100	24/29	Socket Cold Trap	1	

### D Long Cold Trap - with Rodaviss socket and cone

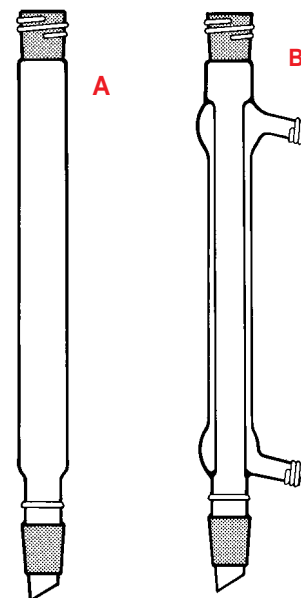
CAT NO	COOLANT CAPACITY	SOCKET SIZE	CONE SIZE	OVERALL LENGTH	PK QTY	PRICE EACH
724030	700ml	24/29	45/40	450mm	1	
724040	700ml	29/32	45/40	450mm	1	



## A Rodaviss Air Condenser

This simple air condenser allows the condensation of liquids with boiling points above 150°C.

CAT NO	APPROX SURFACE AREA	CONE & SOCKET	EFFECTIVE LENGTH	OVERALL LENGTH	PRICE EACH
360032	1 x 10 <sup>-2</sup> m <sup>2</sup>	19/26	150mm	210mm	
360062	2 x 10 <sup>-2</sup> m <sup>2</sup>	19/26	300mm	365mm	
360083	2.5 x 10 <sup>-2</sup> m <sup>2</sup>	24/29	400mm	470mm	



## B Rodaviss Liebig Condenser

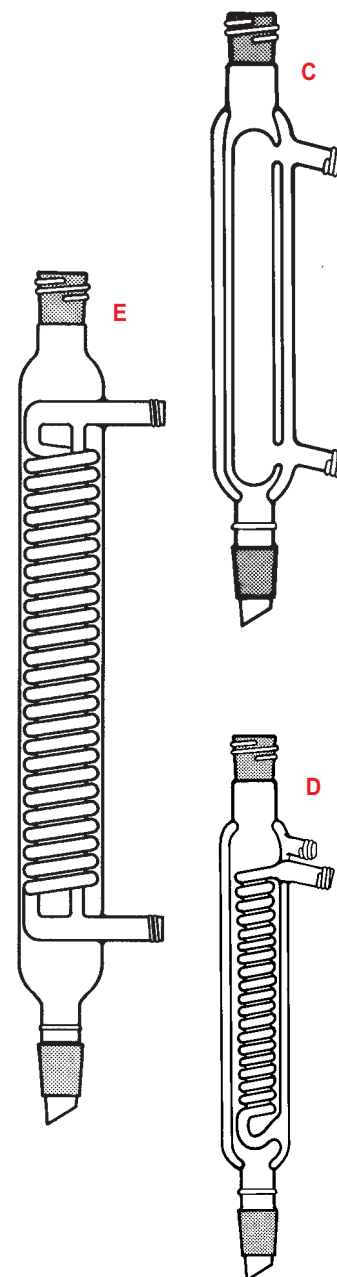
The water jacket of the Liebig condenser is designed with minimum annular space, giving good water turbulence at relatively slow coolant flow rates. Therefore, whilst the surface area is relatively small, the effectiveness of the condenser remains adequate for most applications.

CAT NO	APPROX SURFACE AREA	CONE & SOCKET	EFFECTIVE LENGTH	OVERALL LENGTH	SIDE-ARM	PRICE EACH
362242	1 x 10 <sup>-2</sup> m <sup>2</sup>	19/26	200mm	340mm	11mm Olive	
362243	1 x 10 <sup>-2</sup> m <sup>2</sup>	24/29	200mm	340mm	11mm Olive	
362253	1.3 x 10 <sup>-2</sup> m <sup>2</sup>	24/29	250mm	400mm	11mm Olive	
362254	1.3 x 10 <sup>-2</sup> m <sup>2</sup>	29/32	250mm	400mm	11mm Olive	
362442	1 x 10 <sup>-2</sup> m <sup>2</sup>	19/26	200mm	340mm	GL14 Thread	
362443	1 x 10 <sup>-2</sup> m <sup>2</sup>	24/29	200mm	340mm	GL14 Thread	
362453	1.3 x 10 <sup>-2</sup> m <sup>2</sup>	24/29	250mm	400mm	GL14 Thread	
362454	1.3 x 10 <sup>-2</sup> m <sup>2</sup>	29/32	250mm	400mm	GL14 Thread	
362642	1 x 10 <sup>-2</sup> m <sup>2</sup>	19/26	200mm	340mm	SQ13 Thread	
362643	1 x 10 <sup>-2</sup> m <sup>2</sup>	24/29	200mm	340mm	SQ13 Thread	
362653	1.3 x 10 <sup>-2</sup> m <sup>2</sup>	24/29	250mm	400mm	SQ13 Thread	
362654	1.3 x 10 <sup>-2</sup> m <sup>2</sup>	29/32	250mm	400mm	SQ13 Thread	

## C Rodaviss Double Surface Condenser

The increased surface area of these double surface (or Davies) condensers, compared with the corresponding Liebig condensers, results in improved effectiveness and efficiency. This condenser is particularly useful when dealing with liquids that have a low boiling point.

CAT NO	APPROX SURFACE AREA	CONE & SOCKET	EFFECTIVE LENGTH	OVERALL LENGTH	SIDE-ARM	PRICE EACH
364232	1.7 x 10 <sup>-2</sup> m <sup>2</sup>	19/26	150mm	295mm	11mm Olive	
364242	2.3 x 10 <sup>-2</sup> m <sup>2</sup>	19/26	200mm	340mm	11mm Olive	
364243	3.0 x 10 <sup>-2</sup> m <sup>2</sup>	24/29	200mm	345mm	11mm Olive	
364244	3.0 x 10 <sup>-2</sup> m <sup>2</sup>	29/32	200mm	365mm	11mm Olive	
364432	1.7 x 10 <sup>-2</sup> m <sup>2</sup>	19/26	150mm	295mm	GL14 Thread	
364442	2.3 x 10 <sup>-2</sup> m <sup>2</sup>	19/26	200mm	340mm	GL14 Thread	
364443	3.0 x 10 <sup>-2</sup> m <sup>2</sup>	24/29	200mm	345mm	GL14 Thread	
364444	3.0 x 10 <sup>-2</sup> m <sup>2</sup>	29/32	200mm	365mm	GL14 Thread	
364632	1.7 x 10 <sup>-2</sup> m <sup>2</sup>	19/26	150mm	295mm	SQ13 Thread	
364642	2.3 x 10 <sup>-2</sup> m <sup>2</sup>	19/26	200mm	340mm	SQ13 Thread	
364643	3.0 x 10 <sup>-2</sup> m <sup>2</sup>	24/29	200mm	345mm	SQ13 Thread	
364644	3.0 x 10 <sup>-2</sup> m <sup>2</sup>	29/32	200mm	365mm	SQ13 Thread	



## D Rodaviss Jacketed Coil Condenser

These jacketed, double surface condensers have a coil as an inner cooling surface, giving approximately twice the surface area of a double surface condenser of the same effective length.

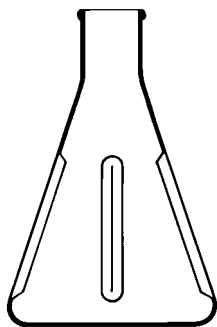
CAT NO	APPROX SURFACE AREA	CONE & SOCKET	EFFECTIVE LENGTH	OVERALL LENGTH	SIDE-ARM	PRICE EACH
366232	4 x 10 <sup>-2</sup> m <sup>2</sup>	19/26	160mm	360mm	11mm Olive	
366233	4 x 10 <sup>-2</sup> m <sup>2</sup>	24/29	160mm	360mm	11mm Olive	
366234	4 x 10 <sup>-2</sup> m <sup>2</sup>	29/32	160mm	370mm	11mm Olive	
366432	4 x 10 <sup>-2</sup> m <sup>2</sup>	19/26	160mm	360mm	GL14 Thread	
366433	4 x 10 <sup>-2</sup> m <sup>2</sup>	24/29	160mm	360mm	GL14 Thread	
366434	4 x 10 <sup>-2</sup> m <sup>2</sup>	29/32	160mm	370mm	GL14 Thread	
366632	4 x 10 <sup>-2</sup> m <sup>2</sup>	19/26	160mm	360mm	SQ13 Thread	
366633	4 x 10 <sup>-2</sup> m <sup>2</sup>	24/29	160mm	360mm	SQ13 Thread	
366634	4 x 10 <sup>-2</sup> m <sup>2</sup>	29/32	160mm	370mm	SQ13 Thread	

## E Large Double Coil Rodaviss Condenser

Large double coil rodaviss condenser with a double coil. The coolant connections are GL18 screwthreads.

CAT NO	CONE & SOCKET	EFFECTIVE LENGTH	OVERALL LENGTH	SIDE-ARM	PRICE EACH
366000	29/32	160mm	560mm	375mm	

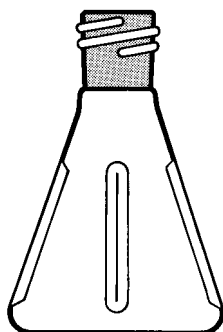
# Culture Flasks & Dissolution Vessels



## Narrow Neck Culture Flask

Standard conical flasks with four indents that act as baffles, enabling the contents to be thoroughly mixed. Ideal for use with mixers and shakers etc.

CAT NO	NECK Ø	BASE OD	CAPACITY	OVERALL HEIGHT	PK QTY	PRICE EACH
761008	22mm	51mm	50ml	85mm	1	
761010	24mm	64mm	100ml	105mm	1	
761012	34mm	85mm	250ml	140mm	1	
761014	34mm	105mm	500ml	175mm	1	
761016	42mm	131mm	1000ml	220mm	1	
761018	50mm	166mm	2000ml	280mm	1	



## Wide Neck Culture Flask

CAT NO	NECK Ø	BASE OD	CAPACITY	OVERALL HEIGHT	PK QTY	PRICE EACH
762008	34mm	48mm	50ml	85mm	1	
762010	34mm	64mm	100ml	105mm	1	
762012	50mm	85mm	250ml	140mm	1	
762014	50mm	105mm	500ml	175mm	1	
762016	50mm	131mm	1000ml	220mm	1	
762018	72mm	153mm	2000ml	275mm	1	

## Rodaviss Culture Flask - with Rodaviss socket and sealing caps

Standard flask with four indents that act as baffles, providing improved mixing action.

CAT NO	SOCKET SIZE	BASE OD	CAPACITY	OVERALL HEIGHT	PK QTY	PRICE EACH
764008	19/26	48mm	50ml	85mm	1	
764010	19/26	64mm	100ml	105mm	1	
764012	24/29	85mm	250ml	140mm	1	
764014	24/29	105mm	500ml	175mm	1	
764016	34/35	131mm	1000ml	220mm	1	
764018	45/40	153mm	2000ml	275mm	1	



## Dissolution Vessels

Designed to meet the specifications of British Pharmacopoeia 1993, Appendix XII D. Dissolution Test for Tablets and Capsules. Available in both clear and ambered.

Dimensions: Rim ø - 127mm; Wall thickness - 3mm; Internal height to base of rim - 168mm.

We will be pleased to quote for specialised sizes and designs for specific instruments.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
379010	Clear Dissolution Vessels	1	
379020	Ambered Dissolution Vessels	1	

## Glassware For Standard Test Methods

Manufacture of glassware to meet the requirements of international test methods including, BS, ASTM, IP, EPA, FDA, European and British Pharmacopoea...

Whatever your specialist area we will be pleased to quote for complete glassware systems to meet the requirements of a large range of standard test methods, both in the UK and abroad. Our service includes the sourcing of methods and where requested, the certification of conformance with those methods.

Contact us today +44-(0)1799-513320 on for more information

## Certificates of Conformity

Available for all standard and custom glassware items...

Single certificates for complete orders or single certificates for each item @ £12.50 per certificate. Cat No. 810001.

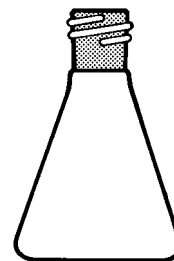
A single certificate with each item individually numbered, @ £12.50 per certificate plus £2.50 per item. Cat No. 810002.

Contact us today on +44-(0)1799-513320 for more information



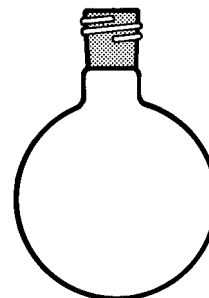
**Rodaviss Conical Flasks** - with Rodaviss socket and sealing caps

CAT NO	SOCKET SIZE	CAPACITY	PK QTY	PRICE EACH
302108	14/23	50ml	1	
302110	14/23	100ml	1	
302210	19/26	100ml	1	
302212	19/26	250ml	1	
302312	24/29	250ml	1	
302314	24/29	500ml	1	
302316	24/29	1000ml	1	
302318	24/29	2000ml	1	



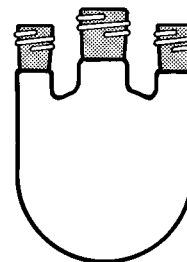
**Rodaviss Round Bottom Flasks**

CAT NO	SOCKET SIZE	CAPACITY	PK QTY	PRICE EACH
300206	19/26	25ml	1	
300208	19/26	50ml	1	
300308	24/29	50ml	1	
300210	19/26	100ml	1	
300310	24/29	100ml	1	
300311	24/29	150ml	1	
300312	24/29	250ml	1	
300314	24/29	500ml	1	
300514	34/35	500ml	1	
300316	24/29	1000ml	1	
300516	34/35	1000ml	1	
300518	34/35	2000ml	1	
300622	45/40	4000ml	1	
300626	45/40	6000ml	1	
300628	45/40	10000ml	1	
300632	45/40	20000ml	1	



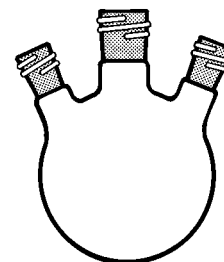
**Rodaviss 3-Neck Flasks, Parallel**

CAT NO	OUTER SOCKETS	MID SOCKET	CAPACITY	PK QTY	PRICE EACH
306210	14/23	19/26	100ml	1	
306212	14/23	19/26	250ml	1	
306310	19/26	24/29	100ml	1	
306312	19/26	24/29	250ml	1	
306314	19/26	24/29	500ml	1	
306316	19/26	24/29	1000ml	1	
306516	24/29	34/35	1000ml	1	
306518	24/29	34/35	2000ml	1	
306622	24/29	45/40	4000ml	1	
306626	24/29	45/40	6000ml	1	
306628	34/35	45/40	10000ml	1	
306632	34/35	45/40	20000ml	1	



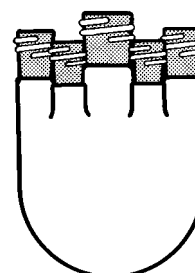
**Rodaviss 3-Neck Flasks, Angled**

CAT NO	OUTER SOCKETS	MID SOCKET	CAPACITY	PK QTY	PRICE EACH
304206	14/23	19/26	25ml	1	
304208	14/23	19/26	50ml	1	
304210	14/23	19/26	100ml	1	
304212	14/23	19/26	250ml	1	
304310	19/26	24/29	100ml	1	
304312	19/26	24/29	250ml	1	
304314	19/26	24/29	500ml	1	
304316	19/26	24/29	1000ml	1	
304516	24/29	34/35	1000ml	1	
304518	24/29	34/35	2000ml	1	
304622	24/29	45/40	4000ml	1	
304626	24/29	45/40	6000ml	1	
304628	34/35	45/40	10000ml	1	
304632	34/35	45/40	20000ml	1	

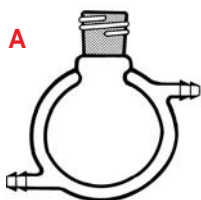


**Rodaviss 5-Neck Flasks, Parallel**

CAT NO	FRONT SOCKETS	SIDE SOCKETS	CENTRAL SOCKET	CAPACITY	PK QTY	PRICE EACH
308312	19/26	19/26	24/29	250ml	1	
308314	19/26	24/29	24/29	500ml	1	
308316	19/26	24/29	24/29	1000ml	1	
308516	24/29	24/29	34/35	1000ml	1	
308518	24/29	24/29	34/35	2000ml	1	
308622	24/29	34/35	45/40	4000ml	1	
308626	24/29	34/35	45/40	6000ml	1	
308628	24/29	34/35	45/40	10000ml	1	
308632	24/29	34/35	45/40	20000ml	1	

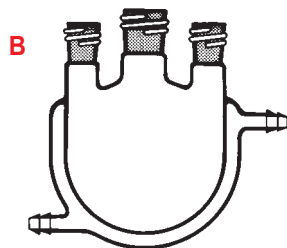


# Rodaviss® Reaction Flasks - Rotary Evaporator Flasks



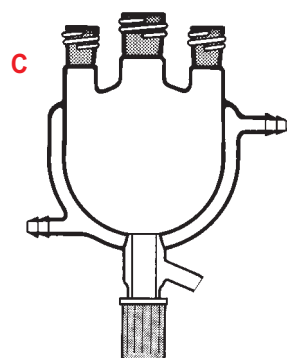
## A Rodaviss Jacketed Round Bottom Flask - single neck

CAPACITY	SOCKET SIZE	CAT NO 11MM OLIVE	CAT NO GL14 THREAD	CAT NO SQ13 THREAD	PK QTY	PRICE EACH
100ml	24/29	309210	309410	309610	1	
250ml	24/29	309212	309412	309612	1	
500ml	24/29	309214	309414	309614	1	
1000ml	34/35	309216	309416	309616	1	



## B Rodaviss Jacketed Round Bottom Flask - 3-neck

CAPACITY	CENTRAL SOCKET	OUTER SOCKETS	CAT NO 11MM OLIVE	CAT NO GL14 THREAD	CAT NO SQ13 THREAD	PK QTY	PRICE EACH
250ml	24/29	19/26	307212	307412	307612	1	
500ml	24/29	19/26	307214	307414	307614	1	
1000ml	34/35	19/26	307216	307416	307616	1	



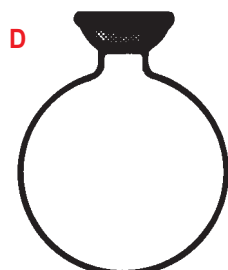
## C Rodaviss Jacketed Reaction Flask - with zero dead space stopcock

A new range of 3 neck reaction flasks with a zero dead space 15mm stopcock. Please refer to pages 608 to 624 for information on a complete range of reaction vessels and accessories.

CAPACITY	CENTRAL SOCKET	OUTER SOCKETS	CAT NO 11MM OLIVE	CAT NO GL14 THREAD	CAT NO SQ13 THREAD	PK QTY	PRICE EACH
250ml	24/29	19/26	317212	317412	317612	1	
500ml	24/29	19/26	317214	317414	317614	1	
1000ml	34/35	19/26	317216	317416	317616	1	

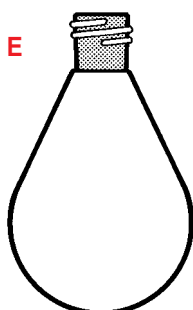
## D Rotary Evaporator Receiving Flask - S35/20 cup joint

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
306608	50ml capacity	1	
306610	100ml capacity	1	
306612	250ml capacity	1	
306614	500ml capacity	1	
306616	1000ml capacity	1	
306618	2000ml capacity	1	
306620	3000ml capacity	1	
306622	4000ml capacity	1	



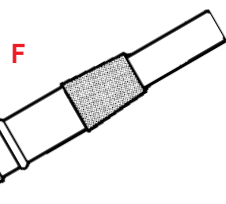
## E Rotary Evaporator Flask - with Rodaviss 29/32 socket

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
306708	50ml capacity	1	
306710	100ml capacity	1	
306712	250ml capacity	1	
306714	500ml capacity	1	
306716	1000ml capacity	1	
306718	2000ml capacity	1	
306720	3000ml capacity	1	
306722	4000ml capacity	1	



## E Rotary Evaporator Flask - with Rodaviss 24/29 socket

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
306808	50ml capacity	1	
306810	100ml capacity	1	
306812	250ml capacity	1	
306814	500ml capacity	1	
306816	1000ml capacity	1	



## F Rotary Evaporator Vapour Duct - with Rodaviss

CAT NO	CONE FOR FLASK	CONE FOR DRIVE	TYPE	PK QTY	PRICE EACH
291101	29/32	29/32	Short	1	
291102	24/29	29/32	Short	1	
291103	29/32	29/32	Long	1	
291104	24/29	29/32	Long	1	

### Fax us a sketch and we'll send you a quote...

Free quotations are given for any item regardless of size or complexity. Simply fax or send us a sketch, or sample, with the relevant dimensions and specifications, and we will provide you with a detailed faxed quotation by return. Alternatively, describe what you want and we will provide you with a drawing to approve. Contact us today on...

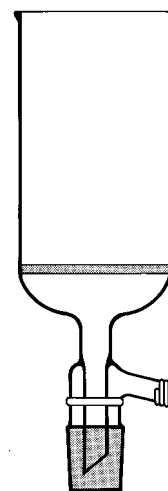
t: +44-(0)1799-513320  
f: +44-(0)1799-513283  
e: sales@radleys.co.uk



## Rodaviss Cylindrical Filter Funnel - side-arm and 24/29 cone

CAPACITY	POROSITY	SINTERED DISC Ø	CAT NO 9MM OLIVE	CAT NO GL14 THREAD	CAT NO SQ13 THREAD	PRICE EACH
90ml	1	40mm	601340	601540	601740	
90ml	2	40mm	602340	602540	602740	
90ml	3	40mm	603340	603540	603740	
90ml	4	40mm	604340	604540	604740	
400ml	1	65mm	601365	601565	601765	
400ml	2	65mm	602365	602565	602765	
400ml	3	65mm	603365	603565	603765	
400ml	4	65mm	604365	604565	604765	

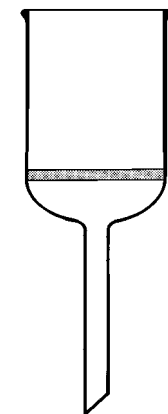
Please note 400ml Filter Funnels have 11mm Olives where fitted.



## Cylindrical Filter Funnel - side-arm and 24/29 ordinary cone

CAPACITY	POROSITY	SINTERED DISC Ø	CAT NO 9MM OLIVE	CAT NO GL14 THREAD	CAT NO SQ13 THREAD	PRICE EACH
90ml	1	40mm	601240	601440	601640	
90ml	2	40mm	602240	602440	602640	
90ml	3	40mm	603240	603440	603640	
90ml	4	40mm	604240	604440	604640	
400ml	1	65mm	601265	601465	601665	
400ml	2	65mm	602265	602465	602665	
400ml	3	65mm	603265	603465	603665	
400ml	4	65mm	604265	604465	604665	

Please note 400ml Filter Funnels have 11mm Olives where fitted.



## Plain Cylindrical Filter Funnels

CAPACITY	POROSITY	SINTERED DISC Ø	CAT NO	PRICE EACH
30ml	1	30mm	641030	
30ml	2	30mm	642030	
30ml	3	30mm	643030	
30ml	4	30mm	644030	
30ml	5	30mm	645030	
60ml	1	40mm	641060	
60ml	2	40mm	642060	
60ml	3	40mm	643060	
60ml	4	40mm	644060	
60ml	5	40mm	645060	
120ml	1	40mm	641120	
120ml	2	40mm	642120	
120ml	3	40mm	643120	
120ml	4	40mm	644120	
120ml	5	40mm	645120	



## Pipeline Filter Tube

For insertion in flexible tubing. Side arms have 11mm olive. Screwthreads available on request.

CAT NO	DESCRIPTION	POR	SINTERED DISC Ø	QTY	PRICE EACH
610030	Pipeline Filter Tube	0	30mm	1	
611030	Pipeline Filter Tube	1	30mm	1	
612030	Pipeline Filter Tube	2	30mm	1	
613030	Pipeline Filter Tube	3	30mm	1	
610050	Pipeline Filter Tube	0	50mm	1	
611050	Pipeline Filter Tube	1	50mm	1	
612050	Pipeline Filter Tube	2	50mm	1	
613050	Pipeline Filter Tube	3	50mm	1	



## NEW Volumetric Flasks - Class B, MBL®

- Complies with ISO 1042 and DIN 12664
- Manufactured from borosilicate glass for corrosion-free performance
- Inscriptions in blue enamel
- Polyethylene stopper

CAT NO	CLASS	CAPACITY ML	TOLERANCE ±ML	HEIGHT MM	STOPPER SIZE	PK QTY	PRICE EACH
FRD300P	B	1	0.05	45	10/19	10	
FRD302P	B	2	0.05	50	10/19	10	
FRD022P	B	5	0.05	70	10/19	10	
FRD024P	B	10	0.05	90	10/19	10	
FRD025P*	B	20	0.08	110	10/19	10	
FRD026P	B	25	0.08	110	10/19	10	
FRD028P	B	50	0.12	140	12/21	10	
FRD030P	B	100	0.20	170	14/23	10	
FRD032P	B	200	0.30	210	14/23	10	
FRD034P	B	250	0.30	220	14/23	10	
FRD036P	B	500	0.50	260	19/26	10	
FRD038P	B	1000	0.80	300	24/29	4	
FRD040P	B	2000	1.20	370	29/32	2	
FRD042P	B	5000	2.40	475	34/35	2	

\*Supplementary to DIN standard



# Volumetric Flasks



## NEW Small Capacity Volumetric Flasks - Class B, E-MIL®

- With wide necks to facilitate entry of pipettes
- Manufactured from borosilicate glass for corrosion-free performance
- White enamel inscriptions
- With polyethylene stopper

CAT NO	CLASS	CAPACITY ML	TOLERANCE ±ML	HEIGHT MM	STOPPER SIZE	PK QTY	PRICE EACH
G7254P	B	1	0.03	40	10/19	10	
G7255P	B	2	0.03	45	10/19	10	
G7227P	B	3	0.03	50	10/19	10	
G7228P	B	4	0.03	55	10/19	10	
G7250P	B	100	0.15	170	19/26	10	



## NEW Volumetric Flasks - Class A, MBL®

- Complies with ISO 1042 and DIN 12664
- Finely calibrated to Class A tolerances
- Conformity 'H' certified
- Manufactured from chemically resistant borosilicate glass
- Inscriptions in blue enamel
- Polyethylene stopper

CAT NO	CLASS	CAPACITY ML	TOLERANCE ±ML	HEIGHT MM	STOPPER SIZE	PK QTY	PRICE EACH
FRD164	A	5	0.025	70	10/19	5	
FRD166	A	10	0.025	90	10/19	5	
FRD167*	A	20	0.04	110	10/19	5	
FRD168	A	25	0.04	110	10/19	5	
FRD170	A	50	0.06	140	12/21	5	
FRD172	A	100	0.10	170	14/23	5	
FRD174	A	200	0.15	210	14/23	5	
FRD176	A	250	0.15	220	14/23	2	
FRD178	A	500	0.25	260	19/26	2	
FRD180	A	1000	0.40	300	24/29	2	
FRD182	A	2000	0.60	370	29/32	1	
FRD184*	A	5000	1.20	475	34/35	1	

\*Supplementary to DIN standard



## NEW Volumetric Flasks - Class A, MBL®

- Complies with ISO 1042 and DIN 12664
- Finely calibrated to Class A tolerances
- For traceability, flasks are batch coded and supplied with certificate
- Conformity 'H' certified
- Manufactured from borosilicate glass with hollow blown glass stopper
- Inscriptions in blue enamel

CAT NO	CLASS	CAPACITY ML	TOLERANCE ±ML	HEIGHT MM	STOPPER SIZE	PK QTY	PRICE EACH
FRD264	A	5	0.025	70	10/19	5	
FRD266	A	10	0.025	90	10/19	5	
FRD267*	A	20	0.04	110	10/19	5	
FRD268	A	25	0.04	110	10/19	5	
FRD270	A	50	0.06	140	12/21	5	
FRD272	A	100	0.10	170	14/23	5	
FRD274	A	200	0.15	210	14/23	5	
FRD276	A	250	0.15	220	14/23	2	
FRD278	A	500	0.25	260	19/26	2	
FRD280	A	1000	0.40	300	24/29	2	
FRD282	A	2000	0.60	370	29/32	1	
FRD284*	A	5000	1.20	475	34/35	1	

\*Supplementary to DIN standard

## NEW Stopper, Hollow blown Glass - MBL®

- Ideally suited for use with volumetric flasks, etc..
- Lower closed end stopper features a 'drip-tip' to ensure adhered liquid is returned to the flask
- Hexagonal feature prevents the stopper from rolling
- Flat head allows stopper to be stood on end, thus preventing contamination of the ground surface
- Hollow blown to reduce weight



CAT NO	DESCRIPTION	JOINT SIZE	PK QTY	PRICE EACH
TRF690	Hollow Blown Glass 'B' Length Stopper	7/16	10	
TRF691	Hollow Blown Glass 'B' Length Stopper	10/19	10	
TRF692	Hollow Blown Glass 'B' Length Stopper	12/21	10	
TRF693	Hollow Blown Glass 'B' Length Stopper	14/23	10	
TRF695	Hollow Blown Glass 'B' Length Stopper	19/26	10	
TRF696	Hollow Blown Glass 'B' Length Stopper	24/29	10	
TRF697	Hollow Blown Glass 'B' Length Stopper	29/32	10	
TRF698	Hollow Blown Glass 'B' Length Stopper	34/35	5	
TRF699	Hollow Blown Glass 'B' Length Stopper	45/40	5	

## NEW Volumetric Flasks - Class A, PYREX®

- Complies with ISO 1042 and DIN 12664
- Finely calibrated to Class A tolerances
- For traceability, flasks are batch coded and supplied with certificate
- Conformity 'H' certified
- Manufactured from chemically resistant Pyrex® glass
- Inscriptions in white enamel
- Polyethylene stopper

CAT NO	CLASS	CAPACITY ML	TOLERANCE ±ML	HEIGHT MM	STOPPER SIZE	PK QTY	PRICE EACH
3140/02MP	A	5	0.025	70	10/19	5	
3140/04MP	A	10	0.025	90	10/19	5	
3140/06MP*	A	20	0.04	110	10/19	5	
3140/08MP	A	25	0.04	110	10/19	5	
3140/10MP	A	50	0.06	140	12/21	5	
3140/12MP	A	100	0.10	170	14/23	5	
3140/14MP	A	200	0.15	210	14/23	5	
3140/16MP	A	250	0.15	220	14/23	2	
3140/18MP	A	500	0.25	260	19/26	2	
3140/20MP	A	1000	0.40	300	24/29	2	
3140/22MP	A	2000	0.60	370	29/32	1	
3140/24MP*	A	5000	1.20	475	34/35	1	

\*Supplementary to DIN standard



## NEW Volumetric Flasks - Class A, USP tolerance, E-MIL®

- Complies with ISO 1042 and DIN 12664
- Finely calibrated to Class A tolerances
- For traceability, flasks are batch coded and supplied with certificate
- Conformity 'H' certified
- Manufactured from borosilicate glass for corrosion-free performance
- Inscriptions in white enamel
- Polyethylene stopper

CAT NO	CLASS	CAPACITY ML	TOLERANCE ±ML	HEIGHT MM	STOPPER SIZE	PK QTY	PRICE EACH
G22300	A	5	0.020	70	10/19	10	
G22301	A	10	0.020	90	10/19	10	
G22311	A	20	0.03	110	10/19	10	
G22302	A	25	0.03	110	10/19	10	
G22303	A	50	0.05	140	12/21	10	
G22304	A	100	0.08	170	14/23	10	
G22305	A	200	0.10	210	14/23	10	
G22306	A	250	0.12	220	14/23	10	
G22307	A	500	0.15	260	19/26	10	
G22308	A	1000	0.30	300	24/29	4	
G22309	A	2000	0.50	370	29/32	2	
G22310	A	5000	1.00	475	34/35	2	



## NEW Volumetric Flasks - Class A, works certified, PYREX®

- Complies with ISO 1042 and DIN 12664
- Finely calibrated to Class A tolerances
- Each flask engraved with individual serial number and supplied with certificate of calibration traceable to National standards
- Conformity 'H' certified
- Manufactured from chemically resistant Pyrex® glass with polyethylene stopper
- Inscriptions in white enamel

CAT NO	CLASS	CAPACITY ML	TOLERANCE ±ML	HEIGHT MM	STOPPER SIZE	PK QTY	PRICE EACH
3140/42MP	A	5	0.025	70	10/19	5	
3140/44MP	A	10	0.025	90	10/19	5	
3140/46MP*	A	20	0.04	110	10/19	5	
3140/48MP	A	25	0.04	110	10/19	5	
3140/50MP	A	50	0.06	140	12/21	5	
3140/52MP	A	100	0.10	170	14/23	5	
3140/54MP	A	200	0.15	210	14/23	5	
3140/56MP	A	250	0.15	220	14/23	2	
3140/58MP	A	500	0.25	260	19/26	2	
3140/60MP	A	1000	0.40	300	24/29	2	
3140/62MP	A	2000	0.60	370	29/32	1	
3140/64MP*	A	5000	1.20	475	34/35	1	

\*Supplementary to DIN standard



## Conformity 'H' Certified

Many Class A volumetric flasks, manufactured by Bibby Sterilin are Conformity Certified. Flasks featuring an 'H' symbol indicate manufacture under strict quality procedures, according to Eichordnung the German Federal Weights and Measures Regulations.

# Volumetric Flasks



## NEW Volumetric Flasks - Class A, USP tolerance, works certified, E-MIL®

- Complies with ISO 1042 and DIN 12664
- Finely calibrated to Class A tolerances
- 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
- Inscriptions in white enamel
- Polyethylene stopper

CAT NO	CLASS	CAPACITY ML	TOLERANCE ±ML	HEIGHT MM	STOPPER SIZE	PK QTY	PRICE EACH
G22300WC	A	5	0.020	70	10/19	10	
G22301WC	A	10	0.020	90	10/19	10	
G22311WC	A	20	0.03	110	10/19	10	
G22302WC	A	25	0.03	110	10/19	10	
G22303WC	A	50	0.05	140	12/21	10	
G22304WC	A	100	0.08	170	14/23	10	
G22305WC	A	200	0.10	210	14/23	10	
G22306WC	A	250	0.12	220	14/23	10	
G22307WC	A	500	0.15	260	19/26	10	
G22308WC	A	1000	0.30	300	24/29	4	
G22309WC	A	2000	0.50	370	29/32	2	
G22310WC	A	5000	1.00	475	34/35	2	

\*Supplementary to DIN standard



## NEW Amber Volumetric Flasks - Class A, USP tolerance, E-MIL®

- Complies with ISO 1042
- Manufactured from amber borosilicate glass ideal for use with light sensitive solutions
- Finely calibrated to Class A tolerances
- For traceability, flasks are batch coded and supplied with certificate
- Conformity 'H' certified
- Inscriptions in white enamel
- Polyethylene stopper

CAT NO	CLASS	CAPACITY ML	TOLERANCE ±ML	HEIGHT MM	STOPPER SIZE	PK QTY	PRICE EACH
G22302A	A	25	0.03	110	10/19	10	
G22303A	A	50	0.05	140	12/21	10	
G22304A	A	100	0.08	170	14/23	10	
G22305A	A	200	0.10	210	14/23	10	
G22306A	A	250	0.12	220	14/23	10	
G22307A	A	500	0.15	260	19/26	10	
G22308A	A	1000	0.30	300	24/29	4	



## NEW Volumetric Flasks - Class A, screwcap, PYREX®

- Manufactured from chemically resistant Pyrex®
- With screwcap for a positive closure, comprises black phenolic and PTFE faced sealing disc
- Finely calibrated to Class A tolerances
- For traceability, flasks are batch coded and supplied with certificate
- Inscriptions in white enamel

CAT NO	DESCRIPTION	CAPACITY ML	TOLERANCE ±ML	HEIGHT MM	CAP SIZE	PK QTY	PRICE EACH
3145/06MP	Vol. Flask, PYREX®	20	0.04	110	13	5	
3145/08MP	Vol. Flask, PYREX®	25	0.04	110	13	5	
3145/10MP	Vol. Flask, PYREX®	50	0.06	145	15	5	
3145/12MP	Vol. Flask, PYREX®	100	0.10	175	15	5	
3145/14MP	Vol. Flask, PYREX®	200	0.15	215	18	5	
3145/16MP	Vol. Flask, PYREX®	250	0.15	225	18	2	
3145/18MP	Vol. Flask, PYREX®	500	0.25	260	20	2	
3145/20MP	Vol. Flask, PYREX®	1000	0.40	305	22	2	
3145/22MP	Vol. Flask, PYREX®	2000	0.60	375	25	1	

\*Supplementary to DIN standard



## NEW Stopper, Polypropylene - MBL®

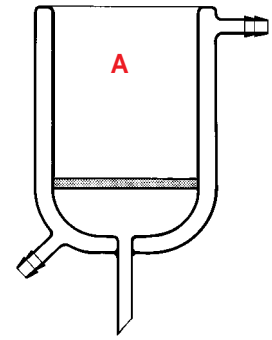
Ideally suited for use with volumetric flasks and measuring cylinders etc which have 'B' length sockets. Manufactured from polypropylene, these stoppers have a large head which provides good grip and protection if glassware is accidentally knocked over.

CAT NO	DESCRIPTION	JOINT SIZE	PK QTY	PRICE EACH
TRF591	Polyethylene 'B' Length Stopper	10/19	10	
TRF592	Polyethylene 'B' Length Stopper	12/21	10	
TRF593	Polyethylene 'B' Length Stopper	10/23	10	
TRF595	Polyethylene 'B' Length Stopper	12/26	10	
TRF596	Polyethylene 'B' Length Stopper	14/29	10	
TRF597	Polyethylene 'B' Length Stopper	29/32	10	
TRF598	Polyethylene 'B' Length Stopper	34/35	10	
TRF599	Polyethylene 'B' Length Stopper	45/40	10	

## A Jacketed Filter Funnels - with side-arms

These jacketed filter funnels allow you to carefully control the temperature of the filtration process, putting an end to the problem of solutions crystallising before being able to pass through the sinter. Also available with porosity 1, 2, 3 and 4 sinters - please specify.

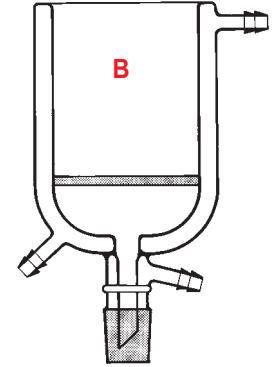
CAPACITY	POROSITY	SINTERED DISC Ø	CAT NO 11MM OLIVE	CAT NO GL14 THREAD	CAT NO SQ13 THREAD	PRICE EACH
100ml	0	40mm	630240	630440	630640	
350ml	0	65mm	630265	630465	630665	
700ml	0	90mm	630290	630490	630690	



## B Jacketed Filter Funnel - side-arms & 24/29 Rodaviss cone

These jacketed filter funnels allow you to carefully control the temperature of the filtration process, putting an end to the problem of solutions crystallising before being able to pass through the sinter. Also available with porosity 1, 2, 3 and 4 sinters - please specify.

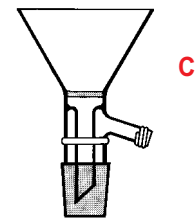
CAPACITY	POROSITY	SINTERED DISC Ø	CAT NO 11MM OLIVE	CAT NO GL14 THREAD	CAT NO SQ13 THREAD	PRICE EACH
100ml	0	40mm	610240	610440	610640	
350ml	0	65mm	610265	610465	610665	
700ml	0	90mm	610290	610490	610690	



## C Rodaviss® Conical Filter Funnel - with side-arm

CONE SIZE	PORO	SINTERED DISC Ø	TOP Ø	CAT NO 9MM OLIVE	CAT NO GL14 THREAD	CAT NO SQ13 THREAD	PRICE EACH
14/23	1	10mm	50mm	621310	621510	621710	
14/23	2	10mm	50mm	622310	622510	622710	
14/23	3	10mm	50mm	623310	623510	623710	
14/23	4	10mm	50mm	624310	624510	624710	
24/29	1	20mm	75mm	621320	621520	621720	
24/29	2	20mm	75mm	622320	622520	622720	
24/29	3	20mm	75mm	623320	623520	623720	
24/29	4	20mm	75mm	624320	624520	624720	

Please note Filter Funnels with 24/29 cones have 11mm Olives where fitted.



## C Conical Filter Funnel - with side-arm and ordinary cone

CONE SIZE	PORO	SINTERED DISC Ø	TOP Ø	CAT NO 9MM OLIVE	CAT NO GL14 THREAD	CAT NO SQ13 THREAD	PRICE EACH
14/23	1	10mm	50mm	621210	621410	621610	
14/23	2	10mm	50mm	622210	622410	622610	
14/23	3	10mm	50mm	623210	623410	623610	
14/23	4	10mm	50mm	624210	624410	624610	
24/29	1	20mm	75mm	621220	621420	621620	
24/29	2	20mm	75mm	622220	622420	622620	
24/29	3	20mm	75mm	623220	623420	623620	
24/29	4	20mm	75mm	624220	624420	624620	

Please note Filter Funnels with 24/29 cones have 11mm Olives where fitted.

## Sintered Glassware Porosity Grade Guide

POROSITY	ISO 4793 DESIGNATION	NOMINAL PORE SIZE	EXAMPLE APPLICATIONS	POROSITY	ISO 4793 DESIGNATION	NOMINAL PORE SIZE	EXAMPLE APPLICATIONS
	P250	160 - 250µm	Coarse filtration, Gas Distribution		P40	16 - 40µm	Analytical filtration of medium precipitation. Fine gas filtration, Extraction apparatus for fine grained material
	P160	100 - 160µm	Coarse filtration, Gas Distribution Extraction apparatus for Coarse grained material		P16	10 - 16µm	Analytical work with fine precipitates
	P100	40 - 100µm	Preparative fine filtration, Mercury filtration, Gas washing, Crystalline precipitate filtration		P10	4 - 10µm	Ultrafine filtration



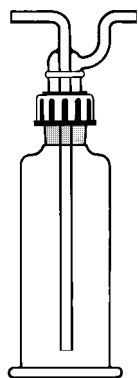
### Complete Rodaviss connections...

All apparatus which incorporates a Rodaviss cone will come supplied with the appropriate O-rings, Loosening Rings and Connecting Caps required for assembly.

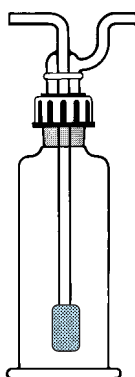
### If you prefer ordinary joints...

Whilst Rodaviss joints are completely interchangeable with ordinary joints, we will be pleased to offer any item from our range with ordinary ground joints instead of Rodaviss at no extra charge

# Gas Sampling



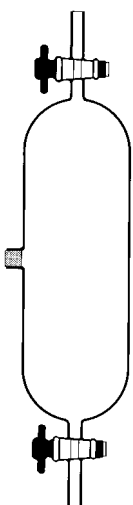
E



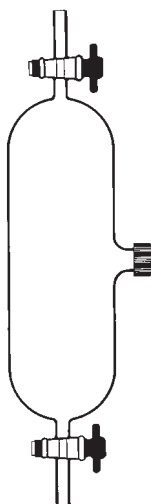
## E Rodaviss Drechsel Bottle

These very popular bottles are well suited to Rodaviss, which provides an air-tight seal, without the need for grease and overcomes the tendency of ordinary joints to jam. Bottles are available with or without sintered glass bulbs. The use of a sintered bulb provides improved gas distribution. Unit comprises of a bottle with a Rodaviss B24/29 socket, a removable Drechsel head with side-arms and integral dip tube.

CAT NO	POROSITY	CAPACITY	PK QTY	PRICE EACH
670211	0	125ml	1	
670212	0	250ml	1	
670214	0	500ml	1	
671211	1	125ml	1	
671212	1	250ml	1	
671214	1	500ml	1	
672211	2	125ml	1	
672212	2	250ml	1	
672214	2	500ml	1	
677211	plain stem	125ml	1	
677212	plain stem	250ml	1	
677214	plain stem	500ml	1	



F



## F Gas Sampling Bulb - with port and half hole septum

Use these glass bulbs to trap and transport a gas sample, then remove an aliquot (through the septum) for analysis. Available with glass or PTFE stopcocks. Supplied with one silicone half hole septum.

CAPACITY	STOPCOCK BORE	CAT NO GLASS KEY	CAT NO PTFE KEY	PK QTY	PRICE EACH
100ml	2mm	702810	704810	1	
250ml	2mm	702812	704812	1	
500ml	4mm	702814	704814	1	
1000ml	4mm	702816	704816	1	
701010	Half Hole Septa			10	



G



## G Gas Sampling Bulb - with screw cap and PTFE/Silicone Septum

Use these glass bulbs to trap and transport a gas sample, then remove an aliquot (through the septum) for analysis. Available with glass or PTFE stopcocks. Supplied with one pre-assembled cap with PTFE/silicone septum.

CAPACITY	STOPCOCK BORE	CAT NO GLASS KEY	CAT NO PTFE KEY	PK QTY	PRICE EACH
100ml	2mm	702610	704610	1	
250ml	2mm	702612	704612	1	
500ml	4mm	702614	704614	1	
1000ml	4mm	702616	704616	1	
565800	Pre-Assembled Caps with PTFE/Silicone Septa			10	
565805	Pre-Assembled Caps with PTFE/Silicone Septa			100	

H

## H Gas Distribution Tube with bulb - for dispersion of gas in liquids

CAT NO	OVERALL LENGTH	POROSITY	BULB Ø	EXT Ø STEM	PK QTY	PRICE EACH
620015	300mm	0	15mm	8mm	1	
621015	300mm	1	15mm	8mm	1	
622015	300mm	2	15mm	8mm	1	
623015	300mm	3	15mm	8mm	1	
620034	300mm	0	34mm	13mm	1	
621034	300mm	1	34mm	13mm	1	
622034	300mm	2	34mm	13mm	1	
623034	300mm	3	34mm	13mm	1	

I

## I Gas Distribution Tube - can also be used for reverse filtration

CAT NO	OVERALL LENGTH	POROSITY	DISC Ø	EXT Ø STEM	PK QTY	PRICE EACH
620020	300mm	0	20mm	8mm	1	
621020	300mm	1	20mm	8mm	1	
622020	300mm	2	20mm	8mm	1	
623020	300mm	3	20mm	8mm	1	
620040	300mm	0	40mm	13mm	1	
621040	300mm	1	40mm	13mm	1	
622040	300mm	2	40mm	13mm	1	
623040	300mm	3	40mm	13mm	1	

## Two Stage Impinger

For the Determination of the Deposition of the Emitted Dose in Pressurised Inhalations. BP Appendix XVII C. Spare parts are available. Price on application.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
285000	Two Stage Impinger	1	

## Kuderna Danish Apparatus

The Kuderna Danish Apparatus - widely used in environmental analysis - was developed for concentrating materials dissolved in volatile solvents. The apparatus consists of a flask, Snyder column and graduated receiving vessel. Two versions of the apparatus are available; one with Rodaviss joints and one with ordinary ground joints. The Rodaviss version is of particular benefit in applications where joints may be prone to sticking.

To use; fill the flask with material to approximately 40% to 60% of capacity and set the apparatus over a boiling water bath. For best results use the new Steam Collar to support your apparatus on the water bath. Heavier fractions reflux and concentrate in the receiving vessel.

### Kit 2 Kuderna Danish - with ordinary joints

With ordinary ground glass joints and joint clips. Kit 2 consists of a flask, Snyder column, graduated receiving vessel and two joint clips.

FLASK CAP.	SOCKET SIZE	CONE SIZE	SNYDER COLUMN			NO. OF BALLS	RECEIVING VESSEL CAPACITY	CAT NO	PRICE EACH
			SOCKET SIZE	CONE SIZE					
50ml	24/29	14/23	19/26	24/29		2	2ml	202050	
250ml	24/29	14/23	24/29	24/29		3	5ml	202250	
500ml	24/29	14/23	24/29	24/29		3	10ml	202500	

### Kit 3 Kuderna Danish - with Rodaviss joints

With Rodaviss joints. Kit 3 consists of a flask, Snyder column, graduated receiving vessel, two Rodaviss connecting caps, two loosening rings and two O-rings.

FLASK CAP.	SOCKET SIZE	CONE SIZE	SNYDER COLUMN			NO. OF BALLS	RECEIVING VESSEL CAPACITY	CAT NO	PRICE EACH
			SOCKET SIZE	CONE SIZE					
50ml	24/29	14/23	19/26	24/29		2	2ml	203050	
250ml	24/29	14/23	24/29	24/29		3	5ml	203250	
500ml	24/29	14/23	24/29	24/29		3	10ml	203500	

## Circular Boiling Baths - Clifton

These fixed temperature baths are supplied with a set of concentric ringed lids to vary the hole size. The steam produced provides an effective source of heat for samples that may be otherwise thermally damaged by a naked flame. Baths are available in round and rectangular style.

- All baths have an integral constant level device to regulate the level of water.
- Electrically heated baths have a class 1 over-heat protection device.
- The metal element collar ensures earth continuity to the outer case.
- All electrical baths are suitable for 230V, 50/60Hz operation.
- Accessory energy regulator can be used for control between vigorous boil and gentle simmer.

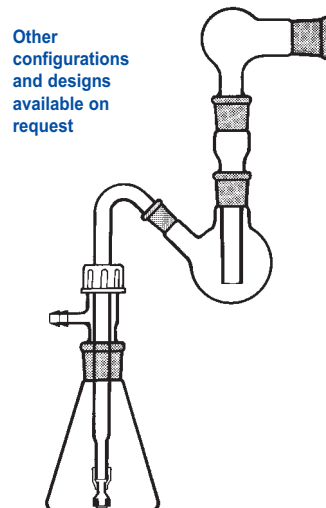
CAT NO	DESCRIPTION	DIAMETER X DEPTH (MM)	HOLE DETAILS DIAMETER (MM)	HEATER WATTS	VOLTAGE	PK QTY	PRICE EACH
1020G	Circular Aluminium Bath, Gas heated	127x90	125	-	-	1	
1021G	Circular Aluminium Bath, Gas heated	152x102	150	-	-	1	
1026G	Circular Aluminium Bath, Gas heated	203x127	200	-	-	1	
1026E	Circular Aluminium Bath, Electrically heated	203x127	200	1000	230	1	

## Rectangular Multi-position Boiling Bath - Clifton

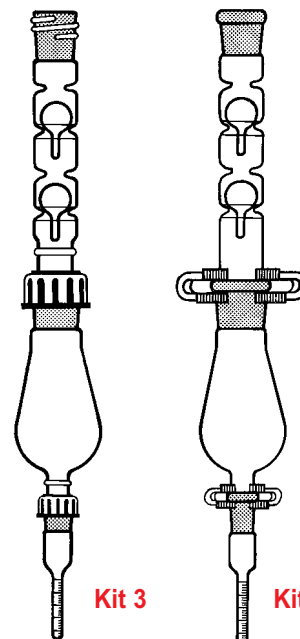
These stainless steel boiling baths can accommodate different sizes of vessel simultaneously simply by removing rings, to vary the hole sizes. An integral constant level device regulates the water level.

- Class 1 over-heat protection device.
- Supplied with a connector and power cord with plug.
- The metal element collar ensures earth continuity to outer case.
- All baths suitable for 230V, 50-60Hz operation.

CAT NO	DESCRIPTION	OVERALL DIMENSIONS		NO. OF HOLES / DIAMETER	HEATER WATTS	VOLTS	PK QTY	PRICE EACH
		WXDXH (MM)						
1101E	Multi-position Bath, Electrically heated	321x216x90		6/76mm	1000	230	1	
1102E	Multi-position Bath, Electrically heated	425x321x90		6/108mm	1000	230	1	
1104E	Multi-position Bath, Electrically heated	425x321x90		12/79mm	1500	230	1	



Other configurations and designs available on request

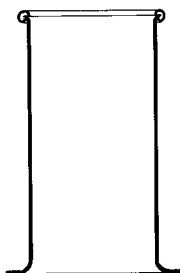
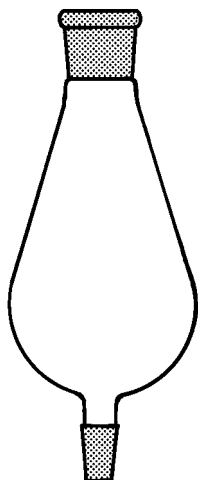


Kit 3

Kit 2



# Kuderna Danish



## Kuderna Danish Flasks

JOINT TYPE	CAPACITY	TOP SOCKET	BOTTOM CONE	CAT NO	PK QTY	PRICE EACH
Ordinary Joint	50ml	24/29	14/23	222050	1	
Ordinary Joint	250ml	24/29	14/23	222250	1	
Ordinary Joint	500ml	24/29	14/23	222500	1	
Rodaviss Joint	50ml	24/29	14/23	223050	1	
Rodaviss Joint	250ml	24/29	14/23	223250	1	
Rodaviss Joint	500ml	24/29	14/23	223500	1	

## 3-Ball Snyder Column - for 250ml and 500ml flasks

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
262003	Snyder Column with ordinary 24/29 cone and socket	1	
263003	Snyder Column with Rodaviss 24/29 cone and socket	1	

## 2-Ball Snyder Column - for 50ml flasks

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
262002	Snyder Column, ordinary 24/29 cone and 19/26 socket	1	
263002	Snyder Column, Rodaviss 24/29 cone and 19/26 socket	1	

## Graduated Receiving Vessels

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
242002	2ml Receiving Vessel with ordinary 14/23 socket	1	
242005	5ml Receiving Vessel with ordinary 14/23 socket	1	
242010	10ml Receiving Vessel with ordinary 14/23 socket	1	
243002	2ml Receiving Vessel with Rodaviss 14/23 socket	1	
243005	5ml Receiving Vessel with Rodaviss 14/23 socket	1	
243010	10ml Receiving Vessel with Rodaviss 14/23 socket	1	

## Steam Collar - supports Kuderna Danish Apparatus

The new Steam Collar is designed to sit on your water bath and safely support all types of Kuderna Danish Apparatus. Available in three sizes, the glass collar allows you to visually monitor the receiving vessel. A PVC rim prevents scratching of the flask.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
266050	Steam Collar for 50ml Flask	1	
266250	Steam Collar for 250ml Flask	1	
266500	Steam Collar for 500ml Flask	1	

## Glassware Repair Service

Save £££'s on our glassware repair service..

We believe that the quality of our manufactured glassware is second-to-none, and it is with the same attention to quality that we undertake to repair broken glassware. As a rule-of-thumb, it generally costs between a 1/3 and 1/2 of the new price to repair a broken glass item.

### Our Repair Service includes:-

- We can arrange for a regular collection and delivery.
- We will provide a heavy duty plastic Repairs Collection Box.
- Included with each Repairs Box will be a dedicated sheet for the listing of items for repair. This helps departmental costing and avoids any confusion within departments with regard to ownership of returned items.
- Included with each Repairs Box is a full set of safety instructions for the safe handling, packing and cleaning of broken glassware. Plus a pair of cut resistant Polysafe Glass Gloves.
- We will provide a free of charge written quotation, which will be faxed to you by return.
- If an item is unrepairable or it is not economical to repair, we will inform you and either return the glassware to you, or dispose of it.
- We will proceed with the repairs only on receipt of your authorisation.



### Complete Rodaviss connections...

All apparatus which incorporates a Rodaviss cone will come supplied with the appropriate O-rings, Loosening Rings and Connecting Caps required for assembly.

### If you prefer ordinary joints...

Whilst Rodaviss joints are completely interchangeable with ordinary joints, we will be pleased to offer any item from our range with ordinary ground joints instead of Rodaviss at no extra charge



## Metabolism Chamber

Proven design now incorporates Rodaviss joints for improved convenience when assembling, cleaning or removing samples. Rodaviss also provides an air-tight seal for CO<sub>2</sub> analysis. Animals may be placed and retrieved via the detachable lid, which is fabricated from soda glass. The borosilicate sockets on the lid are sealed by epoxy resin adhesive. The lid is held on to the body with metal spring clips for safety.

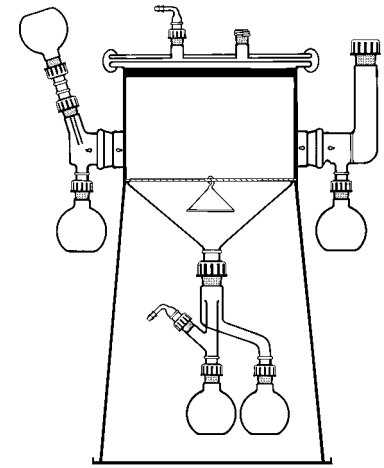
All receiving flasks have Rodaviss joint necks and flat bottoms for easy bench standing. Other important features are the urine-faeces spreader and separator. The chamber floor is made from a stainless steel mesh, with the support stand and tray being fabricated from white, plastic coated steel.

Silanisation of chambers and component parts is available on request.

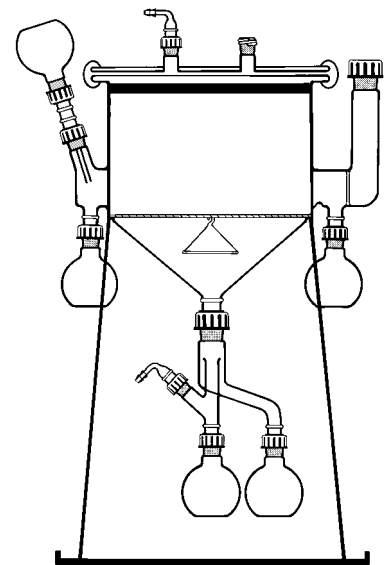
## Large Metabolism Chamber

Suitable for 250g rats and small rodents. Approximate internal dimensions 240mm diameter x 180mm high. This new size is available with fixed or detachable water feed and food hopper side-arms. This allows easier cleaning and storage.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
792301	Complete Large Metabolism Chamber With fixed side-arms.	1	
792401	Complete Large Metabolism Chamber With detachable side-arms.	1	
<b>Replacement Parts</b>			
792309	Living Chamber only, with fixed side-arms.	1	
792409	Living Chamber only, without side-arms.	1	
792414	Detachable Food Hopper	1	
792415	Detachable Water Feeder	1	
792303	Stainless Steel Mesh Floor	1	
792312	Stand and Base Tray	1	
792302	Replacement Lid	1	



Large Metabolism Chamber  
with Detachable Side-arms



Large Metabolism Chamber  
with Fixed Side-arms

## Medium Metabolism Chamber

Suitable for small rats and rodents. Approximate internal dimensions 190mm diameter x 165mm high. Available with fixed side-arms as standard. For detachable water feed and food hopper please call +44-(0)1799-513320 for a quotation.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
792201	Complete Medium Rat Metabolism Chamber,	1	
<b>Replacement Parts</b>			
792202	Lid	1	
790203	Stainless Steel Mesh Floor	1	
792204	Water Feeder	1	
792205	Separator	1	
792207	100ml Receiving Flask	1	
790208	Spreader	1	
792209	Living Chamber	1	
792211	Air Inlet/Outlet Adapter	1	
790212	Stand and Tray	1	

## Small Metabolism Chamber

Suitable for mice. Approximate internal dimensions 95mm diameter x 89mm high. Available with fixed side-arms as standard.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
792001	Complete Small Metabolism Chamber,	1	
<b>Replacement Parts</b>			
792002	Lid	1	
790003	Stainless Steel Mesh Floor	1	
792004	Water feeder	1	
792005	Separator	1	
792007	100ml Receiving Flask	1	
790008	Spreader	1	
790009	Living Chamber	1	
792011	Air Inlet/Outlet Adapter	1	
790012	Stand and Tray	1	

## Metabolism Chambers - modifications and repairs.....

We will be please to undertake modifications or repairs of any metabolism chambers whether manufactured by us or not. Indeed many of our existing customers have been converting over their old style systems to incorporate Rodaviss, for more effective CO<sub>2</sub> analysis.

Call us today on +44-(0)1799-513320 for a FREE quotation...

# Oil Bubblers

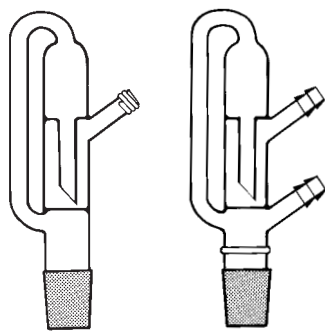


## Oil Bubblers

Oil bubblers are frequently used in the chemistry laboratory to monitor the evolution of a gas produced in a reaction; or the rate of flow of an inert or reacting gas through a reaction vessel; or simply as a means of closing-off a reaction vessel from the atmosphere.

Designed for simplicity, these bubblers are available with either a Rodaviss or ordinary ground glass cone, suitable for fitting on the top of any condenser or vessel with an equivalent socket.

The lower chamber is filled, to a level sufficient to cover the tip of the inner tube, with an appropriate oil or other liquid. The side arm fitted to the lower chamber acts as a vent for the reaction gas and can be fitted with tubing to take off any hazardous gases that may evolve. The upper chamber is designed to be large enough to hold any liquid which may be drawn up the inner tube, when pressure in the reaction vessel is reduced. When not in use, bubblers may be stored by simply hanging on a hook.



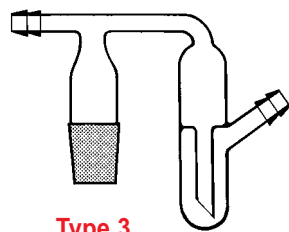
Type 1

Type 2

## Rodaviss Oil Bubblers

BUBBLER TYPE	CONE SIZE	CAT NO 9MM OLIVE	CAT NO GL14 THREAD	CAT NO SQ13 THREAD	PK QTY	PRICE EACH
Type 1	14/23	661314	661514	661714	1	
Type 1	19/26	661319	661519	661719	1	
Type 1	24/29	661324	661524	661724	1	
Type 1	29/32	661329	661529	661729	1	
Type 2	14/23	662314	662514	662714	1	
Type 2	19/26	662319	662519	662719	1	
Type 2	24/29	662324	662524	662724	1	
Type 2	29/32	662329	662529	662729	1	
Type 3	14/23	663314	663514	663714	1	
Type 3	19/26	663319	663519	663719	1	
Type 3	24/29	663324	663524	663724	1	
Type 3	29/32	663329	663529	663729	1	

## Oil Bubblers - with ordinary joints



Type 3

BUBBLER TYPE	CONE SIZE	CAT NO 9MM OLIVE	CAT NO GL14 THREAD	CAT NO SQ13 THREAD	PK QTY	PRICE EACH
Type 1	14/23	661214	661414	661614	1	
Type 1	19/26	661219	661419	661619	1	
Type 1	24/29	661224	661424	661624	1	
Type 1	29/32	661229	661429	661629	1	
Type 2	14/23	662214	662414	662614	1	
Type 2	19/26	662219	662419	662619	1	
Type 2	24/29	662224	662424	662624	1	
Type 2	29/32	662229	662429	662629	1	
Type 3	14/23	663214	663414	663614	1	
Type 3	19/26	663219	663419	663619	1	
Type 3	24/29	663224	663424	663624	1	
Type 3	29/32	663229	663429	663629	1	

## Custom Glassblowing Service

Radleys' team of glass technologist and product specialists have a vast experience in the design of all types of scientific glassware.

### Fax us a sketch and we'll send you a quote...

Free quotations are given for any item regardless of size or complexity. Simply fax or send us a sketch, or sample, with the relevant dimensions and specifications, and we will provide you with a detailed faxed quotation by return. Alternatively, describe what you want and we will provide you with a drawing to approve.

### OEM/Contract enquiries welcome...

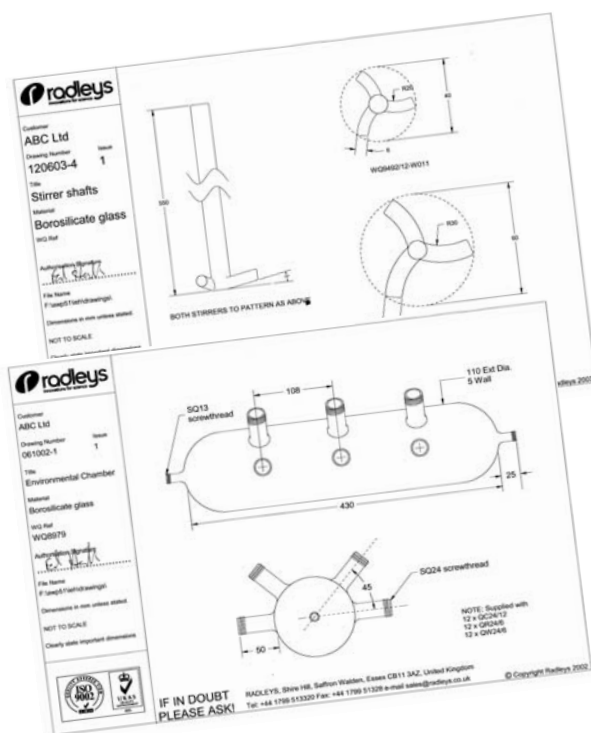
We will be pleased to quote for your OEM equipment requirements. FREE quotations are given for any quantity.

### Need a modification or something slightly different...

If you have an existing piece of glassware you want modified or would like a new item altered during manufacture to suit your requirements, we can help.

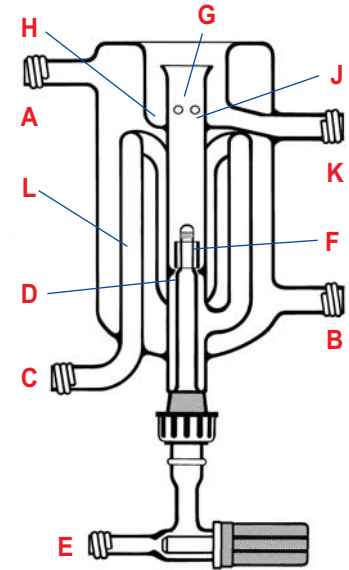
Contact us today on...

t: +44-(0)1799-513320  
 f: +44-(0)1799-513283  
 e: sales@radleys.co.uk



## Robo Organ Baths

This extremely popular organ bath is suitable for single use, or in series. Available with a choice of 11mm olive, GL14 or SQ13 screwthread side-arms. The design ensures good sample visibility at all times, allowing visual checks of changes in colour and texture to be made. The outer jacket is maintained at a constant temperature by circulating heated water, entering via **A**, leaving at **B**. The physiological fluid enters through **C**, flows into the heat exchanger **L**, through the non-return valve **D** and into the tissue cell. The heat exchanger holds 40ml, four times the cell volume of approximately 10ml. This is necessary to enable effective flushing of the bath to take place and the tissue cell to be cleared of the previous drug. Once flushing is complete the heat exchanger **L**, will refill with fresh physiological fluid, where it will be pre-warmed for the next cycle. The specially designed, glass non-return valve **D**, prevents contaminated fluid from leaking back into the fresh solution awaiting the next cycle. Aeration gas enters through the Rotaflo valve **E**, through the sintered glass dispersion filter **F**, and into the tissue cell. The cell top **G**, provides an area for foam to collect, break up and drain back into the cell, without overflowing into the trough **H**. The holes **J**, maintain the level of fluid in the cell. Waste solution is evacuated by vacuum, via **K**.



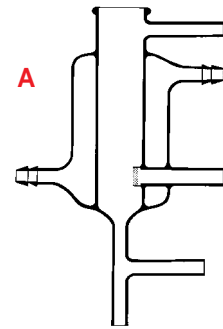
CAT NO	DESCRIPTION	PK QTY	PRICE EACH
409210	Robo Organ Bath with 11mm Olive Side-arms	1	
409410	Robo Organ Bath with GL14 Screwthread Side-arms	1	
409610	Robo Organ Bath with SQ13 Screwthread Side-arms	1	

## Organ Baths - for Physiology and Pharmacology

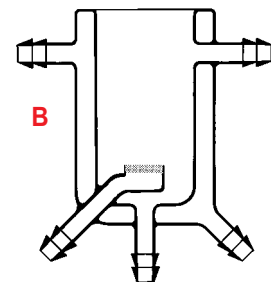
Because of the specialised and very individual nature of these disciplines, it is very difficult to offer a standard range of organ baths and apparatus to meet all needs. Therefore, we have listed only those baths most commonly used. If your specific needs are not covered here, please contact our Sales Office on +44-(0)1799-513320 for a quotation.

### A Organ Bath

This popular design also incorporates a single fixed sinter. However for applications where the sinter is prone to blocking, we are now able to offer a removable sintered inlet that may be taken out for cleaning. Baths are also available with two sinters, either fixed or removable. Please call +44-(0)1799-513320 for a quotation.



CAT NO	CAPACITY	APPROX ID X HEIGHT	SIDEARMS	PRICE EACH
404210	10ml	18 x 45mm	9mm Olive	
404220	20ml	20 x 55mm	9mm Olive	
404225	25ml	22 x 58mm	9mm Olive	
404410	10ml	18 x 45mm	GL14 Screwthread	
404420	20ml	20 x 55mm	GL14 Screwthread	
404425	25ml	22 x 58mm	GL14 Screwthread	
404610	10ml	18 x 45mm	SQ13 Screwthread	
404620	20ml	20 x 55mm	SQ13 Screwthread	
404625	25ml	22 x 58mm	SQ13 Screwthread	

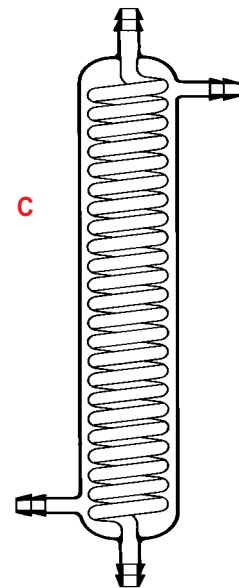


### B Diaphragm Bath

CAT NO	CAPACITY	APPROX ID X HEIGHT	SIDEARMS	PRICE EACH
402205	5ml	18 x 30mm	9mm Olive	
402210	10ml	22 x 35mm	9mm Olive	
402225	25ml	26 x 50mm	9mm Olive	
402405	5ml	18 x 30mm	GL14 Screwthread	
402410	10ml	22 x 35mm	GL14 Screwthread	
402425	25ml	26 x 50mm	GL14 Screwthread	
402605	5ml	18 x 30mm	SQ13 Screwthread	
402610	10ml	22 x 35mm	SQ13 Screwthread	
402625	25ml	26 x 50mm	SQ13 Screwthread	

### C Warming Coils - for use with all Organ Baths

COIL LENGTH	CAT NO 11MM OLIVE	CAT NO GL14 THREAD	CAT NO SQ13 THREAD	PRICE EACH
150mm	420201	420401	420601	
225mm	420202	420402	420602	
300mm	420203	420403	420603	



# Custom Reaction Systems



## Custom Reaction Vessels & Systems

### Custom made reaction systems - to your specific design...

The vast majority of the reaction vessels that we manufacture are custom designed in close cooperation with our customers. Whether you require a large multi-vessel process system or a single benchtop vessel, we will be happy to assist in all aspects of the design stage. Our team of highly skilled glass technologists and product specialists have many years of experience in project development.

### Scope of our services...

- Heating/Cooling Thermoregulators; supply, servicing and support
- Single jacketed reaction vessels to 50 litre.
- Vacuum jacketed reaction vessels to 10 litre.
- Multi-reactor systems for parallel synthesis.
- Solid phase reactors with sinters.
- Fermenters and bioreactors.
- Photochemical and UV reactors.
- Software and semi-automated control.
- Benchtop stands/supports.
- Complex process frameworks.
- Overhead stirrers; electrical, air powered and Ex-rated.
- Scrubbers, condensers and distillation assemblies.
- Installation and training.



Heating and cooling via high performance Huber Thermoregulators.

### Simply tell us what you want...

The combination of different features and design variations for vessel systems is almost limitless. Therefore please contact our specialists on [production@radleys.co.uk](mailto:production@radleys.co.uk) for FREE technical advice and design service.

### Reaction Vessel Options

- Vessel sizes from 100ml to 50 litres.
- With or without cooling/heating jacket.
- Optional vacuum jacket.
- With or without stopcock drain outlet.
- New split jacketed vessels.
- Cylindrical or spherical vessel shapes, tall or squat.
- Vessel graduations.
- A wide range of vessel sidearm options; olives, SQ and GL screwthread fittings, Rodaviss sockets, process couplings etc.
- Lids with any number and style of ports.

### Reaction Vessel Accessories

- Huber Thermoregulators; microprocessor temperature control from -120°C to 400°C.
- A comprehensive design service for support structures for single vessels or complex fume cupboard installations, including custom metalwork design and fabrication.
- Stirrer guides, shafts, propellers, connectors, fittings and adapters (standard and custom).
- Overhead stirrers; electrical, air powered and Ex-rated.
- Custom made PTFE components; lids, probes, adapters and connectors.
- Integral baffles; glass, stainless steel or PTFE.
- Acrylic and polycarbonate safety shields.
- Ancillary equipment; temperature, pH control and monitoring, pumps, balances, level control etc.
- Insulated hoses and connectors.

### Need a vessel modification or repair?

If you have an existing piece of glassware you want modified or repaired we can help.

Please call Tel: +44-(0)1799-513320 or Fax: +44-(0)1799-513283 for a quotation or for FREE technical support...

## NEW Standard Reaction Systems - see following pages

We are pleased to introduce a new range of standard Reaction Systems. From small 250ml benchtop systems, to large 20 Litre floor mounted reactors

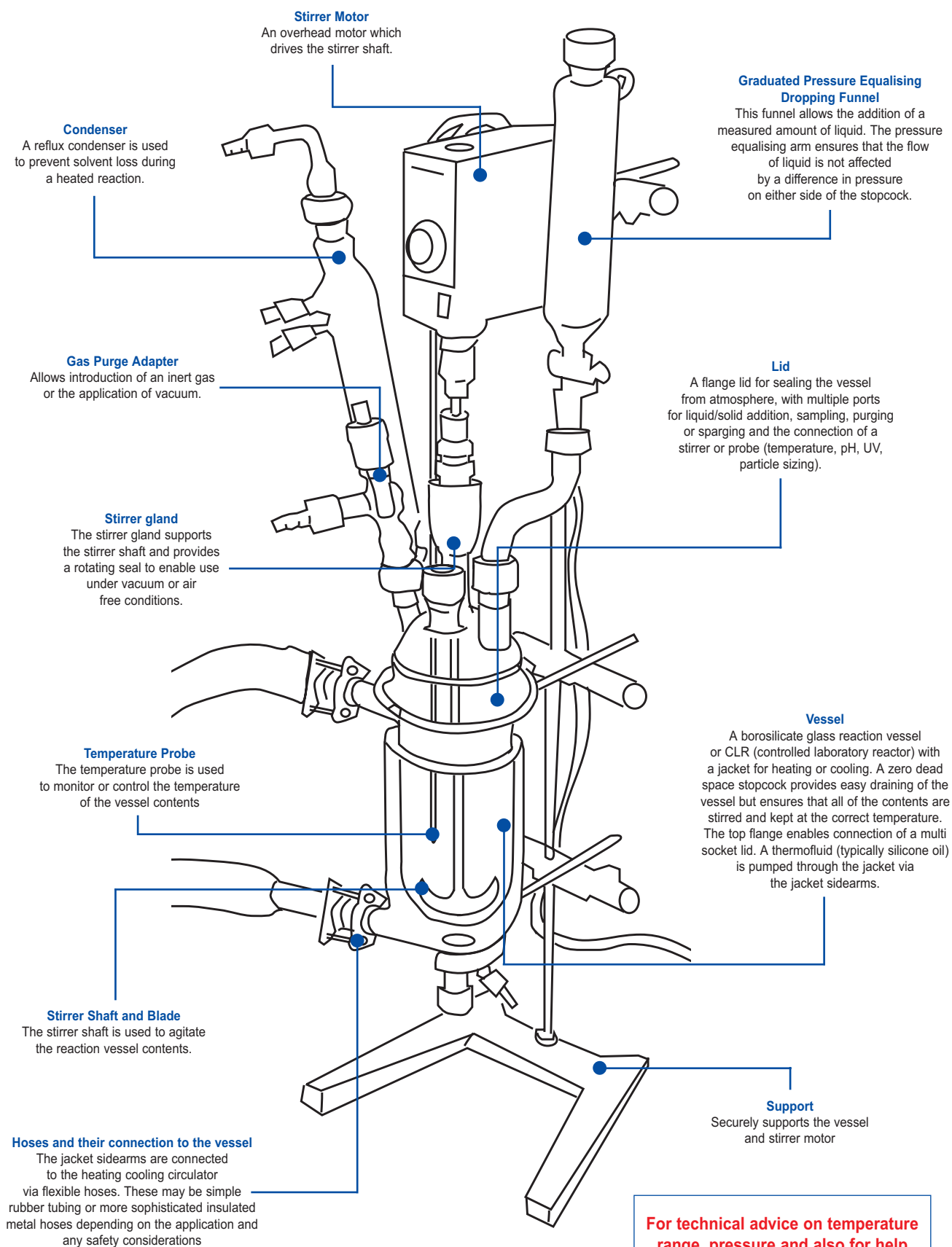
These standard laboratory reactors make the selection of an appropriate system much easier and affordable. When used in conjunction with an appropriate Thermoregulator they offer precise temperature control.

For advice with selecting your system and Thermoregulator please contact us on Email: [production@radleys.co.uk](mailto:production@radleys.co.uk) or Tel: +44-(0)1799-513320



# Reaction Systems

**NEW** Small Benchtop Reaction Systems - 250ml to 2 Litre



**For technical advice on temperature range, pressure and also for help in specifying the appropriate Thermoregulator and thermofluid for your application, please Email: [production@radleys.co.uk](mailto:production@radleys.co.uk)**

## NEW Small Benchtop Reaction Systems - 250ml to 2 Litre

The temperature range for these systems is +200°C to -50°C. The vessels are suitable for use under vacuum, but not for pressurised reactions.

### Vessel

A borosilicate glass reaction vessel or controlled laboratory reactor with a jacket for heating or cooling. A zero dead space stopcock provides easy draining of the vessel but ensures that all of the contents are stirred and kept at the correct temperature. The top flange enables connection of a multi socket lid. A thermofluid (typically silicone oil) is pumped through the jacket via the jacket sidearms.

#### Standard System comprises:

Vessels have a grooved Schott flange for use with an FEP coated o-ring and stainless steel quick-release clamp. The jacket sidearms are tangential DN15 flanges and the drain stopcock is 15mm zero dead-space. The bottom run-off is fitted with a GL18 screwthread with sealing cap and PTFE hose connector.

#### Vessel Options:

- Different working volume e.g. 1500ml
- Vacuum jacket for insulation and to prevent frosting during cooling below ambient.
- Variations in shape, e.g. squat or shaped to mimic a larger plant vessel for process development.
- Different type of flange e.g. ordinary flat flange, different jacket sidearm type or position, indented baffles, graduation, thermofluid jacket drain

### Lid

A flange lid for sealing the vessel from atmosphere, with multiple ports for liquid/solid addition, sampling, purging or sparging and the connection of a stirrer or probe (temperature, pH, UV, particle sizing).

#### Standard System comprises:

Lids have Rodaviss sockets and Schott flanges for use with an FEP coated o-ring and stainless steel quick release clamp.

#### Lid Options:

- Any number or configuration of necks to match the application, different flange type e.g. ordinary flat flanges, different type of joint e.g. ordinary sockets or greaseless spherical joints.
- Custom made PTFE lids.

### Hoses and their connection to the vessel

The jacket sidearms are connected to the heating cooling circulator via flexible hoses. These may be simple rubber tubing or more sophisticated insulated metal hoses depending on the application and any safety considerations

#### Standard System comprises:

10mm bore stainless steel DN15/M16 hose connector which connects to a Huber NW10 insulated flexible metal hose. A coupling consisting of epoxy coated metal backing flanges, plastic inserts, bolts and PTFE gasket is used to connect the hose connector to the vessel. Coupling and hose connections are included in Reaction Systems, but hoses need to be ordered separately. Please call for advice.

#### Hose Options:

- Various other forms of hose connection are available. The most basic is to have glass hose barbs on the vessel and push rubber tubing straight on to these. Detachable hose connectors are obviously safer and several different types and sizes are available. SQ13 and GL14 may be suitable for smaller vessels.
- If rubber tubing is to be used with the larger vessels in this range, the 10mm bore PTFE hose connector is recommended. A heavy wall Rodaviss 19/26 socket should be specified for the vessel jacketed sidearm.
- Stainless steel couplings are available for DN15 sidearms.

### Temperature Probe

The temperature probe is used to monitor or control the temperature of the vessel contents

#### Standard System comprises:

PTFE PT100 temperature probe, which is fitted with a Lemo plug for connection to a Huber heating cooling circulator. A PTFE joint adapter and Rodaviss fittings are used to provide a seal to the lid socket.

#### Probe Options:

- If simple monitoring is required then a Type 'K' PTFE temperature probe may be used which can be connected to a digital thermometer, recorder or datalogger.

### Stirrer Motor

An overhead motor which drives the stirrer shaft.

#### Standard System comprises:

IKA electrically driven stirrer motor.

#### Stirrer Options:

- Available with an RS232 interface to monitor or control stirring speed and viscosity. By using Labworldsoft controlling software a degree of automation may be achieved.
- Air driven motors are available for use in hazardous areas.

### Stirrer Shaft & Blade

The stirrer shaft is used to agitate the reaction vessel contents.

#### Standard System comprises:

A PTFE anchor or removable blade stirrer depending on the vessel size.

#### Stirrer Shaft & Blade Options:

- Different shapes of blade e.g. propellor, turbine or retreat curve, detachable blades which may be re-positioned.
- Different materials e.g. glass, PTFE coated steel, stainless steel or hastelloy. Glass is particularly suitable for the manufacture of scale down stirrers for process development work. Custom made stirrers of any shape or material are available

### Stirrer Gland

The stirrer gland supports the stirrer shaft and provides a rotating seal to enable use under vacuum or air free conditions.

#### Standard System comprises:

PTFE stirrer guides have an internal precision glass and PTFE seal. Rodaviss fittings are provided to connect to central lid socket.

#### Stirrer Gland Options:

- Various other types of gland are available including magnetic coupling, all-glass stirrer guides for use with precision ground glass stirrer shafts

### Graduated Pressure Equalising Dropping Funnel

This funnel allows the addition of a measured amount of liquid. The pressure equalising arm ensures that the flow of liquid is not affected by a difference in pressure on either side of the stopcock.

#### Standard System comprises:

Dropping funnel with Rodaviss joints and a PTFE key stopcock. It is connected to the vessel via a swan neck adapter. A PTFE faced Rodaviss sealing cap seals the top of the funnel.

#### Dropping Funnel Options:

- A Rotaflo stopcock may be used if a more controlled rate of addition is required.
- Dropping funnels are available ungraduated, or without the pressure equalising arm.

### Condenser

Used to prevent solvent loss during a heated reaction.

#### Standard System comprises:

A jacketed coil reflux condenser with Rodaviss joints. GL14\* plastic hose adapters provide the cooling water connection. The top of the condenser is fitted with a right angle adapter complete with GL14 PTFE hose connector.

\*SQ13 screwthread may be fitted if preferred. See page 569 for further information.

#### Condenser Options:

- Other types of condenser are available e.g. Liebig or double surface.
- Distillation apparatus may be fitted to enable solvent evaporation and collection.

### Gas Purge Adapter

Allows introduction of an inert gas or the application of vacuum.

#### Standard System comprises:

Gas purge adapter with Rodaviss cone, PTFE stopcock and GL14\* screwthread with PTFE connector. \*SQ13 screwthread may be fitted if preferred. See page 569 for further information.

### Support

Securely supports the vessel and stirrer motor.

#### Standard System comprises:

A Support Stand consisting of a sturdy H-shape base, 1000mm upright, Viton covered lower support ring and stainless steel top support clamp. The support ring, top support clamp and stirrer motor are held in place with heavy duty bossheads.

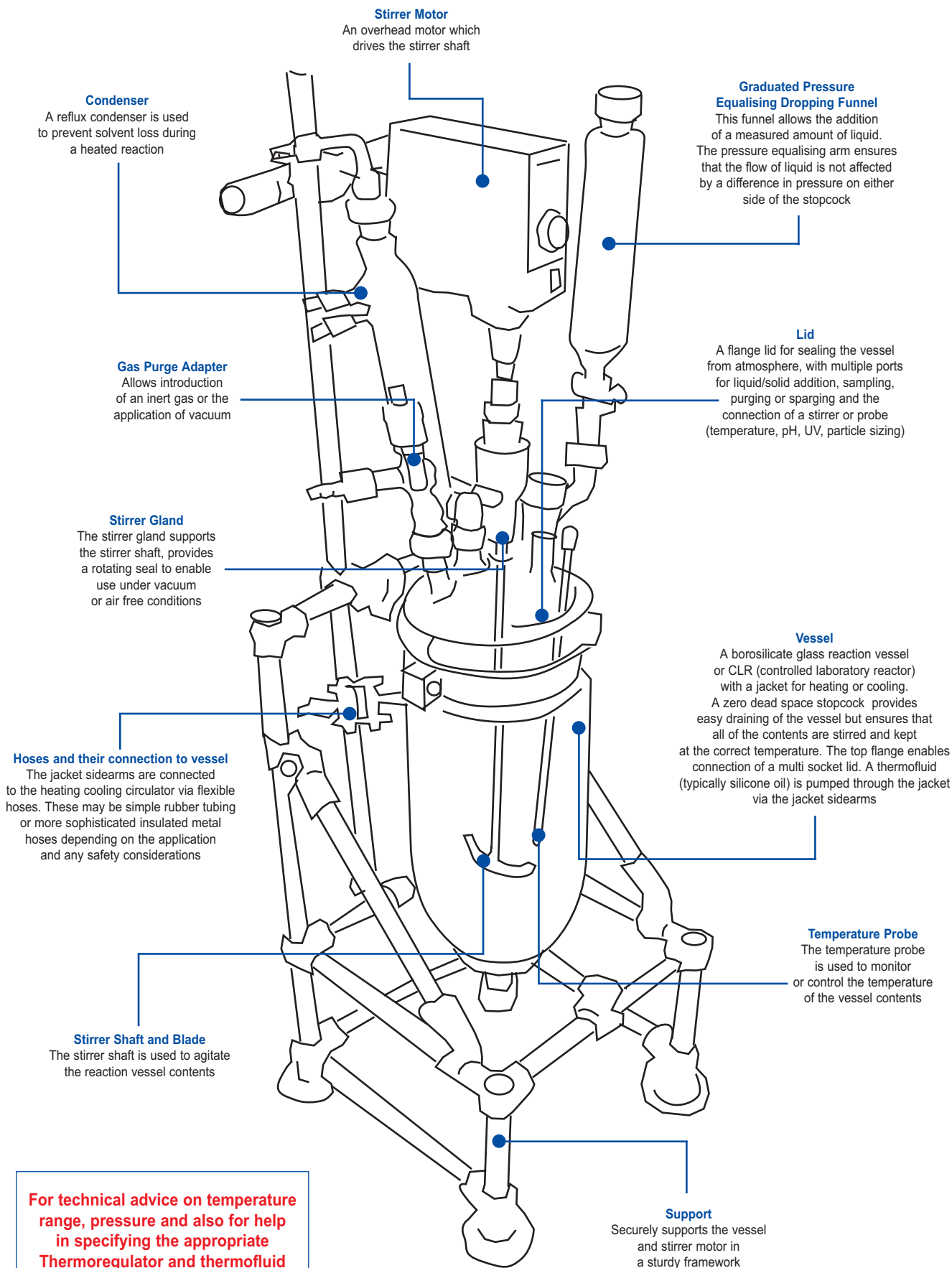
#### Support Options:

- Clamps, support rings and bossheads are available separately to enable small vessels to be connected to an existing laboratory framework.
- Custom made frameworks may support multiple vessels.
- Polycarbonate or acrylic safety screens may be easily fitted.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
500112	250ml Jacketed Reaction System DN15 Jacket sidearm, M16 Hose Connection DN60 Lid Flange, IKA RW16 Basic Overhead Stirrer, 50ml Dropping Funnel	1	POA
500114	500ml Jacketed Reaction System DN15 Jacket sidearm, M16 Hose Connection DN60 Lid Flange, IKA RW16 Basic Overhead Stirrer, 100ml Dropping Funnel	1	POA
500116	1 Litre Jacketed Reaction System DN15 Jacket sidearm, M16 Hose Connection DN100 Lid Flange, IKA RW16 Basic Overhead Stirrer, 250ml Dropping Funnel	1	POA
500118	2 Litre Jacketed Reaction System DN15 Jacket sidearm, M16 Hose Connection DN100 Lid Flange, IKA RW16 Basic Overhead Stirrer, 500ml Dropping Funnel	1	POA

# Reaction Systems

## NEW Intermediate Benchtop Reaction Systems - 2 to 5 Litres



**For technical advice on temperature range, pressure and also for help in specifying the appropriate Thermoregulator and thermofluid for your application, please Email: [production@radleys.co.uk](mailto:production@radleys.co.uk)**

## NEW Intermediate Benchtop Reaction Systems - 2 to 5 Litres

The temperature range for these systems is +200°C to -50°C. The vessels are suitable for use under vacuum, but not for pressurised reactions.

### Vessel

A borosilicate glass reaction vessel or controlled laboratory reactor with a jacket for heating or cooling. A zero dead space stopcock provides easy draining of the vessel but ensures that all of the contents are stirred and kept at the correct temperature. The top flange enables connection of a multi socket lid. A thermofluid (typically silicone oil) is pumped through the jacket via the jacket sidearms.

#### Standard System comprises:

Vessels have a grooved Schott flange for use with an FEP coated or silicone O-ring and stainless steel quick-release clamp. The jacket sidearms are tangential DN15 flanges. 2 litre vessel has a 15mm zero dead space drain stopcock and GL18 screwthread on run-off with sealing cap and PTFE hose connector. 5 litre vessel has a 25mm zero dead space drain stopcock and a Rodaviss 24/29 heavy wall socket, catchpot and PTFE hose connector.

#### Vessel Options:

- Different working volume e.g. 2.2 litre, vacuum jacket for insulation and to prevent frosting during cooling below ambient. Variations in shape, e.g. squat or shaped to mimic a larger plant vessel for process development.
- A different type of flange e.g. ordinary flat flange, different jacket sidearm type or position, indented baffles, graduations and thermofluid jacket drain.

### Lid

A flange lid for sealing the vessel from atmosphere, with multiple ports for liquid/solid addition, sampling, purging or sparging and the connection of a stirrer or probe (temperature, pH, UV, particle sizing).

#### Standard System comprises:

Reaction system lids have Rodaviss sockets and Schott flanges for use with an FEP coated o-ring and stainless steel quick release clamp.

#### Lid Options:

- Any number or configuration of necks to match the application, different flange type e.g. ordinary flat flanges, different type of joint e.g. ordinary sockets or greaseless spherical joints.
- Custom made PTFE lids.

### Hoses and their connection to vessel

The jacket sidearms are connected to the heating cooling circulator via flexible hoses. These may be simple rubber tubing or more sophisticated insulated metal hoses depending on the application and any safety considerations

#### Standard System comprises:

10mm bore stainless steel DN15/M16 hose connector which connects to a Huber NW10 insulated flexible metal hose. A coupling, consisting of epoxy coated metal backing flanges, plastic inserts, bolts and PTFE gasket, is used to connect the hose connector to the vessel. Coupling and hose connections are included in Reaction Systems, but hoses need to be ordered separately. Please call for advice.

#### Hose Options:

- If rubber tubing and a simple hose connector are to be used, the 10mm\* bore PTFE hose connector catalogue number 451010 is recommended. A heavy wall Rodaviss 19/26 socket should be specified for the vessel jacket sidearm.
- Stainless Steel couplings are available for DN15 sidearms.

\*Please note that some circulators require a high flow rate, particularly during cooling, and a 10mm bore would be insufficient.

### Temperature Probe

The temperature probe is used to monitor or control the temperature of the vessel contents

#### Standard System comprises:

PTFE PT100 temperature probe, which is fitted with a Lemo plug for connection to a Huber heating cooling circulator. A PTFE joint adapter and Rodaviss fittings are used to provide a seal to the lid socket.

#### Probe Options:

- If simple monitoring is required then a Type 'K' PTFE temperature probe may be used which can be connected to a digital thermometer, recorder or datalogger.

### Stirrer Motor

An overhead motor which drives the stirrer shaft.

#### Standard System comprises:

IKA electrically driven stirrer motors.

#### Stirrer Options:

- IKA stirrer motors are available with RS232 interface to monitor or control stirring speed and viscosity. By using Labworldsoft controlling software a degree of automation may be achieved.
- Air driven motors are available for use in hazardous areas.

### Stirrer Shaft & Blade

The stirrer shaft is used to agitate the reaction vessel contents.

#### Standard System comprises:

A PTFE anchor stirrer.

#### Stirrer Shaft & Blade Options:

- Different shapes of blade e.g. propeller, turbine or retreat curve.
- Detachable blades which may be repositioned.
- Different materials e.g. glass, PTFE coated steel, stainless steel or hastelloy. Glass is particularly suitable for the manufacture of scale down stirrers for process development work.
- Custom made stirrers of any shape or material are available

### Stirrer Gland

The stirrer gland supports the stirrer shaft, provides a rotating seal to enable use under vacuum or air free conditions.

#### Standard System includes:

PTFE stirrer guides as standard. These have an internal precision glass and PTFE seal. Rodaviss fittings are provided to connect to central lid socket.

#### Stirrer Gland Options:

- Various other types of gland are available including magnetic couplings, or all-glass stirrer guides for use with precision ground glass stirrer shafts.

### Graduated Pressure Equalising Dropping Funnel

This funnel allows the addition of a measured amount of liquid. The pressure equalising arm ensures that the flow of liquid is not affected by a difference in pressure on either side of the stopcock.

#### Standard System includes:

A dropping funnel which has Rodaviss joints and a PTFE key stopcock. It is connected to the vessel via a swan neck adapter. A PTFE faced Rodaviss sealing cap seals the top of the funnel.

#### Dropping Funnel Options:

- A Rotaflo stopcock may be used if a more controlled rate of addition is required.
- Dropping funnels are available ungraduated, or without the pressure equalising arm.

### Condenser

Used to prevent solvent loss during a heated reaction.

#### Standard System includes:

A jacketed coil reflux condenser with Rodaviss joints. GL14\* plastic hose adapters provide the cooling water connection. The top of the condenser is fitted with a right angle adapter complete with GL14\* PTFE hose connector.

\*SQ13 screwthread may be fitted if preferred. See page 569 for further information.

#### Condenser Options:

- Other types of condenser are available e.g. Liebig or double surface.
- Distillation apparatus may be fitted to enable solvent evaporation and collection.

### Gas Purge Adapter

Allows introduction of an inert gas or the application of vacuum.

#### Standard System includes:

Gas purge adapter with Rodaviss cone, PTFE stopcock and GL14\* screwthread with PTFE connector. \*SQ13 screwthread may be fitted if preferred. See page 569 for further information.

### Support

Securely supports the vessel and stirrer motor.

#### Standard System comprises:

Supported within a benchtop framework constructed from heavy gauge 27mm diameter 316 stainless steel tubing and powder coated clamps. The vessel sits on a Viton cushioned heavy-duty support ring and a sturdy top support clamp holds the vessel securely below the flange. The stirrer motor is supported from an extended central upright post.

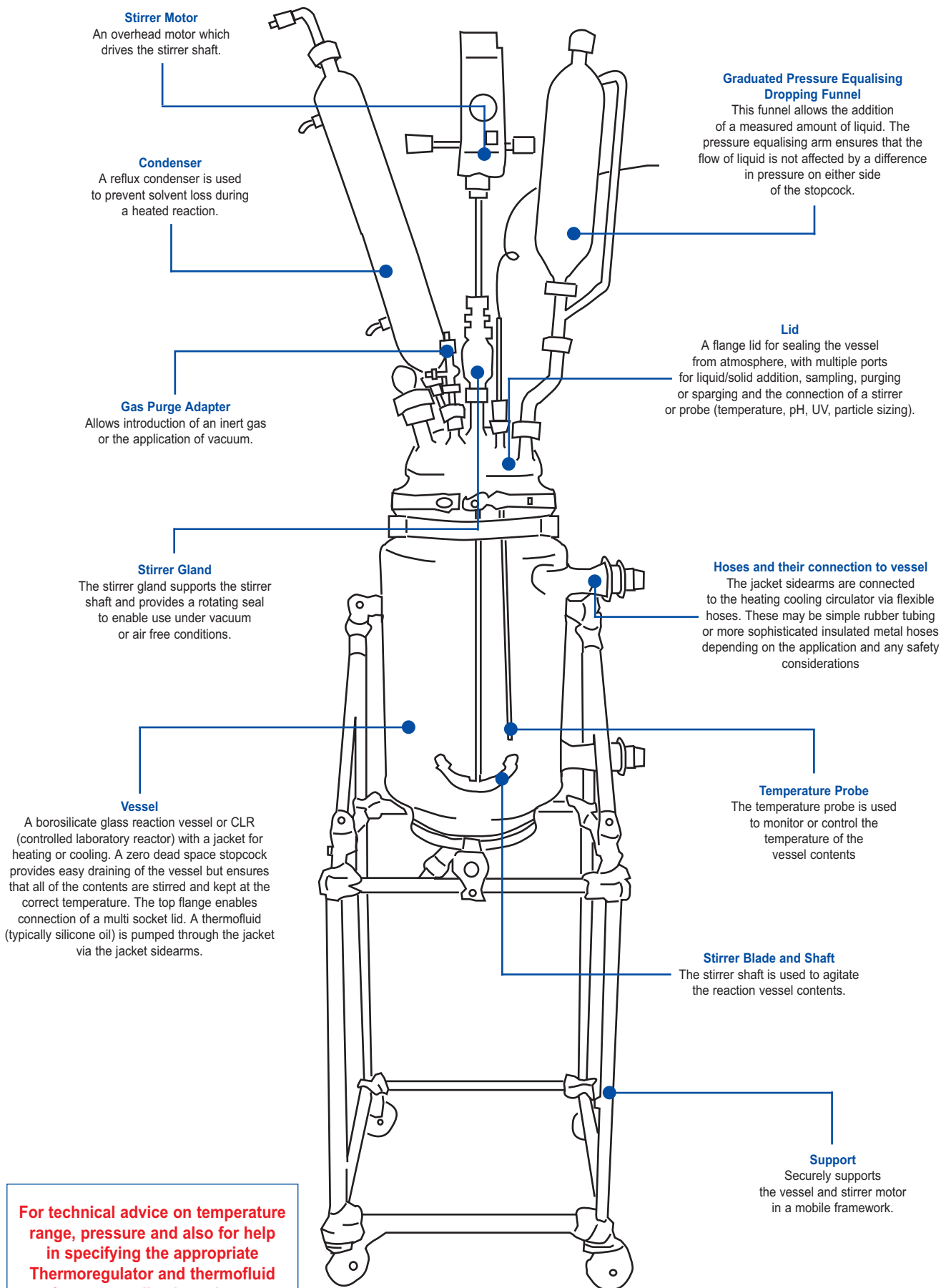
#### Support Options:

- Custom frameworks can be designed and manufactured to suit restricted space or a particular vessel height requirement.
- Stainless steel drip trays/bunds may be fitted below the vessel.
- Custom made frameworks may support multiple vessels e.g. feeder vessels, receiver vessels or separators.
- Polycarbonate or acrylic safety screens may be easily fitted.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
500218	2 Litre Jacketed Reaction System DN15 Jacket sidearm, M16 Hose Connection, DN150 Lid Flange, IKA RW16 Basic Overhead Stirrer 500ml Dropping Funnel	1	POA
500124	5 Litre Jacketed Reaction System DN15 Jacket sidearm, M16 Hose Connection, DN150 Lid Flange, IKA RW16 Basic Overhead Stirrer 500ml Dropping Funnel	1	POA

# Reaction Systems

## NEW Large Mobile Reaction Systems - 10 to 20 Litres



For technical advice on temperature range, pressure and also for help in specifying the appropriate Thermoregulator and thermofluid for your application, please Email: [production@radleys.co.uk](mailto:production@radleys.co.uk)

## NEW Large Mobile Reaction Systems - 10 to 20 Litres

The temperature range for these systems is +200°C to -50°C. The vessels are suitable for use under vacuum, but not for pressurised reactions.

### Vessel

A borosilicate glass reaction vessel or controlled laboratory reactor with a jacket for heating or cooling. A zero dead space stopcock provides easy draining of the vessel, whilst ensuring that all of the contents are stirred and kept at the correct temperature. The top flange enables connection of a multi socket lid. A thermofluid (typically silicone oil) is pumped through the jacket via the jacket sidearms.

#### Standard System comprises:

A grooved Schott flange for use with an FEP o-ring and stainless steel quick-release clamp. The jacket sidearms are tangential DN25 flanges and the drain stopcock is 25mm zero dead-space. The bottom run-off is fitted with a Rodaviss 24/29 heavy wall socket, a catch pot and PTFE hose connector.

#### Vessel Options:

- Different working volume e.g. 12 Litres
- Vacuum jacket for insulation and to prevent frosting during cooling below ambient.
- Variations in shape, e.g. squat or shaped to mimic a larger plant vessel for process development.
- A different type of flange e.g. ordinary flat flange, different jacket sidearm type or position, indented baffles, graduations and thermofluid jacket drain

### Lid

A flange lid for sealing the vessel from atmosphere, with multiple ports for liquid/solid addition, sampling, purging or sparging and the connection of a stirrer or probe (temperature, pH, UV, particle sizing).

#### Standard System comprises:

Lids have Rodaviss sockets and Schott flanges for use with an FEP coated O-ring and stainless steel quick release clamp.

#### Lid Options:

- Any number or configuration of necks to match the application, different flange type e.g. ordinary flat flanges, different type of joint e.g. ordinary sockets or greaseless spherical joints.
- Custom made PTFE lids.

### Hoses and their connection to the vessel

The jacket sidearms are connected to the heating cooling circulator via flexible hoses. These may be simple rubber tubing or more sophisticated insulated metal hoses depending on the application and any safety considerations

#### Standard System comprises:

Large reaction systems use a 20mm bore stainless steel DN25/M30 hose connector which connects to a Huber NW20 insulated flexible metal hose. A coupling, consisting of epoxy coated metal backing flanges, plastic inserts, bolts and PTFE gasket, is used to connect the hose connector to the vessel. Coupling and hose connections are included in Reaction Systems, but hoses need to be ordered separately.

#### Hose Options:

- If rubber tubing and a simple hose connector are to be used, the 10mm\* bore PTFE hose connector Cat No. 451010 is recommended. A heavy wall Rodaviss 19/26 socket should be specified for the vessel jacket sidearm.
- Stainless Steel couplings are available for use with DN25 sidearms.

\*Please note that some circulators require a high flow rate, particularly during cooling, and a 10mm bore would be insufficient.

### Temperature Probe

The temperature probe is used to monitor or control the temperature of the vessel contents.

#### Standard System comprises:

PTFE pt100 temperature probe, which is fitted with a Lemo plug for connection to a Huber heating cooling circulator. A PTFE joint adapter and Rodaviss fittings are used to provide a seal to the lid socket.

#### Probe Options:

- If simple monitoring is required then a Type 'K' PTFE temperature probe may be used which can be connected to a digital thermometer, recorder or datalogger.

### Stirrer Motor

An overhead motor which drives the stirrer shaft.

#### Standard System comprises:

IKA electrically driven stirrer motors.

#### Stirrer Options:

- IKA stirrer motors are available with RS232 interface to monitor or control stirring speed and viscosity. By using Labworldsoft controlling software a degree of automation may be achieved.
- Air driven motors are available for use in hazardous areas.

### Stirrer Shaft & Blade

The stirrer shaft is used to agitate the reaction vessel contents.

#### Standard System comprises:

PTFE anchor stirrer.

#### Stirrer Shaft & Blade Options:

- Different shapes of blade e.g. propeller, turbine or retreat curve.
- Detachable blades which may be repositioned.
- Different materials e.g. glass, PTFE coated steel, stainless steel or hastelloy. Glass is particularly suitable for the manufacture of scale down stirrers for process development work.
- Custom made stirrers of any shape or material are available.

### Stirrer Gland

The stirrer gland supports the stirrer shaft and provides a rotating seal to enable use under vacuum or air free conditions.

#### Standard System comprises:

PTFE stirrer guides as standard. These have an internal precision glass and PTFE seal. Rodaviss fittings are provided to connect to central lid socket.

#### Stirrer Gland Options:

- Various other types of gland are available including magnetic couplings, or all-glass stirrer guides for use with precision ground glass stirrer shafts.

### Graduated Pressure Equalising Dropping Funnel

This funnel allows the addition of a measured amount of liquid. The pressure equalising arm ensures that the flow of liquid is not affected by a difference in pressure on either side of the stopcock.

#### Standard System comprises:

Dropping funnel which has Rodaviss joints and a PTFE key stopcock. It is connected to the vessel via a swan neck adapter. A PTFE faced Rodaviss sealing cap seals the top of the funnel.

#### Dropping Funnel Options:

- A Rotaflo stopcock may be used if a more controlled rate of addition is required.
- Dropping funnels are available ungraduated, or without the pressure equalising arm.

### Condenser

A reflux condenser is used to prevent solvent loss during a heated reaction.

#### Standard System comprises:

Large double coil reflux condenser with Rodaviss joints, GL18 plastic hose adapters provide the cooling water connection. The top of the condenser is fitted with a right angle adapter complete with GL18 PTFE hose connector.

#### Condenser Options:

- Other types of condenser are available e.g. Liebig or double surface.
- Distillation apparatus may be fitted to enable solvent evaporation and collection.

### Gas Purge Adapter

Allows introduction of an inert gas or the application of vacuum.

#### Standard System comprises:

A gas purge adapter with Rodaviss cone, PTFE stopcock and GL18 screwthread with PTFE connector.

### Support

Securely supports the vessel and stirrer motor in a mobile framework.

#### Standard System comprises:

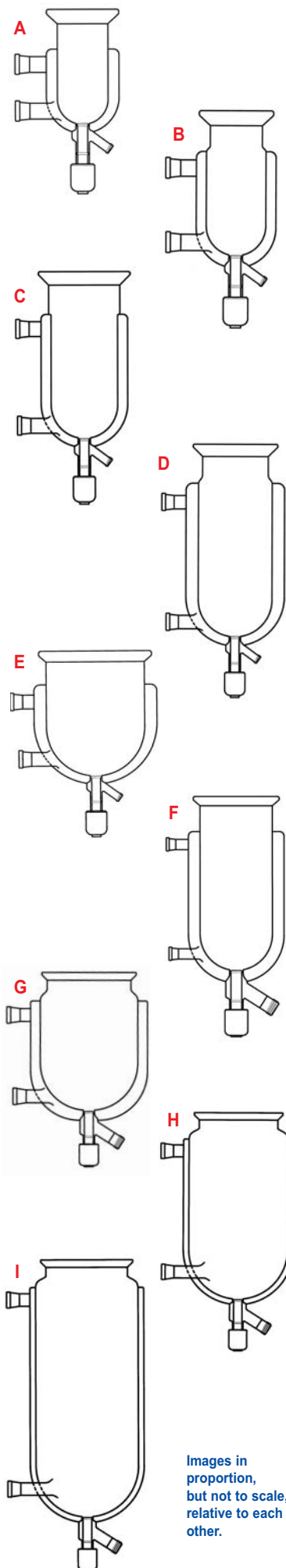
Supported within a mobile framework constructed from heavy gauge 27mm diameter 316 stainless steel tubing, and powder coated clamps. Four castors provide mobility, two of which have brakes to hold the framework in position. The vessel sits on a viton cushioned heavy-duty support ring, and a sturdy top support clamp holds the vessel securely below the flange. The stirrer motor is supported from an extended central upright post.

#### Support Options:

- Custom frameworks can be designed and manufactured to suit restricted space or a particular vessel height requirement.
- Stainless steel drip trays/bunds may be fitted below the vessel.
- Custom made frameworks may support multiple vessels e.g. feeder vessels, receiver vessels or separators.
- Polycarbonate or acrylic safety screens may be easily fitted.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
500128	10000ml Jacketed Reaction System DN25 Jacket sidearm, M30 Hose Connection, DN200 Lid Flange, IKA Eurostar Digital Overhead Stirrer 1000ml Dropping Funnel	1	POA
500132	20000ml Jacketed Reaction System DN25 Jacket sidearm, M30 Hose Connection, DN200 Lid Flange, IKA Eurostar Power Basic Overhead Stirrer 1000ml Dropping Funnel	1	POA

## Reaction Vessels



Images in proportion, but not to scale, relative to each other.

**A 250ml Reaction Vessel**

Jacketed Borosilicate Reaction Vessel, with DN60 Schott flange with groove for O-ring, 15mm zero dead space stopcock, tangential DN15 jacket sidearms, GL18 screwthread on run-off with PTFE hose connector and sealing screwcap.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
379012	250ml Jacketed Reaction Vessel	1	

**B 500ml Reaction Vessel**

Jacketed Borosilicate Reaction Vessel, with DN60 Schott flange with groove for O-ring, 15mm zero dead space stopcock, tangential DN15 jacket sidearms, GL18 screwthread on run-off with PTFE hose connector and sealing screwcap.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
379014	500ml Jacketed Reaction Vessel	1	

**C 1 Litre Reaction Vessel**

Jacketed Reaction Vessel, with DN100 Schott flange with groove for O-ring, 15mm zero dead space stopcock, tangential DN15 jacket sidearms, GL18 screwthread on run-off.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
379016	1 Litre Jacketed Reaction Vessel	1	

**D 2 Litre Reaction Vessel**

Jacketed Reaction Vessel, with DN100 Schott flange with groove for O-ring, 15mm zero dead space stopcock, tangential DN15 jacket sidearms, GL18 screwthread on run-off.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
379018	2 Litre Jacketed Reaction Vessel	1	

**E 2 Litre Squat Form Reaction Vessel**

Squat Form Jacketed Reaction Vessel, with DN150 Schott flange with groove for O-ring, 15mm zero dead space stopcock, tangential DN15 jacket sidearms, GL18 screwthread on run-off with PTFE hose connector and sealing screwcap.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
380018	2 Litre Squat Jacketed Reaction Vessel	1	

**F 5 Litre Reaction Vessel**

Jacketed Reaction Vessel, with DN150 Schott flange with groove for O-ring, 25mm zero dead space stopcock, tangential DN15 jacket sidearms, heavy wall Rodaviss 24/29 socket on run-off.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
379024	5 Litre Jacketed Reaction Vessel	1	

**G 10 Litre Reaction Vessel**

Jacketed Reaction Vessel, with DN200 Schott flange with groove for O-ring, 25mm zero dead space stopcock, tangential DN15 jacket sidearms, heavy wall Rodaviss 24/29 socket on run-off.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
379028	10 Litre Jacketed Reaction Vessel	1	

**H 20 Litre Reaction Vessel**

Jacketed Reaction Vessel, with DN200 Schott flange with groove for O-ring, 25mm zero dead space stopcock, tangential DN15 jacket sidearms, heavy wall Rodaviss 24/29 socket on run-off.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
379032	20 Litre Jacketed Reaction Vessel	1	

**I 30 Litre Reaction Vessel**

Jacketed Reaction Vessel, with DN200 Schott flange with groove for O-ring, 25mm zero dead space stopcock, tangential DN15 Jacket sidearms, heavy wall Rodaviss 24/29 socket on run-off.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
379034	30 Litre Jacketed Reaction Vessel	1	

## J 250ml Vacuum Jacketed Reaction Vessel

Vacuum Jacketed Reaction Vessel, with DN60 Schott flange with groove for O-ring, 15mm zero dead space stopcock, tangential DN15 jacket sidearms, GL18 screwthread on run-off.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
379712	250ml Vacuum Jacketed Reaction Vessel	1	

## K 500ml Vacuum Jacketed Reaction Vessel

Vacuum Jacketed Reaction Vessel, with DN60 Schott flange with groove for O-ring, 15mm zero dead space stopcock, tangential DN15 jacket sidearms, GL18 screwthread on run-off.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
379714	500ml Vacuum Jacketed Reaction Vessel	1	

## L 1 Litre Vacuum Jacketed Reaction Vessel

Vacuum Jacketed Reaction Vessel, with DN100 Schott flange with groove for O-ring, 15mm zero dead space stopcock, tangential DN15 jacket sidearms, GL18 screwthread on run-off.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
379716	1 Litre Vacuum Jacketed Reaction Vessel	1	

## M 2 Litre Vacuum Jacketed Reaction Vessel

Vacuum Jacketed Reaction Vessel, with DN100 Schott flange with groove for O-ring, 15mm zero dead space stopcock, tangential DN15 jacket sidearms, GL18 screwthread on run-off.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
379718	2 Litre Vacuum Jacketed Reaction Vessel	1	

## N 5 Litre Vacuum Jacketed Reaction Vessel

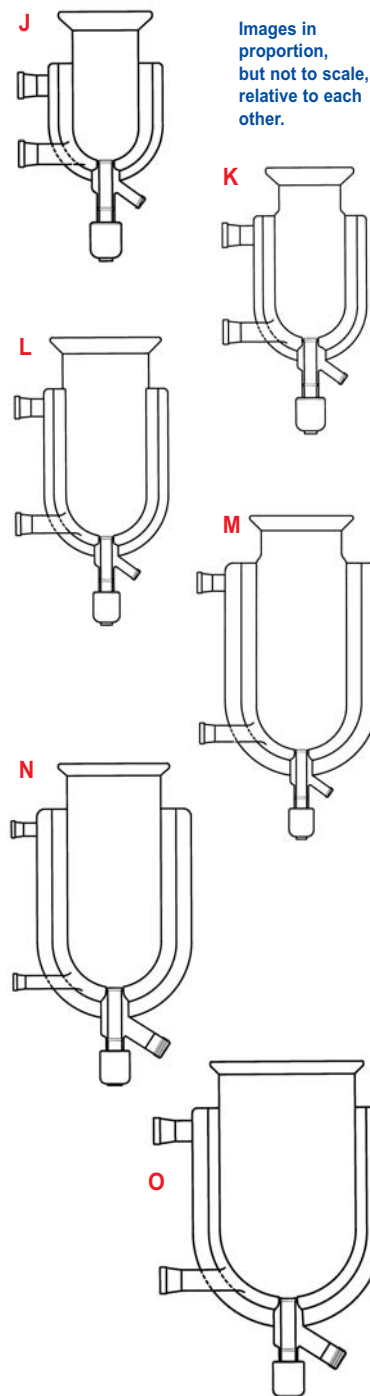
Vacuum Jacketed Reaction Vessel, with DN150 Schott flange with groove for O-ring, 25mm zero dead space stopcock, tangential DN15 jacket sidearms, heavy wall Rodaviss 24/29 socket on run-off.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
379724	5 Litre Vacuum Jacketed Reaction Vessel	1	

## O 10 Litre Vacuum Jacketed Reaction Vessel

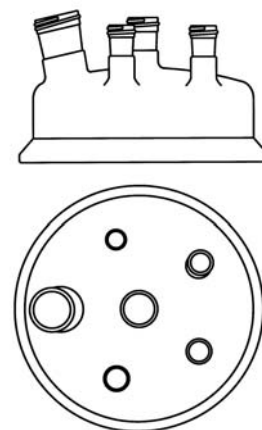
Vacuum Jacketed Reaction Vessel, with DN200 Schott flange with groove for O-ring. 25mm zero dead space stopcock, tangential DN15 jacket sidearms, heavy wall Rodaviss 24/29 socket on run-off.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
379728	10 Litre Vacuum Jacketed Reaction Vessel	1	



## NEW Reaction Vessel Lids - with Rodaviss sockets

CAT NO	DESCRIPTION	NO. NECKS	CENTRAL	SIDE VERTICAL	SIDE ANGLED	PRICE EACH
376006	DN60 Schott Flange Lid	4	1 x B19/26	-	3 x B19/26	
376005	DN60 Schott Flange Lid	5	1 x B19/26	-	4 x B19/26	
376001	DN100 Schott Flange Lid	5	1 x B24/29	1 x B19/26 1 x B24/29	1 x B24/29 1 x B29/32	
376000	DN100 Schott Flange Lid	6	1 x B24/29	2 x B19/26 1 x B24/29	1 x B24/29 1 x B29/32	
376016	DN150 Schott Flange Lid	5	1 x B34/35	1 x B29/32 1 x B19/26	1 x B29/32 1 x B45/40	
376015	DN150 Schott Flange Lid	6	1 x B34/35	1 x B29/32 1 x B19/26 1 x B24/29	1 x B29/32 1 x B45/40	
376021	DN200 Schott Flange Lid	5	1 x B34/35	1 x B29/32 1 x B19/26	1 x B29/32 1 x B45/40	
376020	DN200 Schott Flange Lid	6	1 x B34/35	1 x B29/32 1 x B19/26 1 x B24/29	1 x B29/32 1 x B45/40	



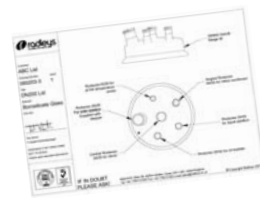
# Reaction Vessel Lids & Accessories



## Custom Reaction Vessel Lids - with Rodaviss

Selecting the lid you require is simple:-

1. Select the lid flange size.
2. Select the number and size of sockets.
3. Select the position and angle of the sockets.
4. Attach this information to your purchase order.
5. On receipt of your instructions we will contact you to confirm your requirements.
6. If you find it easier, simply sketch what you want and we will do the rest.



CAT NO	DESCRIPTION	NO. OF NECKS	PRICE EACH
376453	DN 60 Schott O-ring Flange	3	
376454	DN 60 Schott O-ring Flange	4	
376423	DN 100 Schott O-ring Flange	3	
376424	DN 100 Schott O-ring Flange	4	
376425	DN 100 Schott O-ring Flange	5	
376433	DN 150 Schott O-ring Flange	3	
376434	DN 150 Schott O-ring Flange	4	
376435	DN 150 Schott O-ring Flange	5	
376443	DN 200 Schott O-ring Flange	3	
376444	DN 200 Schott O-ring Flange	4	
376445	DN 200 Schott O-ring Flange	5	



### Complete Rodaviss connections...

All apparatus which incorporates a Rodaviss cone will come supplied with the appropriate O-rings, Loosening Rings and Connecting Caps required for assembly.

### If you prefer ordinary joints...

Whilst Rodaviss joints are completely interchangeable with ordinary joints, we will be pleased to offer any item from our range with ordinary ground joints instead of Rodaviss at no extra charge



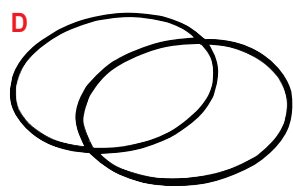
### A Stainless Steel Clamps for Schott® Flanges - fast release

CAT NO	DESCRIPTION	PK QTY	PRICE
378405	DN 60 Schott Fast Release Clamp	1	
378410	DN 100 Schott Fast Release Clamp	1	
378415	DN 150 Schott Fast Release Clamp	1	
378420	DN 200 Schott Fast Release Clamp	1	



### B FEP Coated O-Rings for Schott® Flanges

CAT NO	DESCRIPTION	PK QTY	PRICE
378605	DN 60 FEP O-Ring	1	
378610	DN 100 FEP O-Ring	1	
378615	DN 150 FEP O-Ring	1	
378620	DN 200 FEP O-Ring	1	



### C Silicone O-Rings for Schott® Flanges

CAT NO	DESCRIPTION	PK QTY	PRICE
378005	DN 60 Silicone O-Ring	1	
378010	DN 100 Silicone O-Ring	1	
378015	DN 150 Silicone O-Ring	1	
378020	DN 200 Silicone O-Ring	1	

### D Viton® O-Rings for Schott® Flanges

CAT NO	DESCRIPTION	PK QTY	PRICE
378105	DN 60 Viton O-Ring	5	
378110	DN 100 Viton O-Ring	5	
378115	DN 150 Viton O-Ring	5	
378120	DN 200 Viton O-Ring	5	



### Benchtop Support Stand - for small reaction vessel

This benchtop stand is suitable for 250ml to 2000ml reaction vessels. It incorporates a cast iron, blue acrylic coated base with rubber feet. Choose from a 700mm or 1000mm x 18mm diameter nickel plated steel upright. The (555250) lower support ring (76mm ID) and (555280) stainless steel top support clamp (100mm ID) are held in position with anodised aluminium bossheads. Stand is supplied complete with allen keys for positioning and tightening of supports.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
555310	Complete support stand with 700mm upright	1	
555315	Complete support stand with 1000mm upright	1	

## Jumbo™ Top Support Clamp - for large reaction vessels

This two piece heavy duty top support clamp fits below the flange of larger reaction vessels. Made from 316 stainless steel the supporting rod is 27mm O.D. x 200mm long. The inside of the clamp is cushioned with heat resistant covering.



CAT NO	DESCRIPTION	PK QTY	PRICE EACH
555230	Two piece heavy duty top support clamp to fit DN 150 flange	1	
555240	Two piece heavy duty top support clamp to fit DN 200 flange	1	

## NEW Top Support Clamp - for DN 60 Flange

This two piece top support clamp fits below the flange of smaller reaction vessels. Made from 316 stainless steel the supporting rod is 12.5mm O.D. x 200mm long. The inside of the clamp is cushioned with heat resistant covering.



CAT NO	DESCRIPTION	PK QTY	PRICE EACH
555265	Two piece top support clamp to fit DN 60 flange	1	

## Jumbo™ Lower Support Ring - for large reaction vessels

This heavy duty lower support ring is made from 316 stainless steel. The support rods are 27mm O.D. Overall length is 525mm. The ring is cushioned by heat resistant covering.



CAT NO	DESCRIPTION	PK QTY	PRICE EACH
555210	Lower support ring, inside Ø 120mm	1	
555220	Lower support ring, inside Ø 190mm	1	

## Single Piece Top Support Clamp - for reaction vessels

This single piece top support clamp fits below the flange of the reaction vessel. Made from stainless steel the rod is 12.5mm O.D. x 200mm long. The inside of the clamp is cushioned with heat resistant covering and is supplied with its own allen key to tighten securing bolt.



CAT NO	DESCRIPTION	PK QTY	PRICE EACH
555280	Single piece top support clamp to fit 100mm flange	1	
555290	Single piece top support clamp to fit 150mm flange	1	
555300	Single piece top support clamp to fit 200mm flange	1	

## Lower Support Ring - for small reaction vessels

This lower support ring has an opening for easy insertion of the reaction vessel. The rod dimensions are 12.5mm O.D. x 200mm long.



CAT NO	DESCRIPTION	RING I.D.	SLOT I.D.	PK QTY	PRICE EACH
555250	Lower support ring for small vessels	76mm	38mm	1	
555260	Lower support ring for small vessels	100mm	44mm	1	

## NEW Rodaviss Gas Purge Adapter

Allows application of vacuum or purging of an inert gas.

CAT NO	DESCRIPTION	CONE SIZE	SIDEARM	PISTON	PK QTY	PRICE EACH
386000	Rodaviss Gas Purge Adapter	19/26	GL14	10mm	1	
386010	Rodaviss Gas Purge Adapter	24/29	GL18	10mm	1	



## NEW Rodaviss Swan Neck Adapter - Rodaviss cone & socket

Swan neck adapter is used to connect dropping funnel to reaction vessel where space around the lid is restricted.

CAT NO	DESCRIPTION	CONE SIZE	SOCKET SIZE	PK QTY	PRICE EACH
311000	Rodaviss Swan Neck Adapter	24/29	24/29	1	
312000	Rodaviss Swan Neck Adapter	29/32	24/29	1	
313000*	Rodaviss Swan Neck Adapter	19/26	19/26	1	

\*This item is angled to suit lids 376005 & 376006 not vertical as picture.



# Reaction Vessel Accessories



## NEW Rodaviss Cone Stopper

Rodaviss cone stopper used to blank off unused reaction vessel lid ports.

CAT NO	DESCRIPTION	CONE SIZE	PK QTY	PRICE EACH
480514	Rodaviss Glass Stopper	14/23	1	
480519	Rodaviss Glass Stopper	19/26	1	
480524	Rodaviss Glass Stopper	24/29	1	
480529	Rodaviss Glass Stopper	29/32	1	
480534	Rodaviss Glass Stopper	34/35	1	
480545	Rodaviss Glass Stopper	45/40	1	



## NEW Right Angle Adapter - Rodaviss cone

Right angle adapter with a Rodaviss 29/32 cone and GL18 screwthread.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
312804	Right Angle Adapter	1	



## NEW DN Sidearm Hose Couplings

These couplings securely clamp stainless steel DN hose connector to glass DN sidearm on vessel jacket. These couplings ensure bolt load applied to joint is sufficient to make an effective seal, whilst not unduly stressing the glass. Couplings include: backing flanges, inserts, sprung bolt assembly and PTFE gasket.



CAT NO	DESCRIPTION	PK QTY	PRICE EACH
555410	DN 15 Epoxy coated cast iron	1	
555411	DN 15 Stainless Steel	1	
555430	DN 25 Epoxy coated cast iron	1	
555431	DN 25 Stainless Steel	1	
555415	DN 15 Replacement PTFE Gasket	2	
555435	DN 25 Replacement PTFE Gasket	2	



## NEW Stainless Steel DN Hose Connectors

Stainless steel hose connectors for use with standard DN vessel sidearms and Huber flexible insulated metal hoses. See Huber Thermoregulators accessories page 470 for hose details.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
555400	DN 15 to M16 x 1, cone seat, male	1	
555420	DN 25 to M30 x 1.5, cone seat, male	1	
555440	DN 25 to M16 x 1 cone seat, male	1	



## NEW Stainless Steel Hose Connector - with drain valve

This modified hose connector incorporates a drain valve to aid draining of thermofluid from reaction systems.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
555405	DN15 to M16	1	
555425	DN25 to M30	1	



## NEW Replacement Zero Dead Space Pistons - PTFE

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
A 380015	15mm Replacement Drain Valve Piston for Single Jacket Reaction Vessel	1	
B 380015/2	15mm Replacement Drain Valve Piston for Vacuum Jacket Reaction Vessel	1	
C 380025/2	25mm Replacement Drain Valve Piston for Single Jacket Reaction Vessel	1	
D 380025/3	25mm Replacement Drain Valve Piston for Vacuum Jacket Reaction Vessel	1	



## Jumbo™ Support Systems

Versatile heavy duty framework, ideal for when ordinary laboratory retort stands, rods and bossheads are not up to the job.

### Assembly

Structures are assembled using heavy duty 27mm steel tubing (316 stainless steel) which is connected with cast iron Jumbo clamps. Hexagonal screws lock the clamps firmly in position. Jumbo clamps are supplied with a hard wearing blue gloss polyester coating (as shown below) for improved protection and appearance.

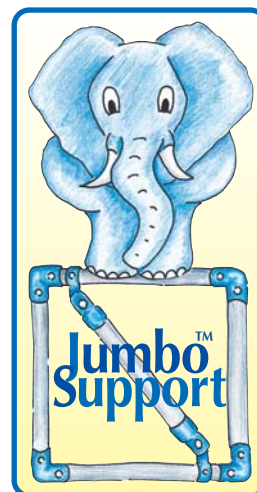
### Accessories

Heavy duty Jumbo support rings and clamps are designed to compliment our range of reaction equipment (see page 619). Other custom components include;

- Stainless steel spill trays.
- Lightproof cabinets for photochemical reactors.
- Acrylic or polycarbonate safety shields.
- Custom clamps and supports.

### Design Service...

You can either design and build your own structure by ordering components listed below, or take advantage of our in-house design service, which can provide you with specifications and a quotation to meet your exact requirements. Please call for more information.



90° Crossover



Swivel



Short Tee



3 Way 90° Elbow



90° Elbow



Corner with Centre



Sleeve Joint



Long Tee



Locking Collar



Hook



Round Base Flange



Long Base Flange



Side Outlet Tee



2 Socket Cross with Centre



Castor with Swivel



Castor with Swivel and Brake



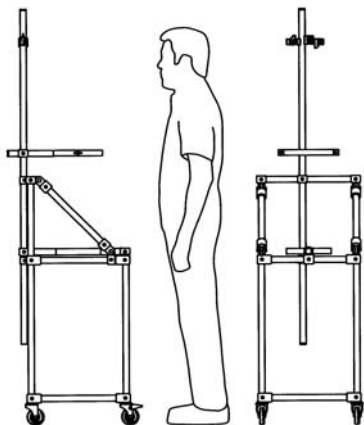
Plastic End Stopper



Polished 316 Stainless Steel



# Reaction Vessel Accessories



## NEW Jumbo™ Mobile Vessel Support Frame

Constructed from heavy duty 27mm ø 316 stainless steel tubing and powder coated clamps, with top support clamp for DN200 flange and 190mm ø Viton cushioned support ring. Fitted with 4 castors, 2 of which are able to be braked. Bosshead on back upright for supporting stirrer motor.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
555750	Heavy Duty Mobile Reaction Vessel Support Frame	1	



## NEW Jumbo™ Benchtop Vessel Support Frame

Constructed from heavy duty 27mm ø 316 stainless steel tubing and powder coated clamps, with top support clamp for DN150 flange and 120mm ø Viton cushioned support ring. Bosshead on back upright for supporting stirrer motor.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
555650	Heavy Duty Benchtop Reaction Vessel Support Frame	1	



## NEW Combination PTFE Baffle/Temperature Probe

This item allows the insertion of a baffle to improve agitation of the vessel contents, and combines this with a PT100 sensor which is moulded into the tip, thus saving port space in the vessel lid. The baffle/probe is supplied as standard with a Rodaviss 29/32 fitting and two metres of cable fitted with a Lemo plug for connection to a suitable thermoregulator. Please specify a vertical Rodaviss 29/32 socket on the vessel lid to enable use of this probe. Please contact us by email on [production@radleys.co.uk](mailto:production@radleys.co.uk) with the vessel specifications or required length and we will provide a quotation by return.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
555800	Combination PTFE baffle/Temperature Probe	1	



## NEW Lemo Plug Fitting Service

Supply and fit lemo plug to PT100 temperature probes for connection to Huber thermoregulators.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
555600	Lemo Plug Fitting Service	1	



## Type-K Thermocouple Probes - PTFE, up to 300°C

Solid PTFE temperature probes bring a whole new dimension to temperature measurement technology. Accuracy:  $\pm 1.5^\circ\text{C}$  or  $\pm 0.004^\circ\text{T}$ . Isostatic molding techniques are used to manufacture probes which are inert to virtually all chemicals, and which have unsurpassed non-stick properties. Probes will not contaminate your sample and are suitable for use from cryogenic temperatures up to  $+300^\circ\text{C}$ . Probe bodies have a metal core for rigidity, but can be bent. Thermocouple is Type K, Class 1 to BS4937 DIN 43710 and IEC581 with a PTFE insulated cable with PFA over-sheath.

Supplied with 1 metre of cable and Type K flat pin mini plug. Extra cable is £4.34 per metre. Please put cable length in metres as last number in Cat No. e.g. 600.201.4 for four metres.

CAT NO	DESCRIPTION	DIMENSIONS	PK QTY	PRICE EACH
600.101.1	PTFE Type-K Thermocouple Probe	7mm ø x 100mm body length	1	
600.201.1	PTFE Type-K Thermocouple Probe	7mm ø x 200mm body length	1	
600.301.1	PTFE Type-K Thermocouple Probe	8mm ø x 300mm body length	1	
600.401.1	PTFE Type-K Thermocouple Probe	8mm ø x 400mm body length	1	
600.501.1	PTFE Type-K Thermocouple Probe	9mm ø x 500mm body length	1	
600.601.1	PTFE Type-K Thermocouple Probe	9mm ø x 600mm body length	1	
600.701.1	PTFE Type-K Thermocouple Probe	9mm ø x 700mm body length	1	

## Platinum Resistance Temperature Probes - PTFE, up to 300°C

Solid PTFE platinum resistance probes offer superior accuracy:  $\pm 0.3^{\circ}\text{C}$  or  $\pm 0.002^{\circ}\text{C}$ . Isostatic molding techniques are used to manufacture probes which are inert to virtually all chemicals, and which have unsurpassed non-stick properties. Probes will not contaminate your sample and are suitable for use from cryogenic temperatures up to  $+300^{\circ}\text{C}$ . Probe bodies have a metal core for rigidity, but can be bent. Sensor is Class A to BS1904, DIN43760 and IEC751 with a 4 core PTFE insulated cable with PFA over-sheath. Connection may be 2, 3 or 4 wire.

CAT NO	DESCRIPTION	DIMENSIONS	PK QTY	PRICE EACH
500.100.1	PTFE Platinum Resistance Temperature Probe	7mm $\varnothing$ x 100mm body length	1	
500.200.1	PTFE Platinum Resistance Temperature Probe	7mm $\varnothing$ x 200mm body length	1	
500.300.1	PTFE Platinum Resistance Temperature Probe	8mm $\varnothing$ x 300mm body length	1	
500.400.1	PTFE Platinum Resistance Temperature Probe	8mm $\varnothing$ x 400mm body length	1	
500.500.1	PTFE Platinum Resistance Temperature Probe	9mm $\varnothing$ x 500mm body length	1	
500.600.1	PTFE Platinum Resistance Temperature Probe	9mm $\varnothing$ x 600mm body length	1	
500.700.1	PTFE Platinum Resistance Temperature Probe	9mm $\varnothing$ x 700mm body length	1	



Supplied with 1 metre of cable, but without plug. Extra cable is £4.34 per metre. Please put cable length in metres as last number in Cat No.e.g. 500.200.4 for four metres.

## NEW Probe & Thermometer Holders - PTFE

Enables standard probes and thermometers to be assembled in standard taper laboratory glassware. The body is pure PTFE and is fully adjustable with a replaceable Viton seal. Contact materials are glass and PTFE only.

CAT NO	DESCRIPTION	PROBE $\varnothing$	SEAL CAT NO.	PK QTY	PRICE EACH
021.146.1	14/23 Cone	6mm	021.06S	1	
021.147.1	14/23 Cone	7mm	021.07S	1	
021.148.1	14/23 Cone	8mm	021.08S	1	
021.149.1	14/23 Cone	9mm	021.09S	1	
021.196.1	19/26 Cone	6mm	021.06S	1	
021.197.1	19/26 Cone	7mm	021.07S	1	
021.198.1	19/26 Cone	8mm	021.08S	1	
021.199.1	19/26 Cone	9mm	021.09S	1	



## Huber High Precision Thermoregulators

Huber are world leaders in the field of thermoregulation - finding simple solutions to a complex problem. The results are "Tango Technology", "Plug and Play Technology" and the Unistat range of thermostats.

- Unistats, Polystats and Ministats
- Compatible Control Thermostats
- Unichillers
- Calibration Bath Equipment

Based on passive components and the laws of physics, the "Tango Technology" is so sound in its concept that the same principle is used from the smallest benchtop system (Unistat Tango) to a unit that delivers 60kW @  $-40^{\circ}\text{C}$  (Unistat 1060).

Following their introduction in 1991, Huber Unistats soon became the thermostat of choice for accurate and responsive control of a wide variety of applications in the pharmaceutical, chemical, petrochemical and semiconductor industries.

The Unistats' low volume, hydraulically sealed system has set a high bench mark in the level of control and response to dynamic thermal loads. It has raised the possibilities and expectations of the industry.

12 years on, the Unistats and the Tango Technology have been refined, the range has grown and the possibilities increased. More power, wider temperature range, easier to use.

Three interchangeable, intuitive, easy to use controllers with practical features and flexibility to keep up to speed with ever changing demands.

Focusing on the application - Huber offer power and response where and when needed... at the process!

Controllers using "Plug and Play" technology are now used on all products except Unistats. This brings a level of familiarity, flexibility and ease of use that is unequalled in our industry.

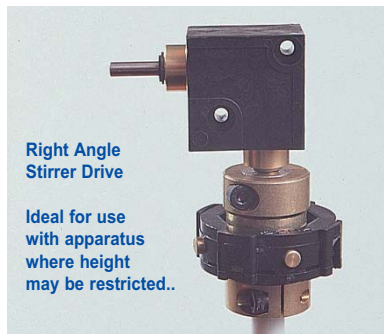
See the Huber Thermoregulator section for more information...



# huber

Supply ✓  
 Servicing ✓  
 Support ✓

# Reaction Vessel Accessories



Right Angle Stirrer Drive

Ideal for use with apparatus where height may be restricted..

## NEW Right Angle Stirrer Drive - for 9.5mm diameter shafts

This unit combines a right angle drive and a coupling which compensates for misalignment. Suitable for use where space above a vessel is limited. Accepts PTFE or metal 9.5mm shafts.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
555320	Right Angle Stirrer Drive	1	



**Eurostar power basic Overhead Stirrer**



**RW 20 DZM.n Mechanical Overhead Stirrer**



**PLR Compressed Air Stirrer from Buddeberg**

## NEW IKA® Overhead Stirrers

IKA overhead stirrers are powerful slimline, laboratory and process stirrers for stirring tasks up to the "high viscosity" range. Features include:

- Microprocessor control
- Infinitely adjustable without gear shifting
- Slim casing, quiet running
- Non-locking, overload capabilities
- Push through stirring shafts

**For prices and specifications on IKA Stirrers please see page 413 to 417**

## NEW Compressed Air Stirrer - Buddeberg

**Compressed Air Stirrers are ideal for all kinds of lab stirring tasks. Features include:-**

- Explosion proof
- Very high power to weight ratio
- Can be overloaded to a standstill without causing damage
- Well suited to continuous operation

**For prices and specifications on Compressed Air Stirrers please see page 426 and 428**



**Version 5 PTFE Stirrer Guide**



**Version 6 PTFE Stirrer Guide**



**Propeller Stirrer, 4-bladed**



**Borosilicate Glass Stirring Shafts and Guides**

## NEW PTFE Stirrer Guides

These PTFE Stirrer Guides are designed to provide a reliable and safe means of entry for stirrer shafts into reaction or fermentation vessels. They are suitable for all types of stirrer shaft of 6, 8, 9.5, 10, 12 and 16mm diameter.

**Note:** All stirrer shafts may whip at certain speed, therefore to avoid damage to shaft or vessel, always ensure that the speed elected is 'whip free'

Two versions of PTFE stirrer guide are available, Version 5 and Version 6.

**For prices and specifications on PTFE Stirrers Guides please see page 419**

## NEW Stirrer Shafts & Blades

A wide range of PTFE, glass and metal stirrer shafts and guides.

- PTFE - Chemically inert, unbreakable, easy to clean, useable up to 280°C
- Glass - Chemically inert, easy to clean, non-shedding
- Metal - Robust up to high speeds, rigid, easy to clean, non-shedding

**For prices and specifications on these Stirrers Shafts please see pages 420 to 425**



**PTFE Screw Propeller Stirrer**



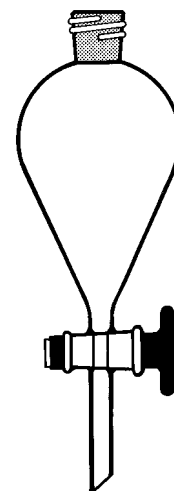
**PTFE Centrifugal Stirrer**



**Maxi Propeller Stirrer Shaft**

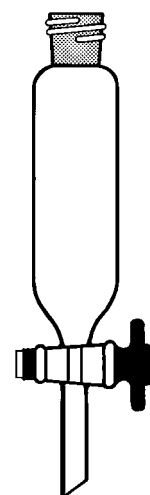
## Rodaviss® Conical Separating Funnels

CAPACITY	SOCKET SIZE	CAT NO GLASS KEY	CAT NO PTFE KEY	PRICE EACH	CAT NO ROTAFLO	PRICE EACH
25ml	14/23	542106	544106		546106	
50ml	19/26	542108	544108		546108	
100ml	19/26	542110	544110		546110	
250ml	19/26	542112	544112		546112	
500ml	24/29	542114	544114		546114	
1000ml	24/29	542116	544116		546116	
2000ml	34/35	542118	544118		546118	
3000ml	34/35	542120	544120		546120	
4000ml	34/35	542122	544122		546122	
6000ml	45/40	542126	544126		546126	
10000ml	45/40	542128	544128		546128	



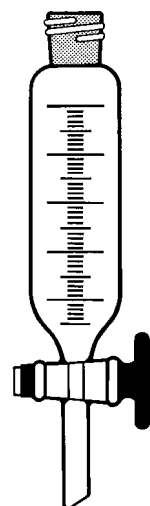
## Conical Separating Funnels - with ordinary socket

CAPACITY	SOCKET SIZE	CAT NO GLASS KEY	CAT NO PTFE KEY	PRICE EACH	CAT NO ROTAFLO	PRICE EACH
25ml	14/23	542406	544406		546406	
50ml	19/26	542408	544408		546408	
100ml	19/26	542410	544410		546410	
250ml	19/26	542412	544412		546412	
500ml	24/29	542414	544414		546414	
1000ml	24/29	542416	544416		546416	
2000ml	34/35	542418	544418		546418	
3000ml	34/35	542420	544420		546420	
4000ml	34/35	542422	544422		546422	
6000ml	40/38	542426	544426		546426	
10000ml	40/38	542428	544428		546428	



## Rodaviss® Dropping Funnels

CAPACITY	SOCKET SIZE	CAT NO GLASS KEY	CAT NO PTFE KEY	PRICE EACH	CAT NO ROTAFLO	PRICE EACH
5ml	14/23	522102	524102		526102	
10ml	14/23	522104	524104		526104	
25ml	19/26	522106	524106		526106	
50ml	19/26	522108	524108		526108	
100ml	19/26	522110	524110		526110	
250ml	24/29	522112	524112		526112	
500ml	24/29	522114	524114		526114	
1000ml	34/35	522116	524116		526116	
2000ml	34/35	522118	524118		526118	
5000ml	34/35	522124	524124		526124	



## Dropping Funnels - with ordinary socket

CAPACITY	SOCKET SIZE	CAT NO GLASS KEY	CAT NO PTFE KEY	PRICE EACH	CAT NO ROTAFLO	PRICE EACH
5ml	14/23	522402	524402		526402	
10ml	14/23	522404	524404		526404	
25ml	19/26	522406	524406		526406	
50ml	19/26	522408	524408		526408	
100ml	19/26	522410	524410		526410	
250ml	24/29	522412	524412		526412	
500ml	24/29	522414	524414		526414	
1000ml	34/35	522416	524416		526416	
2000ml	34/35	522418	524418		526418	
5000ml	34/35	522424	524424		526424	

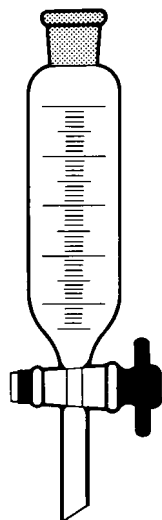
## Rodaviss® Graduated Dropping Funnels

CAPACITY SUB-DIVISION	SOCKET SIZE	CAT NO GLASS KEY	CAT NO PTFE KEY	PRICE EACH	CAT NO ROTAFLO	PRICE EACH
5 x 0.1ml	14/23	532102	534102		536102	
10 x 0.2ml	14/23	532104	534104		536104	
25 x 0.5ml	19/26	532106	534106		536106	
50 x 1ml	19/26	532108	534108		536108	
100 x 2ml	19/26	532110	534110		536110	
250 x 5ml	24/29	532112	534112		536112	
500 x 10ml	24/29	532114	534114		536114	
1000 x 20ml	34/35	532116	534116		536116	
2000 x 20ml	34/35	532118	534118		536118	
5000 x 50ml	34/35	532124	534124		536124	

### If you prefer ordinary joints...

Whilst Rodaviss joints are completely interchangeable with ordinary joints, we will be pleased to offer any item from our range with ordinary ground joints instead of Rodaviss at no extra charge.

# Separating & Dropping Funnels



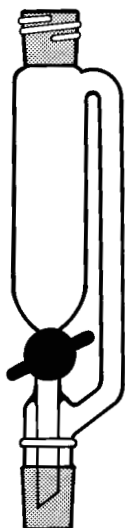
## Graduated Dropping Funnels - with ordinary socket

CAPACITY SUB-DIVISION	SOCKET SIZE	CAT NO GLASS KEY	CAT NO PTFE KEY	PRICE EACH	CAT NO ROTAFL0	PRICE EACH
5 x 0.1ml	14/23	532402	534402		536402	
10 x 0.2ml	14/23	532404	534404		536404	
25 x 0.5ml	19/26	532406	534406		536406	
50 x 1ml	19/26	532408	534408		536408	
100 x 2ml	19/26	532410	534410		536410	
250 x 5ml	24/29	532412	534412		536412	
500 x 10ml	24/29	532414	534414		536414	
1000 x 20ml	34/35	532416	534416		536416	
2000 x 20ml	34/35	532418	534418		536418	
5000 x 50ml	34/35	532424	534424		536424	

## Rodaviss® Dropping Funnels - with equalising arm

Available with extended stem at no extra cost. Please call our Sales Office for details.

CAPACITY	JOINT SIZE	CAT NO GLASS KEY	CAT NO PTFE KEY	PRICE EACH	CAT NO ROTAFL0	PRICE EACH
5ml	14/23	502302	504302		506302	
10ml	14/23	502304	504304		506304	
25ml	19/26	502306	504306		506306	
50ml	19/26	502308	504308		506308	
100ml	19/26	502310	504310		506310	
250ml	24/29	502312	504312		506312	
500ml	24/29	502314	504314		506314	
1000ml	24/29	502316	504316		506316	
2000ml	34/35	502318	504318		506318	
5000ml	34/35	502324	504324		506324	



## Dropping Funnels - with equalising arm and ordinary joints

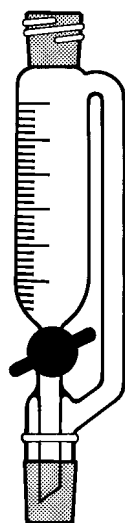
Available with extended stem at no extra cost. Please call our Sales Office for details.

CAPACITY	JOINT SIZE	CAT NO GLASS KEY	CAT NO PTFE KEY	PRICE EACH	CAT NO ROTAFL0	PRICE EACH
5ml	14/23	502602	504602		506602	
10ml	14/23	502604	504604		506604	
25ml	19/26	502606	504606		506606	
50ml	19/26	502608	504608		506608	
100ml	19/26	502610	504610		506610	
250ml	24/29	502612	504612		506612	
500ml	24/29	502614	504614		506614	
1000ml	24/29	502616	504616		506616	
2000ml	34/35	502618	504618		506618	
5000ml	34/35	502624	504624		506624	

## Rodaviss® Graduated Dropping Funnels - with equalising arm

Available with extended stem at no extra cost. Please call our Sales Office for details.

CAPACITY SUB-DIVISION	JOINT SIZE	CAT NO GLASS KEY	CAT NO PTFE KEY	PRICE EACH	CAT NO ROTAFL0	PRICE EACH
5 x 0.1ml	14/23	512302	514302		516302	
10 x 0.2ml	14/23	512304	514304		516304	
25 x 0.5ml	19/26	512306	514306		516306	
50 x 1ml	19/26	512308	514308		516308	
100 x 2ml	19/26	512310	514310		516310	
250 x 5ml	24/29	512312	514312		516312	
500 x 10ml	24/29	512314	514314		516314	
1000 x 20ml	24/29	512316	514316		516316	
2000 x 20ml	34/35	512318	514318		516318	
5000 x 50ml	34/35	512324	514324		516324	



## Graduated Dropping Funnels - equalising arm and ordinary joints

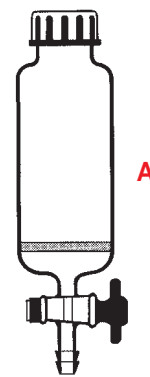
Available with extended stem at no extra cost. Please call our Sales Office for details.

CAPACITY SUB-DIVISION	JOINT SIZE	CAT NO GLASS KEY	CAT NO PTFE KEY	PRICE EACH	CAT NO ROTAFL0	PRICE EACH
5 x 0.1ml	14/23	512602	514602		516602	
10 x 0.2ml	14/23	512604	514604		516604	
25 x 0.5ml	19/26	512606	514606		516606	
50 x 1ml	19/26	512608	514608		516608	
100 x 2ml	19/26	512610	514610		516610	
250 x 5ml	24/29	512612	514612		516612	
500 x 10ml	24/29	512614	514614		516614	
1000 x 20ml	24/29	512616	514616		516616	
2000 x 20ml	34/35	512618	514618		516618	
5000 x 50ml	34/35	512624	514624		516624	

## A Solid Phase Synthesis Vessels

These solid phase synthesis vessels have a porosity 2 sintered disc for resin support. The vessel top has a GL screwthread with PTFE faced sealing cap. PTFE key stopcock. The vessel has minimum dead space below the sintered disc. For other porosity discs available, see table below.

CAT NO	CAPACITY	DISC DIAMETER	GL THREAD SIZE	PK QTY	PRICE EACH
600104	10ml	15mm	GL 14	1	
600106	25ml	20mm	GL 25	1	
600108	50ml	25mm	GL 25	1	
600110	100ml	40mm	GL 25	1	
600112	250ml	50mm	GL 32	1	



A

## B Solid Phase Synthesis Vessels - with T-Bore stopcock

These solid phase synthesis vessels have a porosity 2 sintered disc for resin support. The vessel top has a GL screwthread with PTFE faced sealing cap. The vessel has minimum dead space below the sintered disc. The T-Bore stopcock allows for the addition of nitrogen to agitate the resin beads. For other porosity discs available, see table below.

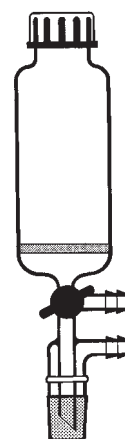
CAT NO	CAPACITY	DISC DIAMETER	GL THREAD SIZE	PK QTY	PRICE EACH
600204	10ml	15mm	GL 14	1	
600206	25ml	20mm	GL 25	1	
600208	50ml	25mm	GL 25	1	
600210	100ml	40mm	GL 25	1	
600212	250ml	50mm	GL 32	1	

B

## C Solid Phase Synthesis Vessels - with 24/29 cone & vacuum arm

These solid phase synthesis vessels have a porosity 2 sintered disc for resin support. The vessel top has a GL screwthread with PTFE faced sealing cap. The vessel has minimum dead space below the sintered disc. The T-Bore stopcock allows for the addition of nitrogen to agitate the resin beads. The vessel also has 24/29 cone to allow connection to a vessel with 24/29 socket and a side arm for connection to a vacuum. For other porosity discs available, see table below.

CAT NO	CAPACITY	DISC DIAMETER	GL THREAD SIZE	PK QTY	PRICE EACH
600304	10ml	15mm	GL 14	1	
600306	25ml	20mm	GL 25	1	
600308	50ml	25mm	GL 25	1	
600310	100ml	40mm	GL 25	1	
600312	250ml	50mm	GL 32	1	

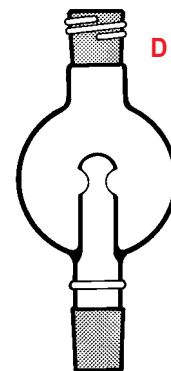


C

## D Rodaviss Rotary Evaporator Splash Heads

These splash heads are designed especially for use with Rotary Evaporators. Connected between the evaporating flask and the vapour duct, the splash head prevents splashes or spurts of liquid from entering the condenser. Rodaviss design ensures a secure fit and prevents joints from sticking.

CAT NO	NOMINAL CAPACITY	JOINT SIZE	JOINT TYPE	PK QTY	PRICE EACH
772100	100ml	24/29	Ordinary	1	
773100	100ml	29/32	Ordinary	1	
772250	250ml	24/29	Ordinary	1	
773250	250ml	29/32	Ordinary	1	
774100	100ml	24/29	Rodaviss	1	
775100	100ml	29/32	Rodaviss	1	
774250	250ml	24/29	Rodaviss	1	
775250	250ml	29/32	Rodaviss	1	

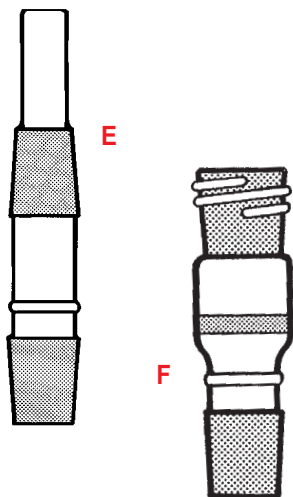


D

## Sintered Glassware Porosity Grade Guide

POROSITY	ISO 4793 DESIGNATION	NOMINAL PORE SIZE	EXAMPLE APPLICATIONS	POROSITY	ISO 4793 DESIGNATION	NOMINAL PORE SIZE	EXAMPLE APPLICATIONS
	P250	160 - 250µm	Coarse filtration, Gas Distribution		P40	16 - 40µm	Analytical filtration of medium precipitation. Fine gas filtration, Extraction apparatus for fine grained material
	P160	100 - 160µm	Coarse filtration, Gas Distribution Extraction apparatus for Coarse grained material		P16	10 - 16µm	Analytical work with fine precipitates
	P100	40 - 100µm	Preparative fine filtration, Mercury filtration, Gas washing, Crystalline precipitate filtration		P10	4 - 10µm	Ultrafine filtration

# Splash Heads - Test Tubes



## E Rodaviss Rotary Evaporator Vapour Duct

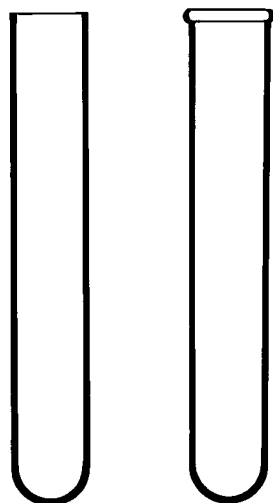
These vapour ducts will fit all leading brands of rotary evaporator. Available in short form for vertical condenser formats and long form for diagonal condensers. If in doubt... please ask...

CAT NO	CONE FOR FLASK	CONE FOR DRIVE	TYPE	PK QTY	PRICE EACH
291101	29/32	29/32	Short	1	
291102	24/29	29/32	Short	1	
291103	29/32	29/32	Long	1	
291104	24/29	29/32	Long	1	

## F Splash Head with Sintered Disc

For use with Rotary Evaporator, it prevents contents of flask entering condenser in event of "Bumping". Sinter porosity 0 with Rodaviss or ordinary joints.

CAT NO	JOINT SIZE	JOINT TYPE	PK QTY	PRICE EACH
770024	24/29	Ordinary	1	
770029	29/32	Ordinary	1	
771024	24/29	Rodaviss	1	
771029	29/32	Rodaviss	1	



For custom test and centrifuge tubes please call +44-(0)1799-513320

## Heavy Duty Test Tubes/Digestion Tubes - with thicker walls

A range of superior quality, hand-made, heavy duty, borosilicate glass test tubes; with and without rims.

CAT NO	TUBE OD	TUBE LENGTH	WALL THICKNESS	RIM	PK QTY	PRICE EACH
322230	30mm	100mm	1.4mm	no	10	
322340	40mm	150mm	1.6mm	no	10	
322350	50mm	150mm	1.8mm	no	10	
322428	28mm	200mm	1.4mm	no	10	
322432	32mm	200mm	1.4mm	no	10	
322438	38mm	200mm	1.4mm	no	10	
322640	40mm	300mm	1.6mm	no	10	
322650	50mm	300mm	1.8mm	no	10	
324428	28mm	200mm	2.0mm	no	10	
324432	32mm	200mm	2.0mm	no	10	
324438	38mm	200mm	2.0mm	no	10	
321230	30mm	100mm	1.4mm	yes	10	
321340	40mm	150mm	1.6mm	yes	10	
321350	50mm	150mm	1.8mm	yes	10	
321428	28mm	200mm	1.4mm	yes	10	
321432	32mm	200mm	1.4mm	yes	10	
321438	38mm	200mm	1.4mm	yes	10	
321640	40mm	300mm	1.6mm	yes	10	
321650	50mm	300mm	1.8mm	yes	10	
323428	28mm	200mm	2.0mm	yes	10	
323432	32mm	200mm	2.0mm	yes	10	
323438	38mm	200mm	2.0mm	yes	10	



## NEW Reaction Tubes - borosilicate glass

- 12mm, 14mm, 16mm, 20mm, 24mm and 24.5mm (one inch) diameters.
- Threaded with caps or plain tops and with round or flat bottoms.

CAT NO	DESCRIPTION	PK QTY	PRICE EACH
RR320112	Plain Reaction Tube Round Bottom 12mm x 100mm	100	
RR320114	Plain Reaction Tube Round Bottom 14mm x 130mm	100	
RR320116	Plain Reaction Tube Flat Bottom 16mm x 150mm	12	
RR320120	Plain Reaction Tube Flat Bottom 20mm x 150mm	12	
RR320124	Plain Reaction Tube Flat Bottom 24mm x 150mm	12	
RR320212	Reaction Tube Round Bottom 12mm x 100mm Threaded with Cap	50	
RR320216	Plain Reaction Tube Round Bottom 16mm x 150mm	12	
RR320220	Plain Reaction Tube Round Bottom 20mm x 150mm	12	
RR320224	Plain Reaction Tube Round Bottom 24mm x 150mm	12	
RR320324	Reaction Tube Flat Bottom 24mm x 150mm Cap & Septum	12	
RR320424	Reaction Tube Flat Bottom 24mm x 150mm Cap & Septum	120	
RR320524	Reaction Tube Round Bottom 24mm x 150mm Cap & Septum	12	
RR320624	Reaction Tube Round Bottom 24mm x 150mm Cap & Septum	120	
RR320724	Heavy Duty Reaction Tube Flat Bottom 24.5mm x 115mm Cap & Septum	12	
RR320824	Heavy Duty Reaction Tube Flat Bottom 24.5mm x 115mm Cap & Septum	120	
RR320924	Heavy Duty Reaction Tube Flat Bottom 24.5mm x 150mm Cap & Septum	12	
RR321024	Heavy Duty Reaction Tube Flat Bottom 24.5mm x 150mm Cap & Septum	120	

### Glass Test Tubes, Centrifuge Tubes and Vials

Please see pages 167 to 172 of the Consumables section.

## Prices

All Prices are in Pounds Sterling and subject to alteration without prior notice. We reserve the right to invoice goods at prices ruling at the date of despatch. Prices are exclusive of carriage, packing, insurance and VAT. Our preferred minimum order value is £30 net.

## Delivery of Goods

We will despatch all goods by the most cost effective method of transport unless otherwise specified by the customer. Please advise of any special shipping requirements. For details of carriage, packing and insurance charges please contact our Sales Office on Tel: +44-(0)1799-513320.

## Quotations

All offers, written or verbal, are valid for 30 days, unless otherwise specified. The right is reserved to amend any accidental errors.

## Damage or Shortage of Delivered Goods

Within three working days advise the carrier both in writing and verbally. Immediately advise us both in writing and verbally. Retain goods and packaging for inspection. Deliveries offered ex-stock are subject to the goods being unsold at the date of receipt of customer's order.

## Payment of Accounts

Our terms of payment are strictly 30 days from date of invoice, subject to approved trade and bankers' references.

## Responsibility

Our responsibility is limited to the supply of goods in the kind and quality ordered. All goods should be checked before use as no subsequent liability can be accepted.

## Free-Issue Materials and Repairs

We are not responsible for damage to articles sent to us for repair or examination, nor for incidental damage to glass apparatus and delicate instruments during the course of repair whilst on our premises, or during transit, to or from our premises. Time involved in the preliminary examination of any article may be charged in the event of no subsequent order being placed. Goods for repair should be sent carriage paid and clearly labelled with the sender's name and address; at the same time a note should be included detailing the work required. Any goods sent for repair, maintenance or return should be free from physical, chemical and biological hazards.

## On-site Work

No responsibility can be accepted for any accident, however caused, whilst our employees are on the customer's premises. Safety precautions are the hirer's responsibility.

## Tools or Moulds

Unless otherwise agreed between the purchaser and ourselves, in the case of orders where special tools, moulds, gauges etc, are required for the manufacturer of the parts to be supplied, the purchaser will be charged with a part cost of the manufacture or purchase of such tool, as and when samples for approval are being submitted. We reserve the right to retain possession of all such tools.

## Return of Goods

Return of correctly supplied goods will not be accepted unless agreed arrangements have been made. A separate advice of despatch should be sent to us for all items. No responsibility will be accepted for items damaged or lost in transit.

## Illustrations and Specifications

Subject to alteration without notice. They are not binding and are only intended to represent generally the type of goods offered, as owing to improvements and revision of design and/or change of service, apparatus may not conform to them in detail.

## Bank Details

Lloyds Bank plc, 25 East Gate, Harlow Town Centre, Harlow, Essex. CM20 1LD. United Kingdom Account Name: R. B. Radley & Co. Ltd.  
Account Number: 0149739. Bank Sort Code: 30-93-89

## New Customers

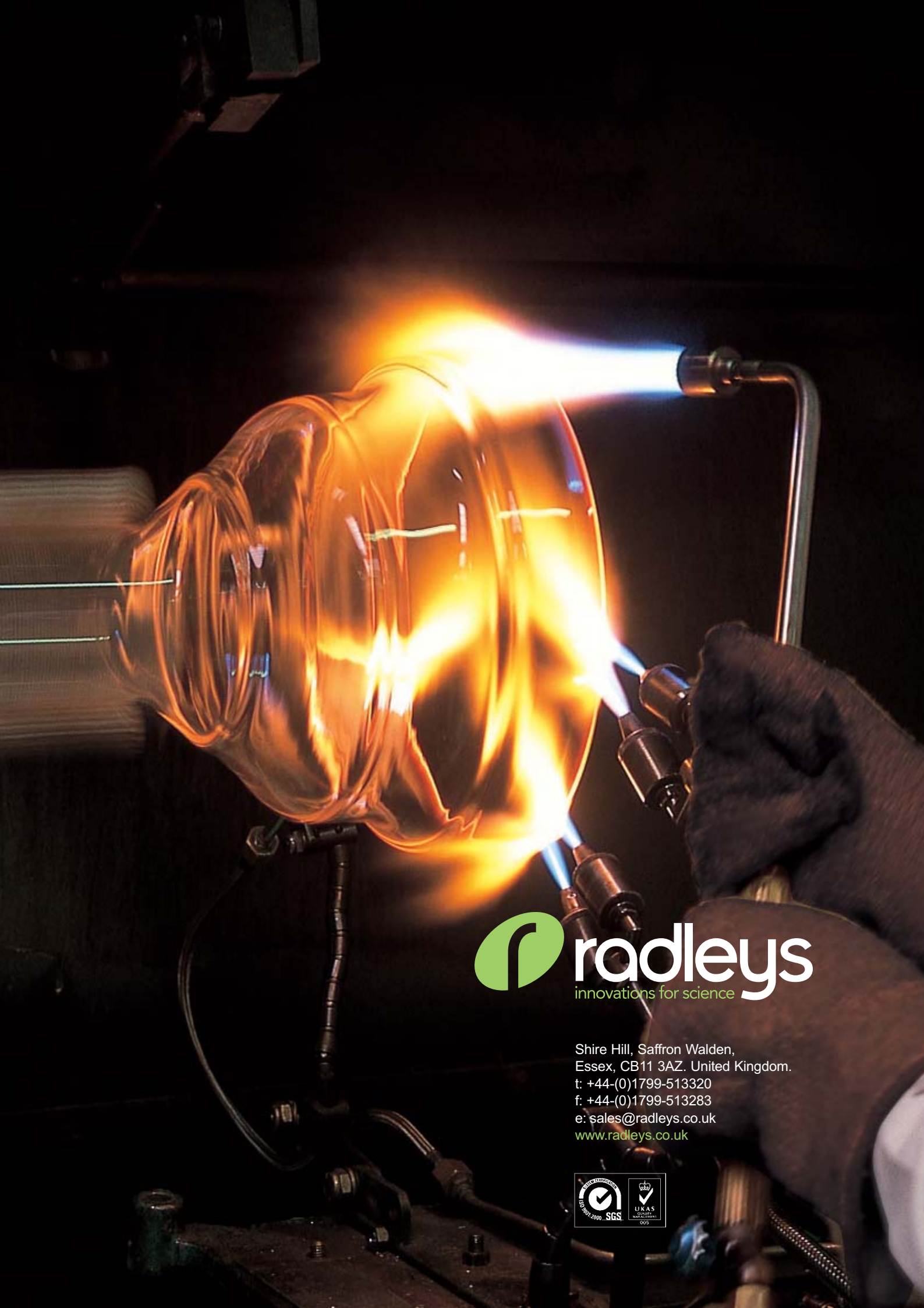
For new customers there may be some delay in despatching goods until credit has been approved. To avoid the delay customers may remit on Proforma invoice, where goods will be despatched after remittance is received.

## Export Customers

Our terms of payment are strictly 30 days from date of invoice, subject to credit approval. All invoices will be in Pounds Sterling and should be remitted in Sterling. Payment should be made by Bankers Draft drawn in Sterling and sent direct to ourselves or by International Money Transfer, direct to our bank. When remitting by IMT please advise us of details in advance.

## Pay by Credit Card

For your convenience we accept payment by all leading credit or debit cards. Credit card orders are accepted by telephone, fax, post or email. Please provide your card number, card holders name, address and expiry date when placing your order. Payment is debited when your goods are despatched.



 **radleys**  
innovations for science

Shire Hill, Saffron Walden,  
Essex, CB11 3AZ. United Kingdom.  
t: +44-(0)1799-513320  
f: +44-(0)1799-513283  
e: [sales@radleys.co.uk](mailto:sales@radleys.co.uk)  
[www.radleys.co.uk](http://www.radleys.co.uk)

