

# Chemistry - Tools for chemistry

Heat-On™



Heat-On Multi-well Block Holder  
(with optional safety lifting handles)



Heat-On Multi-well Block Holder  
with 50ml and 100ml flask inserts



Multi-well flask inserts are available for  
10ml, 25ml, 50ml, 100ml & 150ml flasks



Multi-well Block  
Holder can  
accept one  
or two inserts as  
required.

## Replaces messy oil baths, heating mantles, avoid spills and make your chemistry safer, cleaner and faster...

It is accepted that oil baths and heating mantles are no longer the preferred choice of chemists to heat round bottom flasks. The risk of oil fires and injury from hot oil spills, plus the mess and disposal costs associated with the use of oil, mean that oil baths no longer represent safe working practice in labs. Heating mantles are expensive, difficult to clean, do not respond well to spills and often create hot spots when heating. Therefore safety aware scientists are increasingly turning to Heat-On as the safe, cost efficient and high performance alternative to heating standard round bottom flasks.

### Heat-On offers benefits that make a real difference...

- All Heat-On blocks are manufactured from solid aluminium providing excellent, even heat transfer to the entire block, preventing hot spots.
- Heat-On's weight-saving design reduces the mass of the block to be heated, making the heat-up times significantly faster. This weight-saving design also offers faster post synthesis cool down times.
- Heat-On blocks feature a proprietary well design, that eliminates cracking of flasks, whilst allowing the Heat-On blocks to have deeper wells, maximising the heated surface area to in-turn improve heat-up times and minimise the differential between the block and solution temperature.
- Heat-On blocks have two probe holes for insertion of temperature probe/s.
- Removable lifting handles ensure safe and rapid removal of the blocks from the heat source.
- Blocks can be used up to 200°C and 260°C for short periods.

### Heat-On heats hotter, faster...

- Heat-up tests have shown Heat-On can boil a 250ml flask of water in under 11 minutes, faster than an oil bath and faster than competitive blocks.
- Whilst another controlled test showed that a 2000ml Heat-On block and flask, containing 1000ml flask of water boiled 66% faster than the competition.
- Heat-On is also more efficient - using 30% less energy than a competitive block, when boiling water over a 7 hour period.



Heat-On accepts 10ml, 50ml, 100ml,  
150ml, 500ml, 1 litre, 2 litre, 3 litre and  
5 litre round bottom flasks...

Popular 250ml Heat-On  
block with hotplate and  
temp. controller

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## Fluoropolymer coating gives superb chemical resistance...

Heat-On blocks have an innovative fluoropolymer coating that offers outstanding chemical resistance to most solvents, acids and alkalis. The coating also extends the product life, is easy-to-clean and reduces heat-up time. Heat-On blocks are also available as standard with a lower cost anodised finish if preferred.

## Multi-well block holder and inserts...

This unique Multi-well block holder is designed to hold either one or two inserts for flasks or tubes\*. The inserts are available for 10ml, 25ml, 50ml, 100ml and 150ml flasks as well as multi-tube inserts for 16mm, 20mm and 24mm tubes or vials. Flask inserts also feature cut-away sides for use with two or three neck flasks and accept the optional safety lifting handles. \*Only accepts one 150ml insert.

## Heat-On is an easy to use, efficient, heating and stirring work station designed to accept standard round bottom flasks from 10ml to 5 litres...

### Unique well design prevents cracking of glassware...

Heat-On blocks feature a proprietary well design, that eliminates cracking of flasks, whilst allowing the Heat-On blocks to have deeper wells, maximising the heated surface area to in-turn improve heat-up times.

### Cleaner...

Heat-On saves money by removing the need for oil and its costly disposal, and by making the cleaning of oil-free glassware much easier.

### Removable safety lifting handles...

Optional safety lifting handles have a simple and secure quick release mechanism that allows the user to quickly attach the handles and remove the block from the heat source, even whilst it remains hot. We offer this as an option rather than compromising the overall design by having them permanently attached.

### Heat-On fits on to all leading brands of stirring hotplate...

Heat-On blocks are suitable for use with all hotplates up to 145mm in diameter including Heidolph, IKA and the Radleys Stirring Hotplate. An optional aluminium adapter for 135mm Hotplates (required for IKA and the Radleys Stirring Hotplate) comes free when you buy any Heat-On System (see page 3).

### Heat-On blocks for large flasks from 250ml to 5 litres...

Each Heat-On block (250ml, 500ml, 1 litre, 2 litre, 3 litre & 5 litre) is a stand-alone product that can be placed directly onto your stirring hotplate - these blocks do not use reducing inserts to accept smaller flasks, thereby maximising heat transfer from a single piece design. All single well blocks feature two probe holes and accept the optional safety lifting handles.



250ml Heat-On block



500ml Heat-On block



1 Litre Heat-On block



5 Litre Heat-On block



1 Litre Heat-On block with hotplate and temp. controller



2 Litre Heat-On block with hotplate and temp. controller



Radleys products are only available for France and Germany

### Heat-On blocks with Fluoropolymer Coating

P/N	Description
<b>Heat-On Blocks for Multi-well Holder with Fluoropolymer Coating</b>	
RR61005	Heat-On Multi-Well Holder (Polymer coated)
RR61010	Heat-On 10ml Insert (Polymer coated)
RR61015	Heat-On 25ml Insert (Polymer coated)
RR61020	Heat-On 50ml Insert (Polymer coated)
RR61025	Heat-On 100ml Insert (Polymer coated)
RR61030	Heat-On 150ml Insert (Polymer coated)
RR61065	Heat-On Inserts for 8 x 16mm Tubes (Polymer coated)
RR61070	Heat-On Inserts for 4 x 20mm Tubes (Polymer coated)
RR61075	Heat-On Inserts for 4 x 24mm Tubes (Polymer coated)

#### Heat-On Blocks with Fluoropolymer Coating

RR61040	Heat-On 250ml Block (Polymer coated)
RR61045	Heat-On 500ml Block (Polymer coated)
RR61050	Heat-On 1 Litre Block (Polymer coated)
RR61055	Heat-On 2 Litre Block (Polymer coated)
RR61060	Heat-On 3 Litre Block (Polymer coated)
RR61063	Heat-On 5 Litre Block (Polymer coated)

#### Heat-On Florentine (pear-shaped) Blocks with Fluoropolymer Coating

RR61032	Heat-On 200ml Florentine Block (Polymer Coated)
RR61042	Heat-On 300ml Florentine Block (Polymer Coated)

#### Heat-On Multi-well System with Fluoropolymer Coating

RR61000	Heat-On Multi-Well System (Polymer coated) 1 x RR61005 Heat-On Multi-well Holder (Polymer coated) 2 x RR61015 Heat-On 25ml Insert (Polymer coated) 2 x RR61020 Heat-On 50ml Insert (Polymer coated) 2 x RR61025 Heat-On 100ml Insert (Polymer coated) 1 x RR61085 Heat-On Adapter Plate for 135mm Hotplates
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#### Heat-On Multi-well Basic System with Fluoropolymer Coating

RR61001	Heat-On Multi-Well Basic System (Polymer coated) 1 x RR61005 Heat-On Multi-well Holder (Polymer coated) 1 x RR61015 Heat-On 25ml Insert (Polymer coated) 1 x RR61020 Heat-On 50ml Insert (Polymer coated) 1 x RR61025 Heat-On 100ml Insert (Polymer coated) 1 x RR61085 Heat-On Adapter Plate for 135mm Hotplates
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#### Heat-On Accessories

RR61080	Heat-On Safety Lifting Handles (Pair)
RR61085	Heat-On Adapter Plate for 135mm Hotplates

A full range of stirring bars and round bottom flasks are available on request. Prices are in Pounds Sterling or Euros and exclude VAT and delivery. For pricing in other currencies please contact your local distributor

### Heat-On blocks with Anodised Finish

P/N	Description
<b>Heat-On Blocks for Multi-well Holder with Anodised Finish</b>	
RR62005	Heat-On Multi-Well Holder
RR62010	Heat-On 10ml Insert
RR62015	Heat-On 25ml Insert
RR62020	Heat-On 50ml Insert
RR62025	Heat-On 100ml Insert
RR62030	Heat-On 150ml Insert
RR62065	Heat-On Inserts for 8 x 16mm Tubes
RR62070	Heat-On Inserts for 4 x 20mm Tubes
RR62075	Heat-On Inserts for 4 x 24mm Tubes

#### Heat-On Blocks with Anodised Finish

RR62040	Heat-On 250ml Block
RR62045	Heat-On 500ml Block
RR62050	Heat-On 1 Litre Block
RR62055	Heat-On 2 Litre Block
RR62060	Heat-On 3 Litre Block
RR62063	Heat-On 5 Litre Block

#### Heat-On Florentine (pear-shaped) Blocks with Anodised Finish

RR62032	Heat-On 200ml Florentine Block
RR62042	Heat-On 300ml Florentine Block

#### Heat-On Multi-well System with Anodised Finish

RR62000	Heat-On Multi-Well System 1 x RR62005 Heat-On Multi-well Holder 2 x RR62015 Heat-On 25ml Insert 2 x RR62020 Heat-On 50ml Insert 2 x RR62025 Heat-On 100ml Insert 1 x RR61085 Heat-On Adapter Plate for 135mm Hotplates
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#### Heat-On Multi-well Basic System with Anodised Finish

RR62001	Heat-On Multi-Well Basic System 1 x RR62005 Heat-On Multi-well Holder 1 x RR62015 Heat-On 25ml Insert 1 x RR62020 Heat-On 50ml Insert 1 x RR62025 Heat-On 100ml Insert 1 x RR61085 Heat-On Adapter Plate for 135mm Hotplates
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#### Hotplates & Temperature Controller

RR98072	Carousel Stirring Hotplate 230v UK Plug
RR98072/EURO	Carousel Stirring Hotplate 230v Euro Plug
RR98072/JAP	Carousel Stirring Hotplate 110v Japanese Plug
RR98072/SWISS	Carousel Stirring Hotplate 240v Swiss Plug
RR98072/USA	Carousel Stirring Hotplate 115v US Plug
RR98073	Carousel Temperature Controller

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StarFish™

## Advantages

StarFish offers many advantages over standard experimental set-ups...

### Money saving...

Cheaper than using multiple stirrers, hotplates, heating mantles or oil baths. Also allows you to use your existing stirring hotplate and glassware.

### Compact

Uses less space than multiple heating and stirring set-ups.

### True versatility

Accommodates a wider range of vessel types and accessory glassware than any other system. Use it for one application today and a different one tomorrow.

### Simple set-up...

Unique clamp and distribution manifolds mean less tubing and clamping and easier set-up.

### More flexible...

Use as many or as few positions as you want.

### Easy to use...

Simple design means it is easy to use and quick to assemble or disassemble. Requires minimal training to operate.

### Increased Productivity...

Multiple positions allow you to heat and stir experiments in parallel for improved productivity.

### Safer, cleaner working...

Eliminates the need for oil baths, reducing spills and accidents.

StarFish is a modular, general purpose heating and stirring work station designed to fit on all leading brands of stirring hotplate which accepts a wide range of standard glassware, including; vials, test tubes, beakers and round-bottomed flasks.

Whether you just want to heat and stir, or perform more complex experiments, StarFish really can make your life easier and improve the productivity of your lab.

## Key StarFish features...

- Fits on all leading brands of stirring hotplate.
- Powerful stirring and rapid heating of all positions equally.
- Accepts a wide range of standard glassware, including vials, test tubes, beakers and round-bottomed flasks.
- Perfect for both simple heating or stirring; and for more complex experiments.
- Universal 5-way Telescopic Clamp will hold a wide variety of glassware such as condensers, extractors etc.
- Water Distribution Manifolds distribute cooling water to up to five condensers simultaneously.
- Gas/Vacuum Distribution Manifolds allow gas or a vacuum from a single source to be evenly distributed to up to five positions or vessels.
- Set-up vessels individually or in parallel.



A typical Starfish set-up for a single soxhlet extraction

### StarFish applications...

#### ◀ Stirring...

StarFish will easily and powerfully stir the contents of vials, tubes, beakers, conical flasks and round bottomed flasks, making it ideal for almost any stirring application including: microbiology, tissue culture, biochemistry, analytical chemistry...

#### ◀ Heating...

All StarFish base plates and blocks are made from anodised aluminium, providing excellent heat transfer. Precision machining also ensures an excellent contact between the blocks and the base plate. In tests StarFish boiled five 250ml vessels with 150ml of water in each in less than 20 minutes.

#### ◀ Synthesis...

StarFish can be used for all types of chemical synthesis and will accommodate standard round bottomed flasks from 5ml to 250ml, as well as both 1 inch and 24mm boiling tubes. Use the versatile 5-way Telescopic Clamp to hold glass condensers of any size and the Water and Gas/Vacuum Distribution Manifolds to distribute cooling water or gas to a maximum of five vessels, without the fuss of glass manifolds, stopcocks and excessive tubing.

#### ◀ Extraction...

StarFish can be used to replace large, inflexible extraction apparatus. Accommodating any standard round bottomed flasks from 5ml to 250ml, StarFish can easily accept complete glassware assemblies for Soxhlet, liquid-liquid, reverse liquid-liquid and reflux extraction methods.

#### ◀ Concentration...

Use StarFish to rapidly concentrate or evaporate samples. Use standard round bottomed flasks, tubes or vials.

#### ◀ Distillation...

StarFish can easily be configured for all common types distillation including; binary and multi-component, vacuum, fractional and azeotropic methods.

#### ◀ Digestion...

StarFish offers powerful, rapid heating making it ideal for many digestion methods, either individually or in parallel.



A typical StarFish set-up for parallel synthesis

Select only the components you really need

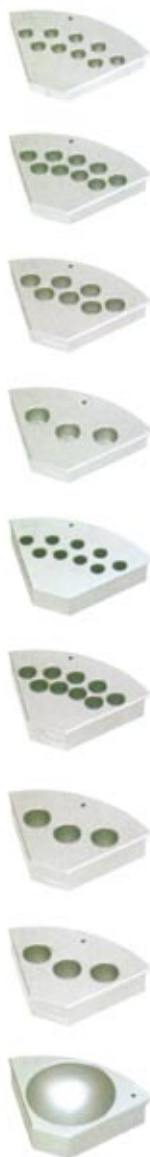
## PolyBlocks

PolyBlocks can be mixed'n'matched to accommodate any combination of vessels (5 per StarFish)



## Custom blocks

If you don't see the block with the well sizes you want then please visit our website to download the "StarFish Custom Block Ordering Guide".



Gas/Vacuum Distribution Manifold  
(two required for most applications)



Water Distribution Manifold  
(two required for most applications)

Support Rod  
(650mm x 12mm)

Split Support Rod  
(650mm x 12mm)



Universal 5-way Telescopic Clamp  
(two required for most applications)



Base Plate  
(handles are optional)



Choose your preferred stirring Hotplate



## MonoBlocks

MonoBlocks are single blocks with multiple wells all of the same size



## Inserts

Aluminium inserts for flasks from 5ml to 150ml fit in PolyBlocks and MonoBlocks

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## Making use of existing lab resources

### StarFish fits on all leading brands of stirring hotplate

With a choice of base plates, StarFish will fit on most stirring hotplates including; RDT, IKA, Heidolph, Eyela, Stuart and Barnstead making it the most versatile work station available.



RDT Carousel  
Stirring Hotplate



IKA  
RCT Basic



Heidolph  
MR 3001 K



Barnstead  
Cimarec 2



Eyela  
CCX-1000



Stuart  
SD 162

Description	RCT Basic	Stirring Hotplate	MR 3001 K	Cimarec 2	CCX-1000	SD162
Maximum Temp	300°C	300°C	300°C	540°C	170°C	350°C
Heating Power	600 W	600 W	600 W	1200 W	500 W	750 W
Max Recommended Block Temp.	195°C	195°C	260°C	309°C	161°C	257°C
Time to boil 5 x 150ml water (250ml round bottom flasks)	27min	27min	27min	18min	86min*	23min
Max Stirring Speed	1100rpm	1100rpm	1250rpm	1200rpm	1200rpm	1300rpm
RDT Cat No.	<b>3378700</b>	<b>RR98072</b>	<b>RR95820</b>	<b>SP13120-33</b>	n/a	<b>SD162</b>
StarFish Base Plate	<b>RR95010</b>	<b>RR95010</b>	<b>RR95020</b>	<b>RR95040</b>	<b>RR95030</b>	<b>RR95050</b>
Base Plate Recess (Nominal)	135mm ID	135mm ID	145mm ID	184 x 184mm	150mm ID	160 x 160mm
Base Plate Recess (Actual)	136mm +/-0.1	136mm +/-0.1	146.5mm +/-0.1	189mm +/-0.1	151.5mm +/-0.1	154.5mm +/-0.1

\*Test performed with 5 x 100ml of water only. Also fits on IKA RET basic and basic C, plus IKA RET control-visc and control-visc C. Also fits on Heidolph MR 3000, MR 3001, MR 3002 & MR 3004 series.

### Important Note

Information is correct at time of publication. No responsibility can be taken for inaccuracy of stirring hotplate data. All trade names are the property of their respective owners. No endorsement for the suitability of any stirring hotplate for use with the StarFish is given or implied by any of the respective stirring hotplate manufacturers.

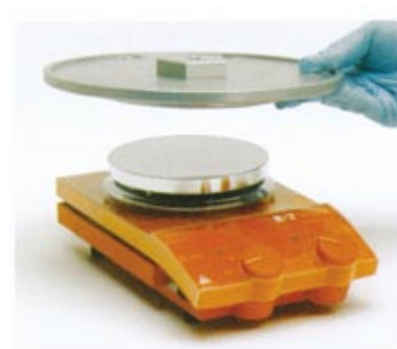
### A truly modular and versatile system

StarFish is both flexible and modular. Simply select the components or accessories that you want, as and when you need them...

#### Base Plates with optional handles

The range of StarFish base plates have been designed for use on the most popular brands of stirring hotplate shown opposite. Stirring hotplates from other manufacturers can be used as long as the base plate fits securely on to the top plate, thereby maintaining good thermal contact with the heated surface. The base plate's design allows it to be easily lifted on and off the stirring hotplate as required. Each plate is labelled with dimensions for quick identification.

Optional insulated handles can be fitted to facilitate the removal of the base plate; these are particularly useful for removing the StarFish from your stirring hotplate whilst still hot.



#### Choose from MonoBlocks and PolyBlocks

StarFish is available with a choice of two block formats: MonoBlocks, which are single blocks with multiple wells all of the same size and are ideal for experiments using the same vessel. PolyBlocks, which are smaller segments (5 per StarFish) which can be mixed'n'matched to accommodate any combination of vessel; allowing the use of different vessel types and sizes at the same time. All blocks are stackable maximising lab space, have a 3.5mm hole for temperature probes and are individually labelled for quick identification. See overleaf for a full listing.

#### Custom blocks are also available

If you don't see the block with the well sizes you want then please visit [www.starfish-chemistry.com](http://www.starfish-chemistry.com) to download the 'StarFish Custom Block Ordering Guide'.






#### Support Rods

There are a choice of two support rods, both 650mm x 12mm in diameter; the one piece rod and the two piece split rod. The split rod has threaded join half way along its body, which allows for shorter assemblies and easier storage.

*Save money, by using your own glassware... StarFish will accept all brands of standard glassware; including vials, test tubes, beakers and round bottomed flasks.*












































## Quick Selection Guide

Vessels	RDT Vessels	PolyBlocks	MonoBlocks	Stirring Bars
 2ml Vial (12mm Ø x 35mm) RR94330	<p><b>Custom blocks</b></p> <p>If you don't see the block with the well sizes you want then please visit our website to download the 'StarFish Custom Block Ordering Guide'.</p>	 12mm Ø x 9 RR95270	 12mm Ø x 40 RR95170	 Cylindrical Stirring Bar 8mm RR95905
 1 Dram (15mm Ø x 45mm) RR94320		 15mm Ø x 9 RR95265	 15mm Ø x 40 RR95165	 Pivot Ring Stirring Bar 12mm RR99607
 2 Dram (17mm Ø x 60mm) RR94310		 17mm Ø x 7 RR95260	 17mm Ø x 40 RR95160	 Pivot Ring Stirring Bar 15mm RR99613
 4 Dram (21mm Ø x 70mm) RR94300		 21mm Ø x 3 RR95255	 21mm Ø x 20 RR95155	 Pivot Ring Stirring Bar 15mm RR99613
 Test Tube (16mm Ø x 100mm) RR94030 - without rim RR94015 - with rim	 Green house Classic Reaction Tube (12mm Ø x 100mm) RR99603	 12mm Ø x 9 RR95250	 12mm Ø x 40 RR95150	 Pivot Ring Stirring Bar 12mm RR99607
 Test Tube (16mm Ø x 100mm) RR94030 - without rim RR94015 - with rim	 GreenHouse Plus Reaction Tube (16mm Ø x 100mm) RR99612	 16mm Ø x 9 RR95245	 16mm Ø x 40 RR95145	 Pivot Ring Stirring Bar 15mm RR99613
 Test Tube (24mm Ø x 150mm) RR94010 - without rim RR94005 - with rim	 Carousel Reaction Tube (24mm Ø x 150mm) RR98061	 24mm Ø x 3 RR95240	 24mm Ø x 16 RR95140	 Rare Earth Medium Cross Shaped RR98091 (7mm x 16,5mm)
 Test Tube (25mm/1inch Ø)		 25mm Ø x 3 RR95235	 25mm Ø x 16 RR95135	 Rare Earth Medium Cross Shaped RR98091 (7mm x 16.5mm)

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Vessels	RDT Vessels	PolyBlocks	MonoBlocks	Stirring Bars	
 <p>5ml Round Bottom Flask RR94115 - 10/19 socket RR94110 - 14/23 socket</p>	 <p>5ml RDT Reaction Flask RR99151</p>	 <p>250ml x 1 RR95230</p>	 <p>250ml x 5 RR95130</p>	 <p>5ml Aluminium Insert RR95355</p>	 <p>Small Cross Shaped RR98075 (4,9mm x 10mm)</p>
 <p>10ml Round Bottom Flask RR94105 - 10/19 socket RR94100 - 14/23 socket</p>	 <p>10ml RDT Reaction Flask RR99148</p>	 <p>250ml x 1 RR95230</p>	 <p>250ml x 5 RR95130</p>	 <p>10ml Aluminium Insert RR95350</p>	 <p>Small Cross Shaped RR98075 (4,9mm x 10mm)</p>
 <p>25ml Round Bottom Flask RR94095 - 19/26 socket RR94165 - 14/23 socket with 14/23 sidearm</p>	 <p>25ml RDT Reaction Flask RR99145</p>	 <p>250ml x 1 RR95230</p>	 <p>250ml x 5 RR95130</p>	 <p>25ml Aluminium Insert RR95345</p>	 <p>Rare Earth Medium Cross Shaped RR98091 (7mm x 16.5mm)</p>
 <p>50ml Round Bottom Flask RR94085 - 19/26 socket RR94080 - 24/29 socket RR94160 - 14/23 socket with 14/23 sidearm</p>	 <p>50ml RDT Reaction Flask RR99070 RR99071 with B14/23 sidearm</p>	 <p>250ml x 1 RR95230</p>	 <p>250ml x 5 RR95130</p>	 <p>50ml Aluminium Insert RR95340</p>	 <p>Rare Earth Medium Cross Shaped RR98091 (7mm x 16.5mm)</p>
 <p>100ml Round Bottom Flask RR94075 - 19/26 socket RR94070 - 24/29 socket RR94155 - 24/29 socket with 19/26 sidearm</p>	 <p>100ml RDT Reaction Flask RR99054 RR99074 with B14/23 sidearm</p>	 <p>250ml x 1 RR95230</p>	 <p>250ml x 5 RR95130</p>	 <p>100ml Aluminium Insert RR95335</p>	 <p>Rare Earth elliptical RR99064 (25,1mm x 15,5mm)</p>
 <p>150ml Round Bottom Flask RR94065 - 19/26 socket RR94060 - 24/29 socket</p>		 <p>250ml x 1 RR95230</p>	 <p>250ml x 5 RR95130</p>	 <p>150ml Aluminium Insert RR95330</p>	 <p>Rare Earth Elliptical RR99064 (25,1mm x 15,5mm)</p>
 <p>250ml Round Bottom Flask RR94055 - 19/26 socket RR94050 - 24/29 socket RR94150 - 24/29 socket with 19/26 sidearm</p>	 <p>250ml RDT Reaction Flask RR99040 Long neck and sidearm versions are available</p>	 <p>250ml x 1 RR95230</p>	 <p>250ml x 5 RR95130</p>		 <p>Rare Earth Elliptical RR99064 (25,1mm x 15,5mm)</p>

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

- Please contact your local distributor

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