

cowie[®]

**World leaders
in the design &
manufacture of
PTFE products**



www.cowie.com

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Cowie® Technology Group Limited are world leaders in the design and manufacture of PTFE products, shipping to over 50 countries on a daily basis.

Our standard labware items are available from major laboratory product distributors worldwide. We also supply direct to end users, and if you'd rather purchase our products through a local supplier, contact us and we'll provide the relevant distributor information.

Every Cowie item is fully customisable. If you want it made to your own specification, contact us directly about your requirements. You'll find everything you need to know about our custom manufacture service on page 6 of this brochure.

We can only accept orders for the supply of goods that meet our Standard Terms of Conditions of Business. Please contact us directly for a copy of these or find them on our website at www.cowie.com

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All quoted dimensions are nominal; product data sheets are available on request. Product specifications can only be regarded as general information and will not discharge the user from his obligation to ensure the product is suitable for the intended use. In the interest of product development Cowie® reserve the right to alter product specifications without notice.

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Our story

It began in the 1960's. George Cowie, a university lecturer in physical chemistry, was becoming ever more interested in the exceptional chemical properties of PTFE. So much so that he designed and developed a whole range of PTFE laboratory equipment, which he then manufactured using machines that he had also designed himself.

George's enthusiasm, underpinned by his knowledge, a passion for innovation, and his business acumen, would not only go on to build a company that manufactured and sold PTFE laboratory equipment worldwide, it created the COWIE brand.

A brand shaped by George's relentless appetite for experimentation, for aiming higher and for refusing to accept the limits set by others. Yet, George wore his learning lightly. If asked how he grew the business into the successful company it is today, he quoted the same chemical formula, "Good luck and ignorance!"

Six decades of expansion have meant several moves but we have never left our home in North-East England. Today that home is Coulby Newham, Middlesbrough where we take pride in Cowie's record as a local manufacturer since 1965.

At the same time, growth meant that we needed to build a second home. In 2003 we opened a sales and distribution outlet in Vineland, New Jersey to serve our US market: so successfully that we have since moved to an even bigger home in New Castle, Delaware.



2025 – our 60th anniversary – was a milestone year for Cowie. We are now leaders in the manufacture of PTFE laboratory equipment, underpinning everything that we do with exceptional levels of engineering and technical expertise. We not only offer a wide range of standard PTFE laboratory equipment but manufacture custom items to client-specific requirements in PTFE and other engineered plastics.

A workforce with so many long-serving members is ready to share its wealth of experience and knowledge. To this end we promote training and invest in our loyal employees.

Having started life as a family-owned business, being a company with a family ethos remains a priority. To this day we are proud of the fact that different generations of families work together at Cowie.

And we are happy to share our ongoing success, through regular donations to charities and to local community projects.

Why choose PTFE?

What is PTFE?

PTFE is a synthetic, high molecular weight fluoropolymer with fluorine atoms that are directly attached to a carbon only backbone.



The exceptionally strong fluorine-carbon bond gives PTFE a range of valuable and unique properties, making PTFE an incredibly versatile material that can be used across many industries and sectors.

Cowie® manufacture high quality products using well known tradenames such as *Teflon™* (*Chemours™*) and *Inoflon®* (*GFL™*).

Typical Virgin Grade PTFE Properties

Property	Typical Value
Appearance	White, Opaque
Density	2.15g/cm ³
Melting Point	327°C (621°F)
Tensile Strength	20 – 40MPa (2900-5800psi)
Elongation at Break	200 – 500%
Coefficient of Friction	0.05 – 0.10

Non-stick / non-wetting surface
PTFE's coefficient of friction is one of the lowest of any known solid material, creating remarkable non-stick and non-wetting characteristics.

Flexural Strength
PTFE has a high flexural strength making it highly durable.

Purity
Virgin grade PTFE (i.e. no fillers or additives) is considered to have very high levels of purity, so that it can be used in applications where this is essential. For example, trace analysis and semiconductor manufacture.

The virgin grade PTFE used to manufacture Cowie products is both FDA and USP Class VI approved.

What are Modified & Filled PTFE?

Modified PTFE is a chemically modified version of PTFE with enhanced properties. It is created by co-polymerisation with a small quantity of a perfluorinated modifier. This modification delivers improved mechanical strength, reduced porosity and the ability to self-fuse.

PTFE is available with a range of fillers, such as glass or carbon, to increase strength and durability, though filled PTFE does not have the same levels of purity as virgin material.

Custom design and manufacture

At Cowie® Technology Group Limited we offer a full custom design, engineering and manufacturing service. Cowie® has been at the forefront of PTFE design and manufacture for over six decades, and it is this commitment to quality and excellence that has made us the trusted, go-to brand in PTFE.

Whatever your application or requirement, contact us with your bespoke specification and we will find a solution that works for you.

Using the latest CAD/CAM technology our team of highly qualified, experienced and innovative engineers will shape and develop your ideas. Creating exciting new products that

match your exact specifications in a unique collaboration between manufacturer and customer. It is this approach that ensures higher product quality and consistency. Even if it is simply a modification to a standard catalogue item, we will customise it to your exact requirements.

While we specialise in manufacturing PTFE products, we frequently manufacture items from other engineered plastics too. It is the unique properties of these specialist plastics that make them suitable for so many applications across so many industries.

For further details or to send your enquiry please email enquiries@cowie.com

Examples of engineered plastics:

Virgin PTFE
Filled PTFE (Glass/PEEK)
Modified PTFE
Coloured PTFE
PEEK
UHMWPE
HDPE / LDPE
Polypropylene
Acetal

Examples of industries:

Laboratory
Life Sciences
Pharmaceutical
Food
Aerospace
Automotive
Medical
Renewable Energy
Water



Sustainability

At Cowie® Technology Group Ltd we recognise how our business can negatively impact the environment. This is why we take our responsibilities to the environment and to sustainability so seriously and are searching proactively to find ways to reduce the effect of our activities on the environment.

We monitor our **environmental impact** continuously and do everything we can to reduce it in line with our set objectives.

We **minimise waste** by evaluating operations and ensuring they are as efficient as practicable.

We **minimise emissions** wherever we can through the selection, use and source of power requirements.

We actively promote **recycling and re-use**, both internally and among our customers and suppliers. PTFE products are inherently designed for repeated, long-term use.



We meet or exceed the **environmental legislation** that relates to the company.

We champion **responsible purchasing and supply chain management**. Raw materials must be free from toxins and additives, such as PFOA and PFOS.

We encourage the use of **sustainable transport** and minimise business-related travel through home working, using online systems for meetings and training, and promoting public transport and vehicle sharing.

We encourage a **paperless workplace**. Printing is discouraged unless absolutely necessary.

We ensure the use of **100% recyclable packaging** wherever possible. Plastic packaging must be at minimum manufactured from 30% recycled plastic.

We foster **continual improvement** through company and employee initiative.

Quality & Compliance



Cowie® Technology Group Limited is ISO 9001:2015 certified in the design and manufacture of high-performance PTFE products and components.

Through our Quality Management System, we strive to maintain and continually improve the effectiveness of our products and services, so that we consistently exceed customer expectations and comply with all applicable regulatory requirements.

Central to this is identifying and qualifying our suppliers. We ensure that all critical materials are sourced only from approved suppliers with the appropriate regulatory compliance.

All Cowie® PTFE Products are manufactured from virgin grade PTFE conforming to FDA and USP Class VI requirements.





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Magnetic Stir Bars

Magnetic stir bars are available in an extensive range of shapes and sizes. They are composed of a magnetic core fully encapsulated in PTFE.

Pure PTFE variants:

- Virgin grade PTFE conforming to FDA and USP Class VI
- Alnico V magnetic core
- Chemical Resistance is virtually total
- Temperature Range, -200°C to 260°C (-328°F to 500°F)
- Shelf life is considered indefinite within the confines of normal use and storage conditions
- Autoclavable

Coloured variants:

- Coloured PTFE coatings are not as inert as pure PTFE



PTFE Stir Bar – Cross

A good general purpose stir bar designed to provide a deep vortex with stable stirring action.



Item Number	Height	Diameter
001.2401	5mm	10mm
001.2402	8mm	20mm
001.2403	9mm	25mm
001.2404	10mm	30mm
001.2405	11mm	38mm
001.2406	15mm	50mm
001.2407	20mm	60mm

PTFE Stir Bar – Crosshead (Single Sided)

A good general purpose stir bar designed for use with tube like containers.



Single Sided

Item Number	Height	Diameter
001.110.1	8mm	10mm
001.114.1	12mm	14mm
001.117.1	13mm	17mm
001.125.1	15mm	25mm
001.140.1	17mm	40mm
001.160.1	17mm	60mm

PTFE Stir Bar – Crosshead (Double Sided)

A good general purpose stir bar designed for use with tube like containers. A double-sided cross head provides greater turbulence



Double Sided

Item Number	Height	Diameter
001.110	8mm	10mm
001.114	10mm	14mm
001.117	13mm	17mm
001.122	15mm	22mm
001.130	12mm	30mm
001.140	14mm	40mm
001.160	15mm	60mm

PTFE Stir Bar – Cylindrical

General purpose stir bar with a smooth, round profile. Suitable for a wide variety of applications.



Item Number	Length	Diameter
001.106	6mm	3mm
001.108	8mm	3mm
001.110.6	10mm	6mm
001.112	12mm	4.5mm
001.113.6	13mm	6mm
001.113.8	13mm	8mm
001.115	15mm	4.5mm
001.115.6	15mm	6mm
001.120	20mm	6mm
001.120.7	20mm	7mm
001.120.8	20mm	8mm
001.125.5	25mm	5mm
001.125	25mm	6mm

Item Number	Length	Diameter
001.125.8	25mm	8mm
001.130	30mm	6mm
001.130.7	30mm	7mm
001.130.8	30mm	8mm
001.135	35mm	6mm
001.140.7	40mm	7mm
001.140	40mm	8mm
001.145	45mm	8mm
001.150	50mm	8mm
001.160	60mm	10mm
001.170	70mm	10mm
001.180	80mm	10mm
001.0120	120mm	12mm

PTFE Stir Bar – Disc

Designed for use in tube like containers..

Item Number	Height	Diameter
001.709	6mm	9mm
001.710	6mm	10mm
001.720	10mm	20mm
001.730	12mm	30mm



PTFE Stir Bar – Double Ended

Designed with a double paddle action for efficient stirring plus high stability.



Item Number	Length	Diameter
001.1335	35mm	8mm
001.1355	55mm	8mm

PTFE Stir Bar – Double Ended (Coloured)

Designed with a double paddle action for efficient stirring plus high stability.



Item Number	Length	Diameter
Blue	001.1335-B	001.1335-R
Red	001.1335-Y	35mm
Yellow	001.1355-B	001.1355-R
	001.1355-Y	55mm

PTFE Stir Bar – Hub

Designed for use in beakers. Provides a deep vortex with stable stirring action.



Item Number	Length	Height
001.2301	45mm	14mm
001.2302	62mm	14mm
001.2303	70mm	14mm

PTFE Stir Bar – Micro

Designed for mixing small volumes in appropriately sized vessels, such as vials and tubes.
Always use the largest stir bar possible.



Item Number	Length	Diameter
001.802	2mm	2mm
001.803	3mm	3mm
001.805	5mm	2mm
001.806	6mm	3mm
001.807	7mm	2mm
001.808	8mm	1.5mm
001.808.3	8mm	3mm
001.810	10mm	3mm
001.813	13mm	3mm
001.815	15mm	1.5mm
001.820	20mm	3mm
001.830	30mm	3mm

PTFE Stir Bar – Micro (Coloured)

Designed for mixing small volumes in appropriately sized vessels, such as vials and tubes.
Always use the largest stir bar possible.



Item Number	Length	Diameter
Blue	Red	Yellow
001.802-B	001.802-R	001.802-Y
2mm	2mm	
001.803-B	001.803-R	001.803-Y
3mm	3mm	
001.805-B	001.805-R	001.805-Y
5mm	2mm	
001.806-B	001.806-R	001.806-Y
6mm	3mm	
001.807-B	001.807-R	001.807-Y
7mm	2mm	
001.808-B	001.808-R	001.808-Y
8mm	1.5mm	
001.808.3-B	001.808.3-R	001.808.3-Y
8mm	3mm	
001.810-B	001.810-R	001.810-Y
10mm	3mm	
001.813-B	001.813-R	001.813-Y
13mm	3mm	
001.815-B	001.815-R	001.815-Y
15mm	1.5mm	

PTFE Stir Bar – Octahedral

The polygonal shape provides increased turbulence. The added pivot ring enables the stir bar to adopt the optimum position for a smoother stirring action with reduced friction. Can be used in vessels with a curved or uneven base.

Item Number	Length	Diameter
001.513.3	13mm	3mm
001.513	13mm	8mm
001.513.10	13mm	10mm
001.515	15mm	8mm
001.522	22mm	8mm
001.525	25mm	8mm
001.525.10	25mm	10mm
001.528	28mm	8mm

Item Number	Length	Diameter
001.538	38mm	8mm
001.538.10	38mm	10mm
001.541	41mm	8mm
001.551	51mm	8mm
001.551.10	51mm	10mm
001.564.8	64mm	8mm
001.564	64mm	10mm
001.575	75mm	13mm



PTFE Stir Bar – Octahedral (Coloured)

The polygonal shape provides increased turbulence. The added pivot ring enables the stir bar to adopt the optimum position for a smoother stirring action with reduced friction. Can be used in vessels with a curved or uneven base.



Item Number	Length	Diameter
Blue	Red	Yellow
001.513-B	001.513-R	001.513-Y
13mm	8mm	
001.515-B	001.515-R	001.515-Y
15mm	8mm	
001.522-B	001.522-R	001.522-Y
22mm	8mm	
001.525-B	001.525-R	001.525-Y
25mm	8mm	
001.538-B	001.538-R	001.538-Y
38mm	8mm	
001.551-B	001.551-R	001.551-Y
51mm	8mm	
001.575-B	001.575-R	001.575-Y
75mm	13mm	

PTFE Stir Bar – Oval

Designed for use in round/concave bottomed vessels. The oval shape reflects that of the flask to ensure complete mixing with minimal friction.



Item Number	Length	Diameter
001.610	10mm	5mm
001.615	15mm	6mm
001.620	20mm	10mm
001.625.10	25mm	10mm
001.625	25mm	12mm
001.630.10	30mm	10mm
001.630	30mm	16mm
001.635.13	35mm	13mm
001.635	35mm	16mm
001.640.13	40mm	13mm
001.640	40mm	20mm
001.650.17	50mm	17mm
001.650	50mm	20mm
001.664	64mm	20mm
001.670	70mm	20mm
001.670.27	70mm	27mm
001.6100	100mm	30mm
001.6150	150mm	40mm

PTFE Stir Bar – Pivot Ring

Designed for use in vessels with curved or uneven bases. The pivot ring enables the stir bar to adopt the optimum position for a smoother stirring action with reduced friction.



Item Number	Length	Diameter
001.308	8mm	3mm
001.312	12mm	4.5mm
001.312.6	12mm	6mm
001.315	15mm	4.5mm
001.315.8	15mm	8mm
001.320	20mm	6mm
001.325	25mm	6mm
001.325.10	25mm	10mm
001.330	30mm	6mm
001.335	35mm	6mm
001.340	40mm	8mm
001.345	45mm	8mm
001.350	50mm	8mm
001.357	57mm	24mm
001.360	60mm	10mm
001.370	70mm	10mm
001.375.13	75mm	13mm
001.3108	108mm	24mm
001.3159	159mm	24mm

PTFE Stir Bar – Plain

General purpose stir bar for a wide variety of applications. More turbulence at lower speeds than cylindrical shape.



Item Number	Length	Diameter
001.210.6	10mm	6mm
001.212	12mm	4.5mm
001.213.8	13mm	8mm
001.215	15mm	4.5mm
001.215.6	15mm	6mm
001.220	20mm	6mm
001.220.7	20mm	7mm
001.225	25mm	6mm
001.225.8	25mm	8mm
001.225.10	25mm	10mm
001.230	30mm	6mm
001.230.7	30mm	7mm
001.235.7	35mm	7mm
001.235.10	35mm	10mm
001.240	40mm	8mm
001.250.7	50mm	7mm
001.250	50mm	8mm
001.250.10	50mm	10mm
001.257	57mm	27mm
001.260.7	60mm	7mm
001.260	60mm	10mm
001.265.13	65mm	13mm
001.270	70mm	10mm
001.275	75mm	13mm
001.280	80mm	10mm
001.2108	108mm	27mm
001.2159	159mm	27mm

PTFE Stir Bar – Plain Economy

General purpose stir bar offering outstanding value.



Item Number	Length	Diameter
001.2912	12mm	3mm
001.2925	25mm	8mm
001.2940	40mm	8mm
001.2950	50mm	8mm

PTFE Stir Bar – Removable Ring

Designed for use as either a cylindrical or pivot ring stir bar.

Cylindrical – General purpose stir bar with a smooth, round profile. Suitable for a wide variety of applications.

Pivot Ring – Designed for use in vessels with curved or uneven bases. The pivot ring enables the stir bar to adopt the optimum position for a smoother stirring action with reduced friction.



Item Number	Length	Diameter
001.1712	12mm	8mm
001.1725	25mm	8mm
001.1732	32mm	8mm
001.1738.8	38mm	8mm
001.1738	38mm	10mm
001.1742	42mm	10mm
001.1751.8	51mm	8mm
001.1751	51mm	10mm
001.1775	75mm	12mm
001.17102	102mm	16mm
001.17127	127mm	16mm
001.17150	150mm	19mm

PTFE Stir Bar – Spherical

Designed for use with tube like containers or for eccentric stirring action.



Item Number	Diameter
001.1512	12mm

PTFE Stir Bar – Square Economy

General purpose stir bar offering outstanding value.



Item Number	Length	Height
001.1412	12mm	4mm
001.1425	25mm	5.5mm
001.1435	35mm	6mm
001.1450	50mm	7.5mm

PTFE Stir Bar – Tapered

General purpose stir bar for a wide variety of applications but with similar action to Oval/Pivot Ring stir bars. The taper enables the stir bar to adopt an optimum stirring position.



Item Number	Length	Diameter
001.1910	10mm	4mm
001.1915	15mm	5mm
001.1920	20mm	7mm
001.1925	25mm	8mm
001.1930	30mm	8mm
001.1935	35mm	8mm
001.1940	40mm	8mm
001.1945	45mm	8mm
001.1950	50mm	8mm
001.1960	60mm	8mm
001.1970	70mm	10mm
001.1980	80mm	10mm

PTFE Stir Bar – Triangular

Designed to provide strong turbulence at low speeds and are effective for dissolving solids and mixing sediments due to the scraper like action.

Item Number	Length	Height
001.412	12mm	6mm
001.420	20mm	8mm
001.425	25mm	8mm
001.425.14	25mm	14mm
001.435	35mm	9mm
001.440	40mm	14mm
001.450	50mm	12mm
001.455	55mm	14mm
001.480	80mm	14mm
001.4110	110mm	36mm
001.4136	136mm	36mm



PTFE Stir Bar – Tube

Designed for use with 10mm standard cuvettes.



Item Number	Height	Diameter
001.1609	6mm	9mm

PTFE Stir Bar – Wing

Designed to provide effective stirring in small tapered and round bottom tubes.

Item Number	Height	Diameter	Tube
001.2201.1	9mm	5.5mm	6-7mm
001.2201	11mm	8mm	9-10mm
001.2202	16mm	10mm	11-12mm
001.2203	10mm	13mm	14-15mm
001.2204	20mm	13mm	14-15mm



Glass Stir Bars

Glass coated stirrer bars are leak proof and non-absorbent. Designed for use in high temperature applications and for stirring abrasive materials.

- Borosilicate glass
- Alnico V magnetic core
- Excellent chemical resistance
- Temperature Resistant up to 274°C (525°F)
- Shelf life is considered indefinite within the confines of normal use and storage conditions
- Autoclavable

Glass Stir Bar – Cylindrical

Item Number	Length	Diameter
001.1206	6mm	5mm
001.1212	12mm	5mm
001.1219	19mm	6mm
001.1225	25mm	6mm
001.1245	45mm	8mm
001.1250	50mm	8mm
001.1260	60mm	8mm



Turbo Magnetic Stir Bars

Turbo stir bars use stronger rare earth magnets and are identified by an inert carbon black spot.

- Virgin grade PTFE conforming to FDA and USP Class VI
- Rare Earth (Samarium-Cobalt) magnetic core
- Chemical Resistance is virtually total
- Temperature Range, -200°C to 260°C (-328°F to 500°F)
- Shelf life is considered indefinite within the confines of normal use and storage conditions
- Autoclavable



Turbo PTFE Stir Bar – Cylindrical

A good general purpose stir bar designed to provide a deep vortex with stable stirring action.

Item Number	Length	Diameter
001.108.RE	8mm	3mm
001.112.RE	12mm	4.5mm
001.120.RE	20mm	6mm
001.125.RE	25mm	6mm
001.130.RE	30mm	6mm
001.140.RE	40mm	8mm
001.150.RE	50mm	8mm
001.160.RE	60mm	10mm



Turbo PTFE Stir Bar – Elliptical

Designed for use with round or convex vessels.



Item Number	Length	Diameter
001.2610.RE	10mm	6mm
001.2615.RE	15mm	10mm
001.2625.RE	25mm	14mm
001.2650.RE	50mm	24mm
001.2670.RE	70mm	28mm



Turbo PTFE Stir Bar – Flute

General purpose stir bar with a high power polygonal shape.

Item Number	Length	Diameter
001.3450.RE	50mm	21mm



Turbo PTFE Stir Bar – Octahedral

The polygonal shape provides increased turbulence. The added pivot ring enables the stir bar to adopt the optimum position for a smoother stirring action with reduced friction. Can be used in vessels with curved or uneven base.



Item Number	Length	Diameter
001.513.3.RE	13mm	3mm
001.513.RE	13mm	8mm
001.515.RE	15mm	8mm
001.525.RE	25mm	8mm
001.538.RE	38mm	8mm
001.551.RE	51mm	8mm
001.564.8.RE	64mm	8mm

Turbo PTFE Stir Bar – Oval

Designed for use in round/concave bottomed vessels. The oval shape reflects that of the flask to ensure complete mixing with minimal friction.

Item Number	Length	Diameter
001.610.RE	10mm	5mm
001.615.RE	15mm	6mm
001.620.RE	20mm	10mm
001.625.RE	25mm	12mm
001.635.RE	35mm	16mm
001.640.RE	40mm	20mm
001.650.RE	50mm	20mm
001.664.RE	64mm	20mm



Stir Bar Box Set

Box sets include an assortment of useful sizes of each type of stir bar.

Pure PTFE variants:

- Virgin grade PTFE conforming to FDA and USP Class VI
- Alnico V magnetic core
- Chemical Resistance is virtually total
- Temperature Range, -200°C to 260°C (-328°F to 500°F)
- Shelf life is considered indefinite within the confines of normal use and storage conditions
- Autoclavable

Coloured variants:

- Coloured PTFE coatings are not as inert as pure PTFE

Turbo variants:

- Rare Earth (Samarium-Cobalt) magnetic core
- Identified by an inert carbon black spot



PTFE Stir Bar Box Set – Cross

Box of 5 assorted Cross stir bars

Item Number	Type	Height	Diameter	Quantity
001.3032	Cross	5mm	10mm	1
	Cross	8mm	20mm	1
	Cross	9mm	25mm	1
	Cross	10mm	30mm	1
	Cross	11mm	38mm	1



PTFE Stir Bar Box Set – Cylindrical

Box of 18 assorted Cylindrical stir bars



Item Number	Type	Length	Diameter	Quantity
001.3003	Cylindrical	10mm	6mm	2
	Cylindrical	15mm	6mm	2
	Cylindrical	20mm	7mm	2
	Cylindrical	25mm	8mm	2
	Cylindrical	30mm	8mm	2
	Cylindrical	40mm	8mm	2
	Cylindrical	50mm	8mm	2
	Cylindrical	60mm	10mm	2
	Cylindrical	80mm	10mm	2
001.3019	Cylindrical	10mm	6mm	2
	Cylindrical	15mm	4.5mm	2
	Cylindrical	20mm	6mm	2
	Cylindrical	25mm	6mm	2
	Cylindrical	30mm	6mm	2
	Cylindrical	40mm	8mm	2
	Cylindrical	50mm	8mm	2
	Cylindrical	60mm	10mm	2
	Cylindrical	70mm	10mm	2

PTFE Stir Bar Box Set – Cylindrical & Removable Ring

Box of 22 assorted Cylindrical & Removable Ring stir bars



Item Number	Type	Length	Diameter	Quantity
001.3020	Cylindrical	13mm	8mm	2
	Cylindrical	13mm	10mm	2
	Cylindrical	20mm	8mm	2
	Removable Ring	25mm	8mm	2
	Removable Ring	25mm	10mm	2
	Removable Ring	32mm	8mm	1
	Removable Ring	32mm	10mm	1
	Removable Ring	38mm	8mm	2
	Removable Ring	38mm	10mm	1
	Removable Ring	42mm	10mm	2
	Removable Ring	45mm	8mm	1
	Removable Ring	51mm	8mm	2
	Removable Ring	51mm	10mm	2

PTFE Stir Bar Box Set – Micro (Coloured)

Box of 12 assorted coloured Micro stir bars

Item Number	Type	Length	Diameter	Quantity
001.3006	Micro	5mm	2mm	1 Blue / 1 Red / 1 Yellow
	Micro	7mm	2mm	1 Blue / 1 Red / 1 Yellow
	Micro	8mm	1.5mm	1 Blue / 1 Red / 1 Yellow
	Micro	10mm	3mm	1 Blue / 1 Red / 1 Yellow



PTFE Stir Bar Box Set – Octahedral

Box of 12 assorted Octahedral stir bars



Item Number	Type	Length	Diameter	Quantity
001.3001	Octahedral	13mm	8mm	2
	Octahedral	15mm	8mm	2
	Octahedral	25mm	10mm	2
	Octahedral	38mm	10mm	2
	Octahedral	51mm	10mm	2
	Octahedral	64mm	10mm	2

PTFE Stir Bar Box Set – Octahedral (Coloured)

Box of 24 assorted coloured Octahedral stir bars

Item Number	Type	Length	Diameter	Quantity
001.3017	Octahedral	13mm	3mm	1 Blue / 1 Red / 1 Yellow
	Octahedral	13mm	8mm	1 Blue / 1 Red / 1 Yellow
	Octahedral	15mm	8mm	1 Blue / 1 Red / 1 Yellow
	Octahedral	22mm	8mm	1 Blue / 1 Red / 1 Yellow
	Octahedral	25mm	8mm	1 Blue / 1 Red / 1 Yellow
	Octahedral	38mm	8mm	1 Blue / 1 Red / 1 Yellow
	Octahedral	51mm	8mm	1 Blue / 1 Red / 1 Yellow
	Octahedral	75mm	13mm	1 Blue / 1 Red / 1 Yellow



PTFE Stir Bar Box Set – Octahedral & Micro

Box of 14 assorted Octahedral & Micro stir bars



Item Number	Type	Length	Diameter	Quantity
001.3021	Octahedral	13mm	8mm	2
	Octahedral	15mm	8mm	2
	Octahedral	25mm	10mm	2
	Octahedral	38mm	10mm	2
	Octahedral	51mm	10mm	2
	Micro	7mm	2mm	2
	Micro	10mm	3mm	2

PTFE Stir Bar Box Set – Oval

Boxes of 12 & 13 assorted Oval stir bars



Item Number	Type	Length	Diameter	Quantity
001.3002	Oval	10mm	5mm	2
	Oval	15mm	6mm	2
	Oval	25mm	10mm	2
	Oval	30mm	10mm	2
	Oval	35mm	13mm	2
	Oval	50mm	17mm	1
	Oval	70mm	27mm	1
001.3015	Oval	20mm	10mm	2
	Oval	25mm	12mm	2
	Oval	30mm	16mm	2
	Oval	35mm	16mm	2
	Oval	40mm	20mm	2
	Oval	50mm	20mm	2
	Oval	70mm	20mm	1

PTFE Stir Bar Box Set – Plain

Box of 18 assorted Plain stir bars



Item Number	Type	Length	Diameter	Quantity
001.3004	Plain	10mm	6mm	2
	Plain	15mm	6mm	2
	Plain	20mm	7mm	2
	Plain	25mm	8mm	2
	Plain	30mm	7mm	2
	Plain	40mm	8mm	2
	Plain	50mm	8mm	2
	Plain	60mm	7mm	2
	Plain	80mm	10mm	2

PTFE Stir Bar Box Set – Turbo Elliptical

Box of 10 assorted Turbo Elliptical stir bars



Item Number	Type	Length	Diameter	Quantity
001.3035.RE	Turbo Elliptical	10mm	6mm	3
	Turbo Elliptical	15mm	10mm	3
	Turbo Elliptical	25mm	14mm	3
	Turbo Elliptical	50mm	24mm	1

PTFE Stir Bar Box Set – Tapered & Retriever

Box of 20 assorted tapered stir bars and 1x flexible PTFE retriever



Item Number	Type	Length	Diameter	Quantity
001.3033	Tapered	10mm	4mm	2
	Tapered	15mm	5mm	2
	Tapered	20mm	7mm	2
	Tapered	25mm	8mm	2
	Tapered	30mm	8mm	2
	Tapered	35mm	8mm	2
	Tapered	40mm	8mm	2
	Tapered	50mm	8mm	2
	Tapered	60mm	8mm	2
	Tapered	70mm	10mm	1
	Tapered	80mm	10mm	1
	Retriever	330mm	10mm	1

PTFE Stir Bar Box Set – Turbo Cylindrical

Box of 14 assorted Turbo Cylindrical stir bars



Item Number	Type	Length	Diameter	Quantity
001.3036.RE	Turbo Cylindrical	8mm	3mm	2
	Turbo Cylindrical	12mm	4.5mm	2
	Turbo Cylindrical	20mm	6mm	2
	Turbo Cylindrical	25mm	6mm	2
	Turbo Cylindrical	30mm	6mm	2
	Turbo Cylindrical	40mm	8mm	2
	Turbo Cylindrical	50mm	8mm	1
	Turbo Cylindrical	60mm	10mm	1

Stir Bar Retrievers

General purpose stir bar retrievers for easy removal of magnets from vessels of all kinds.

Pure PTFE variants:

- Virgin grade PTFE conforming to FDA and USP Class VI
- Alnico V magnetic core
- Chemical Resistance is virtually total
- Temperature Range, -200°C to 260°C (-328°F to 500°F)
- Shelf life is considered indefinite within the confines of normal use and storage conditions
- Autoclavable

Turbo variant:

- Rare Earth (Samarium-Cobalt) magnetic core
- Identified by an inert carbon black spot



PTFE Stir Bar Retriever

Item Number	Length	Diameter
004.150	150mm	10mm
004.250	250mm	10mm
004.350	350mm	10mm
004.450	450mm	10mm



PTFE Stir Bar Retriever – Flexible



Item Number	Length	Diameter
004.330F	330mm	10mm

PTFE Stir Bar Retriever – Turbo

Contains a strong Rare Earth magnetic core for easy removal of Turbo/Giant stir bars.

Item Number	Length	Diameter
004.150.RE	150mm	10mm
004.250.RE	250mm	10mm
004.350.RE	350mm	10mm
004.2350.RE	350mm	18mm
004.450.RE	450mm	10mm
004.2450.RE	450mm	18mm



Polypropylene Stir Bar Retriever

- Temperature range 0°C to 100°C (32°F to 212°F)



Item Number	Length	Diameter
004.1300	300mm	10mm
004.1350	350mm	10mm
004.1450	450mm	10mm

Shaft Stirring

PTFE shaft stirrers are composed of a moulded rotor fused to a stainless steel rod that is fully encapsulated in PTFE. The rotors are designed for clockwise rotation.

- Virgin grade PTFE conforming to FDA and USP Class VI
- Chemical Resistance is virtually total
- Temperature Range, -200°C to 260°C (-328°F to 500°F)
- Easy to clean, robust and break resistant
- Shelf life is considered indefinite within the confines of normal use and storage conditions
- Autoclavable
- Exposed shaft models (EX) have an exposed stainless steel core to provide a more rigid connection to the chuck drive



Plain PTFE Shaft

Plain shafts have a PTFE encapsulated stainless steel core with exposed end. Can be used with Adjustable Rotors. The exposed length (30mm) provides a more rigid connection to the chuck drive.

Item Number	Shaft Diameter	Exposed End Diameter	Length
005.100830EX	8mm	5mm	300mm
005.100850EX	8mm	5mm	500mm
005.101030EX	10mm	6.35mm	300mm
005.101050EX	10mm	6.35mm	500mm
005.101065EX	10mm	6.35mm	650mm
005.101250EX	12mm	6.35mm	500mm
005.101265EX	12mm	6.35mm	650mm
005.101275EX	12mm	6.35mm	750mm
005.1016750EX	16mm	10mm	750mm
005.1016100EX	16mm	10mm	1000mm
005.1019750EX	19mm	14mm	750mm
005.1019100EX	19mm	14mm	1000mm



PTFE Adjustable Rotor – Flat (2 blade)

PTFE Adjustable Rotor slides over standard glass, metal or PTFE shafts. They lock in place with a glass filled PTFE lock nut to give the most effective stirring patterns. Can be used with Cowie® Plain PTFE Shafts.



Metric	Item Number	Shaft Diameter	Rotor Diameter
	005.706070	6mm	70mm
	005.708070	8mm	70mm
	005.710070	10mm	70mm
	005.710100	10mm	100mm
	005.712100	12mm	100mm
	005.712150	12mm	150mm
	005.716100	16mm	100mm
	005.716150	16mm	150mm

Imperial	Item Number	Shaft Diameter	Rotor Diameter
	005.7.250.3	1/4"	3"
	005.7.313.3	5/16"	3"
	005.7.375.3	3/8"	3"
	005.7.500.4	1/2"	4"
	005.7.625.6	5/8"	6"

PTFE Adjustable Rotor – 45° Angle (4 Blade)

PTFE Adjustable Rotor slides over standard glass, metal or PTFE shafts. They lock in place with a glass filled PTFE lock nut to give the most effective stirring patterns. Can be used with Cowie® Plain PTFE Shafts.



Metric

Item Number	Shaft Diameter	Rotor Diameter
005.606040	6mm	40mm
005.608040	8mm	40mm
005.610060	10mm	60mm
005.610090	10mm	90mm
005.612070	12mm	70mm
005.612090	12mm	90mm
005.616100	16mm	100mm

Imperial

Item Number	Shaft Diameter	Rotor Diameter
005.6.250.15	1/4"	1 1/2"
005.6.313.15	5/16"	1 1/2"
005.6.375.25	3/8"	2 1/2"
005.6.500.35	1/2"	3 1/2"
005.6.625.40	5/8"	4"

PTFE Adjustable Rotor – Turbine

PTFE Adjustable Rotor slides over standard glass, metal or PTFE shafts. They lock in place with a glass filled PTFE lock nut to give the most effective stirring patterns. Can be used with Cowie® Plain PTFE Shafts.

Item Number	Shaft Diameter	Rotor Diameter
005.90850	8mm	50mm
005.90875	8mm	75mm
005.91075	10mm	75mm
005.910100	10mm	100mm
005.91275	12mm	75mm
005.912100	12mm	100mm
005.916100	16mm	100mm
005.916150	16mm	150mm



PTFE Shaft Stirrer – Anchor

Features a PTFE Rotor fused to a PTFE encapsulated stainless steel shaft. Suitable for use with medium to high viscous media.

- Exposed length (EX), 50mm

Item Number	Shaft Diameter	Rotor Diameter	Length
005.330.2	6mm	80mm	300mm
005.340.2	6mm	80mm	400mm
005.350.2	6mm	80mm	500mm
005.330.8.2	8mm	80mm	300mm
005.340.8.2	8mm	80mm	400mm
005.350.8.2	8mm	80mm	500mm
005.355.2	9.5mm	100mm	550mm
005.365.2	9.5mm	100mm	650mm
005.355.1.2	9.5mm	140mm	550mm
005.365.1.2	9.5mm	140mm	650mm
005.0365.1.2	9.5mm	140mm	650mm (EX)
005.0375.1.2	9.5mm	140mm	750mm (EX)
005.355.10.2	10mm	100mm	550mm
005.0365.10.2	10mm	140mm	650mm (EX)
005.0375.10.2	10mm	140mm	750mm (EX)
005.0365.12.2	12mm	140mm	650mm (EX)
005.0375.12.2	12mm	140mm	750mm (EX)
005.03100.12.2	12mm	140mm	1000mm (EX)
005.0375.16.2	16mm	140mm	750mm (EX)
005.0375.16.1.2	16mm	180mm	750mm (EX)
005.03100.16.2	16mm	140mm	1000mm (EX)
005.03100.16.1.2	16mm	180mm	1000mm (EX)



PTFE Shaft Stirrer – Centrifugal

Features a PTFE Rotor fused to a PTFE encapsulated stainless steel shaft. Ideal for use with narrow necked vessels. Blades open during stirring.

- Exposed length (EX), 50mm



Item Number	Shaft Diameter	Rotor Diameter	Length
005.430.2	6mm	40mm	300mm
005.440.2	6mm	40mm	400mm
005.450.2	6mm	50mm	500mm
005.430.8.2	8mm	40mm	300mm
005.440.8.2	8mm	40mm	400mm
005.450.8.2	8mm	50mm	500mm
005.455.2	9.5mm	70mm	550mm
005.465.2	9.5mm	70mm	650mm
005.0465.2	9.5mm	70mm	650mm (EX)
005.0475.2	9.5mm	70mm	750mm (EX)
005.455.10.2	10mm	70mm	550mm
005.0465.10.2	10mm	70mm	650mm (EX)
005.0475.10.2	10mm	70mm	750mm (EX)
005.0465.12.2	12mm	80mm	650mm (EX)
005.0475.12.2	12mm	80mm	750mm (EX)
005.04100.12.2	12mm	80mm	1000mm (EX)
005.0475.16.2	16mm	80mm	750mm (EX)
005.04100.16.2	16mm	80mm	1000mm (EX)

PTFE Shaft Stirrer – Retreat Curve

Features a PTFE Rotor fused to a PTFE encapsulated stainless steel shaft. Retreat curve angle of 30°.

- Exposed length (EX), 50mm



Item Number	Shaft Diameter	Rotor Diameter	Shaft Length	Blade Height
005.80850.300	8mm	50mm	300mm	10mm
005.80875.300	8mm	75mm	300mm	15mm
005.80850.400	8mm	50mm	400mm	10mm
005.80875.400	8mm	75mm	400mm	15mm
005.81050.400	10mm	50mm	400mm	10mm
005.81075.400	10mm	75mm	400mm	15mm
005.81050.500	10mm	50mm	500mm	10mm
005.81075.500	10mm	75mm	500mm	15mm

PTFE Shaft Stirrer – Screw Propeller

Features a PTFE Rotor fused to a PTFE encapsulated stainless steel shaft.

- Exposed length (EX), 50mm

Item Number	Shaft Diameter	Rotor Diameter	Length
005.230.2	6mm	40mm	300mm
005.240.2	6mm	40mm	400mm
005.250.2	6mm	50mm	500mm
005.230.8.2	8mm	40mm	300mm
005.240.8.2	8mm	40mm	400mm
005.250.8.2	8mm	50mm	500mm
005.255.2	9.5mm	60mm	550mm
005.265.2	9.5mm	60mm	650mm
005.0265.2	9.5mm	60mm	650mm (EX)
005.0275.2	9.5mm	60mm	750mm (EX)
005.255.10.2	10mm	70mm	500mm
005.0265.10.2	10mm	70mm	650mm (EX)
005.0275.10.2	10mm	70mm	750mm (EX)
005.0265.12.2	12mm	80mm	650mm (EX)
005.0275.12.2	12mm	80mm	750mm (EX)
005.02100.12.2	12mm	80mm	1000mm (EX)
005.0275.16.2	16mm	80mm	750mm (EX)
005.0275.16.1.2	16mm	100mm	750mm (EX)
005.02100.16.2	16mm	100mm	1000mm (EX)
005.02100.16.1.2	16mm	120mm	1000mm (EX)



PTFE Stirrer Blades and Shafts

These tiltable shaped blades are designed to fit narrow vessel openings / neck. The moon shaped blades are ideal for use with round bottom vessels.

- Blades are available with square or plain ends. Hole diameter 6.5mm and thickness 3.2mm
- Shafts have a PTFE encapsulated stainless steel core.
- Exposed length (EX), 50mm



Blade – Square End

Item Number	Height	Width
002.052.1	14mm	52mm
002.076.1	19mm	76mm
002.090.1	28mm	90mm

Blade – Plain End

Item Number	Height	Width
002.1065.1	25mm	65mm
002.1075.1	25mm	75mm
002.1105.1	25mm	105mm
002.1125.1	25mm	125mm
002.1150.1	25mm	150mm

Shafts for Blades

Item Number	Shaft Diameter	Length
005.530.1	6mm	300mm
005.540.1	6mm	400mm
005.550.1	6mm	500mm
005.530.8.1	8mm	300mm
005.540.8.1	8mm	400mm
005.550.8.1	8mm	500mm
005.555.1	9.5mm	550mm
005.565.1	9.5mm	650mm
005.0565.1	9.5mm	650mm (EX)
005.0575.1	9.5mm	750mm (EX)
005.0565.10.1	10mm	650mm (EX)
005.0575.10.1	10mm	750mm (EX)
005.05100.10.1	10mm	1000mm (EX)
005.0565.12.1	12mm	650mm (EX)
005.0575.12.1	12mm	750mm (EX)
005.05100.12.1	12mm	1000mm (EX)
005.0575.16.1	16mm	750mm (EX)
005.05100.16.1	16mm	1000mm (EX)

Stirrer Guides



High Performance Shaft Guide (for standard taper joints)

HP Shaft Guide, with standard taper ground glass joint. Can be used with Glass or Metal shaft stirrers (not compatible with PTFE shafts). The composite PTFE/PEEK seal maintains vacuum over a wide temperature range without shedding particles. Available with or without a moulded-in PTFE/PEEK guide ring located at the end of the taper, this provides a guide to assist alignment of the shaft.

- Virgin grade PTFE conforming to FDA and USP Class VI
- Exceptional chemical resistance
- Suitable for vacuum (5mmHg) and pressure (3-5psi) applications
- Maximum recommended speeds: 500rpm (continuous), 800rpm (intermittent)
- Self releasing ring for ease of removal
- Autoclavable (disassemble parts first)
- Replacement parts available
- Variant available with NPT Thread, see page 81

Note: PEEK has reduced chemical resistance compared to PTFE and may be affected by acids, phenols and halogen based compounds

A Length Cone

Item Number	Shaft Diameter	Cone Size
005.0.0619	6mm	19/22
005.0.0624	6mm	24/40
005.0.0819	8mm	19/38
005.0.0824	8mm	24/40
005.0.1024	10mm	24/40
005.0.1029	10mm	29/42
005.0.1034	10mm	34/45
005.0.1045	10mm	45/50
005.0.1229	12mm	29/42
005.0.1634	16mm	34/45
005.0.1945	19mm	45/50



B Length Cone

Item Number	Shaft Diameter	Cone Size
005.00.0619	6mm	19/26
005.00.0624	6mm	24/29
005.00.0819	8mm	19/26
005.00.0824	8mm	24/29
005.00.1024	10mm	24/29
005.00.1029	10mm	29/32
005.00.1045	10mm	45/40
005.00.1229	12mm	29/32
005.00.1634	16mm	34/35
005.00.1645	16mm	45/40
005.00.1945	19mm	45/40

Universal Stirrer Guide (for standard taper joints)

Universal Stirrer Guide, with standard taper ground glass joint. Can be used with PTFE, Glass or Metal shaft stirrers. The permanently loaded composite PTFE/PEEK seal and glass ball-bearing give rigidity and smoothness of operation.

- Virgin grade PTFE conforming to FDA and USP Class VI
- Exceptional chemical resistance
- Suitable for vacuum (5mmHg) and pressure (3-5psi) applications
- Maximum recommended speeds: 500rpm (continuous), 800rpm (intermittent)
- Anti-whip / reduced vibration / no shedding
- Self releasing ring for ease of removal
- Autoclavable (disassemble parts first)
- Replacement parts available
- Variant available with NPT Thread, see page 84

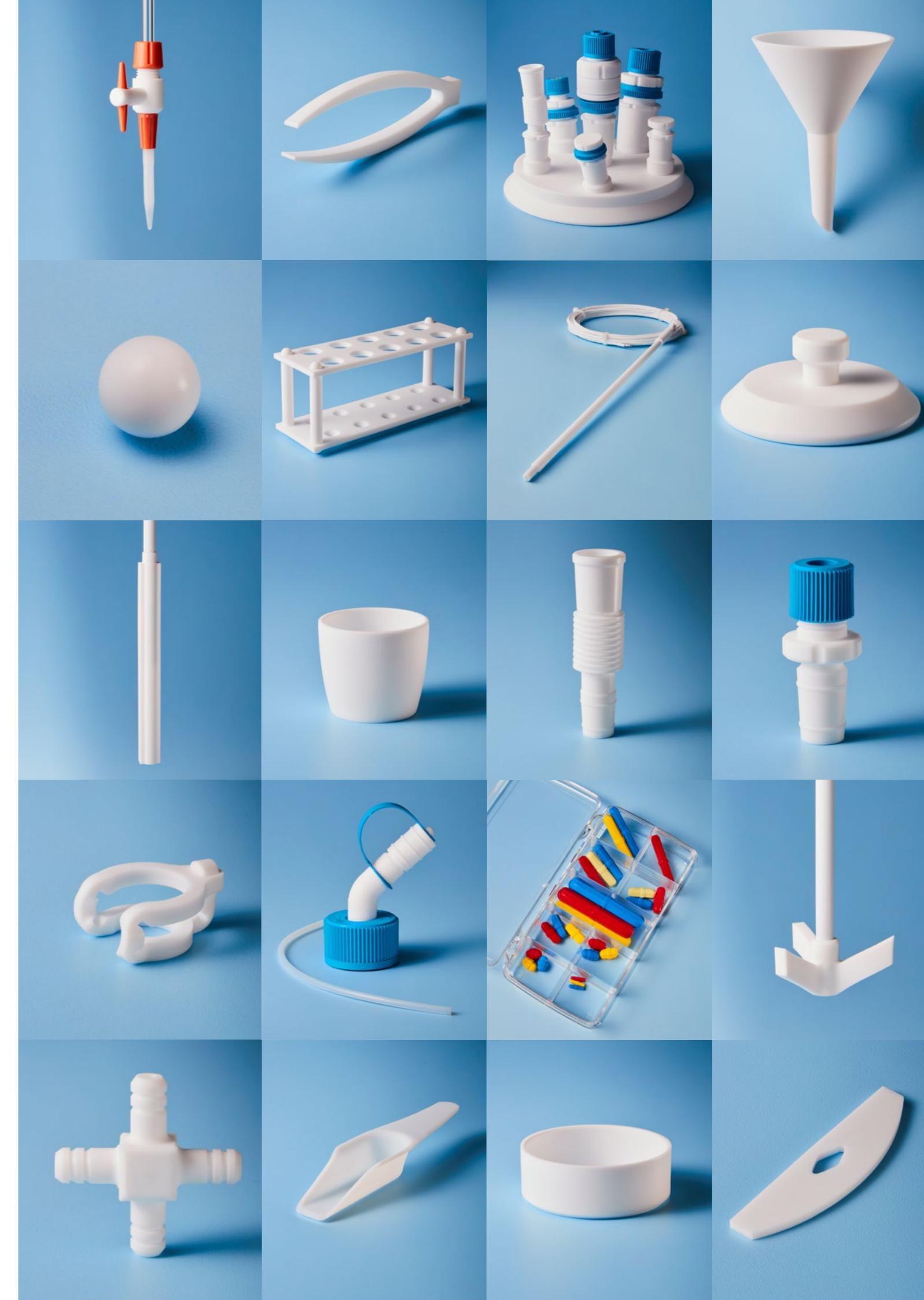


A Length Cone

Item Number	Shaft Diameter	Cone Size
005.101.7	6mm	19/22
005.102.7	6mm	24/40
005.104.7	8mm	24/40
005.105.7	10mm	24/40
005.106.7	10mm	29/42
005.108.7	12mm	29/42
005.111.7	16mm	34/45
005.112.7	16mm	45/50

B Length Cone

Item Number	Shaft Diameter	Cone Size
005.201.7	6mm	19/26
005.202.7	6mm	24/29
005.203.7	8mm	19/26
005.204.7	8mm	24/29
005.205.7	10mm	24/29
005.206.7	10mm	29/32
005.207.7	10mm	34/45
005.208.7	12mm	29/32
005.209.7	12mm	34/45
005.211.7	16mm	34/35
005.212.7	16mm	45/40





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Containers

Unless indicated otherwise:

- Virgin grade PTFE conforming to FDA and USP Class VI
- Virtually total chemical resistance
- Temperature Range, -200°C up to 260°C (-328°F to 500°F)
- Shelf life is considered indefinite within the confines of normal use and storage conditions
- Autoclavable



PTFE Beaker

General laboratory use PTFE beaker with pouring spout and smooth internal finish.

- Temperature Range, -200°C up to 250°C (-328°F to +482°F)

Item Number	Capacity	Height	Diameter
007.001	1ml	18mm	13mm
007.005	5ml	26mm	20mm
007.010	10ml	33mm	24mm
007.025	25ml	47mm	32mm
007.050	50ml	55mm	42mm
007.100	100ml	70mm	54mm
007.150	150ml	75mm	59mm
007.250	250ml	99mm	66mm
007.400	400ml	106mm	80mm
007.500	500ml	125mm	80mm
007.600	600ml	125mm	91mm
007.1000	1000ml	155mm	100mm
007.2000	2000ml	205mm	126mm
007.5000	5000ml	280mm	170mm



Thermotech™ PTFE Beaker

Thermotech™ Beakers with pouring spout and smooth internal finish are designed to improve heat transfer and eliminate distortion. They feature a unique combination of pure PTFE body with a specially formulated stabilised PTFE-Carbon base as a single moulding.



Item Number	Capacity	Height	Diameter
007.0100	100ml	74mm	56mm
007.0250	250ml	94mm	75mm
007.0400	400ml	112mm	85mm

PTFE Beaker Cover

PTFE Beaker covers (watch glass) are suitable for use as beaker covers, weighing solids and for evaporation. They have a smooth surface preventing contamination.



Item Number	Diameter	Fits Beaker
013.020	20mm	1ml
013.030	30mm	5-10ml
013.040	40mm	25ml
013.050	50mm	50ml
013.065	65mm	100ml
013.075	75mm	150ml
013.080	80mm	250ml
013.100	100mm	400-500ml
013.125	125mm	600-1000ml
013.150	150mm	2000ml
013.200	200mm	5000ml

PTFE Bottle

Wide neck general use PTFE bottle with leak free screw cap. Bottles have a smooth internal finish.
Note: Do not heat with the lid sealed.

- Height stated below includes lid



Item Number	Capacity	Height	Outer Diameter	Mouth Diameter
015.001.2	1ml	27mm	16mm	10mm
015.005.2	5ml	36mm	22mm	10mm
015.010.2	10ml	52mm	26mm	12mm
015.025.2	25ml	62mm	33mm	19mm
015.050.2	50ml	76mm	43mm	24mm
015.100.2	100ml	87mm	52mm	33mm
015.150.2	150ml	87mm	60mm	33mm
015.250.2	250ml	113mm	67mm	41mm
015.500.2	500ml	143mm	80mm	50mm
015.1000.2	1000ml	174mm	102mm	56mm
015.2000.2	2000ml	236mm	126mm	60mm
015.5000.2	5000ml	337mm	170mm	80mm

PTFE Crucible

PTFE crucibles have a smooth internal finish, they are durable and chemically inert.



Item Number	Capacity	Height	Diameter
009.005	5ml	17mm	27mm
009.025	25ml	27mm	45mm
009.075	75ml	48mm	57mm
009.100	100ml	46mm	73mm

PTFE Dipper Beaker

PTFE dipper beakers are designed for convenient sampling from vats, tanks, etc. They feature a beaker shaped container with a screw in PTFE encapsulated steel shaft. Additional shafts can be purchased to increase handle length.

Dipper Beaker

Item Number	Capacity	Beaker Diameter	Shaft Length
036.100	100ml	54mm	600mm
036.250	250ml	67mm	600mm
036.500	500ml	80mm	600mm
036.1000	1000ml	100mm	600mm

Shaft

Item Number	Length
036.001	600mm



PTFE Dropping Bottle

PTFE dropping bottle with screw cap are chemically inert, leak free and flexible.



Item Number	Capacity	Height	Diameter
014.025	25ml	80mm	30mm
014.050	50ml	100mm	40mm

PTFE Evaporating Dish – Tall Form with Spout

PTFE evaporating dishes are chemically inert and have a smooth internal finish.



Item Number	Capacity	Height	Diameter
006.025	25ml	34mm	38mm
006.050	50ml	40mm	50mm
006.100	100ml	54mm	64mm
006.150	150ml	43mm	78mm
006.180	180ml	48mm	78mm
006.250	250ml	46mm	97mm
006.350	350ml	60mm	100mm

PTFE Evaporating Dish – Flat Form

PTFE evaporating dishes are chemically inert and have a smooth internal finish.



Item Number	Capacity	Height	Diameter
006.1025	25ml	25mm	42mm
006.1050	50ml	23mm	66mm
006.1100	100ml	28mm	79mm
006.1180	180ml	48mm	82mm
006.1350	350ml	54mm	101mm

PTFE Ladle

PTFE ladle suitable for sampling, especially corrosive products. Features a fixed handle and pouring spouts on either side of the container.



Item Number	Capacity	Handle Length
037.010	10ml	150mm

PTFE Evaporating Dish – Flat Form with Spout

PTFE evaporating dishes are chemically inert and have a smooth internal finish.



Item Number	Capacity	Height	Diameter
006.1025.1	25ml	12mm	66mm
006.1050.1	50ml	15mm	82mm
006.1100.1	100ml	19mm	105mm
006.1180.1	180ml	21mm	127mm
006.1350.1	350ml	36mm	130mm
006.1400.1	400ml	39mm	135mm

PTFE Jar

General use PTFE jar with leak free screw cap. Jars have a thick wall construction and smooth internal finish. Note: Do not heat with the lid sealed.

- Height stated below includes lid



Item Number	Capacity	Height	Cap Diameter
038.015	15ml	37mm	36mm
038.030	30ml	65mm	36mm
038.060	60ml	49mm	60mm
038.120	120ml	66mm	69mm
038.240	240ml	97mm	74mm
038.360	360ml	98mm	90mm
038.480	480ml	126mm	90mm
038.1000	1000ml	170mm	110mm
038.2200	2200ml	262mm	134mm

PTFE Test Tube

PTFE test tubes are durable, chemically inert and have a smooth internal finish. They can be used in a centrifuge and are available with a round or conical shaped bottom with either a rim/lip or a screw cap.

- Where applicable, height stated below includes lid



Round Bottom with Screw Cap

Item Number	Capacity	Height	Diameter	Wall
012.1108	8ml	103mm	12mm	1mm
012.1118	17ml	103mm	18mm	1.5mm
012.1150	50ml	148mm	25mm	2mm

Round Bottom with Lip

Item Number	Capacity	Height	Diameter	Wall
012.108	8ml	100mm	12mm	1mm
012.113	13ml	100mm	16mm	1.5mm
012.118	17ml	100mm	18mm	1.5mm
012.150	50ml	145mm	25mm	2mm
012.180	85ml	100mm	40mm	3mm

Conical Bottom with Screw Cap

Item Number	Capacity	Height	Diameter	Wall
012.1213	13ml	113mm	16mm	1.5mm
012.1215	18ml	123mm	18mm	1.5mm
012.1245	45ml	153mm	25mm	2mm

Conical Bottom with Lip

Item Number	Capacity	Height	Diameter	Wall
012.213	13ml	110mm	16mm	1.5mm
012.215	18ml	120mm	18mm	1.5mm
012.245	45ml	150mm	25mm	2mm

PTFE Test Tube Rack

Durable and chemically inert PTFE test tube racks with a standard footprint of 180mm x 60mm.



Item Number	Height	Hole Diameter	Holes
029.008	45mm	8mm	27
029.013	60mm	13mm	21
029.019	70mm	19mm	10
029.030	80mm	30mm	4

PTFE Vial

PTFE vials have a thick wall construction with a tapered inner for easy removal of contents. They are suitable for storage and shipping of valuable or aggressive materials. Can also be used for low pressure small scale reactions. Note: Do not heat with the lid sealed.

- Height stated below includes lid

Item Number	Capacity	Height	Diameter
014.125	25ml	68mm	40mm
014.150	50ml	87mm	45mm



Handling Products

Unless indicated otherwise:

- Virgin grade PTFE conforming to FDA and USP Class VI
- Chemical Resistance is virtually total
- Temperature Range, -200°C to 260°C (-328°F to 500°F)
- Shelf life is considered indefinite within the confines of normal use and storage conditions
- Autoclavable



PTFE Bottle Pourer

Bottle Pourer permits pouring of liquids in a safe and consistent manner. Contains a PTFE encapsulated Viton® neck seal



Item Number	Fits Neck
028.030	GL30
028.032	GL32
028.038	GL38
028.045	GL45

PTFE Spatula

PTFE spatulas are durable, chemically inert and non-contaminating.

Item Number	Length	Width
043.120	120mm	12mm
043.150	150mm	18mm
043.180	180mm	20mm
043.210	210mm	25mm
043.240	240mm	30mm



PTFE Funnel

PTFE funnels are durable, chemically inert with a smooth non-stick internal finish.

Item Number	Funnel Diameter	Stem Diameter	Height
039.030	33mm	10mm	50mm
039.050	52mm	16mm	84mm
039.070	79mm	18mm	116mm
039.100	104mm	22mm	150mm
039.150	158mm	24mm	200mm



PTFE Stirring Rod

PTFE Stirring Rods are available in two versions. A solid PTFE rod with a tapered end and a PTFE stirring rod with a fully encapsulated steel core that can be bent into a permanent shape. Chemically inert and will not scratch.



Steel Core

Item Number	Length	Diameter
003.100	100mm	6mm
003.150	150mm	6mm
003.200	200mm	6mm
003.250	250mm	6mm
003.300	300mm	6mm
003.350	350mm	6mm
003.400	400mm	6mm

Solid PTFE

Item Number	Length	Diameter
003.1100	100mm	8mm
003.1150	150mm	8mm
003.1200	200mm	8mm
003.1250	250mm	8mm
003.1300	300mm	8mm

PTFE Scoop

PTFE scoop is durable, chemically inert and non-contaminating.



Item Number	Height	Width	Scoop Length	Overall Length
041.001	20mm	30mm	80mm	140mm

PTFE Tweezers – Fine (Square Ends)

PTFE fine tweezers are chemically inert, durable and non-contaminating.



Item Number	Length
027.0100	100mm
027.0150	150mm
027.0200	200mm

PTFE Tweezers – Fine (Sharp Ends)

PTFE fine tweezers are chemically inert, durable and non-contaminating.

Item Number	Length
027.0101	100mm
027.0151	150mm
027.0201	200mm



PTFE Tweezers – Rigid (Square Ends)

PTFE rigid tweezers are chemically inert, durable and non-contaminating.



Item Number	Length
027.100	100mm
027.150	150mm
027.200	200mm

PTFE Tweezers – Rigid (Sharp Ends)

PTFE rigid tweezers are chemically inert, durable and non-contaminating.

Item Number	Length
027.101	100mm
027.151	150mm
027.201	200mm



Tissue Grinder / Homogeniser

Tissue Grinders for the controlled reduction of particle size and to homogenise (homogenize) various types of material, such as tissue, plant, food and soil. Often used within Life Science laboratories for extracting DNA, RNA and protein.

Precision borosilicate glass vessels are available in a range of capacities.

Plungers have a stainless steel shaft (\varnothing 6.5mm) with a plain or serrated PTFE head.

The clearance between plunger head and vessel is 0.15-0.25mm.

Note: Volumes stated are working volumes with the plunger in place.



Glass Vessel

Item Number	Capacity	Height	Bore
011.102	2ml	120mm	8mm
011.105	5ml	135mm	12mm
011.110	10ml	150mm	15mm
011.115	15ml	155mm	19mm
011.130	30ml	175mm	25mm
011.150	50ml	195mm	32mm

Plunger, Plain

Item Number	Fits Vessel	Height
011.202	2ml	230mm
011.205	5ml	235mm
011.210	10ml	270mm
011.215	15ml	270mm
011.230	30ml	270mm
011.250	50ml	270mm

Plunger, Serrated Tip

Item Number	Fits Vessel	Height
011.302	2ml	230mm
011.305	5ml	235mm
011.310	10ml	270mm
011.315	15ml	270mm
011.330	30ml	270mm
011.350	50ml	270mm

Joints and Adapters

A range of fittings for use with standard taper joints.

Unless indicated otherwise:

- Virgin grade PTFE conforming to FDA and USP Class VI
- Chemical Resistance is virtually total
- Temperature Range, -200°C to 260°C (-328°F to 500°F)
- Shelf life is considered indefinite within the confines of normal use and storage conditions
- Autoclavable



PTFE Compression Fitting for Standard Taper Joints

PTFE Compression Fittings are suited for use with standard taper ground glass joints. They are designed to hold items such as temperature probes and sampling tubes securely in place. Manufactured from pure PTFE with a PEEK olive to give a secure grip.

Also available Compression Fitting for NPT Port, see page 82

A Length Cone – Metric

Item Number	Joint Size	Bore
PC704.1938.03	19/38	3mm
PC704.1938.06	19/38	6mm
PC704.1938.08	19/38	8mm
PC704.1938.12	19/38	12mm
PC704.2440.06	24/40	6mm
PC704.2440.08	24/40	8mm
PC704.2440.12	24/40	12mm
PC704.2440.14	24/40	14mm
PC704.2440.16	24/40	16mm
PC704.2942.12	29/42	12mm
PC704.2942.14	29/42	14mm
PC704.2942.16	29/42	16mm
PC704.2942.19	29/42	19mm
PC704.3445.12	34/45	12mm
PC704.3445.14	34/45	14mm
PC704.3445.16	34/45	16mm
PC704.3445.19	34/45	19mm
PC704.3445.25	34/45	25mm
PC704.4550.12	45/50	12mm
PC704.4550.14	45/50	14mm
PC704.4550.16	45/50	16mm
PC704.4550.19	45/50	19mm
PC704.4550.25	45/50	25mm

B Length Cone – Metric

Item Number	Joint Size	Bore
PC704.1926.03	19/26	3mm
PC704.1926.06	19/26	6mm
PC704.1926.08	19/26	8mm
PC704.1926.12	19/26	12mm
PC704.2429.06	24/29	6mm
PC704.2429.08	24/29	8mm
PC704.2429.12	24/29	12mm
PC704.2429.14	24/29	14mm
PC704.2429.16	24/29	16mm
PC704.2932.12	29/32	12mm
PC704.2932.14	29/32	14mm
PC704.2932.16	29/32	16mm
PC704.2932.19	29/32	19mm
PC704.3435.12	34/35	12mm
PC704.3435.14	34/35	14mm
PC704.3435.16	34/35	16mm
PC704.3435.19	34/35	19mm
PC704.3435.25	34/35	25mm
PC704.4540.12	45/40	12mm
PC704.4540.14	45/40	14mm
PC704.4540.16	45/40	16mm
PC704.4540.19	45/40	19mm
PC704.4540.25	45/40	25mm

A Length Cone – Imperial

Item Number	Joint Size	Bore
PC704.1938.125	19/38	1/8"
PC704.1938.250	19/38	1/4"
PC704.1938.312	19/38	5/16"
PC704.1938.500	19/38	1/2"
PC704.2440.250	24/40	1/4"
PC704.2440.312	24/40	5/16"
PC704.2440.500	24/40	1/2"
PC704.2440.560	24/40	9/16"
PC704.2440.625	24/40	5/8"
PC704.2942.500	29/42	1/2"
PC704.2942.560	29/42	9/16"
PC704.2942.625	29/42	5/8"
PC704.2942.750	29/42	3/4"
PC704.3445.500	34/45	1/2"
PC704.3445.560	34/45	9/16"
PC704.3445.625	34/45	5/8"
PC704.3445.750	34/45	3/4"
PC704.3445.1000	34/45	1"
PC704.4550.500	45/50	1/2"
PC704.4550.560	45/50	9/16"
PC704.4550.625	45/50	5/8"
PC704.4550.750	45/50	3/4"
PC704.4550.1000	45/50	1"



B Length Cone – Imperial

Item Number	Joint Size	Bore
PC704.1926.125	19/26	1/8"
PC704.1926.250	19/26	1/4"
PC704.1926.312	19/26	5/16"
PC704.1926.500	19/26	1/2"
PC704.2429.250	24/29	1/4"
PC704.2429.312	24/29	5/16"
PC704.2429.500	24/29	1/2"
PC704.2429.560	24/29	9/16"
PC704.2429.625	24/29	5/8"
PC704.2932.500	29/32	1/2"
PC704.2932.560	29/32	9/16"
PC704.2932.625	29/32	5/8"
PC704.2932.750	29/32	3/4"
PC704.3435.500	34/35	1/2"
PC704.3435.560	34/35	9/16"
PC704.3435.625	34/35	5/8"
PC704.3435.750	34/35	3/4"
PC704.3435.1000	34/35	1"
PC704.4540.500	45/40	1/2"
PC704.4540.560	45/40	9/16"
PC704.4540.625	45/40	5/8"
PC704.4540.750	45/40	3/4"
PC704.4540.1000	45/40	1"

PTFE Flexible Bellow Connector

Flexible PTFE bellow connectors are suited for use with standard ground glass joints. They are used to correct misalignment and relieve stress in glassware assemblies. The greaseless seal eliminates any contamination and sealing rings give a medium to high vacuum performance.



A Length Cone

Item Number	Socket Size	Cone Size	Height
008.1414	14/35	14/35	115mm
008.1919.1	19/22	19/22	90mm
008.1919	19/38	19/38	120mm
008.2424	24/40	24/40	130mm
008.2929	29/42	29/42	140mm
008.4545	45/50	45/50	155mm

B Length Cone

Item Number	Socket Size	Cone Size	Height
008.01414	14/23	14/23	90mm
008.01429	14/23	29/32	98mm
008.01919	19/26	19/26	100mm
008.02424	24/29	24/29	110mm
008.02929	29/32	29/32	115mm
008.02934	29/32	29/32	122mm
008.03434	34/35	34/35	120mm

PTFE Joint Adapter for Standard Taper Joints

PTFE Joint Adapters connect standard ground glass joints of differing size. The greaseless seal eliminates any contamination and sealing rings give a medium to high vacuum performance.

A Length Cone

Item Number	Socket Size	Cone Size
021.01014	10/30	14/35
021.01019	10/30	19/38
021.01419	14/35	19/38
021.01424	14/35	24/40
021.01924	19/38	24/40
021.01929	19/38	29/42
021.01934	19/38	34/45
021.02429	24/40	29/42
021.02434	24/40	34/45
021.02445	24/40	45/50
021.02934	29/42	34/45
021.02945	29/42	45/50
021.03445	34/45	45/50

B Length Cone

Item Number	Socket Size	Cone Size
021.1014	10/19	14/23
021.1019	10/19	19/26
021.1419	14/23	19/26
021.1424	14/23	24/29
021.1924	19/26	24/29
021.1929	19/26	29/32
021.1934	19/26	34/35
021.2429	24/29	29/32
021.2434	24/29	34/35
021.2445	24/29	45/40
021.2934	29/32	34/35
021.2945	29/32	45/40
021.3445	34/35	45/40



PTFE Joint Clamp/Clip for Standard Taper Joints

Joint clamps/clips have a steel spring core that is fully encapsulated in PTFE. They are designed to fit standard ground glass joints and can be adjusted by hand.



Item Number

Item Number	Joint Size
030.010.1	10/
030.012.1	12/
030.014.1	14/
030.019.1	19/
030.024.1	24/
030.029.1	29/
030.034.1	34/
030.040.1	40/
030.045.1	45/

PTFE Joint Sleeve – Rigid

Rigid PTFE Joint Sleeves are inserted between standard ground glass joints to prevent sticking. The greaseless seal eliminates any contamination and sealing rings give a medium to high vacuum performance. Wall thickness is approximately 0.5mm



A Length Cone

Item Number	Joint Size
020.110	10/30
020.114.1	14/20
020.119.1	19/22
020.124	24/40
020.129	29/42
020.134	34/45
020.145	45/50
020.155	55/40

B Length Cone

Item Number	Joint Size
020.010	10/19
020.014	14/23
020.019	19/26
020.024	24/29
020.029	29/32
020.034	34/35
020.040	40/38
020.045	45/40
020.055	55/44

PTFE Joint Sleeve – Thin Wall

Thin Wall PTFE Joint Sleeves are inserted between standard ground glass joints to prevent sticking. The greaseless seal eliminates any contamination and can withstand low to medium vacuum. Wall thickness is approximately 0.05mm.



A Length Cone

Item Number	Joint Size
019.010	10/30
019.012	12/30
019.014	14/35
019.014.1	14/20
019.019	19/38
019.019.1	19/22
019.024	24/40
019.029	29/42
019.034	34/45
019.040	40/50
019.045	45/50
019.050	50/50
019.055	55/50

B Length Cone

Item Number	Joint Size
019.110	10/19
019.112	12/21
019.114	14/23
019.119	19/26
019.124	24/39
019.129	29/32
019.134	34/35
019.140	40/38
019.145	45/40
019.150	50/42
019.155	55/44

PTFE Probe/Thermometer Holder for Standard Taper Joints

PTFE Probe Holders are suited for use with standard taper ground glass joints. They are designed to hold temperature probes securely in place.

A Length Cone

Item Number	Joint Size	Bore
021.0146.1	14/20	6mm
021.0149.1	14/20	9mm
021.0197.1	19/22	7mm
021.0198.1	19/22	8mm
021.0199.1	19/22	9mm
021.0247.1	24/40	7mm
021.0248.1	24/40	8mm
021.0249.1	24/40	9mm

B Length Cone

Item Number	Joint Size	Bore
021.104.5.1	10/19	4.5mm
021.144.5.1	14/23	4.5mm
021.146.1	14/23	6mm
021.147.1	14/23	7mm
021.148.1	14/23	8mm
021.149.1	14/23	9mm
021.193.1	19/26	3mm
021.196.1	19/26	6mm
021.197.1	19/26	7mm
021.198.1	19/26	8mm
021.199.1	19/26	9mm
021.246.1	24/29	6mm
021.246.5.1	24/29	6.4mm
021.248.1	24/29	8mm
021.249.1	24/29	9mm



PTFE Stopper – Flat Head

PTFE Flat Head Stoppers are suited for use with standard ground glass joints. They are durable and the greaseless seal eliminates any contamination.

A Length Cone

Item Number	Joint Size	Height
010.110	10/30	39mm
010.114	14/35	46mm
010.119	19/38	50mm
010.124	24/40	54mm
010.129	29/42	57mm
010.134	34/45	60mm

B Length Cone

Item Number	Joint Size	Height
010.210	10/19	31mm
010.214	14/23	34mm
010.219	19/26	38mm
010.224	24/29	43mm
010.229	29/32	47mm
010.234	34/35	51mm



PTFE Stopper – Self Releasing

PTFE Self releasing stoppers are suited for use with standard ground glass joints. The greaseless seal eliminates any contamination, and the self-releasing ring allows ease of removal.

A Length Cone

Item Number	Joint Size	Height
010.119	19/38	59mm
010.1124	24/40	62mm
010.1134	34/45	70mm
010.1145	45/50	79mm

B Length Cone

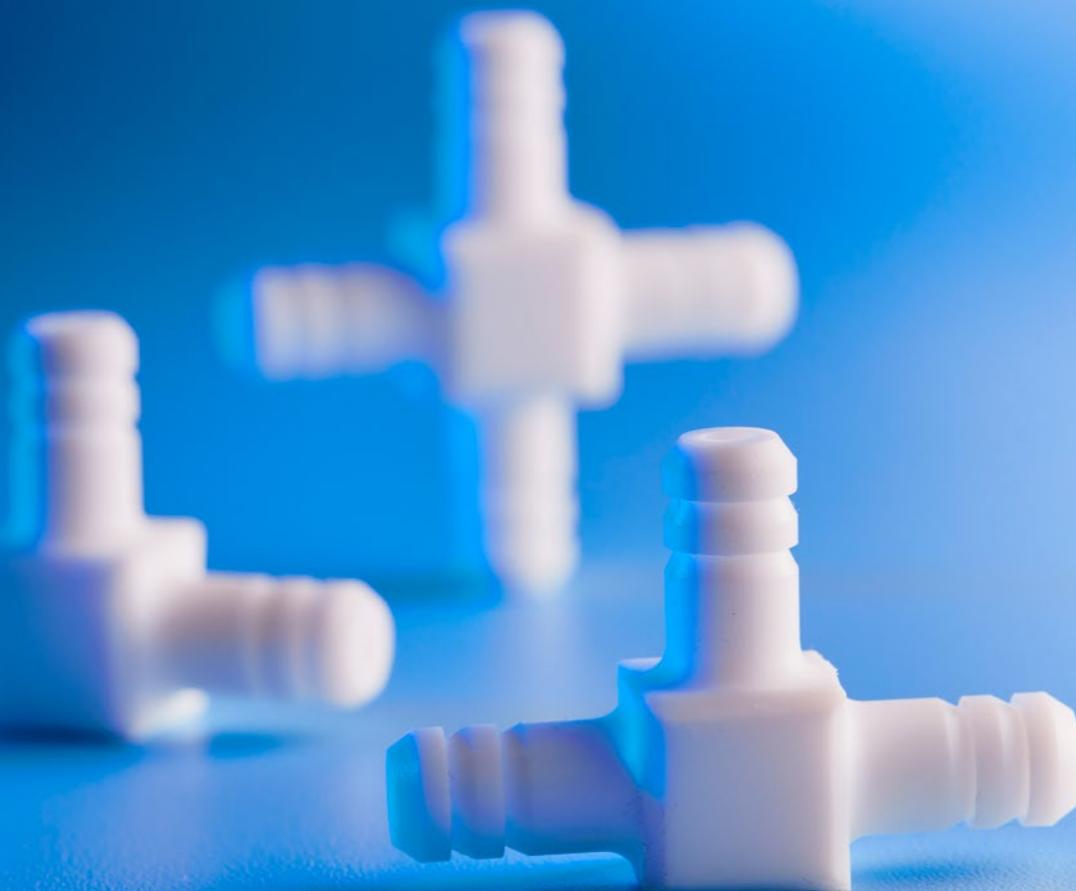
Item Number	Joint Size	Height
010.1219	19/26	47mm
010.1224	24/29	52mm
010.1229	29/32	55mm
010.1234	34/35	59mm
010.1245	45/40	68mm

Connecters

PTFE connectors with bayonet fitting are designed for use with flexible tubing such as PTFE, PVC, Rubber, HDPE and Silicone Rubber. They are suitable for medium vacuum/pressure applications.

Unless indicated otherwise:

- Virgin grade PTFE conforming to FDA and USP Class VI
- Chemical Resistance is virtually total
- Temperature Range, -200°C to 260°C (-328°F to 500°F)
- Shelf life is considered indefinite within the confines of normal use and storage conditions
- Autoclavable



PTFE 4-Way Connector – Bayonet Fitting

Item Number	Bore	Arm Diameter
016.1112.5.2	2mm	4.5mm
016.1112.2	2mm	6mm
016.1113.7.2	3mm	6.8mm
016.1113.2	3mm	8mm
016.1114.9.2	4mm	9mm
016.1114.2	4mm	10mm
016.1115.2	5mm	11mm



PTFE Right Angle Connector – Bayonet Fitting



Item Number	Bore	Arm Diameter
016.1002.5.2	2mm	4.5mm
016.1002.2	2mm	6mm
016.1003.7.2	3mm	6.8mm
016.1003.2	3mm	8mm
016.1004.9.2	4mm	9mm
016.1004.2	4mm	10mm
016.1005.2	5mm	11mm

PTFE Straight Through Connector – Bayonet Fitting

Item Number	Bore	Arm Diameter
016.902.5.2	2mm	4.5mm
016.902.2	2mm	6mm
016.903.7.2	3mm	6.8mm
016.903.2	3mm	8mm
016.904.9.2	4mm	9mm
016.904.2	4mm	10mm
016.905.2	5mm	11mm



PTFE T-Type Connector – Bayonet Fitting



Item Number	Bore	Arm Diameter
016.1102.5.2	2mm	4.5mm
016.1102.2	2mm	6mm
016.1103.7.2	3mm	6.8mm
016.1103.2	3mm	8mm
016.1104.9.2	4mm	9mm
016.1104.2	4mm	10mm
016.1105.2	5mm	11mm

PTFE Tubing

PTFE Tubing for use with Bayonet Valves and Connectors. Quantity per 1 Metre.

Item Number	Diameter	Wall
016.1706	6mm	1mm
016.1708	8mm	1mm
016.1712	12mm	1mm
016.1714	14mm	1mm

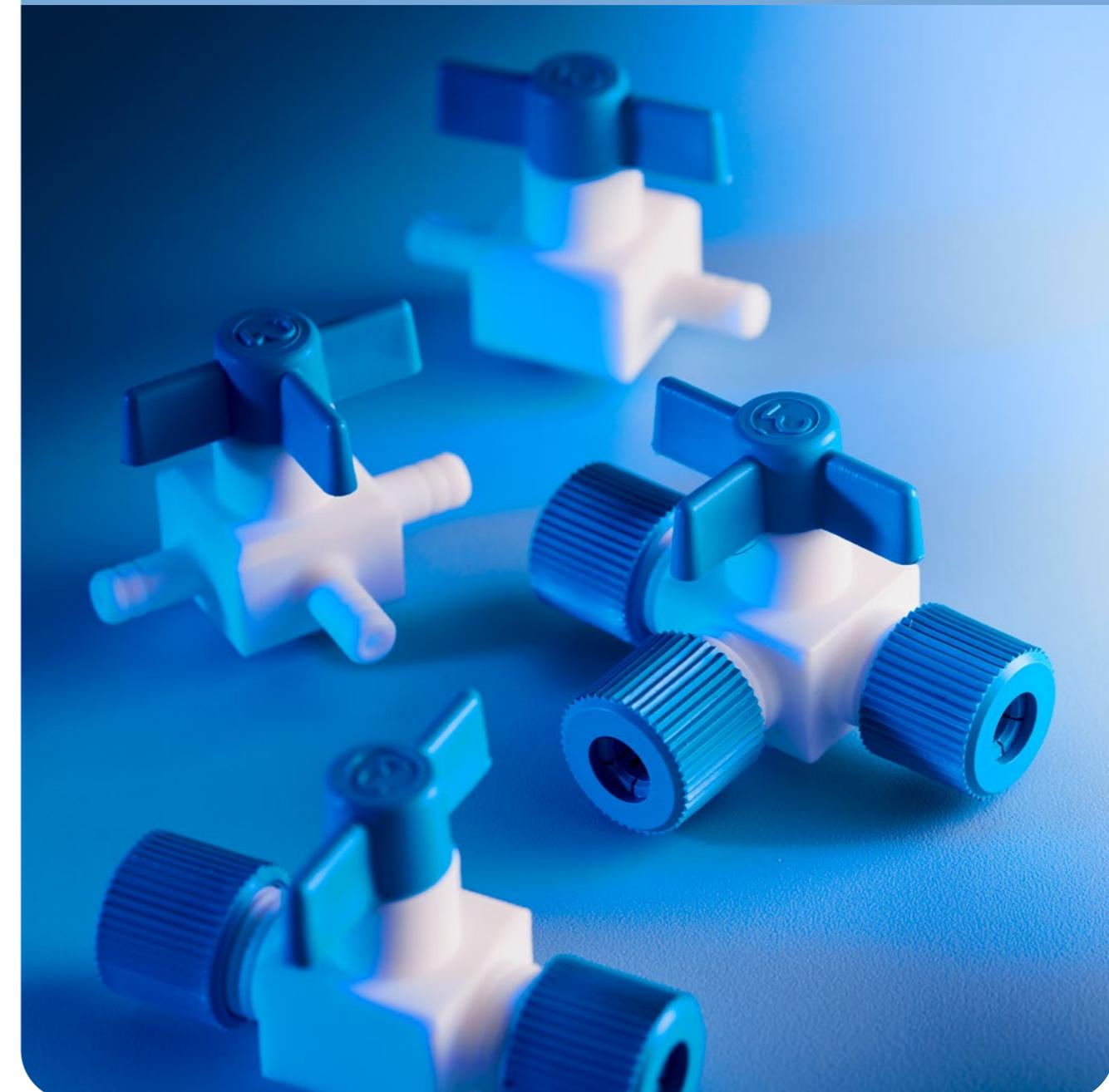


Valves

General purpose valves with a pure PTFE body, suitable for low pressure and temperature applications.

Note: Rapid temperature changes may cause leakage due to the expansion properties of PTFE.

- Virgin grade PTFE conforming to FDA and USP Class VI
- Chemical Resistance is virtually total
- Maximum pressure 1bar / Vacuum 5mmHg
- Shelf life is considered indefinite within the confines of normal use and storage conditions
- Autoclavable



PTFE Straight Through Valve – Bayonet Fitting

2-way valve with bayonet fittings



Item Number	Bore	Arm Diameter
016.702.5.2	2mm	4.5mm
016.702.2	2mm	6mm
016.703.7.2	3mm	6.8mm
016.703.2	3mm	8mm
016.704.9.2	4mm	9mm
016.704.2	4mm	10mm
016.705.2	5mm	11mm

PTFE T-Type Valve – Screw Fitting

3-way valve with screw fittings



Item Number	Bore	Tube Diameter
016.1302.6.2	2mm	6mm
016.1303.2	3mm	8mm
016.1304.2	4mm	8mm

PTFE Straight Through Valve – Screw Fitting

2-way valve with screw fittings

Item Number	Bore	Tube Diameter
016.1202.6.2	2mm	6mm
016.1203.2	3mm	8mm
016.1204.2	4mm	8mm



PTFE T-Type Valve – Bayonet Fitting

3-way valve with bayonet fittings



Item Number	Bore	Arm Diameter
016.802.5.2	2mm	4.5mm
016.802.2	2mm	6mm
016.803.7.2	3mm	6.8mm
016.803.2	3mm	8mm
016.804.9.2	4mm	9mm
016.804.2	4mm	10mm
016.805.2	5mm	11mm

Stopcocks

Burette stopcocks for general laboratory use feature a PTFE body and plug. Suitable for medium vacuum/pressure applications and are robust, inert and grease free.

- Available with either polypropylene or glass push-lock tip
- Supplied with borosilicate glass side arm (diameter 8mm)



PTFE Burette (Buret) Stopcock

Burette Stopcock – Polypropylene Tip

Item Number	Bore
016.9202-B	2mm

Burette Stopcock – Glass Tip

Item Number	Bore
016.9203-B	2mm

Replacement Tip

Item Number	Details
016.9202.1	Polypropylene Tip
016.9212.1	Glass Tip





Reactor Lids & Temperature Probes

Reactor Lids & Fittings 74

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Reactor Lids & Fittings

Cowie® PTFE Reactor lid systems provide a versatile means for assembling a range of equipment (e.g. probes, stirrers, baffles, condensers) through NPT screw threads or standard taper joints. They are designed to fit standard flat flanged vessels with an extensive range of NPT fittings and accessories available.

Unless stated otherwise.

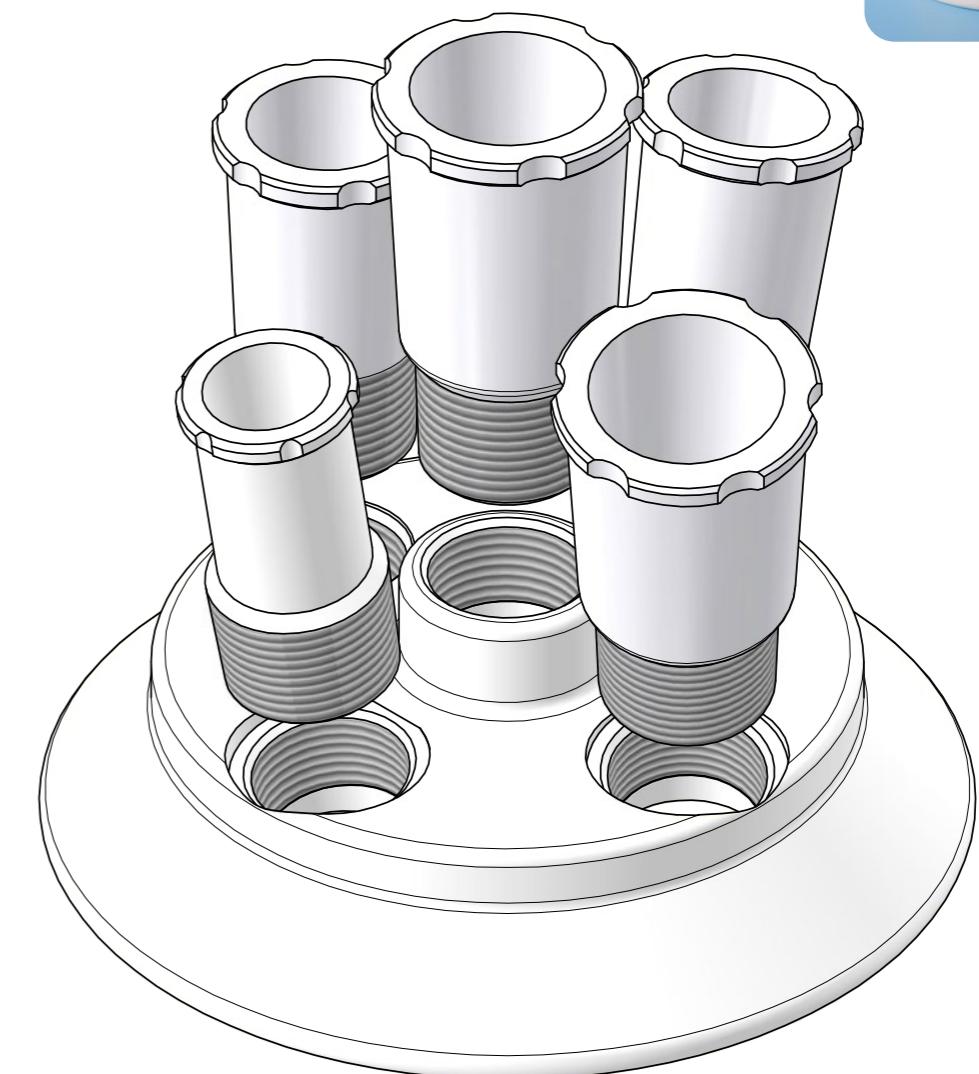
- Virgin grade PTFE conforming to FDA and USP Class VI
- Chemical Resistance is virtually total
- Temperature Range, -200°C to 260°C (-328°F to 500°F)
- Shelf life is considered indefinite within the confines of normal use and storage conditions
- Autoclavable



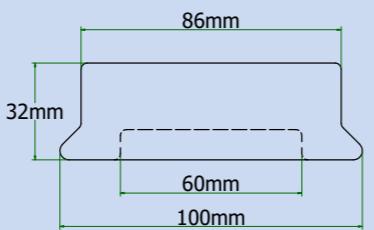
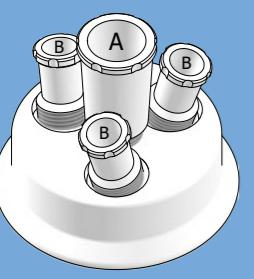
PTFE Reactor Lid, Pre-Assembled

The Pre-Assembled PTFE Reactor Lid System provides a versatile means for assembling a range of equipment (e.g. probes, stirrers, baffles, condensers) through standard taper joints in flat flanged reactors/vessels.

- Fit 60/100/150/200mm Schott® / Duran® type flat flanged vessels
- Supplied with removable and interchangeable standard taper joints with NPT screw thread
- Durable and safe when compared to conventional glass lids
- Customisation available
- See pages 81-84 for reactor lid NPT fittings and accessories
- See pages 58-63 for standard taper joint fittings

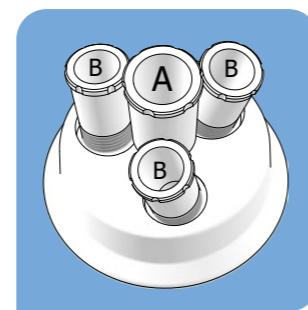


60mm Pre-Assembled Reactor Lids

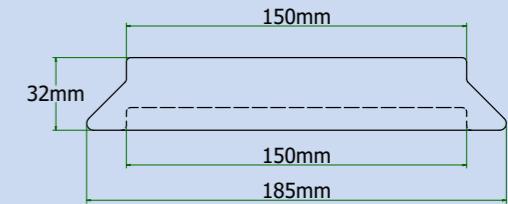


Item Number	Port	Type	Taper	Port Size	Quantity
PC715.060.001	A	Vertical	24/-	1/2" NPT1	1
	B	10° x 10° Compound Angle	14/-	1/2" NPT	3

Item Number	Port	Type	Taper	Port Size	Quantity
PC715.060.002	A	Vertical	24/-	1/2" NPT	1
	B	10° x 10° Compound Angle	19/-	1/2" NPT	3



150mm Pre-Assembled Reactor Lids

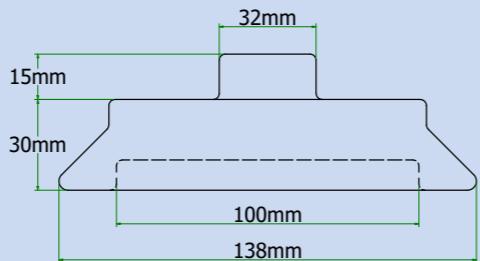
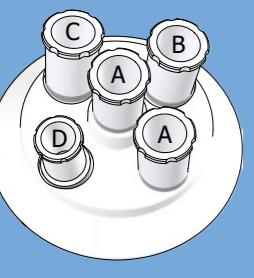


Item Number	Port	Type	Taper	Port Size	Quantity
PC715.150.001	A	Vertical	29/-	1" NPT	2
	B	Vertical	24/-	1" NPT	1
	C	10° x 10° Compound Angle	29/-	1" NPT	1
	D	10° Angle	45/-	1" NPT	1

Item Number	Port	Type	Taper	Port Size	Quantity
PC715.150.002	A	Vertical	34/-	1" NPT	1
	B	Vertical	29/-	1" NPT	2
	C	10° x 10° Compound Angle	29/-	1" NPT	1
	D	10° Angle	45/-	1" NPT	1

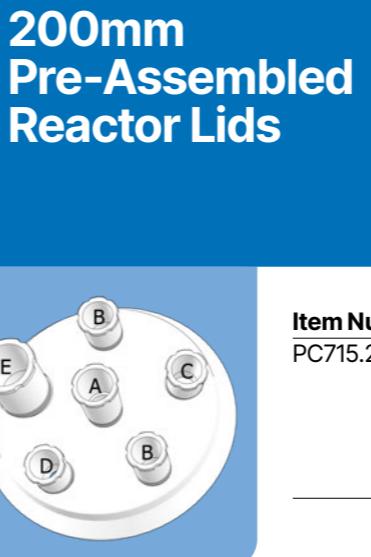
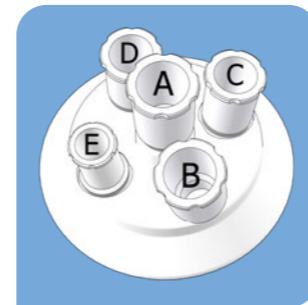


100mm Pre-Assembled Reactor Lids



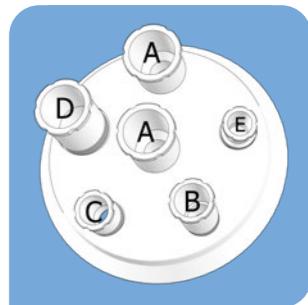
Item Number	Port	Type	Taper	Port Size	Quantity
PC715.100.001	A	Vertical	24/-	3/4" NPT	2
	B	10° Angle	24/-	3/4" NPT	1
	C	10° x 10° Compound Angle	24/-	3/4" NPT	1
	D	10° Angle	19/-	3/4" NPT	1

Item Number	Port	Type	Taper	Port Size	Quantity
PC715.100.002	A	Vertical	29/-	3/4" NPT	1
	B	10° x 10° Compound Angle	29/-	3/4" NPT	1
	C	10° Angle	24/-	3/4" NPT	1
	D	Vertical	24/-	3/4" NPT	1
	E	10° Angle	19/-	3/4" NPT	1



Item Number	Port	Type	Taper	Port Size	Quantity
PC715.200.001	A	Vertical	34/-	1" NPT	1
	B	Vertical	29/-	1" NPT	2
	C	10° x 10° Compound Angle	29/-	1" NPT	1
	D	10° Angle	29/-	1" NPT	1
	E	10° Angle	45/-	1 1/2" NPT	1

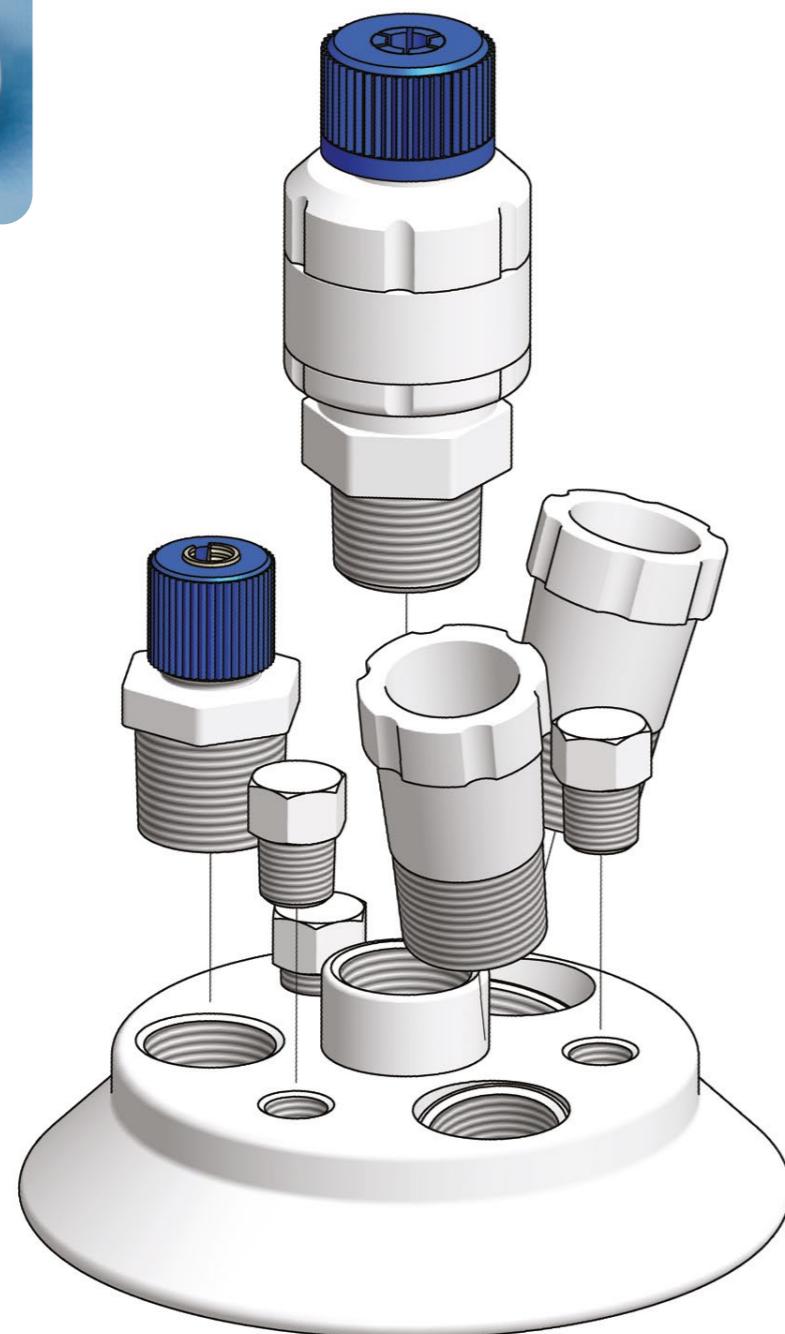
Item Number	Port	Type	Taper	Port Size	Quantity
PC715.200.002	A	Vertical	45/-	1" NPT	2
	B	Vertical	34/-	1" NPT	1
	C	10° Angle	29/-	1" NPT	1
	D	10° Angle	45/-	1 1/2" NPT	1
	E	10° x 10° Compound Angle	24/-	1" NPT	1



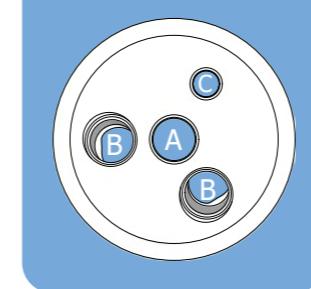
PTFE Reactor Lid, Self Assembly

The Self Assembly PTFE Reactor Lid System provides a versatile means for assembling a range of equipment (e.g. probes, stirrers, baffles, condensers) in flat flanged reactors/vessels.

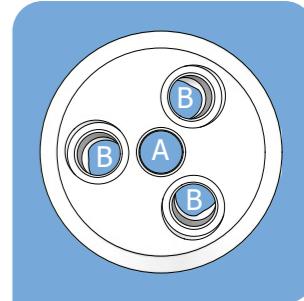
- To fit 60/100/200mm Schott® / Duran® type flat flanged vessels
- Supplied **without** fittings
- Durable and safe when compared to conventional glass lids
- Customisation available
- See pages 81-84 for reactor lid NPT fittings and accessories



60mm Lids for Self Assembly

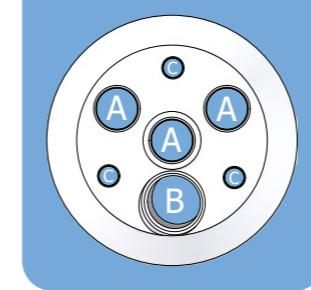


Item Number	Port	Type	Port Size	Quantity
PC705.060.003	A	Vertical	1/2" NPT	1
	B	10° x 10° Compound Angle	1/2" NPT	2
	C	Vertical	1/4" NPT	1

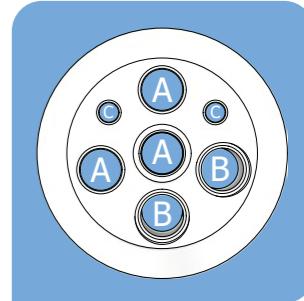


Item Number	Port	Type	Port Size	Quantity
PC705.060.004	A	Vertical	1/2" NPT	1
	B	10° x 10° Compound Angle	1/2" NPT	3

100mm Lids for Self Assembly

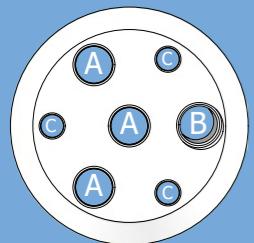


Item Number	Port	Type	Port Size	Quantity
PC705.100.002	A	Vertical	3/4" NPT	3
	B	10° x 10° Compound Angle	1" NPT	1
	C	Vertical	1/4" NPT	3



Item Number	Port	Type	Port Size	Quantity
PC705.100.003	A	Vertical	3/4" NPT	3
	B	10° Angle	3/4" NPT	2
	C	Vertical	1/4" NPT	2

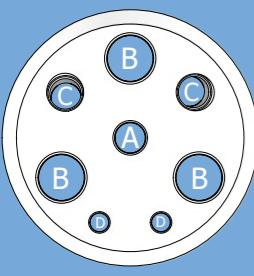
150mm Lids for Self Assembly



Item Number	Port	Type	Port Size	Quantity
PC705.150.002	A	Vertical	1" NPT	3
	B	10° x 10° Compound Angle	1" NPT	1
	C	Vertical	1/2" NPT	3

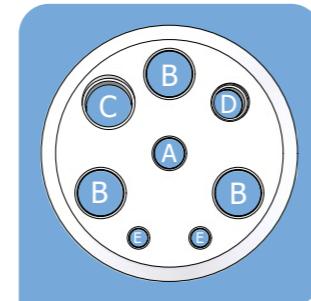
Item Number	Port	Type	Port Size	Quantity
PC705.150.003	A	Vertical	1" NPT	4
	B	10° x 10° Compound Angle	1" NPT	1
	C	Vertical	1/2" NPT	4

200mm Lids for Self Assembly



Item Number	Port	Type	Port Size	Quantity
PC705.200.002	A	Vertical	1" NPT	1
	B	Vertical	1 1/2" NPT	3
	C	10° x 10° Compound Angle	1" NPT	2
	D	Vertical	1/2" NPT	2

Item Number	Port	Type	Port Size	Quantity
PC705.200.003	A	Vertical	1" NPT	1
	B	Vertical	1 1/2" NPT	3
	C	10° x 10° Compound Angle	1 1/2" NPT	1
	D	10° Angle	1" NPT	1
	E	Vertical	1/2" NPT	2



Extension Adapter to fit NPT Port

Extension Adapters with NPT screw thread for direct assembly into Cowie® PTFE Reactor Lids. They provide additional port sizes and raise the height of the entry port enabling a greater range of fittings to be used – can be used with 60mm reactor lid to allow operation of a central stirrer guide.

- Material: Glass Filled PTFE for improved mechanical strength
- Excellent Chemical Resistance

Item Number	Height	NPT Size (Male)	NPT Size (Female)
PC713.025050.GF	45mm	1/4"	1/2"
PC713.050025.GF	50mm	1/2"	1/4"
PC713.050050.GF	50mm	1/2"	1/2"
PC713.050075.GF	55mm	1/2"	3/4"
PC713.075075.GF	57mm	3/4"	3/4"
PC713.075100.GF	56mm	3/4"	1"
PC713.100100.GF	56mm	1"	1"
PC713.100150.GF	70mm	1"	1 1/2"



High Performance Shaft Guide to fit NPT Port

HP Shaft Guide with NPT screw thread fitting for direct assembly into Cowie® Reactor Lids / NPT Extension Adapters. Can be used with Glass or Metal shaft stirrers. The composite PTFE/PEEK seal maintains vacuum over a wide temperature range without shedding particles. A PTFE/PEEK guide ring located at the end of the taper provides a guide to assist alignment of the shaft.

- Exceptional chemical resistance (Note: PEEK has reduced chemical resistance compared to PTFE and may be affected by acids, phenols and halogen based compounds)
- Suitable for vacuum (5mmHg) and pressure (3-5psi) applications
- Maximum recommended speeds: 500rpm (continuous), 800rpm (intermittent)
- Autoclavable (disassemble parts first)
- Replacement parts available
- Variant available with a Standard Taper Joint, see page 41



Item Number	Shaft Diameter	NPT Size
PC710.0819.PK	8mm	3/4"
PC710.0825.PK	8mm	1"
PC710.1019.PK	10mm	3/4"
PC710.1025.PK	10mm	1"
PC710.1225.PK	12mm	1"
PC710.1625.PK	16mm	1"
PC710.1925.PK	19mm	1"

PTFE Blanking Nut to fit NPT Port

PTFE Blanking Nuts/Plugs with NPT screw thread for direct assembly into Cowie® PTFE Reactor Lids. They are designed to seal unused ports.



Item Number	NPT Port Size
PC702.025	1/4"
PC702.050	1/2"
PC702.075	3/4"
PC702.100	1"
PC702.150	1 1/2"

PTFE Reactor Blanking Lid

PTFE blanking lids have no ports and are designed to provide a seal for reaction vessels with Schott®/Duran® type flanges.



Item Number	Flange ID	Outer Diameter	Height
PC706.060	DN60	100mm	16mm
PC706.100	DN100	138mm	20mm
PC706.150	DN150	185mm	22mm
PC706.200	DN200	242mm	20mm

PTFE Compression Fitting for NPT ports

PTFE Compression Fittings with NPT screw thread for direct assembly into Cowie® PTFE Reactor Lids / NPT Extension Adapters. They are designed to securely hold items such as temperature probes and sampling tubes.

- Manufactured from pure PTFE with a PEEK olive to give a secure grip
- Replacement parts available
- Variant available with standard taper joint, see page 59

Metric	Imperial	
Item Number	NPT Size	Bore
PC701.025.03	1/4"	3mm
PC701.025.06	1/4"	6mm
PC701.050.06	1/2"	6mm
PC701.050.07	1/2"	7mm
PC701.050.08	1/2"	8mm
PC701.050.09	1/2"	9mm
PC701.050.12	1/2"	12mm
PC701.050.14	1/2"	14mm
PC701.075.08	3/4"	8mm
PC701.075.12	3/4"	12mm
PC701.075.14	3/4"	14mm
PC701.075.16	3/4"	16mm
PC701.075.19	3/4"	19mm
PC701.100.08	1"	8mm
PC701.100.12	1"	12mm
PC701.100.14	1"	14mm
PC701.100.16	1"	16mm
PC701.100.19	1"	19mm
PC701.100.25	1"	25mm



PTFE Rod Baffle

PTFE Rod Baffles are used to increase agitation and promote thorough mixing. They feature a stainless steel core fully encapsulated in PTFE. Can be assembled with corresponding Compression Fitting.



Item Number	Shaft Diameter	Shaft Length	Baffle (W x D x L)	Total Length
PC708.008.150	8mm	150mm	16mm x 12mm x 150mm	300mm
PC708.008.200	8mm	200mm	16mm x 12mm x 150mm	350mm
PC708.008.250	8mm	250mm	16mm x 12mm x 150mm	400mm
PC708.012.150	12mm	150mm	20mm x 15mm x 200mm	350mm
PC708.012.200	12mm	200mm	20mm x 15mm x 200mm	400mm
PC708.012.250	12mm	250mm	20mm x 15mm x 200mm	450mm
PC708.016.150	16mm	150mm	35mm x 22mm x 250mm	400mm
PC708.016.200	16mm	200mm	35mm x 22mm x 250mm	450mm
PC708.016.250	16mm	250mm	35mm x 22mm x 250mm	500mm

PTFE Standard Taper Joint to fit NPT Port

Standard Taper PTFE Joint Fittings with NPT screw thread for direct assembly into Cowie® PTFE Reactor Lids. Suitable for 'A' and 'B' length tapered joints.



Item Number	NPT Size	Cone Size	Height	Diameter
PC711.1413	1/2"	14/-	45mm	21.5mm
PC711.1913	1/2"	19/-	50mm	27mm
PC711.2413	1/2"	24/-	67mm	33mm
PC711.2913	1/2"	29/-	69mm	40mm
PC711.1919	3/4"	19/-	57mm	27mm
PC711.2419	3/4"	24/-	57mm	34mm
PC711.2919	3/4"	29/-	67mm	40mm
PC711.3419	3/4"	34/-	75mm	45mm
PC711.4519	3/4"	45/-	89mm	58mm
PC711.2425	1"	24/-	60mm	34mm
PC711.2925	1"	29/-	60mm	40mm
PC711.3425	1"	34/-	76mm	45mm
PC711.4525	1"	45/-	90mm	58mm
PC711.2438	1 1/2"	24/-	55mm	45mm
PC711.2938	1 1/2"	29/-	55mm	45mm
PC711.3438	1 1/2"	34/-	55mm	45mm
PC711.4538	1 1/2"	45/-	80mm	58mm

Universal Stirrer Guide to fit NPT Port

Universal Stirrer Guide with NPT Screw Thread Fitting for direct assembly into Cowie® Reactor Lids / NPT Extension Adapters. Can be used with PTFE, Glass or Metal shaft stirrers. The permanently loaded composite PTFE/PEEK seal and glass ball-bearing give rigidity and smoothness of operation.

- Exceptional chemical resistance
- Suitable for vacuum (5mmHg) and pressure (3-5psi) applications
- Maximum recommended speeds: 500rpm (continuous), 800rpm (intermittent)
- Anti-whip / reduced vibration / no shedding
- Autoclavable (disassemble parts first)
- Replacement parts available
- Variant available with a standard taper joint, see page 42

Item Number	Shaft Diameter	Guide Diameter	NPT Size
PC709.0819	8mm	44mm	3/4"
PC709.1019	10mm	44mm	3/4"
PC709.1219	12mm	44mm	3/4"
PC709.0825	8mm	44mm	1"
PC709.1025	10mm	44mm	1"
PC709.1225	12mm	54mm	1"
PC709.1625	16mm	54mm	1"



Temperature Probes



PTFE Platinum Resistance Temperature Probe – PT100

An accurate and reliable temperature probe with all components fully encapsulated in pure PTFE. The body has a stainless steel core for rigidity but can be manually bent. The Total Immersion Probe is suitable for use in autoclaves and most corrosive liquids.

Sensor: PT100 Class A

Cable: 4 wire, white, PFA coated, 1m cable (supplied without plug)*

Response: 50%, 6-14 seconds

- Virgin grade PTFE conforming to FDA and USP Class VI
- Virtually total chemical resistance
- Working Temperature Range, -50°C up to 260°C (-58°F to +500°F)
- Inert and non-contaminating
- Pressure resistant
- Shelf life is considered indefinite within the confines of normal use and storage conditions.

*Plugs and longer cables available on request.



Total Immersion Probe

Item Number	Diameter	Length	
500.050.1	5mm	Body 50mm	

Platinum Resistance Probes

Item Number	Diameter	Body Length	Ferrule Length
500.106.1	6mm	100mm	35mm
500.206.1	6mm	200mm	40mm
500.100.1	7mm	100mm	35mm
500.200.1	7mm	200mm	40mm
500.307.1	7mm	300mm	40mm
500.208.1	8mm	200mm	40mm
500.300.1	8mm	300mm	40mm
500.400.1	8mm	400mm	50mm
500.500.1	9mm	500mm	60mm
500.600.1	9mm	600mm	60mm
500.700.1	9mm	700mm	45mm
500.900.1	9mm	900mm	45mm

PTFE Thermocouple Probe, Type K

An accurate and reliable thermocouple probe with all components fully encapsulated in pure PTFE. The body has a stainless steel core for rigidity but can be manually bent.

Sensor: Type K (Class 1) Thermocouple.

Cable: Green, PFA insulated and coated, 1m cable with miniplugin. (Longer cables available on request)

Response: 50%, 6-14 seconds.

- Virgin grade PTFE conforming to FDA and USP Class VI
- Virtually total chemical resistance
- Working Temperature Range, -50°C up to 260°C (-58°F to +500°F)
- Inert and non-contaminating.
- Pressure resistant
- Shelf life is considered indefinite within the confines of normal use and storage conditions



Item Number	Diameter	Body Length	Ferrule Length
600.101.1	7mm	100mm	35mm
600.106.1	6mm	100mm	35mm
600.201.1	7mm	200mm	40mm
600.206.1	6mm	200mm	40mm
600.208.1	8mm	200mm	40mm
600.301.1	8mm	300mm	40mm
600.307.1	7mm	300mm	40mm
600.401.1	8mm	400mm	50mm
600.501.1	9mm	500mm	60mm
600.601.1	9mm	600mm	60mm
600.701.1	9mm	700mm	45mm
600.901.1	9mm	900mm	45mm

Locations



**World leaders
in the design &
manufacture of
PTFE products**

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All quoted dimensions are nominal; product data sheets are available on request. Product specifications can only be regarded as general information and will not discharge the user from his obligation to ensure the product is suitable for the intended use. In the interest of product development Cowie® reserve the right to alter product specifications without notice.

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