



synthware

Quality Glass for Organic Synthesis at the Most Competitive Prices.

## CATALOG 2021-2022



*Here's our contact information*

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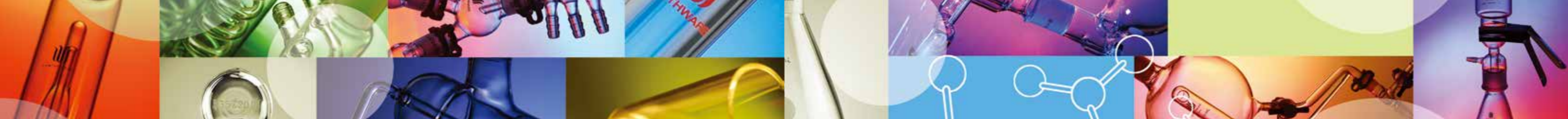
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# KEMTECH AMERICA

ACCESSORIES  
ADAPTER  
BUBBLER  
BOTTLE GAS WASH  
CHROMATOGRAPHY  
CHROMATOGRAPHY SPRAYER  
COLUMN DISTILLATION  
CONDENSER  
DEWAR FLASK  
DISH  
DISTILLATION  
DRYING APPARATUS SOLVENT  
EVAPORATOR, KUDERNA-DANISH  
EXTRACTOR, SOXHLET  
EXTRACTOR  
FILTRATION APPARATUS  
FLASK  
FUNNEL  
POWDER  
PRESSURE EQUALIZING  
FILTER  
SEPARATORY



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## INTRODUCTION

Synthware® Glass was founded in 1992 as a scientific laboratory glassware manufacturing company. Since then, we have become a respected supplier to over 2500 universities, pharmaceutical companies, and research laboratories worldwide. We currently design and manufacture more than 2,000 different products (as shown in the Contents) in order to meet our clients' requirements. Our products provide the highest quality as we use Schott Duran, Simax and BGIF borosilicate 3.3 tubing, and manufacture strictly according to the ASTM Standards. Our new modern manufacturing facility is staffed with 150 skilled technicians and is equipped with advanced automatic tooling machines, CNC Glass Lathes and CNC Machining Lathes from Germany and the United States. In the aspect of management, we have adopted a new management system and talent-oriented ideology. Our goal is to provide the highest quality, lowest cost, and best customer service in the industry.

Kemtech America Inc. has been Synthware Glass' North Americas marketing and sales company since 1992 and now is located in Pleasant Prairie, WI. It has adequate warehousing space and stocks almost 95% products in this catalog. The staff in this warehouse are committed to quick delivery when receiving US customers' orders.

## KEMTECH AMERICA, INC.

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**General Instructions**

**Glass Properties**

All Synthware® glass products meet ASTM Specification E438, Type 1, Class A, “standard specification for glasses in laboratory apparatus”. This borosilicate glass with low linear coefficient of expansion is ideal choice for fabricating laboratory glassware.

Annealing Point.....	560°C
Linear Coefficient of Expansion.....	32 X 10 <sup>-7</sup> /°C
Softening Point.....	820°C
Lowest Temperature for Glass.....	-78°C (Dry Ice)
(Liquid Nitrogen is ok for the glassware only)	
Recommended Max Temperature for Glassware .....	200-230°C
Maximum Temperature for Fritted Glassware.....	150°C
Maximum Temperature for Teflon Components.....	250°F
High Vacuum Range is Approximately.....	1.1 x 10 <sup>-4</sup> Torr
Low Vacuum Range is Approximately.....	1.3 x 10 <sup>-4</sup> Torr

All glassware is autoclavable but does not come sterile. We recommend removing Teflon/Rubber accessories prior to the autoclave process. Glassware with fritted discs can be autoclaved.

Our glassware can stand 2 atmospheres of pressure (15-25 PSI Maximum) at room temperature. Please check all glassware for flaws before applying any amount of pressure. Our pressure vessels are rated for 88 PSI at room temperature.

**Frit Porosities**

Synthware Code	Pore Size (Micron)
EC (X)	80-120
C	40-80
M	15-40
F	5-15

**Trademarks**

Registered trademarks found in this catalog.

- Teflon® -----E.I.DuPont.
- Viton® -----E.I.DuPont.
- Nylon® -----E.I.DuPont.
- Rodaviss® -----S.A.V.France

**Prices**

Prices as shown are current at the time of publication and are subject to change without notice.

**Terms of Payment**

Net 30 days F.O.B shipping point unless otherwise stated in a quotation.

**Shipments**

Unless otherwise instructed, we ship via UPS. Most of the items in this catalog are in stock and can be shipped promptly (typically within 2-3 business days after the receipt of order. Lead times may vary from time to time. If you are in urgent need of your order, please specify when placing your order). If an order cannot be filled completely, a partial shipment will usually be made with the remaining balance being sent as soon as possible. If the complete order is to be shipped in a single shipment, it should be specified on your purchase order.

**Shortage or Breakage**

In case the quantity of material received does not agree with the items ordered, or if the items are received broken, please notify us within 30 business days from the delivery date.

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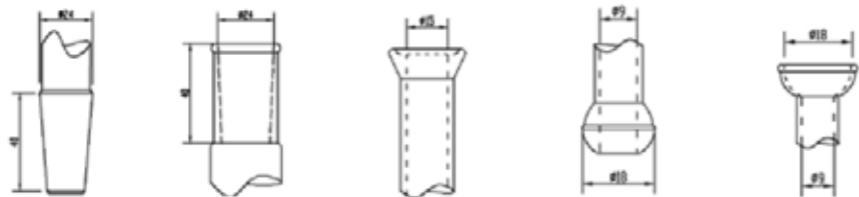
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Dimensions of Joints



Standard Dimensions for Full Length Interchangeable Taper-Ground Joints

Joint Size Number (Designation)	Approximate Diameter at Small End mm	Approximate Length of Ground Zone mm	Diameter of Large End of Ground Zone mm
7/25	5	25	7.5
10/30	7	30	10.0
12/30	9.5	30	12.5
14/35	11	35	14.5
19/38	15	38	18.8
24/40	20	40	24.0
29/42	25	42	29.2
34/45	30	45	34.5
40/50	35	50	40.0
45/50	40	50	45.0
50/50	45	50	50.0
55/50	50	50	55.0
60/55	55	50	60.0

Standard Dimensions for Short Length Interchangeable Taper-Ground Joints

Joint Size Number (Designation)	Approximate Diameter at Small End mm	Approximate Length of Ground Zone mm	Diameter of Large End of Ground Zone mm
7/10	6.3	10	7.0
10/10	9.0	10	10.0
14/10	13.5	10	14.5
24/12	22.8	12	24.0
29/12	28.0	12	29.2
34/12	28.0	12	29.2
40/12	38.8	12	40.0
45/12	43.8	12	45.0
50/12	48.8	12	50.0
55/12	53.8	12	55.0
60/12	58.8	12	60.0

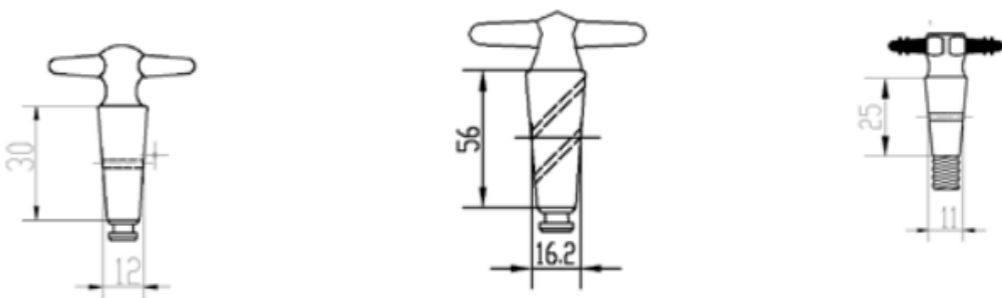
Standard Dimensions for Medium Length Interchangeable Taper-Ground Joints

Joint Size Number (Designation)	Approximate Diameter at Small End mm	Approximate Length of Ground Zone mm	Diameter of Large End of Ground Zone mm
5/12	3.8	12	5.0
7/15	6.0	15	7.5
10/18	8.2	18	10.0
12/18	10.7	18	12.5
14/20	12.5	20	14.5
19/22	16.6	22	18.8
24/25	21.5	25	24.0
29/26	26.6	26	29.2
34/28	31.7	28	34.5
40/35	36.5	35	40.0

Standard Dimensions for Short Length Standard Dimensions for Interchangeable Spherical Ground Joint

Joint Size Number (Designation)	Nominal Diameter of Ball mm	Nominal Tube Inside Diameter mm
21/1	12	1
21/1.5	12	1.5
12/2	12	2
12/3	12	3
12/5	12	5
18/7	18	7
18/9	18	9
28/12	28	12
28/15	28	15
35/20	35	20
35/25	35	25
40/25	40	25
50/30	50	30
65/40	65	40
75/50	72	50

Dimensions for Stopcocks



Stopcocks with Glass Plugs

Single Straight-Bore Stopcocks

Stopcock Size (Designation and Bore of Hole in Plug) mm	Diameter of Plug at Centerline of Bore mm	Length of Shell $\pm 0.5$ mm
1-m (1mm)	7	30
1	12	30
1-1/2	12	30
2	12	30
3	17	40
4	17	40
5	20	40
6	20	44
8	25	52
10	35	56

Single Oblique-Bore Stopcocks

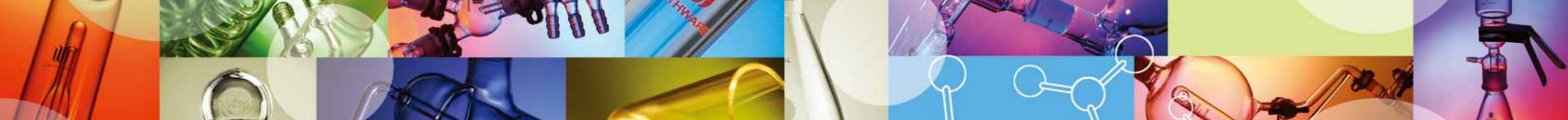
Stopcock Size (Designation And Bore of Hole in Plug) mm	Diameter of plug at Opening Nearest Large End mm (Gauging Point)	Distance of Gauging Point From Large End mm	Length of Shell $\pm 0.5$ mm
1	12.60	14.0	40
1-1/2	12.60	14.0	40
2	12.60	14.0	40
3	17.35	16.5	50
4	17.35	16.5	50

T-Bore 120° Bore Stopcocks

Stopcock Size (Designation and Bore of Hole in Plug) mm	Diameter of Plug at Centerline of Bore mm	Length of Shell $\pm 0.5$ mm
1	17	40
1-1/2	17	40
2	17	40
3	20	44
4	20	44

Double Oblique-Bore Stopcocks

Stopcock Size (Designation and Bore of Hole in Plug) mm	Diameter of Plug at Gauging Point (Center of plug) mm	Distance Gauging Point From Centerline of Hole Nearest Large End mm	Length Of Shell $\pm 0.5$ mm
1	14.5	12.5	50
1-1/2	14.5	12.5	50
2	14.5	12.5	50
3	16.2	14.0	56
4	16.2	14.0	56



## Stopcocks with Teflon® Plugs

Single Straight-Bore Stopcocks

Stopcock Size (Designation and Bore of Hole in Plug) mm	Diameter of Plug at Centerline of Bore mm	Length of Shell ±0.5 mm
1	11	25
2	11	25
3	15.2	30
4	15.2	30
6	16	35

Single Oblique-Stopcocks

Stopcock Size (Designation and Bore of Hole in Plug) mm	Diameter of plug at Opening Nearest Large End mm (Gauging Point)	Distance Of Gauging Point From Large end mm	Length Of Shell ±0.5 mm
2	15.9	11.5	30

T-Bore 120° Bore Stopcocks

Stopcock Size (Designation and Bore of Hole in Plug) mm	Diameter of Plug at Centerline of Bore mm	Length of Shell ±0.5 mm
1	15.2	30
2	15.2	30
4	16	35

Double Oblique-Bore Stopcocks

Stopcock Size (Designation and Bore of Hole in Plug) mm	Diameter of plug at Opening Nearest Large End mm (Gauging Point)	Distance Of Gauging Point From Large end mm	Length Of Shell ±0.5 mm
1	12.9	9.4	44
2	12.9	9.4	44
3	14.4	10.4	44
4	14.4	10.4	44

## Kemtech America Welcomes:



## O-Ring-Organic Solvent Compatibility Chart<sup>1,2</sup>

Organic Solvents	Viton®	EP	Chemraz®505	Chemraz®514 White
Acetic Acid, Glacial	D	B	A	B
Acetic Anhydride	B	B	A	B
Acetone	D	A	A	A
Acetonitrile	A	-	A	A
Ammonia, Anhydrous Liquid	D	A	A	B
Benzene	A	D	A	A
Benzyl Chloride	A	D	A	A
Bromine	A	D	A	A
Butane	A	D	A	A
Carbon Tetrachloride	A	D	B	B
Chloroform	A	D	A	A
Cyclohexane	A	D	A	A
Decane	A	D	A	A
Diethyl Ether	D	D	A	A
Ethanol	C	A	A	A
Ethyl Acetate	D	B	A	A
Gasoline	A	D	A	A
n-Hexane	A	D	A	A
Isobutyl Alcohol	A	A	A	A
Kerosene	A	D	A	A
Methanol	D	A	A	A
Methyl Ethyl Ketone	D	A	A	A
Pentane	A	D	A	A
Propane	A	D	A	A
Pyridine	D	B	A	A
Tetrahydrofuran	D	-	A	A
Toluene	D	D	A	A

- A – Excellent. Volumetric swell is less than 10% after exposure.  
 B – Good. Limited exposure is recommended.  
 C – Fair. Volumetric swell is between 20% - 40% after exposure. Limited  
 Exposure and frequent O-ring replacements may be necessary.  
 D- Poor. Not suitable for these types of reactions/conditions.

<sup>1</sup> We cannot be responsible for use of the above data in specific application. Immersion testing under actual conditions is always recommended. For specific chemical resistance, Please call our office for technical information at 800-472-1658.

<sup>2</sup> Fluorinated products should never be exposed to molten or gaseous alkali metals such as sodium or potassium since vigorous exothermic reaction may occur.

**ADAPTER, BUSHING**

Bushing adapters allow for compact assemblies of dissimilar joints.

Item #	Top Outer Joint	Bottom Inner Joint	Price (each)
A791419	14/20	19/22	21.55
A793519	14/35	19/38	26.74
A793524	14/35	24/40	27.49
A791924	19/38	24/40	31.36
A792434	24/40	34/45	38.46
A792445	24/40	45/50	62.14

**ADAPTER, REDUCING**

With joints at top and bottom.

Item #	Top Joint	Bottom Joint	Price (each)
A201024	10/30	24/40	24.95
A201419	14/20	19/22	20.62
A201424	14/20	24/40	23.63
A201924	19/22	24/40	24.83
A202429	24/40	29/42	28.18
A202434	24/40	34/45	31.59
A202445	24/40	45/50	44.24

**ADAPTER, ENLARGING**

With joints at top and bottom.

Item #	Top Joint	Bottom Joint	Price (each)
A251914	19/22	14/20	23.05
A252414	24/40	14/20	24.49
A252419	24/40	19/22	24.95
A252914	29/42	14/20	26.80
A252924	29/42	24/40	29.40
A253424	34/45	24/40	33.73
A254024	40/50	24/40	51.28
A254529	45/50	29/42	58.16

**ADAPTER, WITH BALL SOCKET**

With top spherical socket joint and lower standard taper inner joint.

Item #	Top Joint	Bottom Joint	Price (each)
A663514	35/20	14/20	30.26
A663524	35/20	24/40	31.30

**ADAPTER, INLET**

For use with gas inlet tubes or plain stem thermometers. Supplied with one holed rubber adapter.

Item #	Joint	Price (each)
A451420	14/20	13.74
A451922	19/22	14.27
A452440	24/40	21.48
<b>Accessory:</b>		
R045	Replacement Rubber Adapter	1.50

**REPLACEMENT RUBBER ADAPTER**

Item #	Joint	Price (each)
R045	Replacement Rubber Adapter	1.50

**ADAPTER, INLET OR THERMOMETER**

With a compression cap and Viton® O-ring to form a vacuum tight seal. To use it as a syringe port, simply replace the O-ring with the Teflon® -lined septum. Cap accommodates a 5.0 - 7.5mm O.D. thermometer. Supplied with one Nylon® cap and one Viton® O-ring.

Item #	Joint	Price (each)
A521420	14/20	22.52
A521922	19/22	23.63
A522440	24/40	24.43
<b>Accessories:</b>		
RC009	Nylon® caps	1.16
R108	Replacement Viton® O-rings, Size 108	1.73

**ADAPTER, INLET, WITH HOSE CONNECTION**

Same as above but with an 8mm hose connection for N2/Ar or vacuum introduction. Supplied with one Nylon® and one Viton® O-ring.

Item #	Joint	Price (each)
A531420	14/20	29.40
A532440	24/40	30.09
<b>Accessories:</b>		
RC009	Nylon® Caps	1.16
R108	Replacement Viton® O-rings, Size 108	1.73



**ADAPTER, VACUUM OR ARGON**

With hose connection on the side and a male joint.

Item #	Joint	Hose O.D. (mm)	Price (each)
A291420	14/20	8	16.17
A291922	19/22	8	16.81
A292440	24/40	10	17.44
A292942	29/42	10	17.90

**ADAPTER, VACUUM/GAS, BALL JOINT**

With a 35/20 ball joint and an 8mm hose connection.

Item #	Joint	Price (each)
A293520	35/20	27.90

**ADAPTER, VACUUM/INERT GAS, 90°**

With a 90° hose connection on the top and a male joint.

Item #	Joint	Hose Connection O.D. (mm)	Price (each)
A921420	14/20	8	16.81
A921922	19/22	8	17.27
A922440	24/40	10	18.02

**ADAPTER, VACUUM, 90° OUTER JOINT**

With a 90° hose connection on the top and a female joint.

Item #	Joint	Hose Connection O.D. (mm)	Price (each)
A951420	14/20	8	16.78
A951922	19/22	8	17.27

**ADAPTER, VACUUM OR ARGON (NITROGEN)**

With a hose connection on the top and a male joint.

Item #	Joint	Hose O.D. (mm)	Price (each)
A301420	14/20	8	15.36
A301922	19/22	8	16.12
A302440	24/40	10	17.16
A302942	29/42	10	18.66

**ADAPTER, INLET**

With an extra coarse fritted disc to prevent solids from being introduced into the reaction system during liquid transfer.

Item #	Joint	Height (mm)	Price (each)
A831420	14/20	65	28.88
A831922	19/22	67	29.57
A832440	24/40	95	30.49

**ADAPTER, VACUUM, OUTER JOINT**

Ideal for use as a vent or for the introduction of pressure/vacuum.

Item #	Joint	Hose O.D. (mm)	Price (each)
A321420	14/20	8	19.52
A322440	24/40	10	20.56

**ADAPTER, TWIN CONNECTING HOSE**

Adapter has two hose connections 180° from one another to permit a flow of inert gas over the apparatus.

Item #	Joint	Hose O.D. (mm)	Price (each)
A341420	14/20	8	19.24
A341922	19/22	8	20.79
A342440	24/40	10	22.06
A342942	29/42	10	23.91



**ADAPTER, VACUUM, WITH 1:5 TEFLON® STOPCOCK**

With an 8mm O.D. hose connection and a 2mm Teflon® stopcock.

Item #	Joint	Price (each)
A381420	14/20	52.67
A381922	19/22	53.77
A382440	24/40	58.21
<b>Accessory:</b>		
S181125	Replacement 2mm Teflon® Plug Only	12.54

**ADAPTER, VACUUM, PTFE STOPCOCK**

Used to regulate the flow of gases or liquids into reaction systems. Teflon® stopcock has a bore of 2mm. With a standard taper inner joint.

Item #	Joint	Stopcock Bore (mm)	Price (each)
A701420	14/20	2	50.24
A701922	19/22	2	51.40
A702440	24/40	2	55.56
<b>Accessory:</b>			
S181125	Replacement 2mm Teflon® Plug Only		12.54

**ADAPTER, OUTER JOINT, PTFE STOPCOCK**

For regulating the flow of gases or liquids into reaction systems. Stopcock has a bore of 2mm. With a standard taper outer joint.

Item #	Joint	Stopcock Bore (mm)	Price (each)
A711420	14/20	2	57.63
A711922	19/22	2	58.28
A712440	24/40	2	62.02
<b>Accessory:</b>			
S181125	Replacement 2mm Teflon® Plug Only		12.54

**ADAPTER, VACUUM, GLASS STOPCOCK, 90°**

Used to regulate the flow of gases or liquids into reaction systems. Stopcock has a bore of 2mm.

Item #	Joint	Stopcock Bore (mm)	Price (each)
A751420	14/20	2	42.85
A751922	19/22	2	44.01
A752440	24/40	2	46.66
<b>Accessory:</b>			
S461230	Replacement 2mm Glass Plug Only		11.61
S691230	Replacement S.S. Retention for 2mm Glass Stopcock		2.43

**ADAPTER, VACUUM, GLASS STOPCOCK**

Used to regulate the flow of gases or liquids into reaction systems. Stopcock has a bore of 2mm.

Item #	Joint	Stopcock Bore (mm)	Price (each)
A611420	14/20	2	40.37
A611922	19/22	2	41.46
A612440	24/40	2	47.88
<b>Accessory:</b>			
S461230	Replacement 2mm Glass Plug Only		11.61
S691230	Replacement S.S. Retention Kit for 2mm Glass Stopcock		2.43

**ADAPTER, OUTER JOINT, GLASS STOPCOCK**

For regulating the flow of gases or liquids into reaction systems. With an 8mm or 10mm hose connection.

Item #	Joint	Stopcock Bore (mm)	Price (each)
A691420	14/20	2	49.67
A692440	24/40	2	54.05
<b>Accessory:</b>			
S461230	Replacement 2mm Glass Plug Only		11.61
S691230	Replacement S.S. Retention Kit for 2mm Glass Stopcock		2.43

**ADAPTER, FLUSHING**

With a 2mm T-bore PTFE stopcock.

Item #	Joint	Stopcock Type	Price (each)
A681420	14/20	Teflon	85.59
A681922	19/22	Teflon	86.51
A682440	24/40	Teflon	87.66
A681420G	14/20	Glass	76.00
A681922G	19/22	Glass	76.93
A682440G	24/40	Glass	83.49
<b>Accessory:</b>			
S201530	2mm Teflon® T-bore Stopcock Plug		27.78
S510217	Replacement "T"- bore Glass Plug, 2mm Hole		15.77
S691230	Replacement S.S. Retention Kit for 2mm Glass Stopcock		2.43



**ADAPTER, VACUUM/INERT GAS**

With a 4mm T-bore glass stopcock having constant pressure retention device or a 2mm T-bore 1:5 taper Teflon® plug.

Item #	Joint	Stopcock Type	Price (each)
A881420G	14/20	Glass	65.78
A882440G	24/40	Glass	69.13
A881420	14/20	Teflon	87.73
A882440	24/40	Teflon	91.01
<b>Accessories:</b>			
S201530	2mm Teflon "T"-bore Stopcock Plug		27.78
S511740	4mm Glass "T"-bore Stopcock Plug		19.01
S691740	Replacement S.S. Retention for 4mm Glass Stopcock		2.43

**ADAPTER, THERMOMETER**

With a 10/30 thermometer joint. Angled for use in multiple neck flasks.

Item #	Joint	Price (each)
A162440	24/40	56.66

**INLET ADAPTER**

With an elongated inlet tube.

Item #	Joint	Hose O.D. (mm)	Tube Length (mm)	Price (each)
A314075	24/40	10	75	24.55
A314250	24/40	10	250	25.99

**ADAPTER, FLOW CONTROL, METERING STOPCOCK, 90°**

Provides on/off control with the main valve. Allows delivery of preset volumes of gases or liquids to reactions using the needle valve.

Item #	Joint	Stopcock Bore (mm)	Price (each)
A721420	14/20	2	74.61
A721922	19/22	2	80.22
A722440	24/40	2	81.26
<b>Accessory:</b>			
S191125	Replacement 2mm Teflon® Metering Plug		45.05

**ADAPTER, FLOW CONTROL, METERING STOPCOCK**

Adapter has a 2mm Teflon® metering stopcock between the top outer and lower inner standard taper joints, to permit flow control of fluids between apparatus.

Item #	Joint	Stopcock Bore (mm)	Price (each)
A732440	24/40	2	104.99
<b>Accessory:</b>			
S191125	Replacement 2mm Teflon® Metering Plug		45.05

**ADAPTER, FLUSHING**

With a 2mm T-bore PTFE stopcock

Item #	Joint	Price (each)
A761420	14/20	93.44
A762440	24/40	96.67
<b>Accessory:</b>		
S201530	2mm Teflon "T"-bore Stopcock Plug	27.78

**ADAPTER, CONNECTING**

With a 2mm Teflon stopcock. Converts standard vessels to airless applications.

Item #	Joint	Price (each)
A192424	24/40	77.62
<b>Accessory:</b>		
S181125	Replacement 2mm Teflon® Plug Only	12.54



**ADAPTER, VACUUM TRANSFER**

With a 2mm Teflon® stopcock. For transfer of sensitive and hazardous solutions.

Item #	Joint	Price (each)
A121420	14/20	128.90
A121922	19/22	128.90
A122440	24/40	131.90
<b>Accessory:</b>		
S181125	Replacement 2mm Teflon® Plug Only	12.54

**ADAPTER, INLET WITH HOSE CONNECTION**

With vacuum take-off and drip tip.

Item #	Joint	Hose O.D. (mm)	Price (each)
A431420	14/20	8	35.00
A431922	19/22	8	35.75
A432440	24/40	10	46.43

**ADAPTER, VACUUM**

With a 2mm straight-bore PTFE or glass stopcock.

Item #	Joint	Stopcock Type	Price (each)
A741420	14/20	Teflon	62.14
A741922	19/22	Teflon	66.87
A742440	24/40	Teflon	68.03
A741420G	14/20	Glass	58.97
A741922G	19/22	Glass	62.60
A742440G	2440	Glass	63.76
<b>Accessory:</b>			
S181125	Replacement 2mm Teflon® Plug Only		12.54
S461230	Replacement 2mm Glass Plug Only		11.61
S691230	Replacement S.S. Retention Kit for 2mm Glass Stopcock		2.43

**ADAPTER, DISTILLATION, BENT, 105°**

Also used as rotary evaporator washer. When filled with ethanol or Acetone, and suddenly, with finger released, the mashing solvent is sprayed into the rotavapor condenser and thus cleans the entire system. Very simple and handy.

Item #	Joint	Price (each)
A412440	24/40	30.84

**ADAPTER, DISTILLING, 105°**

With an outer joint at the top. Tapered drip tube extends into open receivers.

Item #	Joint	Height * Width (mm)	Price (each)
A961922	19/22	90×60	23.56
A962440	24/40	141×105	24.49

**GROUND JOINT, REDUCED DIAMETER, EXTENDED, DRIP TUBE**

Inner joint with a sealed on lower tube extending 6" below the grind. Has the same O.D. tubing on both ends of the grind.

Item #	Joint	Length Below Joint (mm)	Tubing O.D. (mm)	Price (each)
A501420	14/20	153	8	18.94
A501922	19/22	153	10	20.91
A502440	24/40	153	12	22.87

**ADAPTER, TRANSFER VALVE**

The 0-4mm high vacuum valve has two Viton® O-rings on the shaft and an integral PTFE O-ring on the tip.

Item #	Joint	Overall Height × Width (mm)	Price (each)
A391420	14/20	150×75	107.53
A392440	24/40	180×75	110.30
<b>Accessory:</b>			
S600004T	0-4mm PTFE Protected High Vacuum (Fully Enclosed)		34.76



**ADAPTER, DRYING TUBE, "U" SHAPED**

With a tapered joint. Cotton is usually used to contain drying agent.

Item #	Joint	Price (each)
A851420	14/20	29.57
A851922	19/22	31.13
A852440	24/40	37.72

**ADAPTER, DRYING TUBE, STRAIGHT**

With top and bottom joints.

Item #	Joint	Price (each)
A861420	14/20	26.57
A861922	19/22	28.53
A862440	24/40	35.29

**ADAPTER, DRYING TUBE, 75°**

Angled at 75° to avoid desiccant contact with reactions.

Item #	Joint	Price (each)
A871420	14/20	27.21
A871922	19/22	29.40
A872440	24/40	37.77

**ADAPTER, DISTILLATION CONNECTING**

For use as a component in atmospheric or vacuum distillations.

Item #	Top Joint	Bottom Joint	Side Joint	Immersion (Bottom of Top Joint to Bottom of Side Hole) (mm)	Price (each)
A351014	10/18	14/20	14/20	50	35.75
A351019	10/18	19/22	19/22	50	38.35
A351024	10/18	24/40	24/40	76	45.80
A351420	14/20	14/20	14/20	76	34.14
A351922	19/22	19/22	19/22	76	36.68
A352440	24/40	24/40	24/40	76	43.66
A351424	14/20	24/40	24/40	76	43.14
A354914	14/20	24/40	19/22	76	43.84

**THERMOMETER, WITH 10/18 JOINT**

Immersion length is measured from the bottom of the 10/18 joint to lower end of kerosene bulb. Accuracy is  $\pm 1^{\circ}\text{C}$ .

Item #	Immersion (mm)	Range ( $^{\circ}\text{C}$ )	Price (each)
T162511	25	-20 to 110	57.81
T162525	25	-20 to 250	60.93
T165011	50	-20 to 110	63.53
T165025	50	-20 to 250	67.40
T167611	76	-20 to 110	75.14
T167625	76	-20 to 250	79.18

**ADAPTER, DISTILLING, 75°**

With a compression cap (RC009) and a Viton® O-ring for forming a vacuum tight seal of a plain thermometer.

Item #	Joint	Height × Width (mm)	Price (each)
A971420	14/20	110*55	34.94
A971922	19/22	110*55	36.38
A972440	24/40	155*100	45.34

**Accessories:**

RC009	Nylon® cap	1.16
R107	Replacement Viton® O-rings, size 107	1.73

**ADAPTER, DISTILLING, BENT, 105°**

With an inner drip joint at the bottom and an outer joint at the top.

Item #	Top Joint	Bottom Joint	Price (each)
A891420	14/20	14/20	33.56
A891922	19/22	19/22	34.77
A892440	24/40	24/40	42.97

**ADAPTER, INLET, LONG STEM**

With a standard taper outer top and lower inner joints with a sealed in lower tube extending below the inner joint

Item #	Joint	Tube Length Below Joint (mm)	Price (each)
A651420	14/20	100	37.42
A652440	24/40	200	49.55





#### ADAPTER, VACUUM TAKE-OFF, SHORT STEM

With a hose connection and a drip tip.

Item #	Joint	Hose Connection (mm)	Price (each)
A621420	14/20	8	38.18
A621922	19/22	8	40.26
A622440	24/40	10	44.47
A622942	29/42	10	46.89



#### ADAPTER, DISTILLATION HEAD

Vacuum jacketed. The 10/18 top joint accommodates a 76mm immersion thermometer.

Item #	Top Joint	Other Joint	Price (each)
A542440	10/18	24/40	249.08
<b>Accessory:</b>			
T167625	76mm Immersion Thermometer -20 °C to 250 °C		79.18



#### ADAPTER, DISTILLATION CONNECTING, VIGREUX

Accommodates a 76mm immersion thermometer.

Item #	Top Joint	Bottom Joint	Side Joint	Price (each)
A131024	10/18	24/40	24/40	56.71
<b>Accessory:</b>				
T167625	76mm Immersion Thermometer -20 °C to 250 °C			79.18



#### ADAPTER, DISTILLATION

With a threaded thermometer port. Supplied with a Nylon cap (RC009) and Viton O-ring (R107) to accommodate a 6-7.5mm O.D. plain thermometer.

Item #	Joint	Price (each)
A901420	14/20	66.24
A901922	19/22	70.34
A902440	24/40	88.88
<b>Accessory:</b>		
RC009	Nylon® cap	1.16
R107	Replacement Viton® O-rings, size 107	1.73



#### ADAPTER, DISTILLATION

With a 10/18 joint on the vertical side tube for a 76mm immersion thermometer.

Item #	All Joints	Thermometer Joint	Price (each)
A362410	24/40	10/18	79.23
<b>Accessory:</b>			
T167625	76mm Immersion Thermometer		79.18



#### ADAPTER, CLAISEN

Provides dual entry into a variety of flasks.

Item #	Joint	Price (each)
A371420	14/20	44.12
A371922	19/22	44.99
A372440	24/40	51.05
A372942	29/42	56.20



#### ADAPTER, CONNECTING

Three-arm design for the assembly of three vessels.

Item #	Joint	Price (each)
A331420	14/20	57.70
A332440	24/40	61.62



#### ADAPTER, CLAISEN

Three-inlet type for multiple entries into a single neck flask. One side joint is at a 45° angle.

Item #	Joint	Price (each)
A111420	14/20	74.21
A112440	24/40	89.34



**ADAPTER, CONNECTING**

Three-arm design for the assembly of three vessels.

Item #	Joint	Price (each)
A101420	14/20	54.05
A102440	24/40	59.78

**ADAPTER, BENT, 75°**

With inner joints at each end.

Item #	Joint	Price (each)
A151420	14/20	24.49
A151922	19/22	25.29
A152440	24/40	29.63

**ADAPTER, VACUUM FILTRATION**

Used with a plain stem Buchner funnel and pluro-stopper. Hose Connection has an O.D. of 10mm at the largest serration. Order pluro-stoppers separately.

Item #	Lower Joint	Pluro-stopper Size	Fits Funnel Capacity	Price (each)
A841420	14/20	#1	2 to 20	34.88
A842415	24/40	#3	15 to 150	49.04
A842440	24/40	#5 or #6	350 to 5000	49.84

**ADAPTER, WITH MINERAL OIL BUBBLER**

With a 10mm O.D. hose connection.

Item #	Joint	Price (each)
A402440	24/40	126.59

**ADAPTER, KJELDAHL TRAP**

Distance between joints is 100mm. Useful in the sub-boiling separation of mixtures having volatile components.

Item #	Joint	Hose O.D. (mm)	Price (each)
A491420	14/20	8	67.05

**ADAPTER, KJELDAHL TRAP**

Distance between center of joints is approximately 200mm.

Item #	Joint	Price (each)
A172440	24/40	91.89

**ADAPTER, ANTI-CLIMB**

Bump Trap – Trap provides expanded volume for reactions that have a tendency to foam excessively. The inner vapor tube is sealed to the top of the trap to prevent entry into the condenser.

Item #	Top Joint	Bottom Joint	Capacity (mL)	Price (each)
A272414	24/40	14/20	100	89.97
A272419	24/40	19/22	100	90.67
A274100	24/40	24/40	100	92.17
A272250	24/40	14/20	250	93.32
A274250	24/40	24/40	250	98.41
A279450	29/42	24/40	250	105.86

**ADAPTER, DISTILLING TRAP**

Bump Trap – Adapter is placed above flask to prevent carry-over of reactions which have a tendency to foam.

Item #	Upper Joint	Lower Joint	Capacity (mL)	Price (each)
A262414	24/40	14/20	100	48.74
A262419	24/40	19/22	100	49.43
A264100	24/40	24/40	100	50.19



**ADAPTER, ANTI-SPLASH**

Bump Trap - This design prevents possible contamination from the rotary evaporator. No drain holes.

Item #	Upper Joint	Lower Joint	Capacity (mL)	Price (each)
A282414	24/40	14/20	100	85.59
A282419	24/40	19/22	100	86.39
A282424	24/40	24/40	100	86.69
A282914	29/42	14/20	100	90.04
A282924	29/42	24/40	100	91.25
A281250	24/40	14/20	250	86.05
A289250	24/40	19/22	250	88.88
A284250	24/40	24/40	250	91.82
A282250	29/42	24/40	250	93.32
A288250	29/42	24/40	250	93.90

**ADAPTER, ANTI-SPLASH WITH FRITTED DISC**

Bump Trap – Similar to A28- series except with an extra coarse fritted disc sealed above the lower inner joint. The frit reduces foam from being carried over. No drain holes – with frit.

Item #	Top Joint	Bottom Joint	Capacity (mL)	Price (each)
A232414	24/40	14/20	100	116.49
A232419	24/40	19/22	100	117.18
A232424	24/40	24/40	100	117.87
A231250	24/40	14/20	250	119.54
A234250	24/40	24/40	250	119.54

**ADAPTER, ANTI-SPLASH, MODIFIED**

Bump Trap – Self-washing, Rotary Evaporator.

With two 4mm drain holes at the base of the inner tube to allow solvents to drain back into the evaporation flask. No frit – with drain holes.

Item #	Upper Joint	Lower Joint	Capacity (mL)	Price (each)
A602414	24/40	14/20	100	88.01
A602419	24/40	19/22	100	88.70
A602424	24/40	24/40	100	89.11
A602914	29/42	14/20	100	90.96
A602924	29/42	24/40	100	91.71
A601250	24/40	14/20	250	88.54
A604250	24/40	24/40	250	92.93

**ADAPTER, ANTI-SPLASH, WITH FRITTED DISC (MODIFIED)**

Bump Trap – Self-washing, Rotary Evaporator.

Similar to A60- series except with an extra coarse fritted disc sealed above the lower inner joint. Frit reduces foam overflow from being drawn into the condenser. With two 4mm drain holes and frit.

Item #	Upper Joint	Lower Joint	Capacity (mL)	Price (each)
A462414	24/40	14/20	100	118.80
A462424	24/40	24/40	100	119.84
A461250	24/40	14/20	250	122.43
A464250	24/40	24/40	250	123.82

**VAPOR DUCT, ROTARY EVAPORATOR**

Precision ground and polished. Meets manufacturer standards.

Item #	Model Type	Joint	Price (each)
V222440	Ika	24/40	102.80
V222440H	Heidolph	24/40	102.80

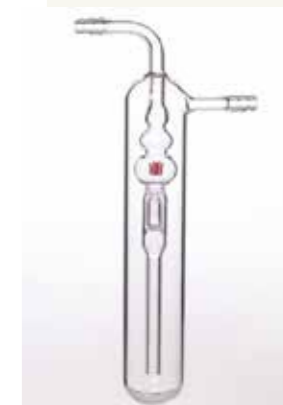
**BUBBLER, MINERAL OIL**

With a 10mm O.D. hose connection.

Item #	Body O.D. (mm)	Overall Height × Width (mm)	Price (each)
B257040	26	185*80	32.46
B257040L	26	500*80	56.94

Item #	Body O.D. (mm)	Overall Height × Width (mm)	Price (each)
B257040D	32	220*92	58.21

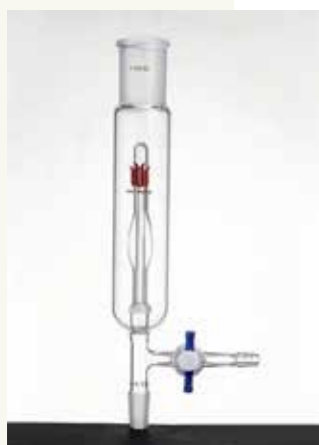
\*HAS ANTI-SYPHON IN THIS PRODUCT.



**RAPID PURGE VALVE**

An efficient purge valve that allows rapid 100% replacement of air in a manifold or reaction vessel, with an inert gas, such as Nitrogen. No need to watch manometers, hand control gas flow, or install warning systems to prevent accidents. Expensive gases are conserved. Once purging is complete, the flow can be cut to almost zero. Overall dimensions are 150mm high x 165mm wide. Hose connections have an O.D. of 11mm at the largest serration. Supplied complete with instructions, but not oil. B241656G has the high vacuum valve on the underside of the apparatus. B241656 has the vacuum valve on the side of the apparatus.

Item #	Valve Size	Overall Size	Hose Connection O.D.	Price (each)
B241656G	0-4mm	150mm x 165mm	11mm	262.32
B241656	0-4mm	150mm x 165mm	11mm	269.77

**BUBBLER**

With small ball joints to prevent mineral oil being sucked back under sudden negative pressure in the system.

Item #	Top Joint	Bottom Joint	Length (mm)	Price (each)
B262914	29/42	14/20	157	72.19
B262924	29/42	24/40	157	76.41
<b>Accessory:</b>				
S181125	Replacement 2mm Teflon® Plug Only			12.54

**BUBBLER**

With small ball joints to prevent mineral oil being sucked back under sudden negative pressure into the system.

Item #	Top Joint	Bottom Connection	Length (mm)	Price (each)
B262910	29/42	10mm Hose Connection	157	70.34
<b>Accessory:</b>				
S181125	Replacement 2mm Teflon® Plug Only			12.54

**BOTTLE, GAS WASHING, FRITTED**

Gas washing bottle with standard taper 45/50 cap style stopper And a fritted disc angled at 15° for even distribution of gas throughout absorbing material. Available with a coarse or extra coarse fritted disc. Order plastic clip separately (NOT SUPPLIED).

Item #	Capacity (mL)	Approx. Height (mm)	Porosity	Price (each)
B300125C	125	290	C	178.97
B300125X	125	290	X	178.97
B300250C	250	305	C	208.02
B300500C	250	380	C	223.44
B300500X	500	380	XC	227.77
<b>Replacement Components:</b>				
CS004550	Plastic Clamp, 45/50			6.65

**BOTTLE, GAS WASHING, FRITTED**

Gas washing bottle with an extra-large diameter (60mm) fritted disc sealed into the bottom of the bottle to enable increased gas throughout and uniform gas distribution. Available with coarse fritted disc. The 24/40 standard taper top outer joint accepts an A292440 gas inlet adapter which is supplied with the bottle.

Item #	Capacity (mL)	Approx. Height (mm)	Porosity	Price (each)
B310350C	350	250	C	208.36
<b>Replacement Components:</b>				
A292440	Adapter, 24/40 Gas Inlet Adapter, 8mm Hose Connection			17.44
CS002440	24/40 Joint Clip, Plastic			3.76





### COLUMN, DISTILLING, VIGREUX

Column length is measured from the highest to lowest indent in the column.

Item #	Indentation Length (mm)	Upper Joint	Lower Joint	Price (each)
C101075	75	14/20	14/20	54.23
C101100	100	14/20	14/20	54.63
C101420	120	14/20	14/20	55.67
C101922	120	19/22	19/22	56.66
C109130	130	19/22	19/22	57.06
C102441	120	24/40	24/40	57.75
C104150	150	24/40	24/40	58.56
C102442	200	24/40	24/40	59.20
C102443	300	24/40	24/40	74.96

### CONDENSER, DISTILLATION, VACUUM, JACKETED

With 12mm I.D. indentations to support packing material. Vacuum jacketed to improve performance.

Item #	Joint	Jacket Height (mm)	Price (each)
C161100	14/20	130	167.24
C164250	24/40	250	180.06

### DISTILLING COLUMN PACKING

Particle type mini-glass coils packing and can be "poured" into any laboratory or pilot scale column. Easily removed for replacement or cleaning. Approximately: 1,850 pcs/pack (0.5 liters/pack)

Item #	Material	Size O.D. X L (mm)	Price (500g/Pack)
D240001	Glass	4*12	71.96

### CONDENSER, DISTILLATION

Indentations at the bottom for supporting packing material.

Jacket permits the column to be used as a condenser.

Item #	Joint	Jacket Height (mm)	Column Overall Height (mm)	Price (each)
C171120	14/20	110	180	55.27
C171200	14/20	200	280	57.35
C179110	19/22	110	200	59.02
C179200	19/22	200	280	61.05
C174200	24/40	200	330	69.07

### CONDENSER, DISTILLATION, REMOVABLE HOSE CONNECTIONS

Indentations at the bottom for supporting packing material.

Jacket permits the column to be used as a condenser.

Item #	Joint	Jacket Height (mm)	Column Overall Height (mm)	Price (each)
C571120	14/20	110	180	60.18
C571200	14/20	200	280	61.62
C579110	19/22	110	200	62.78
C574200	24/40	200	330	71.61

#### Accessories:

RC14	#14 Nylon Cap with 9.5mm Hole	1.33
R201402	Replacement Hose Connection - Straight	1.68

### CONDENSER, COLD FINGER, WITH DRIP TIP

Extended offset lower tip for drip control.

Item #	Joint	Length Below Joint (mm)	Hose O.D. (mm)	Price (each)
C111420	14/20	100	8	50.94
C114150	24/40	150	10	61.45
C114200	24/40	200	10	70.40
C114250	24/40	250	10	74.38



**CONDENSER, FRIEDRICHS, WITH 24/40 JOINT**

With a joint at 15° angle.

Item #	Top Joint	Bottom Joint	Overall Height (mm)	Price (each)
C212440	24/40	24/40	330	147.61
C214550	24/40	45/50	340	180.30

**CONDENSER, FRIEDRICHS, REMOVABLE HOSE CONNECTIONS**

With a joint at a 15° angle. Supplied complete with a Nylon cap and hose connections.

Item #	Top Joint	Bottom Joint	Overall Height (mm)	Hose Connection (mm)	Price (each)
C272440	24/40	24/40	330	10	160.78
<b>Accessories:</b>					
RC14	#14 Nylon Cap with a 9.5mm Hole				1.33
R201402	Replacement Hose Connection-Straight				1.68

**CONDENSER, FRIEDRICHS**

With hose connections.

Item #	Joint	Overall Height (mm)	Hose Connection (mm)	Price (each)
C232440	24/40	330	10	142.59

**CONDENSER, REFLUX**

Coil style reflux condenser with tightly wrapped coil providing maximum cooling. Excellent for use with volatile solvents. Condenser has a top outer standard taper joint and lower inner drip tip joint. Hose connections have an O.D. of 8mm or 10mm at the middle serration.

Item #	Jacket Length (mm)	Joint	Overall Height (mm)	Hose Connection (mm)	Price (each)
C261100	100	14/20	205	8	122.20
C262280	180	14/20	305	8	141.14
C269100	100	19/22	205	8	128.78
C264125	125	24/40	275	10	162.57
C264175	175	24/40	325	10	167.88
C264225	225	24/40	375	10	179.20
C264275	275	24/40	425	10	185.26

**CONDENSER, REFLUX, REMOVABLE HOSE CONNECTIONS**

Coil style reflux condenser with tightly wrapped coil providing maximum cooling. Excellent for use with volatile solvents. Condenser has a top outer standard taper joint and lower inner drip tip joint.

Item #	Jacket Length (mm)	Joint	Overall Height (mm)	Hose Connection (mm)	Price (each)
C561100	100	14/20	210	8	137.68
C562280	180	14/20	305	8	140.56
C564125	125	24/40	285	8	162.57
C564175	175	24/40	335	8	167.88
C564225	225	24/40	375	8	179.20
<b>Accessories:</b>					
RC14	#14 Nylon® Cap with a 9.5mm Hole				1.33
R201402	Replacement Hose Connection-Straight				1.68

**CONDENSER, COILED**

With joints at top and bottom.

Item #	Jacket Length (mm)	Joint	O.D. Hose Connection (mm)	Price (each)
C121100	100	14/20	8	120.47
C121120	120	14/20	8	123.19
C129200	200	19/22	8	127.97
C124200	200	24/40	10	134.79
C124300	300	24/40	10	159.51
C124400	400	24/40	10	181.63



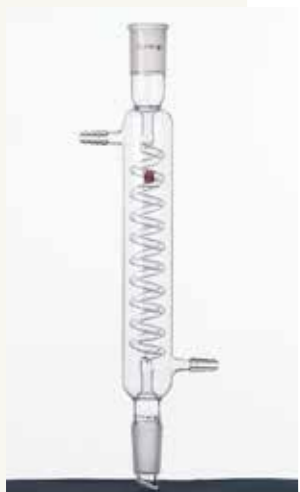
**CONDENSER, COILED, REMOVABLE HOSE CONNECTIONS**

With joints at top and bottom.

Item #	Jacket Length (mm)	Joint	O.D. Hose Connection (mm)	Price (each)
C524200	200	24/40	10	138.95
C524300	300	24/40	10	160.72
C524400	400	24/40	10	184.52
C528300	300	29/42	10	168.35

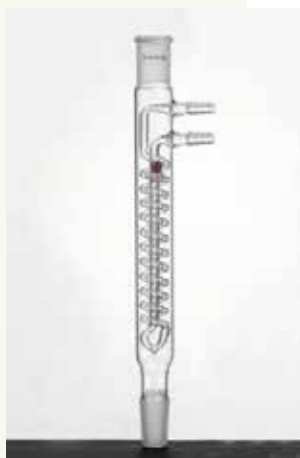
**Accessories:**

RC14	#14 Nylon® Cap with a 9.5mm Hole	1.33
R201402	Replacement Hose Connection-Straight	1.68

**CONDENSER, GRAHAM**

With hose connections.

Item #	Joint	Jacket Length (mm)	O.D. Hose Connection (mm)	Price (each)
C141120	14/20	120	8	98.52
C149200	19/22	200	8	107.59
C144200	24/40	200	8	115.22
C144250	24/40	250	10	119.03
C144300	24/40	300	10	122.89
C144400	24/40	400	10	133.17

**CONDENSER, REFLUX, LARGE COOLING CAPACITY**

Jacket has an O.D. of 40mm while coil O.D. is 8mm to provide maximum cooling capacity.

Item #	Coil Length (mm)	Joint	Overall Height (mm)	Hose Connection (mm)	Price (each)
C314125	125	24/40	300	10	179.26
C314175	175	24/40	350	10	217.67

**CONDENSER, REFLUX, LARGE COOLING CAPACITY, REMOVABLE HOSE CONNECTIONS**

Jacket has an O.D. of 40mm while coil O.D. is 8mm to provide maximum cooling capacity.

Item #	Coil Length (mm)	Joint	Overall Height (mm)	Hose Connection (mm)	Price (each)
C534125	125	24/40	300	8	182.95

**Accessories:**

RC14	#14 Nylon Cap with a 9.5mm Hole	1.33
R201402	Replacement Hose Connection-Straight	1.68

**CONDENSER, REFLUX**

Coil section is 100mm in height

Item #	Joint	Price (each)
C351420	14/20	128.38
C351922	19/22	133.06





### CONDENSER, ALLIHN

With joints at the top and the bottom.

Item #	Jacket Length (mm)	Joint	O.D. Hose Connection (mm)	Price (each)
C251120	120	14/20	8	76.23
C259200	200	19/22	8	83.74
C259300	300	19/22	8	95.35
C251200	200	24/40	10	87.55
C254300	300	24/40	10	98.93
C254400	400	24/40	10	104.24
C255300	300	29/42	10	109.73
C255400	400	29/42	10	113.07



### CONDENSER, ALLIHN, REMOVABLE HOSE CONNECTIONS

With joints at the top and the bottom.

Item #	Jacket Length (mm)	Joint	O.D. Hose Connection (mm)	Price (each)
C621120	120	14/20	8	92.17
C621200	200	24/40	8	98.01
C624300	300	24/40	8	110.30
C624400	400	24/40	10	125.55
C625300	300	29/42	10	117.06
<b>Accessories:</b>				
RC14	#14 Nylon Cap with a 9.5mm Hole			1.33
R201402	Replacement Hose Connection-Straight			1.68



### CONDENSER WEST, REMOVABLE HOSE CONNECTIONS

With narrow annular space for high cooling efficiency.

Item #	Joint	Jacket Length (mm)	Price (each)
C551110	14/20	110	58.67
C550190	14/20	190	63.13
C554100	24/40	100	71.61
C551190	24/40	190	76.99
C554200	24/40	200	79.58
C554300	24/40	300	84.26
<b>Accessories:</b>			
RC14	#14 Nylon® Cap with a 9.5mm Hole		1.33
R201402	Replacement Hose Connection-Straight		1.68



### CONDENSER WEST

With narrow annular space for fast coolant speed, thus high cooling efficiency.

Item #	Joint	Jacket Length (mm)	Price (each)
C151110	14/20	110	56.60
C150190	14/20	190	58.16
C151200	14/20	200	60.47
C159190	19/22	190	62.09
C159200	19/22	200	63.93
C154100	24/40	100	67.22
C151190	24/40	190	73.64
C154200	24/40	200	75.37
C154300	24/40	300	78.89



### CONDENSER, LIEBIG, REMOVABLE HOSE CONNECTIONS

With joints at the top and the bottom.

Item #	Jacket Length (mm)	Joint	O.D. Hose Connection (mm)	Price (each)
C501120	120	14/20	8	84.20
C509180	180	19/22	8	88.59
C509300	300	19/22	8	92.58
C504200	200	24/40	8	89.74
C504250	250	24/40	8	93.39
C504300	300	24/40	8	96.33
C504400	400	24/40	8	100.55
C504500	500	24/40	8	104.59
<b>Accessories:</b>				
RC14	#14 Nylon Cap with a 9.5mm Hole			1.33
R201402	Replacement Hose Connection-Straight			1.68



### CONDENSER, LIEBIG

With joints at the top and the bottom.

Item #	Jacket Length (mm)	Joint	O.D. Hose Connection (mm)	Price (each)
C201120	120	14/20	8	80.27
C209180	180	19/22	8	84.61
C209300	300	19/22	8	88.59
C204100	100	24/40	10	81.61
C204200	200	24/40	10	86.16
C204250	250	24/40	10	87.03
C204300	300	24/40	10	89.86
C204400	400	24/40	10	94.02
C204500	500	24/40	10	94.48





#### CONDENSER, DEWAR, MICRO

Side joint is at a 90° angle.

Item #	Inside Depth (mm)	I.D. (mm)	Joint	Price (each)
C341014	90	31	14/20	105.80



#### CONDENSER, FOR ROTARY EVAPORATORS

Double coiled condenser for use with Buchi rotary evaporators. For cooling with tap water in a diagonal position. Has a 19/38 top valve with a 35/20 spherical ball joint.

Item #	Description	Price (each)
C910200	Rotary Evaporator Condenser, Diagonal Style	1414.88
<b>Accessories:</b>		
C910001	Inlet Feed Tube	99.97
RC14	Nylon Cap for Water Inlet/Outlet	1.33
R201402	Replacement Nylon Hose Connection-Straight with O-ring (Used with RC14 Cap)	1.68
RC1	Thread Cap for GL10	2.78
R008	O-ring, I.D. 4.5mm × Width 1.78mm	1.33



#### CONDENSER, FOR ROTARY EVAPORATOR, UPRIGHT STYLE

For vertical style of Heidolph Rotary Evaporators.

Item #	Description	Price (each)
C900200	Rotary Evaporator Condenser, Vertical Style	1400.44
<b>Accessories:</b>		
C900001	Inlet Feed Tube, 19/38 Joint	99.97
RC14	Nylon cap for Water Inlet/Outlet	1.33
R201402	Replacement Nylon Hose Connection-Straight with O-ring (Used with RC14 Cap)	1.68
RC18	Nylon Cap for Vacuum	2.77
R201801	Replacement Nylon Hose Connection-Straight, with O-ring (Used with RC18 Cap)	5.89



#### FLASK, DEWAR, LOW FORM, HEMISPHERICAL

Flask size shown is the maximum capacity flask that will fit inside the Dewar. With aluminum housing to transfer magnetic field.

Item #	Fits Flask Sizes (mL)	Exterior Dimensions in Height × Width (mm)	Dimensions, Depth × Diameter (mm)	Price (each)
F240100	100	93×110	65×80	295.68
F240250	250	108×142	75×100	376.53
F240500	500	120×163	85×123	418.11
F241000	1000	130×180	100×143	513.98



**\*Due to extra high vacuum, the Dewar flasks still have a rare possibility to explode, so working behind a safety shield in hood and always wearing goggles are strongly recommended.**

#### FLASK, DEWAR, WIDE MOUTH, METAL HOUSING

Dewar flask with weighted metal base for stability and with a full-length aluminum housing which extends to the top rim for added protection.

Item #	Overall Capacity (mL)	Exterior Dimensions in Height × Width (mm)	Interior Dimensions in Depth × Diameter (mm)	Price (each)
F110350	350	195×100	125×70	183.65
F110665	665	265×100	195×70	184.80
F111000	1000	375×100	302×70	191.73
F111900	1900	256×160	190×120	458.25
F111900 L	3500	376×160	305×120	520.33
F114300	4300	376×178	305×143	593.67



**\*Due to extra high vacuum, the Dewar flasks still have a rare possibility to explode, so working behind a safety shield in hood and always wearing goggles are strongly recommended.**

**CHROMATOGRAPHY FLOW CONTROL ADAPTER**

0-4mm high vacuum valve with metering tip to adjust air pressure. With standard taper joint. Order CC3525 pinch clamps with screw-locking device for ball joints. For replacement O-rings on high vacuum plug shaft, order R010. The O-rings on the high vacuum PTFE valve are completely encapsulated with a thin layer of PTFE, making it inert to chemicals.

Item #	Joint Size	Price (each)
C1301	35/20	88.88
C1324	24/40	64.86
<b>Accessories:</b>		
S660004T	0-4mm High Vacuum Metering Plug and Control Knob. (PTFE O-ring at Tip)	39.28
R010	Replacement Viton® O-rings, Size 010 for 0-4mm High Vacuum Plug Shaft O-ring	1.16
CC3525	Clamps for 35/20 or 35/25 Ball Joint	19.40
CS002440	Plastic Clamp for 24/40 Joint	3.76

**\*Since the chromatography column is used with positive air pressure, It's highly recommended that operator uses the column behind a safety shield.**

**CHROMATOGRAPHY RESERVOIR**

For flash chromatography

Item #	Joint	Capacity (mL)	Price (each)
C184100	24/40	100	48.28
C182402	24/40	250	56.83
C182403	24/40	500	60.35
C193502	35/20	250	60.41
C193503	35/20	500	64.45
<b>Accessories:</b>			
CC3525	S.S. Clamps for 35/20 or 35/25 Ball Joint		19.40
CS002440	Plastic Clamp for 24/40 Joint		3.76

**CHROMATOGRAPHY COLUMN, HEAVY WALL DESIGN**

General purpose column has a Teflon® stopcock and a top outer joint.

For flash chromatography. All Synthware columns are heavy wall designed to increase safety.

Item #	Column O.D. (mm)	Column I.D. (mm)	Effective Length Inch (mm)	Joint	Stopcock Bore (mm)	Price (each)
C184171	17	13.4	8(203)	24/40	2	83.04
C184172	17	13.4	10(254)	24/40	2	87.78
C184173	17	13.4	12(305)	24/40	2	92.52
C184261	26	20.0	8(203)	24/40	2	83.04
C184262	26	20.0	10(254)	24/40	2	87.78
C184263	26	20.0	12(305)	24/40	2	92.52
C184264	26	20.0	18(457)	24/40	2	111.17
C184321	32	26.0	8(203)	24/40	2	103.03
C184322	32	26.0	10(254)	24/40	2	111.17
C184323	32	26.0	12(305)	24/40	2	119.37
C184324	32	26.0	18(457)	24/40	2	142.76
C184461	46	40.0	8(203)	24/40	2	103.37
C184462	46	40.0	10(254)	24/40	2	111.07
C184463	46	40.0	12(305)	24/40	2	119.37
C184464	46	40.0	18(457)	24/40	2	142.76
C184603	60	53.0	12(305)	24/40	2	154.95
C184604	60	53.0	18(457)	24/40	2	172.04
C184605	60	53.0	24(610)	24/40	2	202.93
<b>Accessories:</b>						
CS002440	Plastic Clamp for 24/40 Joint					3.76
S181125	Replacement 2mm Teflon Plug Only					12.54

**\*Since the chromatography column is used with positive air pressure, it's highly recommended that operator uses column behind a safety shield.**

**TLC DEVELOPING TANKS-CYLINDRICAL**

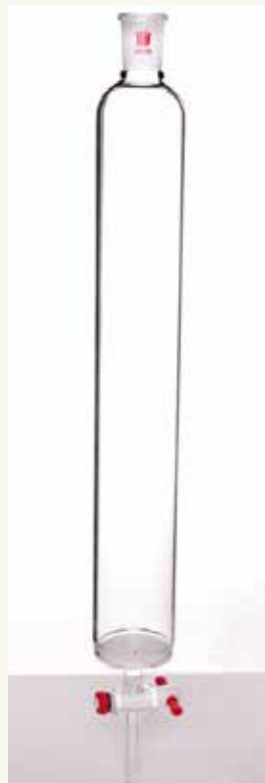
Made of glass with lid. Compact size offers good plate visibility and minimal solvent use.

Item #	OD*H (mm)	Joint	Price (each)
T216105	65*105	60/12	117.23
T216205	65*205	60/12	126.82



**CHROMATOGRAPHY COLUMN, HEAVY WALL DESIGN**

General purpose column has a Teflon® stopcock and a top outer joint. With a coarse porosity fritted disc to support column packing. The section below the disc is carefully minimized to prevent re-mixing of components already separated. All Synthware columns are heavy wall designed to increase safety.



Item #	Column O.D. (mm)	Column I.D. (mm)	Effective Length Inch (mm)	Joint	Stopcock Bore (mm)	Price (each)
C184171C	17	13.4	8(203)	24/40	2	94.83
C184172C	17	13.4	10(254)	24/40	2	99.56
C184173C	17	13.4	12(305)	24/40	2	105.34
C184261C	26	20.0	8(203)	24/40	2	94.83
C184262C	26	20.0	10(254)	24/40	2	99.91
C184263C	26	20.0	12(305)	24/40	2	105.34
C184264C	26	20.0	18(457)	24/40	2	125.09
C184321C	32	26.0	8(203)	24/40	2	115.85
C184322C	32	26.0	10(254)	24/40	2	125.09
C184323C	32	26.0	12(305)	24/40	2	132.77
C184324C	32	26.0	18(457)	24/40	2	155.69
C184461C	46	40.0	8(203)	24/40	2	121.80
C184462C	46	40.0	10(254)	24/40	2	130.58
C184463C	46	40.0	12(305)	24/40	2	138.25
C184464C	46	40.0	18(457)	24/40	2	161.42
C184602C	46	40.0	10(254)	24/40	2	161.53
C184603C	60	53.0	12(305)	24/40	2	173.13
C184604C	60	53.0	18(457)	24/40	2	190.69
C184605C	60	53.0	24(610)	24/40	2	221.13
<b>Accessories:</b>						
CS002440	Plastic Clamp for 24/40 Joint					3.76
S181125	Replacement 2mm Teflon Plug Only					12.54

\* Since the chromatography column is used with positive air pressure, it's highly recommended that the operator uses column behind a safety shield.

**COLUMN, CHROMATOGRAPHY WITH RESERVOIR**

With 24/40 outer joint at top. All Synthware columns are heavy wall designed to increase safety.

Item #	Column O.D. (mm)	Column I.D. (mm)	Effective Length Inch (mm)	Joint	PTFE Stopcock Bore (mm)	Capacity of Reservoir (mL)	Price (each)
C371720	17	13.4	8(203)	24/40	2	100	96.44
C371730	17	13.4	12(305)	24/40	2	100	109.73
C371740	17	13.4	18(457)	24/40	2	250	114.58
C372620	26	20.0	8(203)	24/40	2	250	120.70
C372625	26	20.0	10(254)	24/40	2	250	108.40
C372630	26	20.0	12(305)	24/40	2	250	137.39
C372640	26	20.0	18(457)	24/40	2	500	159.45
C373220	32	26.0	8(203)	24/40	2	500	123.99
C373225	32	26.0	10(254)	24/40	2	500	154.49
C373230	32	26.0	12(305)	24/40	2	500	139.82
C373240	32	26.0	18(457)	24/40	2	500	163.96
C374620	46	40.0	8(203)	24/40	2	500	150.68
C374625	46	40.0	10(254)	24/40	2	500	135.83
C374630	46	40.0	12(305)	24/40	2	500	182.14
C374640	46	40.0	18(457)	24/40	2	500	200.16
C376025	60	53.0	10(254)	24/40	4	500	170.59
C376030	60	53.0	12(305)	24/40	4	1000	188.73
C376040	60	53.0	18(457)	24/40	4	1000	219.33
C378020	80	73.0	8(203)	24/40	4	1000	215.70
C378040	80	73.0	18(457)	24/40	4	1000	272.12
<b>Accessories:</b>							
CS002440	Plastic Clamp for 24/40 Joint						3.76
S181125	Replacement 2mm Teflon Plug Only						12.54
S181530	Replacement 4mm Teflon Plug Only						20.97

\*Since the chromatography column is used with positive air pressure, It's highly recommended that operator uses the column behind a safety shield.



**COLUMN, CHROMATOGRAPHY WITH RESERVOIR, FRITTED DISC**

With a coarse porosity sealed in fritted disc to support column packing.

All Synthware columns are heavy wall designed to increase safety.



Item #	Column O.D. (mm)	Column I.D. (mm)	Effective Length Inch (mm)	Joint	PTFE Stopcock Bore (mm)	Capacity of Reservoir (mL)	Price (each)
C391720C	17	13.4	8(203)	24/40	2	100	109.73
C391730C	17	13.4	12(305)	24/40	2	100	114.69
C391740C	17	13.4	18(457)	24/40	2	250	121.80
C392620C	26	20.0	8(203)	24/40	2	250	133.86
C392625C	26	20.0	10(254)	24/40	2	250	156.85
C392630C	26	20.0	12(305)	24/40	2	250	149.46
C392640C	26	20.0	18(457)	24/40	2	500	177.24
C393220C	32	26.0	8(203)	24/40	2	500	142.18
C393225C	32	26.0	10(254)	24/40	2	500	167.59
C393230C	32	26.0	12(305)	24/40	2	500	170.66
C393240C	32	26.0	18(457)	24/40	2	500	183.25
C394620C	46	40.0	8(203)	24/40	2	500	171.17
C394625C	46	40.0	10(254)	24/40	2	500	181.62
C394630C	46	40.0	12(305)	24/40	2	500	201.89
C394640C	46	40.0	18(457)	24/40	2	500	219.45
C396020C	60	53.0	8(203)	24/40	2	500	171.52
C396025C	60	53.0	10(254)	24/40	4	500	193.53
C396030C	60	53.0	12(305)	24/40	4	1000	213.97
C396040C	60	53.0	18(457)	24/40	4	1000	244.69
C396060C	60	53.0	24(610)	24/40	4	1000	249.08
C398020C	80	73.0	8(203)	24/40	4	1000	226.21
C398025C	80	73.0	10(254)	24/40	4	1000	241.40
C398030C	80	73.0	12(305)	24/40	4	1000	269.92
C398060C	80	73.0	24(610)	24/40	4	1000	293.32
<b>Accessories:</b>							
CS002440	Plastic Clamp for 24/40 Joint						3.76
S181125	Replacement 2mm Teflon Plug Only						12.54
S181530	Replacement 4mm Teflon Plug Only						20.97

\*Since the chromatography column is used with positive air pressure, it's highly that the Operator uses the column behind a safety shield.

**CHROMATOGRAPHY COLUMN, SPHERICAL JOINTS**

Spherical joint used with pinch clamp makes quick and tight connection under pressure for flash chromatography. All Synthware columns are

heavy wall designed to increase safety.

Item #	Column O.D. (mm)	Column I.D. (mm)	Effective Length Inch (mm)	Joint	PTFE Stopcock Bore (mm)	Price (each)
C195173	17	13.4	12(305)	35/20	2	95.47
C195264	26	20.0	18(457)	35/20	2	115.22
C195323	32	26.0	12(305)	35/20	2	123.99
C195324	32	26.0	18(457)	35/20	2	147.03
C195464	46	40.0	18(457)	35/20	2	147.03
<b>Accessories:</b>						
CC3525	Clamps for 35/20 Ball Joint					19.40
S181125	Replacement 2mm Teflon Plug Only					12.54


**CHROMATOGRAPHY COLUMN, FRITTED DISC, SPHERICAL JOINTS**

With a coarse porosity fritted disc to support packing material.

All Synthware columns are heavy wall designed to increase safety.

Item #	Column O.D. (mm)	Column I.D. (mm)	Effective Length Inch (mm)	Joint	PTFE Stopcock Bore (mm)	Price (each)
C195171C	17	13.4	8(203)	35/20	2	97.66
C195172C	17	13.4	10(254)	35/20	2	103.14
C195173C	17	13.4	12(305)	35/20	2	108.63
C195262C	26	20.0	10(254)	35/20	2	103.14
C195264C	26	20.0	18(457)	35/20	2	129.48
C195323C	32	26.0	12(305)	35/20	2	137.16
C195324C	32	26.0	18(457)	35/20	2	161.30
C195463C	46	40.0	12(305)	35/20	2	143.80
C195464C	46	40.0	18(457)	35/20	2	166.78
<b>Accessories:</b>						
CC3525	Clamps for 35/20 Ball Joint					19.40
S181125	Replacement 2mm Teflon Plug Only					12.54



\*Since the chromatography column is used with positive air pressure, it's highly recommended that the operator uses column behind a safety shield.

**COLUMN, CHROMATOGRAPHY WITH RESERVOIR**

With 35/20 spherical joint. All Synthware columns are heavy wall designed to increase safety.

Item #	Column O.D. (mm)	Column I.D (mm)	Effective Length Inch (mm)	Joint	PTFE Stopcock Bore (mm)	Capacity of Reservoir (mL)	Price (each)
C381720	17	13.4	8(203)	35/20	2	100	96.56
C381730	17	13.4	12(305)	35/20	2	100	109.73
C381740	26	20.0	8(203)	35/20	2	250	114.58
C382620	26	20.0	8(203)	35/20	2	250	105.86
C382625	26	20.0	10(254)	35/20	2	250	108.40
C382630	26	20.0	12(305)	35/20	2	250	115.27
C382640	26	20.0	18(457)	35/20	2	500	131.27
C383220	32	26.0	8(203)	35/20	2	500	144.44
C383225	32	26.0	10(254)	35/20	2	500	154.49
C383230	32	26.0	12(305)	35/20	2	500	161.35
C383240	32	26.0	18(457)	35/20	2	500	164.59
C384630	46	40.0	12(305)	35/20	2	500	163.55
C384640	46	40.0	18(457)	35/20	2	500	164.59

**Accessories:**

CC3525	Clamps for 35/20 Ball Joint	19.40
S181125	Replacement 2mm Teflon Plug Only	12.54

\*Since the chromatography column is used with positive air pressure, it's highly recommended that the operator uses the column behind a safety shield.

**COLUMN, CHROMATOGRAPHY, WITH RESERVOIR, FRITTED DISC**

With a coarse porosity fritted disc to support packing with 35/20 spherical joint. All Synthware Columns are heavy wall designed to increase safety.

Item #	Column O.D. (mm)	Column I.D (mm)	Effective Length Inch (mm)	Joint	PTFE Stopcock Bore (mm)	Capacity of Reservoir (mL)	Price (each)
C381720C	17	13.4	8(203)	35/20	2	100	117.06
C381730C	17	13.4	12(305)	35/20	2	100	121.80
C381740C	26	20.0	8(203)	35/20	2	250	156.85
C382620C	26	20.0	8(203)	35/20	2	250	152.75
C382625C	26	20.0	10(254)	35/20	2	250	156.85
C382630C	26	20.0	12(305)	35/20	2	250	164.13
C382640C	26	20.0	18(457)	35/20	2	500	172.50
C383220C	32	26.0	8(203)	35/20	2	500	160.78
C383225C	32	26.0	10(254)	35/20	2	500	167.48
C383230C	32	26.0	12(305)	35/20	2	500	171.12
C383240C	32	26.0	18(457)	35/20	2	500	176.66
C384630C	46	40.0	12(305)	35/20	2	500	206.28
C384640C	46	40.0	18(457)	35/20	2	500	224.94

**Accessories:**

CC3525	Clamps for 35/20 Ball Joint	19.40
S181125	Replacement 2mm Teflon Plug Only	12.54

\*Since the chromatography column is used with positive air pressure, it's highly recommended that the operator uses the column behind a safety shield.

**CHROMATOGRAPHY COLUMN, MODIFIED**

Short column with lower 24/40 joint and hose connection for vacuum. All Synthware columns are heavy wall designed to increase safety.

Item #	Column O.D. (mm)	Length (mm)	Porosity	Price (each)
F234020C	40	200	Coarse	126.07
F234030C	40	300	Coarse	144.09
F234030M	40	300	Medium	144.09
F236040C	60	400	Coarse	207.90
F238530C	90	300	Coarse	239.26
F238540C	90	400	Coarse	272.81

\*Length above fritted disc.

**COLUMN, CHROMATOGRAPHY, TEFLON® STOPCOCK**

With reinforced beaded top. All Synthware columns are heavy wall designed to increase safety.

Item #	Column O.D. (mm)	Column I.D (mm)	Effective Length Inch (mm)	PTFE Stopcock Bore (mm)	Price (each)
C361320	13	10.0	8(203)	2	68.95
C361330	13	10.0	12(305)	2	81.77
C361340	13	10.0	16(406)	2	90.67
C361720	17	13.4	8(203)	2	73.00
C361725	17	13.4	10(254)	2	79.35
C361730	17	13.4	12(305)	2	85.82
C362620	26	20.0	8(203)	2	73.00
C362625	26	20.0	10(254)	2	79.35
C362630	26	20.0	12(305)	2	85.82
C362640	26	20.0	18(457)	2	107.65
C363225	32	26.0	10(254)	2	102.45
C364640	46	40.0	18(457)	2	135.71
C366030	60	53.0	12(305)	4	128.78
C366040	60	53.0	18(457)	4	155.81
C366060	60	53.0	24(610)	4	184.11
C368030	80	73.0	12(305)	4	163.38

**Accessories:**

S181125	Replacement 2mm Teflon Plug Only	12.54
S181530	Replacement 4mm Teflon Plug Only	20.97

\*Since the chromatography column is used with positive air pressure, it's highly recommended that the operator uses the column behind a safety shield.



**COLUMN, CHROMATOGRAPHY, TEFLON®, STOPCOCK, FRITTED DISC**

With reinforced beaded top and a coarse porosity fritted disc to support column packing. All Synthware columns are heavy wall designed to increase safety.



Item #	Column O.D. (mm)	Column I.D. (mm)	Effective Length Inch (mm)	PTFE Stopcock Bore (mm)	Price (each)
C361720C	17	13.4	8(203)	2	85.76
C361725C	17	13.4	10(254)	2	90.90
C361730C	17	13.4	12(305)	2	95.58
C361740C	17	13.4	18(457)	2	112.68
C362620C	26	20.0	8(203)	2	85.82
C362625C	26	20.0	10(254)	2	90.90
C362630C	26	20.0	12(305)	2	95.58
C362640C	26	20.0	18(457)	2	112.68
C363225C	32	26.0	10(254)	2	117.76
C363230C	32	26.0	12(305)	2	127.00
C363240C	32	26.0	18(457)	2	153.91
C364620C	46	40.0	8(203)	2	108.86
C364625C	46	40.0	10(254)	2	117.76
C364630C	46	40.0	12(305)	2	126.77
C364640C	46	40.0	18(457)	2	153.73
C366040C	60	53.0	18(457)	4	181.51
C366060C	60	53.0	24(610)	4	224.02
C368030C	80	73.0	12(305)	4	214.83
<b>Accessories:</b>					
S181125	Replacement 2mm Teflon Plug Only				12.54
S181530	Replacement 4mm Teflon Plug Only				20.97

\*Since the chromatography column is used with positive air pressure, it's highly recommended that the operator uses the column behind a safety shield.

**FLOW CONTROL ADAPTER, CHROMATOGRAPHY, RODAVISS**

Flow control adapter for use with column with 24/40 inner Rodaviss® joint. Supplied complete with open top screw cap, loosening cap and O-ring. Adapter has a 0-4mm metering plug.

Item #	Joint	Price (each)
C432440	24/40	66.41
<b>Accessories:</b>		
RC2440	24/40 Open Top Screw Cap	2.89
R202440	24/40 Loosening Ring	1.45
R221	#221 O-Rings for 24/40 Rodaviss® Joint	3.47
S660004T	0-4mm High Vacuum Metering Plug and Control Knob. (PTFE O-ring at Tip)	39.28
R010	Replacement Viton® O-rings, Size 010	1.16

\*Since the chromatography column is used with positive air pressure, It's highly recommended that the operator uses the column behind a safety shield.


**RESERVOIR, CHROMATOGRAPHY RODAVISS® JOINT**

Reservoir has a top 24/40 or 45/50 Rodaviss outer joint for use with flow controller, and the listed size lower inner joint. Supplied complete with open top cap, Viton O-ring and loosening ring.

Item #	Capacity (mL)	Lower Inner Joint Size	Price(each)
C414250	250	24/40	64.74
C414500	500	24/40	68.03
<b>Accessories:</b>			
RC2440	24/40 Open Top Screw Cap		2.89
R202440	24/40 Loosening Ring		1.45
R221	#221 O-Rings for 24/40 Rodaviss Joint		3.47

\*Since the chromatography column is used with positive air pressure. It's highly recommended that the operator uses the column behind a safety shield.



**DISTILLING BULB, KUGELROHR**

Used in distillation of very small amounts of distillate at lower temperature with high efficiency. Kugelrohr machine required but not supplied. For the vacuum adapter, see A301420

Item #	Capacity (mL)	Joint	Bulb O.D. (mm)	Overall Height (mm)	Price (each)
D281005	5	14/20	25	80	25.41
D281010	10	14/20	31	85	31.19
D281015	15	14/20	35	90	34.07
D281025	25	14/20	42	98	36.04
D281050	50	14/20	48	105	38.12

**Accessories:**

A301420	14/20 Vacuum Adapter with an 8mm Hose connection	15.36
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**DISTILLATION APPARATUS, MICROSCALE**

Short-path design for microscale application. Used with a 25mm immersion thermometer and a D27 distillation receiver.

Item #	Thermometer Joint	Joint	Price (each)
D151814	10/18	14/20	140.45
D151819	10/18	19/22	146.22

**DISTILLATION RECEIVER, WITHOUT HOSE CONNECTION**

With the outer and inner joint at a 135° angle, used with short-path.

Item #	Joint	Price (each)
D271420	14/20	95.52
D272440	24/40	101.87

**DISTILLATION APPARATUS, MICROSCALE, VIGREUX**

With Vigreux indentations. Used with a 25mm immersion thermometer and a D27 distillation receiver.

Item #	Thermometer Joint	Joint	Price (each)
D251014	10/18	14/20	159.45
D251019	10/18	19/22	163.73

**DISTILLATION APPARATUS, SHORT PATH, VACUUM JACKETED**

Vacuum jacketed design for more efficiency. When a thermometer is inserted into the top of this apparatus, the bulb and stem serve as column packing. The close coupled condenser and vacuum connection offer an extremely short condensate travel path. Used with a 25mm immersion thermometer and a D27 distillation receiver.

Item #	Thermometer Joint	Joints	Price (each)
D121014	10/18	14/20	294.64

**DISTILLING RECEIVER**

Supplied with a distribution adapter, three 12mL receiver tubes, and three plastic joint clips. With a 135° angle between the top outer joint and the lower inner joint.

Item #	Lower Inner Joint Size	Price (each)
D381412	14/20	168.98

**Accessories:**

T230012	Receiver Tube, 14/20, 12mL	31.94
CS001420	Plastic Clamp for 14/20 Joint	3.53

**DISTILLATION APPARATUS, SHORT PATH, VACUUM JACKETED**

Used with a 25mm immersion thermometer and a D27 distillation receiver.

Item #	Thermometer Joint	Joints	Price (each)
D371418	10/18	14/20	307.23





**DISTILLATION, SHORT PATH WITH 24/40 JOINT**

One-piece design for easy set-up. For the best result, use D272440 distillation receiver. To be used with a 25mm immersion thermometer.

Item #	Thermometer Joint	Joint	Price (each)
D261024	10/18	14/20	172.85



**DISTILLING HEAD, SHORT PATH, FOR VOLATILE SOLVENTS**

With the condenser being a combination of a cold coil and Leibig top. Outer joint is 10/18. For use with a 50mm immersion thermometer. For best result use D272440.

Item #	Lower Inner Joint Size	Top Thermometer Joint	Price (each)
D531024	24/40	10/18	286.73



**DISTILLING HEAD, SHORT PATH, FOR VOLATILE DISTILLANTS**

Same as above but with Vigreux indentations. Top outer joint is 10/18. For use with a 50mm immersion thermometer.

Item #	Lower Inner Joint Size	Top Thermometer Joint	Price (each)
D541024	24/40	10/18	299.79



**DISTILLING HEAD**

Thermometer joint is 10/18 for a 76mm immersion thermometer. Side arm is at a 75° angle.

Item #	Lower Inner Joint Size	Top Thermometer Joint	Jacket Length (mm)	Price (each)
D304150	24/40	10/18	150	129.31
D304250	24/40	10/18	250	132.77
D304400	24/40	10/18	400	142.01



**DISTILLATION RECEIVER, WITH HOSE CONNECTION**

Cow-type design having three receivers spaced 40° apart. 105° angle between top outer joint and lower inner joints.

Item #	Joint	Price (each)
D681420	14/20	91.31
D681922	19/22	94.54
D682440	24/40	102.68



**DISTILLATION APPARATUS, VACUUM**

10/18 joint on side tube accommodates a 25mm immersion thermometer.

Item #	Joint	Other Joints	Price (each)
D101410	10/18	14/20	227.54
D101414	14/20	14/20	227.54
D101910	10/18	19/22	243.59





**DISTILLATION COW RECEIVER**

Designed for microscale application. With one female joint and four drip-tip male joints.

Item #	Joint	Price (each)
D161420	14/20	91.31



**DISTILLING RECEIVER, GRADUATED, WITH HOOKS**

Centrifuge tube shaped receiver with an upper standard taper joint.

Item #	Joint	Capacity (mL)	Price (each)
T230012	14/20	12	31.94
T230015	14/20	15	33.26

\*Used for indication purposes only – not accuracy.  
Length of T230012 is approximately 120mm.  
Length of T230015 is approximately 155mm.



**DISTILLING, COW RECEIVER, GRADUATED**

Tubes are graduated from 0-3mL in 0.2mL subdivisions.

Item #	Joint	Price (each)
D351403	14/20	122.89

\*For distillation head, please see D251014.



**DISTILLATION RECEIVER, WITH HOSE CONNECTION**

Cow-type design having three receivers spaced 40° apart. 105° angle between top outer joint and lower inner joints.

Item #	Joint	Price (each)
D191420	14/20	101.24
D191922	19/22	104.59
D192440	24/40	109.21



**DISTILLATION RECEIVING COMPONENTS**

Designed without hose connection to be used with a D10 distillation apparatus.

Item #	Item Type	Joint	Price (each)
A581420	Distribution Adapter	14/20	34.83
D201414	Cow Receiver	14/20	109.33
A581922	Distribution Adapter	19/22	42.22
D201922	Cow Receiver	19/22	128.85

**Accessories:**

CS001420	Plastic Clamp for 14/20 Joint	3.53
CS001922	Plastic Clamp for 19/22 Joint	3.64



**DISTILLATION RECEIVING COMPONENTS**

Rotating cow receiver allows for four flasks to be progressively filled.

Item #	Item Type	Joint	Price (each)
A551420	Distribution Adapter	14/20	41.23
D201414	Cow Receiver	14/20	109.33
A551922	Distribution Adapter	19/22	49.32
D201922	Cow Receiver	19/22	128.85
A552440	Distribution Adapter	24/40	62.49
D202424	Cow Receiver	24/40	176.66

**Accessories:**

CS001420	Plastic Clamp for 14/20 Joint	3.53
CS001922	Plastic Clamp for 19/22 Joint	3.64
CS002440	Plastic Clamp for 24/40 Joint	3.76



**DISTRIBUTION RECEIVER, VERTICAL ORIENTATION**

Rotating distillation receiver allows for four fractions to be collected. Vacuum adapter has a vertical orientation.

Item #	Item Type	Joint	Price (each)
A592440	Distribution Adapter	24/40	56.08
D202424	Cow Receiver	24/40	176.66

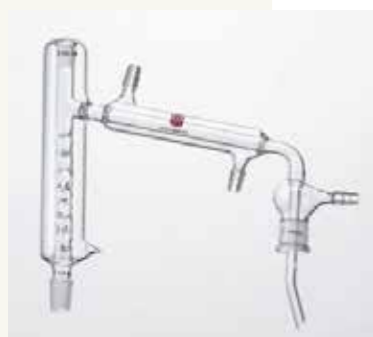
**Accessories:**

CS002440	Plastic Clamp for 24/40 Joint	3.76
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**DISTILLATION HEAD, VIGREUX, MICRO**

Distillation head with condenser sealed to a Vigreux column. Vacuum adapter has an outer joint and accepts a distribution adapter (D201414). To be used with a 25mm immersion thermometer.

Item #	Joint Size	Thermometer Joint	Approx. Height × Width (mm)	Price (each)
D141014	14/20	10/18	195*185	198.03

**DISTILLATION HEAD, JACKETED, VIGREUX, MICRO**

Similar to D14- series but with the Vigreux column vacuum jacketed to improve distillation performance. To be used with D201414 distribution adapter.

Item #	Joint Size	Thermometer Joint	Approx. Height × Width (mm)	Price (each)
D171014	14/20	10/18	195*190	293.09

**DISTILLATION HEAD, VIGREUX, JACKETED**

Vacuum jacketed Vigreux distillation head having a sealed on condenser braced for strength. Vacuum adapter has an inner joint and a sealed in drip tip. To be used with a 25mm immersion thermometer.

Item #	Joint Size	Column Height (mm)	Thermometer Joint	Approx. Height×Width (mm)	Price (each)
D211100	14/20	100	10/18	200*180	304.80
D211150	14/20	150	10/18	250*180	313.01
D214200	24/40	200	10/18	325*350	362.09
D214300	24/40	300	10/18	425*350	370.64

**DISTILLATION APPARATUS, LARGE SCALE**

One-piece design. With a 10/18 thermometer joint and a high efficiency cooling jacket. To be used with a 50mm immersion thermometer with a 10/18 joint.

Item #	Joint	Price (each)
D502440	24/40	301.26

**DRYING CHAMBER, ABDERHALDEN**

Drying samples for elemental analysis placed in a vial which is placed into a drying chamber. Under vacuum and gentle heat created by refluxing in outer jacket of low boiling point solvents.

Item #	Upper Joint	Lower Joint	Drying Chamber Joint	Price (each)
D222434	24/40	24/40	34/45	168.98

**DESICCANT FLASK**

With Teflon stopcock. Use with D222434 drying chamber.

Item #	Joint	Stopcock	Price (each)
D133424	34/45	2mm (PTFE)	95.47

**Accessory:**

S181125	Replacement 2mm Teflon® Plug Only	12.54
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**DISTILLATION HEAD, MICROSCALE**

With 2mm glass stopcock and 24/40 joint. Supplied with a special 25mL long-neck flask for small volume efficiency.

Item #	Joint	Hose O.D. (mm)	Price (each)
D112440G	24/40	10	184.92

**Accessory:**

DF302425	Flask, Round Bottom, Long Neck, 25mL	21.78
S461230	Replacement 2mm Glass Plug Only	11.61
S691230	Replacement S.S. Retention Kit for 2mm Glass Stopcock	2.43



**DISTILLATION RECEIVER, DEAN STARK**

For easy separation of water from reaction or distillation system.  
Graduated with 2mm Teflon stopcock or 2mm glass stopcock.

Item #	Capacity (mL)	Joint (mm)	Stopcock (mm)	Approx. Height×Width (mm)	Price (each)
D451414	5	14/20	2, PTFE	190*120	138.25
D451410	10	14/20	2, PTFE	250*120	145.94
D451910	10	19/22	2, PTFE	250*120	149.34
D452410	10	24/40	2, PTFE	275*120	152.81
D452424	20	24/40	2, PTFE	300*105	158.24
D452910	10	29/42	2, PTFE	275*72	153.45
D452920	20	29/42	2, PTFE	290*72	158.64
<b>Accessories:</b>					
S181125	Replacement 2mm Teflon® Plug Only				12.54

**DISTILLATION RECEIVER, DEAN STARK**

Similar to D451414 above but with the uptake tube vacuum jacketed to improve distillation performance. The jacket eliminates the possibility of condensation or recrystallization of distillate in the sidearm.  
With 2mm PTFE stopcock.

Item #	Capacity (mL)	Joint (mm)	Stopcock (mm)	Approx. Height×Width (mm)	Price (each)
D441405	5	14/20	2, PTFE	240×75	180.76
D441410	10	14/20	2, PTFE	280×75	188.61
D442410	10	24/40	2, PTFE	300×70	209.58
D442420	20	24/40	2, PTFE	300×80	224.99
<b>Accessories:</b>					
S181125	Replacement 2mm Teflon® Plug Only				12.54

**CONDENSER, FOR SOXHLET EXTRACTORS**

Allihn reflux condenser with a water-cooled inner drip joint at bottom.

Item #	Jacket Length (mm)	Joint	Overall Height (mm)	Price (each)
C243445	190	34/45	275	89.97
C244500	260	45/50	365	106.44
C245550	300	55/50	405	130.58

\*We recommend using keck clips for this assembly.

**EXTRACTOR, SOXHLET**

Extractor body only.

Item #	Upper Joint	Lower Joint	Volume (Approx.)	Price (each)
E103424	34/45	24/40	60mL	124.74
E104524	45/50	24/40	100mL	150.15
E105550	55/50	24/40	220mL	166.32

\*Suggested flask sizes: 250ml, 500ml, or 1L.

**EXTRACTION THIMBLE, GLASS**

All glass extraction thimbles permit viewing extraction process and subsequent weighing. C-Coarse, XC-Extra Coarse. Small thimble is used with C243445 and E103424; Medium thimble is used with C244500 and E104524; Large thimble is used with C245550 and E105550.

Item #	Fits Extractor Size	O.D.× Height (mm)	Porosity	Price (each)
E112585C	Small	25×85	C	40.43
E112585X	Small	25×85	XC	40.43
E113590C	Medium	35×90	C	41.76
E113590X	Medium	35×90	XC	41.76
E114513C	Large	45×130	C	43.20
E114513X	Large	45×130	XC	43.20



**SNYDER DISTILLATION COLUMN**

For use with Kuderna-Danish flask.

Item #	Joint	Column Height (mm)	Overall Height (mm)	Price (each)
C302440	24/40	150	300	76.81

**KUDERNA-DANISH FLASK**

Top joint is a 24/40 outer while the lower joint is a 19/22 inner.

Item #	Flask Capacity (mL)	Price (each)
F984250	250	55.97
F984500	500	60.35
<b>Accessories:</b>		
CS001922	Plastic Clamp for 19/22 Joint	3.64
CS002440	Plastic Clamp for 24/40 Joint	3.76

**CONCENTRATOR TUBE, GRADUATED**

Graduated concentrator tubes for use with Kuderna-Danish evaporative set-ups. Tube can be stoppered for storage. Overall height is 125mm for 10mL, and 153mm for the 25mL.

Item #	Capacity (mL)	Joint Size	Subdivisions (mL)	Price (each)
C291910	10	19/22	0 to 1mL in 0.1 2 to 10 mL in 1.0	36.15
C291925	25	19/22	0 to 1mL in 0.1 2 to 25mL in 1.0	42.85

**FILTRATION APPARATUS, 47MM FRITTED, 40/35**

Using 47mm membranes for filtering corrosive solutions, particulate removal from HPLC solvents, and filtration analysis with solid phase extraction disks. Support base has a sealed-in coarse porosity fritted disc. Complete assembly includes a 300mL graduated funnel, aluminum clamp, support base and 1 liter filtering flask.

Item #	Description	Price (each)
F10401L	Complete Support Assembly	299.15
<b>Replacement Components:</b>		
F100001	Funnel, 47mm, 300mL Graduated	53.13
F100002	Clamp, 47mm Aluminum	59.25
F100003	Base, 47mm Fritted Support, 40/35	150.15
F100004	Flask, 1L Filtering, 40/35	98.18

Inner Male Joint 40/35; Hose Connection = 3/8" I.D.

#2 hose connection – 10mm OD

**FILTRATION APPARATUS, 47MM STAINLESS STEEL, 40/35**

Using 47mm membranes for filtering corrosive solutions, particulate removal from HPLC solvents, and filtration analysis with solid phase extraction disks. Support base has removable 47mm stainless steel support screen for use with viscous or proteinaceous solutions. Complete assembly includes a 300mL graduated funnel, aluminum clamp, support base and 1 liter filtering flask.

Item #	Description	Price (each)
F10401LA	Complete Support Assembly	306.08
<b>Replacement Components:</b>		
F100001	Funnel, 47mm, 300mL Graduated	53.13
F100002	Clamp, 47mm Aluminum	59.25
F100003A	Base, 47mm SS Screen Support	138.60
F100004	Flask, 1L Filtering, 40/35	98.18
F100007	Stainless Steel Screen for Base Support	41.41

Inner Male Joint 40/35; Hose Connection = 3/8" I.D.

#2 hose connection – 10mm OD



### FLASK, ROUND BOTTOM, SINGLE NECK

Heavy wall design. All sizes listed below are hand-blown from tubing to ensure uniform wall thickness.

Item #	Capacity (mL)	Joint	Price (each)
F301405	5	14/20	16.35
F301410	10	14/20	16.86
F301910	10	19/22	17.04
F301425	25	14/20	16.70
F301925	25	19/22	16.93
F302425	25	24/40	17.16
F301450	50	14/20	16.70
F301950	50	19/22	17.04
F302450	50	24/40	17.16
F301100	100	14/20	16.70
F309100	100	19/22	17.27
F304100	100	24/40	17.33
F308100	100	29/42	21.32
F301200	200	14/20	21.20
F309200	200	19/22	22.47
F309250	250	19/22	22.47
F304200	200	24/40	22.24
F304250	250	24/40	23.68
F308250	250	29/42	24.95
F301300	300	14/20	23.45
F309300	300	19/22	25.13
F304300	300	24/40	25.64
F309500	500	19/22	26.28
F304500	500	24/40	27.44
F308500	500	29/42	28.30
F303450	500	34/45	32.29
F304000	1000	24/40	33.15
F30291L	1000	29/42	35.98
F30242L	2000	24/40	88.01
F30292L	2000	29/42	89.97
F30452L	2000	45/50	95.40
F30243L	3000	24/40	120.18
F30293L	3000	29/42	122.77
F30343L	3000	34/45	125.03
F30453L	3000	45/50	130.85
F30553L	3000	55/50	136.98
F30245L	5000	24/40	164.12
F30295L	5000	29/42	167.35
F30345L	5000	34/45	171.23
F30455L	5000	45/50	174.46
F30555L	5000	55/50	178.66



### FLASK, FLAT BOTTOM

Heavy wall single neck flat bottom flask with an outer joint. All sizes listed below are hand-blown from tubing to ensure uniform wall thickness.

Item #	Capacity (mL)	Joint	Price (each)
F122450	50	24/40	24.95
F124100	100	24/40	25.99
F124125	125	24/40	26.33
F124250	250	24/40	26.75
F124300	300	24/40	27.21
F124500	500	24/40	30.21
F124000	1000	24/40	48.28
F128000	1000	29/42	50.70



### FLASK, ROUND BOTTOM, SPHERICAL JOINT

Heavy wall design. All sizes listed below are hand-blown from tubing to ensure uniform wall thickness.

Item #	Capacity (mL)	Joint	Price (each)
F527500	500	35/20	28.64
F527000	1000	35/20	39.15
F52702L	2000	35/20	97.66



### FLASK, ROUND BOTTOM WITH HOOKS

Heavy wall design.

Item #	Capacity (mL)	Joint	Price (each)
F331405	5	14/20	20.44
F331410	10	14/20	21.08
F331425	25	14/20	21.55
F331450	50	14/20	21.95
F339100	100	14/20	24.14
<b>Accessories:</b>			
TH018	Stainless Steel Springs, 18mm		1.56



**FLASK, ROUND BOTTOM, THREADED INLET**

With a threaded side port for insertion of thermometer or bleed tubes. Having an O.D. between 5mm and 7.5mm. Heavy wall design. All sizes listed below are hand-blown from tubing to ensure uniform wall thickness.



Item #	Capacity (mL)	Joint	Price (each)
F141425	25	14/20	40.03
F141450	50	14/20	40.14
F149100	100	19/22	48.28
F144100	100	24/40	53.77
F141250	250	14/20	55.27
F149250	250	19/22	56.25
F144250	250	24/40	57.87
F144500	500	24/40	60.98

**Accessories:**

RC009	Nylon® cap	1.16
R107	Replacement Viton® O-rings, Size 107	1.73

**FLASK, EVAPORATION**

Heavy wall design. Low profile design sits upright on a bench and also provides for easy product access with a spatula. The unique flask shape is excellent for the controlled evaporation of foaming solvents such as Toluene or xylene on a rotary evaporator.



Item #	Capacity (mL)	Joint	Price (each)
F791450	50	14/20	17.50
F791100	100	14/20	22.18
F794100	100	24/40	28.41
F794200	200	24/40	37.08
F791250	250	14/20	32.52
F794250	250	24/40	45.05
F798250	250	29/42	55.16
F794500	500	24/40	75.83
F794000	1000	24/40	92.69

**FLASK, PEAR SHAPED, SINGLE NECK**

Heavy wall design.

Item #	Capacity (mL)	Joint	Price (each)
F321405L	5	14/20	18.08
F321410L	10	14/20	18.31
F321415L	15	14/20	18.54
F321225L	25	14/20	18.77
F329225L	25	19/22	19.06
F321250L	50	14/20	18.94
F329250L	50	19/22	19.29
F322450	50	24/40	24.90
F321100L	100	14/20	20.16
F329100L	100	19/22	20.67
F324100	100	24/40	26.33
F321200L	200	14/20	30.09
F324200	200	24/40	33.56

**FLASK, TWO NECK, PEAR SHAPED**

Pear shape with joints. Heavy wall design.

Item #	Capacity (mL)	Center Joint	Side Joint	Price (each)
F341105	5	14/20	14/20	37.19
F341110	10	14/20	14/20	37.65
F341115	15	14/20	14/20	38.00
F341125	25	14/20	14/20	38.35
F341150	50	14/20	14/20	38.69
F341100	100	14/20	14/20	39.62
F341200	200	14/20	14/20	50.31

**FLASK, RECOVERY**

Heavy wall design. All sizes listed below are hand-blown from tubing to ensure uniform wall thickness.

Item #	Capacity (mL)	Joint	Price (each)
F311405	5	14/20	17.44
F311410	10	14/20	17.44
F311910	10	19/22	17.62
F311425	25	14/20	17.67
F311925	25	19/22	18.25
F312425	25	24/40	18.48
F311450	50	14/20	18.25
F311950	50	19/22	18.36
F312450	50	24/40	18.48
F311100	100	14/20	20.85
F319100	100	19/22	21.43
F314100	100	24/40	22.35
F318100	100	29/42	23.74
F311200	200	14/20	24.83
F314200	200	24/40	29.11
F311250	250	14/20	32.57
F319250	250	19/22	33.21
F314250	250	24/40	36.27
F318250	250	29/42	43.38
F314500	500	24/40	44.81
F318500	500	29/42	55.79
F314000	1000	24/40	56.60
F31291L	1000	29/42	58.51





### FLASK, TWO NECK, ANGLED

Round bottom with joints. Heavy wall design. All sizes listed below are hand-blown from tubing to ensure uniform wall thickness.

Item #	Capacity (mL)	Center Joint	Side Joint	Price (each)
F411110	10	14/20	14/20	39.68
F411125	25	14/20	14/20	41.23
F411925	25	19/22	14/20	41.46
F419925	25	19/22	19/22	41.58
F411150	50	14/20	14/20	41.81
F419950	50	19/22	19/22	41.93
F414150	50	24/40	14/20	43.31
F414450	50	24/40	24/40	43.89
F411100	100	14/20	14/20	42.50
F411900	100	19/22	14/20	42.74
F419900	100	19/22	19/22	42.80
F414100	100	24/40	14/20	43.95
F419100	100	24/40	19/22	52.67
F414400	100	24/40	24/40	57.58
F411250	250	14/20	14/20	44.53
F410250	250	19/22	14/20	45.28
F419250	250	19/22	19/22	47.07
F414251	250	24/40	14/20	56.31
F414259	250	24/40	19/22	56.71
F414250	250	24/40	24/40	59.48
F411501	500	14/20	14/20	60.47
F419501	500	19/22	14/20	61.23
F414501	500	24/40	14/20	62.37
F414504	500	24/40	24/40	63.36
F415501	500	29/42	24/40	69.53
F415502	500	29/42	29/42	73.87
F41611L	1000	24/40	14/20	73.92
F41621L	1000	24/40	19/22	74.27
F41241L	1000	24/40	24/40	76.81
F41641L	1000	29/42	29/42	87.09
F41242L	2000	24/40	24/40	144.67
F41712L	2000	29/42	24/40	146.53
F41722L	2000	29/42	29/42	147.93
F41732L	2000	34/45	24/40	150.73
F41742L	2000	34/45	29/42	150.73
F41752L	2000	45/50	24/40	154.00
F41762L	2000	45/50	29/42	154.00
F41813L	3000	29/42	24/40	188.16
F41823L	3000	29/42	29/42	191.94
F41833L	3000	34/45	24/40	195.72
F41843L	3000	34/45	29/42	199.50
F41853L	3000	45/50	24/40	202.86
F41863L	3000	45/50	29/42	205.80

Item #	Capacity (mL)	Center Joint	Side Joint	Price (each)
F41915L	5000	29/42	24/40	219.93
F41925L	5000	29/42	29/42	225.27
F41935L	5000	34/45	24/40	229.47
F41945L	5000	34/45	29/42	234.05
F41955L	5000	45/50	24/40	237.49
F41965L	5000	45/50	29/42	242.07



### FLASK, THREE NECK, ANGLED

Round bottom with joints. Heavy wall design. All sizes listed below are hand-blown from tubing to ensure uniform wall thickness.

Item #	Capacity (mL)	Center Joint	Side Joint	Price (each)
F431110	10	14/20	14/20	48.51
F431125	25	14/20	14/20	49.67
F439925	25	19/22	19/22	51.35
F431150	50	14/20	14/20	51.35
F439150	50	19/22	14/20	52.73
F439950	50	19/22	19/22	54.17
F434150	50	24/40	14/20	60.41
F434950	50	24/40	19/22	66.59
F434450	50	24/40	24/40	73.46
F431100	100	14/20	14/20	53.77
F439100	100	19/22	14/20	54.58
F439900	100	19/22	19/22	57.63
F434100	100	24/40	14/20	59.89
F434900	100	24/40	19/22	66.64
F434400	100	24/40	24/40	81.14
F431250	250	14/20	14/20	57.93
F430250	250	19/22	14/20	59.37
F439250	250	19/22	19/22	60.82
F432250	250	24/40	19/22	71.67
F434250	250	24/40	24/40	81.49
F431500	500	14/20	14/20	61.97
F439500	500	19/22	19/22	66.53
F430500	500	24/40	19/22	81.31
F434500	500	24/40	24/40	86.92
F434524	500	45/50	24/40	91.08
F43401L	1000	24/40	24/40	97.89
F431045	1000	45/50	24/40	107.53
F43242L	2000	24/40	24/40	123.35
F43542L	2000	45/50	24/40	137.16
F43243L	3000	24/40	24/40	206.64
F43843L	3000	29/42	24/40	210.84
F43293L	3000	29/42	29/42	213.36
F43343L	3000	34/45	24/40	216.72
F43383L	3000	34/45	29/42	219.66
F43543L	3000	45/50	24/40	222.18
F43583L	3000	45/50	29/42	226.38
F43245L	5000	24/40	24/40	271.32
F43845L	5000	29/42	24/40	275.52
F43295L	5000	29/42	29/42	280.56
F43345L	5000	34/45	24/40	284.34
F43385L	5000	34/45	29/42	287.70
F43545L	5000	45/50	24/40	294.00
F43585L	5000	45/50	29/42	298.20



**FLASK, THREE NECK, VERTICAL**

Round bottom with joints. Heavy wall design. All sizes listed below are hand-blown from tubing to ensure uniform wall thickness.



Item #	Capacity (mL)	Center Joint	Side Joint	Price (each)
F441150	50	14/20	14/20	51.35
F449950	50	19/22	19/22	55.32
F441100	100	14/20	14/20	54.93
F449100	100	19/22	14/20	55.50
F449900	100	19/22	19/22	58.10
F444100	100	24/40	14/20	61.05
F444900	100	24/40	19/22	67.80
F444400	100	24/40	24/40	81.14
F441250	250	14/20	14/20	60.24
F442250	250	24/40	19/22	72.83
F444250	250	24/40	24/40	82.30
F441500	500	14/20	14/20	76.00
F449500	500	19/22	19/22	79.64
F440500	500	24/40	19/22	82.30
F444500	500	24/40	24/40	84.61
F446500	500	29/42	24/40	86.69
F448500	500	29/42	29/42	88.88
F444000	1000	24/40	24/40	97.89
F44841L	1000	29/42	24/40	104.01
F44341L	1000	34/45	24/40	108.22
F44451L	1000	45/50	24/40	108.63
F44242L	2000	24/40	24/40	152.52
F44842L	2000	29/42	24/40	153.91
F44292L	2000	29/42	29/42	155.58
F44342L	2000	34/45	24/40	156.91
F44542L	2000	45/50	24/40	159.39
F44243L	3000	24/40	24/40	207.48
F44843L	3000	29/42	24/40	211.68
F44293L	3000	29/42	29/42	214.20
F44343L	3000	34/45	24/40	217.56
F44383L	3000	34/45	29/42	220.50
F44543L	3000	45/50	24/40	223.02
F44583L	3000	45/50	29/42	227.64
F44245L	5000	24/40	24/40	273.00
F44845L	5000	29/42	24/40	276.78
F44295L	5000	29/42	29/42	282.24
F44345L	5000	34/45	24/40	286.02
F44385L	5000	34/45	29/42	289.80
F44545L	5000	45/50	24/40	296.10
F44585L	5000	45/50	29/42	300.30

**FLASK, ROUND BOTTOM, 4-NECK, ANGLED**

Heavy wall design. All sizes listed below are hand-blown from tubing to ensure uniform wall thickness.

Item #	Capacity (mL)	Center Joint	Side Joint	Price (each)
F221125	25	14/20	14/20	72.71
F221150	50	14/20	14/20	73.23
F221100	100	14/20	14/20	75.54
F221250	250	14/20	14/20	77.62
F224250	250	24/40	24/40	120.35
F221500	500	14/20	14/20	83.28
F224500	500	24/40	24/40	124.69
F222500	500	29/42	24/40	126.54
F224000	1000	24/40	24/40	153.15

**FLASK, ROUND BOTTOM, THREE NECK, FULLJACKET**

Round bottom flask with standard taper outer joints on the center and vertical side necks. Heavy wall design. Entire flask body is jacketed and has two hose connections for circulation of heating or cooling liquid.

Item #	Capacity (mL)	Center Joint	Side Joint	Price (each)
F204500	500	24/40	24/40	431.51
F208450	500	29/42	24/40	433.93
F20241L	1000	24/40	24/40	470.32
F20841L	1000	29/42	24/40	472.74

**FLASK, ROUND BOTTOM, THREE NECK, HALFJACKETED, WITH STOPCOCK DRAIN**

Round bottom flask with standard taper outer joints on the center and vertical side necks. Heavy wall design. Lower half of the flask is jacketed with two hose connections for circulation of heating or cooling liquid. Lower outlet has a 4mm straight bore glass or PTFE stopcock.

Item #	Capacity (mL)	Center Joint	Side Joint	Stopcock Type	Price (each)
F634500G	500	24/40	24/40	Glass	400.79
F638450G	500	29/42	24/40	Glass	402.61
F63241LG	1000	24/40	24/40	Glass	457.96
F63841LG	1000	29/42	24/40	Glass	464.77
F634500	500	24/40	24/40	Teflon <sup>®</sup>	410.03
F638450	500	29/42	24/40	Teflon <sup>®</sup>	411.87
F63241L	1000	24/40	24/40	Teflon <sup>®</sup>	467.20
F63841L	1000	29/42	24/40	Teflon <sup>®</sup>	474.59

**Accessory:**

S461740	Replacement 4mm Glass Plug Only	14.73
S691740	Replacement S.S. Retention Kit for 4mm Glass Stopcock	2.43
S181530	Replacement 4mm Teflon <sup>®</sup> Plug Only	20.97





**FLASK, ROUND BOTTOM, 3-NECK BOTTOM OUTLET**

Lower outlet is a 4mm straight bore Teflon® stopcock.

Item #	Capacity (mL)	Center Joint	Side Joint	Price (each)
F424450	500	24/40	24/40	199.65
F42441L	1000	24/40	24/40	221.76
F42442L	2000	24/40	24/40	250.87
F42542L	2000	24/40	24/40	266.29
<b>Accessory:</b>				
S181530	Replacement 4mm Teflon® Plug Only			20.97

**FLASK, ROUND BOTTOM, 4-NECK, WITH THREADED SIDE ARM**

Round bottom, four-neck flask with standard taper outer joints and a thermometer joint. Supplied complete with a compression cap and Viton O-ring for insertion of plain stem thermometers or bleed tubes having an O.D. between 5.0 - 7.0mm.

Item #	Capacity (mL)	Center Joint	Side Joint	Price (each)
F714500	500	24/40	24/40	123.35
F71241L	1000	24/40	24/40	142.64
F71842L	2000	29/42	24/40	179.43
F71542L	2000	45/50	24/40	340.67
<b>Accessories:</b>				
RC009	Nylon® caps			1.16
R107	Replacement Viton® O-rings, Size 107			1.73

\*All sizes including 2L flasks are hand-blown from tubing to ensure heavy and uniform wall.

**FLASK, ROUND BOTTOM, 4-NECK**

With identical vertical side joints.

Item #	Capacity (mL)	Center Joint	Side Joint	Price (each)
F214250	250	24/40	24/40	118.50
F214500	500	24/40	24/40	122.55
F212500	500	29/42	24/40	123.82
F218500	500	29/42	29/42	125.27
F214000	1000	24/40	24/40	150.96
F21841L	1000	29/42	24/40	152.52
F21842L	2000	29/42	24/40	173.37
F21342L	2000	34/45	24/40	178.10
F21543L	3000	45/50	24/40	305.55
F21583L	3000	45/50	29/42	310.28
F21845L	5000	29/42	24/40	402.15
F21545L	5000	45/50	24/40	430.50
F21585L	5000	45/50	29/42	434.70

\*All sizes including 2L flasks are hand-blown from tubing to ensure heavy and uniform wall.



**FLASK, ERLLENMEYER**

With joint. Stopper is not supplied.

Item #	Capacity (mL)	Joint	Price (each)
F661405	5	14/20	15.59
F661410	10	14/20	16.70
F661425	25	14/20	17.16
F661925	25	19/22	17.09
F661450	50	14/20	17.62
F661950	50	19/22	17.85
F662450	50	24/40	21.43
F662950	50	29/42	22.18
F661125	125	14/20	19.64
F669125	125	19/22	20.62
F664125	125	24/40	21.71
F664250	250	24/40	22.52
F669250	250	29/42	23.68
F664500	500	24/40	24.14
F669500	500	29/42	25.29
F664000	1000	24/40	27.49
F668000	1000	29/42	28.76

\*All sizes including 1L flasks are hand-blown from tubing to ensure heavy and uniform wall.



**FLASK, FILTERING, WITH JOINT**

Heavy wall design made from tubing to ensure excellent quality with 10 mm hose connection.

Item #	Capacity (mL)	Joint	Price (each)
F724250	250	24/40	69.13
F724500	500	24/40	78.37
F724000	1000	24/40	102.51





**TUBE, STORAGE, HIGH VACUUM VALVE**

Supplied with high vacuum valve with PTFE O-ring at tip and a PTFE wiper (umbrella) to protect the Viton® O-ring on shaft.

Item #	Capacity (mL)	Valve Size	Tube O.D.×Length (mm)	Price (each)
F580010	10	0-4mm	22×55	67.20
F580810	10	0-8mm	19×65	76.65
F580020	20	0-4mm	22×110	67.20
F580820	20	0-8mm	19×130	76.65
F580025	25	0-4mm	26×110	80.16
F580825	25	0-8mm	26×110	91.59
F580050	50	0-4mm	28×120	93.79
F580850	50	0-8mm	28×120	106.44
F580100	100	0-4mm	40×165	98.75
F588100	100	0-8mm	40×165	109.96
F588250	250	0-8mm	60×185	115.04
<b>Accessories:</b>				
S600004T	0-4mm PTFE Protected High Vacuum Valve (Fully Enclosed)			34.76
S600008T	0-8mm PTFE Protected High Vacuum Valve (Fully Enclosed)			44.99

**TUBE, STORAGE, INTERNAL THREAD HIGH VACUUM VALVE**

Supplied with internal thread high vacuum valve with PTFE O-ring at tip and a PTFE wiper (umbrella) to protect the Viton® O-ring on shaft.

Item #	Capacity (mL)	Valve Size	Tube O.D.× Length (mm)	Price (each)
F580010N	10	0-4mm	22×55	84.58
F580810N	10	0-8mm	19×65	99.15
F580020N	20	0-4mm	22×110	84.58
F580820N	20	0-8mm	19×130	99.15
F580025N	25	0-4mm	26×110	97.54
F580825N	25	0-8mm	26×110	114.09
F580050N	50	0-4mm	28×120	111.17
F580850N	50	0-8mm	28×120	128.94
F580100N	100	0-4mm	40×165	116.13
F588100N	100	0-8mm	40×165	132.46
F588250N	250	0-8mm	60×185	137.54
<b>Accessories:</b>				
S600004N	0-4mm High Vacuum Valve with Internal Thread			52.14
S600008N	0-8mm High Vacuum Valve with Internal Thread			67.49



**FLASK, MODIFIED SCHLENK TUBE**

Choice of either 2mm glass stopcock, 2mm Teflon® stopcock or 0-4mm high vacuum valve.

Item #	Capacity (mL)	Joint	Stopcock Type	Price (each)
F901410	10	14/20	Teflon®	62.90
F901425	25	14/20	Teflon®	66.48
F901450	50	14/20	Teflon®	70.34
F901950	50	19/22	Teflon®	71.26
F902450	50	24/40	Teflon®	71.84
F901100	100	14/20	Teflon®	72.07
F909100	100	19/22	Teflon®	75.88
F904100	100	24/40	Teflon®	78.77
F901200	200	14/20	Teflon®	82.24
F909200	200	19/22	Teflon®	85.42
F904200	200	24/40	Teflon®	87.43
F904500	500	24/40	Teflon®	88.24
F904000	1000	24/40	Teflon®	98.75
F901410G	10	14/20	Glass	59.08
F901425G	25	14/20	Glass	62.43
F901450G	50	14/20	Glass	66.30
F901950G	50	19/22	Glass	67.28
F902450G	50	24/40	Glass	67.86
F901100G	100	14/20	Glass	68.09
F909100G	100	19/22	Glass	71.84
F904100G	100	24/40	Glass	74.79
F901200G	200	14/20	Glass	78.27
F904200G	200	24/40	Glass	83.45
F904500G	500	24/40	Glass	84.26
F904000G	1000	24/40	Glass	97.08
F901425H	25	14/20	HV Valve	68.79
F901450H	50	14/20	HV Valve	70.46
F901950H	50	19/22	HV Valve	71.90
F902450H	50	24/40	HV Valve	72.42
F901100H	100	14/20	HV Valve	72.94
F909100H	100	19/22	HV Valve	75.83
F904100H	100	24/40	HV Valve	77.62
F901200H	200	14/20	HV Valve	81.84
F909200H	200	19/22	HV Valve	82.65
F904200H	200	24/40	HV Valve	84.03
F904500H	500	24/40	HV Valve	85.93
F904000H	1000	24/40	HV Valve	97.78
<b>Accessories:</b>				
S181125	Replacement 2mm Teflon® Plug Only			12.54
S461230	Replacement 2mm Glass Plug Only			11.61
S691230	Replacement S.S. Retention Kit for 2mm Glass Stopcock			2.43
S600004T	0-4mm PTFE Protected High Vacuum Valve (Fully Enclosed)			34.76
R010	Viton® O-ring for 0-4mm High Vacuum Plug Shaft			1.16





**TUBE, STORAGE WITH OUTER JOINT**

Supplied with high vacuum valve with PTFE O-ring at tip.

Item #	Capacity (mL)	Joint	Valve Size	Tube O.D.× Length (mm)	Price (each)
F761425	25	14/20	0-4mm	26*110	86.69
F761450	50	14/20	0-4mm	28*120	100.66
F762450	50	24/40	0-4mm	28*120	104.30
F761100	100	14/20	0-4mm	40*165	113.31
F764100	100	24/40	0-4mm	40*165	116.77
F761108	100	14/20	0-8mm	40*165	118.73
F764108	100	24/40	0-8mm	40*165	121.97
F764258	250	24/40	0-8mm	60*185	135.02
F764358	350	24/40	0-8mm	70*200	135.71
<b>Accessories:</b>					
S600004T	0-4mm PTFE Protected High Vacuum Valve (Fully Enclosed)				34.76
S600008T	0-8mm PTFE Protected High Vacuum Valve (Fully Enclosed)				44.99
R010	Viton® O-ring for 0-4mm High Vacuum Plug Shaft				1.16
R110	Viton® O-ring for 0-8mm High Vacuum Plug Shaft				1.80

**FLASK, STORAGE WITH OUTER JOINT**

Supplied with high vacuum valve with PTFE O-ring at tip.

Item #	Capacity (mL)	Joint	Valve Size	Price (each)
F461010	10	14/20	0-4mm	67.57
F461025	25	14/20	0-4mm	71.03
F461050	50	14/20	0-4mm	89.81
F461100	100	14/20	0-4mm	89.81
F464100	100	24/40	0-4mm	91.82
F461250	250	14/20	0-4mm	99.68
F464250	250	24/40	0-4mm	101.76
F461500	500	14/20	0-4mm	96.04
F464500	500	24/40	0-4mm	102.40
F464508	500	24/40	0-8mm	111.46
F464000	1000	24/40	0-4mm	118.00
F464008	1000	24/40	0-8mm	120.12
<b>Accessories:</b>				
S600004T	0-4mm PTFE Protected High Vacuum Valve (Fully Enclosed)			34.76
S600008T	0-8mm PTFE Protected High Vacuum Valve (Fully Enclosed)			44.99
R010	Viton® O-ring for 0-4mm High Vacuum Plug Shaft			1.16
R110	Viton® O-ring for 0-8mm High Vacuum Plug Shaft			1.80



**FLASK, SOLVENT TRANSFER/STORAGE**

Item #	Capacity (mL)	Joint	Valve Size	Price (each)
F484250	250	24/40	0-4mm	74.15
F484258	250	24/40	0-8mm	88.36
F481500	500	14/20	0-4mm	80.68
F484500	500	24/40	0-4mm	92.75
F484508	500	24/40	0-8mm	106.79
F484000	1000	24/40	0-4mm	114.35
F484008	1000	24/40	0-8mm	128.38
<b>Accessories:</b>				
S600004T	0-4mm PTFE Protected High Vacuum Valve (Fully Enclosed)			34.76
S600008T	0-8mm PTFE Protected High Vacuum Valve (Fully Enclosed)			44.99
R010	Viton® O-ring for 0-4mm High Vacuum Plug Shaft			1.16
R110	Viton® O-ring for 0-8mm High Vacuum Plug Shaft			1.80



**FLASK, HIGH VACUUM VALVE**

Supplied with a high vacuum valve with O-ring at tip and PTFE wiper (umbrella) to protect Viton® O-ring on shaft.

Item #	Capacity (mL)	Valve Size	Price (each)
F490010	10	0-4mm	69.59
F490050	50	0-4mm	83.34
F490100	100	0-4mm	86.97
F490250	250	0-4mm	89.92
F490258	250	0-8mm	103.60
F490500	500	0-4mm	94.13
F49081L	1000	0-8mm	116.03
<b>Accessories:</b>			
S600004T	0-4mm PTFE Protected High Vacuum Valve (Fully Enclosed)		34.76
S600008T	0-8mm PTFE Protected High Vacuum Valve (Fully Enclosed)		44.99
R010	Viton® O-ring for 0-4mm High Vacuum Plug Shaft		1.16
R110	Viton® O-ring for 0-8mm High Vacuum Plug Shaft		1.80



**FLASK, REACTION, HIGH VACUUM VALVE**

Supplied with high vacuum valve with PTFE O-ring at tip and PTFE wiper to protect Viton® O-ring on shaft.

Item #	Capacity (mL)	Joint	Valve Size	Price (each)
F541050	50	14/20	0-4mm	92.12
F541950	50	19/22	0-4mm	93.62
F541100	100	14/20	0-4mm	92.12
F549100	100	19/22	0-4mm	93.96
F544100	100	24/40	0-4mm	93.79
F541250	250	14/20	0-4mm	94.02
F549250	250	19/22	0-4mm	96.97
F544250	250	24/40	0-4mm	100.78
F544500	500	24/40	0-4mm	103.03
F54241L	1000	24/40	0-4mm	107.13
<b>Accessory:</b>				
S600004T	0-4mm PTFE Protected High Vacuum Valve (Fully Enclosed)			34.76
R010	Viton® O-ring for 0-4mm High Vacuum Plug Shaft			1.16

**FLASK, REACTION TUBE, HIGH VACUUM VALVE**

Supplied with high vacuum valve with PTFE O-ring at tip and PTFE wiper (umbrella) to protect Viton® O-ring on shaft.

Item #	Capacity (mL)	Joint	Valve Size	Price (each)
F561025	25	14/20	0-4mm	75.25
F561050	50	14/20	0-4mm	76.41
F561100	100	14/20	0-4mm	77.45
F564100	100	24/40	0-4mm	78.60
F564250	250	24/40	0-4mm	81.03
F564350	350	24/40	0-4mm	87.20
<b>Accessories:</b>				
S600004T	0-4mm PTFE Protected High Vacuum Valve (Fully Enclosed)			34.76
R010	Viton® O-ring for 0-4mm High Vacuum Plug Shaft			1.16

**FLASK, REACTION, WITH GLASS STOPCOCK**

With 2mm glass stopcock. With spring retention device for smooth turning purpose.

Item #	Capacity (mL)	Joint	Price (each)
F531050	50	14/20	88.01
F531100	100	14/20	88.47
F539100	100	19/22	89.05
F534100	100	24/40	89.81
F531250	250	14/20	90.32
F534250	250	24/40	95.87
F534500	500	24/40	99.16
<b>Accessories:</b>			
S461230	Replacement 2mm Glass Plug Only		11.61
S691230	Replacement S.S. Retention for 2mm Glass stopcock		2.43

**FLASK, REACTION, WITH TEFLON STOPCOCK**

With 2mm Teflon stopcock.

Item #	Capacity (mL)	Joint	Price (each)
F531050S	50	14/20	92.41
F531100S	100	14/20	92.89
F539100S	100	19/22	93.50
F534100S	100	24/40	94.30
F531250S	250	14/20	94.84
F534250S	250	24/40	100.66
F534500S	500	24/40	104.12
<b>Accessories:</b>			
S181125	Replacement 2mm Teflon® Plug Only		12.54

**FLASK, REACTION, 2-NECK**

With a 2mm glass stopcock having a constant pressure retention device.

Item #	Capacity (mL)	Joint	Price (each)
F161450	50	14/20	95.87
F161100	100	19/22	96.10
F169100	100	19/22	96.67
F164100	100	24/40	96.85
F164250	250	24/40	105.80
F164500	500	24/40	108.80
<b>Accessories:</b>			
S461230	Replacement 2mm Glass Plug Only		11.61
S691230	Replacement S.S. Retention for 2mm Glass stopcock		2.43



**FLASK, REACTION TUBE**

With an outer joint and 2mm glass or Teflon stopcock.

Item #	Capacity (mL)	Joint	Stopcock Type	Price (each)
F891410	10	14/20	Glass	69.99
F891425	25	14/20	Glass	72.77
F891450	50	14/20	Glass	73.06
F891950	50	19/22	Glass	73.64
F892450	50	24/40	Glass	75.48
F891100	100	14/20	Glass	73.69
F894100	100	24/40	Glass	77.85
F894200	200	24/40	Glass	78.26
F894250	250	24/40	Glass	85.35
F891410S	10	14/20	Teflon®	73.49
F891425S	25	14/20	Teflon®	76.41
F891450S	50	14/20	Teflon®	76.71
F891950S	50	19/22	Teflon®	77.32
F892450S	50	24/40	Teflon®	79.25
F891100S	100	14/20	Teflon®	77.37
F894100S	100	24/40	Teflon®	81.74
F894200S	200	24/40	Teflon®	82.17
F894250S	250	24/40	Teflon®	89.62
<b>Accessories:</b>				
S461230	Replacement 2mm Glass Plug Only			11.61
S691230	Replacement S.S. Retention for 2mm Glass Stopcock			2.43
S181125	Replacement 2mm Teflon® Plug Only			12.54

**FILTER FUNNEL, BUCHNER, INNER JOINT, PERFORATED PLATE**

For use with filter media.

Item #	Glass Disc Size (mm)	Capacity (mL)	Joint	Price (each)
F963014	32	30	14/20	93.04
F963024	32	30	24/40	115.79
F964014	42	60	14/20	95.35
F964024	42	60	24/40	120.76
F966024	60	150	24/40	175.85
F969024	90	600	24/40	245.44

**FILTER FUNNEL, PERFORATED PLATE**

O.D. of disc is 24mm. For use with filter media.

Item #	Joint	O.D. (mm)	Price (each)
F932450	24/40	50	77.79
F932475	24/40	75	89.34
F932490	24/40	90	101.64

**FILTER FUNNEL, FRITTED DISC**

Item #	Joint	O.D. (mm)	Price (each)
F932450X	24/40	50	77.79
F932475X	24/40	75	89.34
F932490X	24/40	90	101.64

**FILTER FUNNEL**

O.D. of disc is 24mm.

Item #	Joint	O.D.(mm)	Porosity	Price (each)
F752450C	24/40	50	C	55.73
F752450M	24/40	50	M	55.73
F752475C	24/40	75	C	67.52
F752475M	24/40	75	M	67.52
F752490C	24/40	90	C	80.10
F752490M	24/40	90	M	80.10



**FUNNEL, POWDER**

Funnels have a 60° side angle and a standard taper inner joint.

Item #	Top Dia. (mm)	Joint Size	Price (each)
F182450	50	24/40	30.26
F182475	75	24/40	33.03
F184100	100	24/40	36.27
F188100	100	29/42	41.23

**FUNNEL, POWDER, FLATTENED SIDE**

Funnels have a 60° angled side with a standard taper inner joint.

Item #	Top Dia. (mm)	Joint Size	Price (each)
F191450	50	14/20	33.26
F191950	50	19/22	34.65
F192475	75	24/40	43.66
F192975	75	29/42	46.32
F194100	100	24/40	50.82
F198100	100	29/42	53.48

**FUNNEL, POWDER, 60° OFFSET**

For use with multi-neck flasks.

Item #	Joint	Approx. Diameter at Top (mm)	Price (each)
F392475	24/40	75	44.12
F394100	24/40	100	53.31

**FUNNEL, SOLVENT ADDITION**

Design of funnel permits addition of solvents to flash chromatography columns without disturbing the silica-gel/packing layer. Lower end of the funnel is closed and the stem has a series of small holes through which the solvent drains. Top of the funnel is 90mm in diameter with the stem size as listed.

Item #	Stem O.D.× Length (mm)	Price (each)
F291275	12×75	44.99
F291210	12×100	49.43
F291975	19×75	49.84
F291910	19×100	51.05
F292810	28×100	57.81
F292812	28×125	59.20

\* Fits column with 24/40 joint or 35/20 joint.

\* Fits column with large joint like 45/50 standard or 50/30 spherical joint.

**FILTER FUNNEL, BUCHNER, INNER JOINT**

Not recommended for filtration where pressure would exceed 15psi.

Item #	Capacity (mL)	Joint	Frit O.D. (mm)	Porosity	Price (each)
F362014C	15	14/20	20	C	63.99
F362014M	15	14/20	20	M	63.99
F362019C	15	19/22	20	C	66.82
F362024C	15	24/40	20	C	93.27
F362024M	15	24/40	20	M	93.27
F363014C	30	14/20	30	C	67.28
F363014M	30	14/20	30	M	67.28
F363019C	30	19/22	30	C	68.26
F363019M	30	19/22	30	M	68.26
F363024C	30	24/40	30	C	98.75
F363024M	30	24/40	30	M	98.75
F364014C	60	14/20	40	C	68.90
F364014M	60	14/20	40	M	68.90
F364019C	60	19/22	40	C	71.33
F364019M	60	19/22	40	M	71.33
F364024C	60	24/40	40	C	104.24
F364024M	60	24/40	40	M	104.24
F366024C	150	24/40	60	C	135.31
F366024M	150	24/40	60	M	135.31
F366029C	150	29/42	60	C	139.99
F366029M	150	29/42	60	M	139.99
F368024C	350	24/40	80	C	158.24
F368024M	350	24/40	80	M	158.24
F369024C	600	24/40	90	C	190.46
F369024M	600	24/40	90	M	190.46

**CRUCIBLE, GOOCH, LOW FORM**

With fritted disc.

Item #	Capacity (mL)	Frit O.D. (mm)	Porosity	Price (each)
F771520C	15	20	Coarse	18.64
F771520M	15	20	Medium	19.98
F773030C	30	30	Coarse	21.48
F773030M	30	30	Medium	22.75



**FILTER FUNNEL, BUCHNER**

With sealed-in glass disc of the listed porosity. Not recommended for filtration where pressure would exceed 15 psi. XC-extra coarse, C-Coarse, M-Medium, F-Fine porosity.

Item #	Capacity (mL)	Disc O.D. (mm)	Porosity	Price (each)
F601002C	2	10	C	28.53
F601002M	2	10	M	28.53
F601002F	2	10	F	30.61
F602015X	15	20	XC	32.06
F602015C	15	20	C	32.06
F602015M	15	20	M	32.06
F602015F	15	20	F	34.07
F603030X	30	30	XC	36.10
F603030C	30	30	C	36.10
F603030M	30	30	M	36.10
F603030F	30	30	F	38.12
F604060X	60	40	XC	39.85
F604060C	60	40	C	39.85
F604060M	60	40	M	39.85
F604060F	60	40	F	41.87
F606150X	150	60	XC	71.10
F606150C	150	60	C	71.10
F606150M	150	60	M	71.10
F606150F	150	60	F	73.06
F608350X	350	80	XC	98.64
F608350C	350	80	C	98.64
F608350M	350	80	M	98.64
F608350F	350	80	F	100.72
F609600C	600	90	C	118.27
F609600M	600	90	M	118.27
F609600F	600	90	F	120.35
F601000X	1000	120	XC	236.25
F601000C	1000	120	C	236.25
F601000M	1000	120	M	236.25
F601000F	1000	120	F	257.25
F602000X	2000	150	XC	472.50
F602000C	2000	150	C	472.50
F602000M	2000	150	M	472.50
F602000F	2000	150	F	514.50
F605000X	5000	180	XC	945.00
F605000C	5000	180	C	945.00
F605000M	5000	180	M	945.00
F605000F	5000	180	F	997.50

**FUNNEL, FILTER, BUCHNER, PERFORATED PLATE**

With sealed-in perforated glass disc to support filter media. Pressure may be used but should not exceed 15 psi. This design solves the contamination problem with a fritted disc and also the blindness problem with a ceramic Buchner funnel.

Item #	Glass Disc Size (mm)	Capacity (mL)	Price (each)
F804260	42	60	94.71
F806150	60	150	127.11
F808350	80	350	160.03
F809600	90	600	207.90

**GAS DISPERSION TUBE, FRITTED**

Stem is 8mm O.D. x 150mm length, XC stands for extra coarse porosity.

Item #	Disc Dia. (mm)	Porosity	Price (each)
F260810X	10	XC	27.90
F260810C	10	C	27.90
F260810M	10	M	28.59

**GAS DISPERSION TUBE, FRITTED, 15° ANGLE**

The 15° angle permits tube to be inserted into vessels where a large opening is not available. Stem is 8mm O.D. x 150mm length, XC stands for extra coarse porosity.

Item #	Disc Dia. (mm)	Opening Required (mm)	Porosity	Price (each)
F271018M	10	18	M	39.33
F272025C	20	25	C	45.05
F272025M	20	25	M	45.05
F273035X	30	35	XC	50.70
F274045M	40	45	M	58.51

**GAS DISPERSION TUBE, FRITTED, 90° ANGLE**

The 90° angle permits bubbles to be spread over a large area. Stem is 8mm O.D. x 150mm length. XC stands for extra coarse porosity.

Item #	Disc Dia. (mm)	Opening Required (mm)	Porosity	Price (each)
F282035M	20	35	M	45.05
F283045C	30	45	C	50.70
F284060X	40	60	C	58.51
F284060C	40	60	XC	58.51
F284060M	40	60	M	58.51



**FILTER, TUBE, FRITTED DISC**

Available with a choice of a coarse or medium porosity fritted disc.

Item #	Joint	Approximate Frit O.D. (mm)	Porosity	Price (each)
F701420C	14/20	20	C	96.85
F701420M	14/20	20	M	96.85
F701430C	14/20	30	C	103.26
F701430M	14/20	30	M	103.26
F702440C	24/40	36	C	106.61
F702440M	24/40	36	M	106.61

\*Used for airless system between 2 flasks – filters from one to another.

**FILTER, TUBE, FRITTED DISC**

With two 2mm glass stopcocks having constant pressure retention devices.

Item #	Joint	Approximate Frit O.D. (mm)	Porosity	Price (each)
F351430C	14/20	30	C	174.29
F351430M	14/20	30	M	174.29
F352440C	24/40	36	C	204.84
F352440M	24/40	36	M	204.84

**Accessories:**

S461230	Replacement 2mm Glass Plug Only	11.61
S691230	Replacement S.S Retention for 2mm Glass Stopcock	2.43

**FUNNEL, ADDITION, HIGH VACUUM VALVE**

Supplied with high vacuum valve with PTFE O-ring at tip and PTFE wiper to protect Viton® O-ring on shaft.

Item #	Joint	Capacity (mL)	Price (each)
F551060	14/20	100	201.61
F554200	24/40	250	222.22

**Accessories:**

S600004T	0-4mm PTFE Protected High Vacuum Valve (Fully Enclosed)	34.76
R010	Viton® O-ring for 0-4mm High Vacuum Plug Shaft	1.16

**PEPTIDE SYNTHESIS VESSEL, SOLID PHASE**

With a fritted disc of coarse or medium porosity to support resin. Top of the vessel has GL thread and a Teflon® lined screw cap. Teflon® stopcock has a 2mm bore with the arm being 8mm O.D.

Item #	Capacity (mL)	Fritted Disc O.D. (mm)	GL Thread Size	Price (each)
P120010C	10	15	14	108.11
P120010M	10	15	14	108.11
P120025C	25	20	25	122.89
P120025M	25	20	25	122.89
P120050C	50	25	25	137.16
P120050M	50	25	25	137.16

**Accessories:**

S181125	Replacement 2mm Teflon® Plug Only	12.54
GL14	Nylon® Cap 14mm	4.50
R14	PTFE Septum 14mm	0.76
GL25	Nylon® Cap 25mm	5.38
R25	PTFE Septum 25mm	1.33

**PEPTIDE SYNTHESIS VESSEL, SOLID PHASE, T-BORE TEFLON® STOPCOCK**

With a fritted disc of coarse or medium porosity to support resin. Top of the vessel has GL thread and a Teflon® lined screw cap. Teflon® stopcock has a 2mm bore with the arm being 8mm O.D.

Item #	Capacity (mL)	Fritted Disc O.D. (mm)	GL Thread Size	Price (each)
P130010C	10	15	14	137.51
P130050C	50	25	25	165.69
P130050M	50	25	25	165.69
P130100C	100	40	25	179.83
P130100M	100	40	25	179.83

**Accessories:**

S201530	2mm Teflon® T-bore Stopcock Plug	27.78
GL14	Nylon® Cap 14mm	4.50
R14	PTFE Septum 14mm	0.76
GL25	Nylon® Cap 25mm	5.38
R25	PTFE Septum 25mm	1.33



**PEPTIDE SYNTHESIS VESSEL, SOLID PHASE, T-BORE, VACUUM**

A connection of 8mm O.D. is sealed on the inner joint for connection to an inner gas. With a fritted disc of coarse or medium porosity to support resin. Top of the vessel has GL thread and a Teflon® lined screw cap. Teflon® stopcock has a 2mm bore with the arm being 8mm O.D.

Item #	Capacity (mL)	Fritted Disc O.D. (mm)	GL Thread size	Price (each)
P140010M	10	15	14	158.47
P140025M	25	20	25	173.25
P140050M	50	25	25	188.15
P140100M	100	40	25	204.44
<b>Accessories:</b>				
S201530	2mm Teflon® T-bore Stopcock Plug			27.78
GL14	Nylon® Cap 14mm			4.50
R14	PTFE Septum 14mm			0.76
GL25	Nylon® Cap 25mm			5.38
R25	PTFE Septum 25mm			1.33

**PEPTIDE SYNTHESIS VESSEL, WITH LOWER JOINT AND T-BORE PTFE PLUG**

Solid phase peptide synthesis vessels feature 2mm PTFE stopcocks and fritted glass supports for resin beads during operation. The 24/40 inner drip joint can be assembled with other standard glassware. The vessel has an 8mm hose connection for vacuum and the stopcock has an 8mm O.D. sidearm for inert gas introduction. Vessels are supplied with a PTFE-faced silicone lined Nylon® cap.

Item #	Capacity (mL)	Fritted Disc O.D. (mm)	Porosity	GL Thread Size	Price (each)
P150025M	25	25	M	14	164.24
P150050C	50	30	C	25	179.03
P150050M	50	30	M	25	179.03
P150100M	100	45	M	25	210.21
P150250M	250	57	M	32	219.45
P150500M	500	80	M	32	235.80
<b>Accessories:</b>					
S201530	2mm Teflon® T-bore Stopcock Plug				27.78
GL14	Nylon® Cap 14mm				4.50
R14	PTFE Septum 14mm				0.76
GL25	Nylon® Cap 25mm				5.38
R25	PTFE Septum 25mm				1.33
GL32	Nylon® Cap 32mm				8.96
R32	PTFE Septum 32mm				1.33

**NYLON® CAP WITH PROTECTED SEAL**

Replacement caps for use with Solid Phase Reaction Vessels, with PTFE protected silicone septum.

Item #	Size (mm)	Material	Price (each)
GL14	14	Nylon®	4.50
GL25	25	Nylon®	5.38
GL32	32	Nylon®	8.96

**SEPTUM, TEFLON®**

For use with Nylon cap.

Item #	Size (mm)	Material	Price (each)
R14	14	PTFE	0.76
R25	25	PTFE	1.33
R32	32	PTFE	1.33

**REACTION VESSEL, PHOTOCHEMICAL, INTERNAL THREAD**

Reaction vessel constructed of borosilicate glass to accommodate immersion well. With #50 internal thread at top which accepts a RC50 bushing and Viton® O-ring to form a compression seal with the immersion well. One 14/20 joint for sparger tube, one 24/40 vertical joint for condenser, and one #7 internal thread side arm for thermometer. Complete with quartz immersion well, caps, and O-rings.

Item #	Capacity (mL)	Price (each)
V150500	500	941.85
<b>Accessories:</b>		
RC50	Bushing, #50, Nylon Cap Only	55.97
R225	O-ring for #50 Internal Thread	7.16
RC7	Nylon® Cap for #7 Internal Thread	1.96
R008	O-ring for #7 Internal Thread	1.33

**IMMERSION WELL, PHOTOCHEMICAL, QUARTZ, WITHOUT JOINT**

Double-walled quartz immersion well for use with V150500 reactor and lamp. A small diameter inner tube extends down the annular space to ensure flow or coolant from bottom of well upward to outlet. Well is used with RC50 Nylon® Bushing with a Viton® O-ring to form a compression type seal with threaded vessels. Well offers a greaseless connection and can be adjusted to desired height. The lack of the ground joint means dismantling since there is no freezing.

Item #	Capacity (mL)	Price (each)
V190390	390mm	579.46



**PRESSURE VESSEL, HEAVY WALL**

Heavy wall cylindrical vessels have an internal thread for use with a Teflon® bushing as a pressure seal. This unique design allows hand tightening and loosening for easy access into the vessel. The O-ring is positioned on the bushing above the thread for improved sealing. The vessels are useful for pressure reactions and applications such as polymerization and analysis of halogens by thermal decomposition in the presence of lime. Complete apparatus is supplied with vessel, Teflon® bushing, and EP® O-ring.

Item #	Capacity (mL)	O.D. x Overall (mm)	GL Thread Size	Price (each)
P160701	1	13*25	#7	45.80
P160702	2	13*45	#7	46.00
P160704	4	13*80	#7	46.20
P160710	10	19*90	#7	47.00
P160020	20	26*110	#15	47.85
P160001	15	26*70	#15	47.42
P160002	35	26*125	#15	48.16
P160003	38	26*135	#15	49.15
P160004	48	46*70	#15	63.87
P160005	100	46*110	#15	64.63
P160006	120	46*130	#15	68.49

**Accessories:**

R107EP	EP O-ring, #7 GL Thread	1.83
B100007	Teflon® Bushing with Viton® O-ring, #7	15.20
R111EP	EP O-ring, #15 GL Thread	1.90
B100015	Teflon® Bushing with Viton® O-ring, #15	15.61

**PRESSURE VESSEL, HEAVY WALL, PROTECTIVE COVERING**

Due to the protective coating, this product has a working temperature of -40 °C to 80 °C. Complete apparatus is supplied with vessel, Teflon® bushing and EP® O-ring.

\*Protective coating may become yellow over time; this does not affect product integrity.

Item #:	Capacity (mL)	O.D. x Overall (mm)	GL Thread Size	Price (each)
P160001D	15	26×70	#15	73.67
P160002D	35	26×125	#15	74.41
P160003D	38	26×135	#15	75.40
P160004D	48	46×70	#15	90.12
P160005D	100	46×110	#15	90.88
P160006D	120	46×130	#15	94.74

**Accessories:**

R111EP	EP O-ring, #15 GL Thread	1.90
B100015	Teflon Bushing with EP O-ring, 15mm	15.61

**\*Important Warnings for Pressurized Glassware:**

Due to varying conditions, we cannot guarantee glass vessels from breakage under pressure. Always work behind a safety shield.

**\*Maximum Pressure:** 88 psi at room temperature.

**PRESSURE VESSEL, HEAVY WALL**

Heavy wall round bottom vessels have an internal thread for use with a 15mm Teflon® bushing as a pressure seal. This unique design allows hand tightening and loosening for easy access into the vessel. The O-ring is positioned on the bushing above the thread for improved sealing. The vessels are useful for pressure reactions and applications such as polymerization and analysis of halogens by thermal decomposition in the presence of lime.

Item #	Capacity (mL)	O.D. x Overall (mm)	GL Thread Size	Supplied	Price (each)
P170001	75	46*90	15	Complete	69.13
P170002	75	46*90	25	Complete	89.97
P170003	150	60*100	15	Complete	71.96
P170004	150	60*100	25	Complete	93.85
P170005	350	80*115	15	Complete	83.04
P170006	350	80*115	25	Complete	103.95

**Accessories:**

B100015	Teflon® Bushing with Viton® O-ring, 15mm	15.61
R111EP	EP O-ring, #7 GL Thread	1.90
B100025	Teflon® Bushing with Viton® O-ring, 25mm	23.78
R212EP	EP O-ring, #25 GL Thread	3.57

**PRESSURE VESSEL, HEAVY WALL, PROTECTIVE COVERING**

Heavy wall round bottom vessels have an internal thread for use with a 15mm Teflon® bushing as a pressure seal. This unique design allows hand tightening and loosening for easy access into the vessel. The O-ring is positioned on the bushing above the thread for improved sealing. The vessels are useful for pressure reactions and applications such as polymerization and analysis of halogens by thermal decomposition in the presence of lime. Due to the protective coating, this product has a working temperature of -40 °C to 80 °C. Complete apparatus is supplied with vessel, Teflon® bushing and EP® O-ring. \*Protective coating may become yellow over time; this does not affect product integrity.

Item #:	Capacity (mL)	O.D. x Overall (mm)	GL Thread Size	Price (each)
P170001D	75	46×90	#15	95.38
P170002D	75	46×90	#25	116.22
P170003D	150	60×100	#15	98.21
P170004D	150	60×100	#25	120.10
P170005D	350	80×115	#15	109.29
P170006D	350	80×115	#25	130.20

**Accessories:**

B100015	Teflon® Bushing with Viton® O-ring, 15mm	15.61
R111EP	EP O-ring, #7 GL Thread	1.90
B100025	Teflon® Bushing with Viton® O-ring, 25mm	23.78
R212EP	EP O-ring, #25 GL Thread	3.57

**\*Important Warnings for Pressurized Glassware:** Due to varying conditions, we cannot guarantee glass vessels from breakage under pressure. Always work behind a safety shield.

**\*Maximum Pressure:** 88 psi at room temperature



**FUNNEL, FILTER, FRITTED DISC**

With two 2mm glass stopcocks.

Item #	Joint	Frit O.D. (mm)	Porosity	Capacity (mL)	Price (each)
F973014C	14/20	30	Coarse	60	170.19
F973014M	14/20	30	Medium	60	170.19
F973024C	24/40	30	Coarse	60	177.47
F973024M	24/40	30	Medium	60	177.47
<b>Accessories:</b>					
S461230	Replacement 2mm Glass Plug Only				11.61
S691230	Replacement S.S Retention for 2mm Glass Stopcock				2.43

**FUNNEL, FILTER, FRITTED DISC**

With a 0-4mm high vacuum valve and a 2mm glass stopcock having a constant pressure retention device.



Item #	Joint	Frit O.D. (mm)	Porosity	Capacity (mL)	Price (each)
F371460M	14/20	30	Medium	60	197.16
F374200C	24/40	40	Coarse	200	202.30
F374200M	24/40	40	Medium	200	202.30
<b>Accessories:</b>					
S461230	Replacement 2mm Glass Plug Only				11.61
S691230	Replacement S.S Retention for 2mm Glass Stopcock				2.43
S600004T	0-4mm PTFE Protected High Vacuum Valve (Fully Enclosed)				34.76
R010	Viton® O-ring for 0-4mm High Vacuum Plug Shaft				1.16

**FUNNEL, SEPARATORY**

With 2mm Teflon® stopcock. Supplied with a glass stopper or PTFE stopper.

Item #	Capacity (mL)	Joint	PTFE Stopcock (mm)	Stopper	Price (each)
F451010	10	14/20	2	PTFE	97.89
F451010A	10	14/20	2	GLASS	87.66
F451025	25	14/20	2	PTFE	98.93
F451025A	25	14/20	2	GLASS	89.69
F459025	25	19/22	2	PTFE	103.6
F451050	50	14/20	2	PTFE	99.62
F451050A	50	14/20	2	GLASS	90.50
F459050	50	19/22	2	PTFE	103.72
F451100	100	14/20	2	PTFE	99.86
F451100A	100	14/20	2	GLASS	91.89
F459100	100	19/22	2	PTFE	104.01
F459100A	100	19/22	2	GLASS	94.66
F451125	125	14/20	2	PTFE	101.64
F451125A	125	14/20	2	GLASS	92.46
F459125	125	19/22	2	PTFE	105.63
F459125A	125	19/22	2	GLASS	95.87
F454125	125	24/40	2	PTFE	109.84
F454125A	125	24/40	2	GLASS	99.68
F451250	250	14/20	4	PTFE	113.37
F451250A	250	14/20	4	GLASS	103.67
F459250	250	19/22	4	PTFE	116.6
F459250A	250	19/22	4	GLASS	106.84
F454250	250	24/40	4	PTFE	120.07
F454250A	250	24/40	4	GLASS	110.13
<b>Accessories:</b>					
S181125	Replacement 2mm Teflon® Plug Only				12.54
S181530	Replacement 4mm Teflon® Plug Only				20.97
S401420	14/20 Hollow Glass Stopper, Penny-head				13.58
S401922	19/22 Hollow Glass Stopper, Penny-head				14.90
S402440	24/40 Hollow Glass Stopper, Penny-head				15.71
S111420	14/20 Teflon® Stopper				29.22
S111922	19/22 Teflon® Stopper				30.49
S112440	24/40 Teflon® Stopper				40.66



## FUNNEL, SEPARATORY

Item #	Capacity (mL)	Joint	PTFE Stopcock (mm)	Stopper	Price (each)
F471010	10	14/20	2	PTFE	93.90
F471025	25	14/20	2	PTFE	95.06
F479025	25	19/22	2	PTFE	99.68
F471330	30	#13	2	PTFE	61.45
F471050	50	14/20	2	PTFE	95.70
F479050	50	19/22	2	PTFE	99.74
F471660	60	#16	2	PTFE	63.64
F471100	100	14/20	2	PTFE	95.87
F479100	100	19/22	2	PTFE	100.02
F471125	125	14/20	2	PTFE	97.25
F479125	125	19/22	2	PTFE	101.64
F474125	125	24/40	2	PTFE	105.80
F472125	125	#22	2	PTFE	72.42
F479250	250	19/22	2	PTFE	109.38
F474250	250	24/40	4	PTFE	112.61
F472925	250	29/42	4	PTFE	116.08
F472250	250	#22	4	PTFE	85.59
F472950	500	29/42	4	PTFE	127.23
F477500	500	#27	4	PTFE	99.86
F474000	1000	24/40	4	PTFE	137.39
F477000	1000	#27	4	PTFE	126.82

## Accessories:

S111420	14/20 Teflon® Stopper	29.22
S111922	19/22 Teflon® Stopper	30.49
S112440	24/40 Teflon® Stopper	40.66
S112942	29/42 Teflon® Stopper	57.75
S120013	#13 Teflon® Stopper	14.90
S120016	#16 Teflon® Stopper	16.98
S120022	#22 Teflon® Stopper	19.52
S120027	#27 Teflon® Stopper	28.88
S181125	Replacement 2mm Teflon® Plug Only	12.54
S181530	Replacement 4mm Teflon® Plug Only	20.97

\*Stem OD is approx. 10mm.



## FUNNEL, SEPARATORY

Item #	Capacity (mL)	Joint	PTFE Stopcock (mm)	Stopper	Price (each)
F471010A	10	14/20	2	GLASS	84.15
F479010A	10	19/22	2	GLASS	86.57
F471025A	25	14/20	2	GLASS	87.50
F479025A	25	19/22	2	GLASS	89.69
F471330A	30	#13	2	GLASS	53.01
F471050A	50	14/20	2	GLASS	85.70
F479050A	50	19/22	2	GLASS	89.81
F471660A	60	#16	2	GLASS	56.08
F471100A	100	14/20	2	GLASS	85.82
F479100A	100	19/22	2	GLASS	90.09
F471125A	125	14/20	2	GLASS	87.73
F479125A	125	19/22	2	GLASS	91.01
F474125A	125	24/40	2	GLASS	95.87
F472125A	125	#22	2	GLASS	66.30
F479250A	250	19/22	2	GLASS	99.45
F474250A	250	24/40	4	GLASS	103.26
F472925A	250	29/42	4	GLASS	106.14
F472250A	250	#22	4	GLASS	76.58
F472950A	500	29/42	4	GLASS	117.46
F477500A	500	#27	4	GLASS	92.86
F474000A	1000	24/40	4	GLASS	127.63
F477000A	1000	#27	4	GLASS	121.22

## Accessories:

S401420	14/20 Hollow Glass Stopper Penny-head	13.58
S401922	19/22 Hollow Glass Stopper Penny-head	14.90
S402440	24/40 Hollow Glass Stopper Penny-head	15.71
S402942	29/42 Hollow Glass Stopper Penny-head	19.52
S280013	#13 Glass Stopper Penny-head	5.72
S280016	#16 Glass Stopper Penny-head	6.81
S280022	#22 Glass Stopper Penny-head	8.66
S280027	#27 Glass Stopper Penny-head	10.97
S181125	Replacement 2mm Teflon® Plug Only	12.54
S181530	Replacement 4mm Teflon® Plug Only	20.97

\*Stem OD is approx. 10mm.



**FUNNEL, SEPARATORY, SQUIBB, GLASS STOPCOCK**

Supplied complete with a flask length glass stopper of the listed size.

Item #	Capacity (mL)	Stopper Size	Stopcock Bore (mm)	Stopper	Price (each)
F780030	30	#13	2	GLASS	53.01
F780060	60	#16	2	GLASS	56.08
F780125	125	#22	2	GLASS	66.30
F780250	250	#22	4	GLASS	76.58
F780500	500	#27	4	GLASS	92.86
F787000	1000	#27	4	GLASS	138.37
<b>Accessories:</b>					
S461230	Replacement 2mm Glass Plug Only				11.61
S461740	Replacement 4mm Glass Plug Only				14.73
S691230	Replacement S.S. Retention for 2mm Glass Stopcock				2.43
S691740	Replacement S.S. Retention for 2mm Glass Stopcock				2.43
S280013	#13 Glass Stopper, Penny-head				5.72
S280016	#16 Glass Stopper, Penny-head				6.81
S280022	#22 Glass Stopper, Penny-head				8.66
S280027	#27 Glass Stopper, Penny-head				10.97
S120013	Stopper, Teflon, Flask Length, #13				14.90
S120016	Stopper, Teflon, Flask Length, #16				16.98
S120022	Stopper, Teflon, Flask Length, #22				19.52
S120027	Stopper, Teflon, Flask Length, #27				28.88

**FUNNEL SEPARATORY SURE-GRIP**

Globe shaped separatory funnel with a long stopper neck and straight section between the funnel body and stopcock, which provides a secure grip while shaking, and also aids in clamping. Available with Teflon® stopcocks. Supplied complete with one listed size Teflon® or glass stopper.

Item #	Capacity (mL)	Stopper Size	PTFE Stopcock Bore (mm)	Stopper	Price (each)
F687500A	500	#27	4	Glass	119.54
F687000A	1000	#27	4	Glass	159.45
F687000	1000	#27	4	PTFE	167.88
F68272LA	2000	#27	4	Glass	199.99
F68272L	2000	#27	4	PTFE	212.52
<b>Accessories:</b>					
S181530	Replacement 4mm Teflon® Plug Only				20.97
S280027	#27 Glass Stopper, Penny-head				10.97
S120027	#27 Teflon® Stopper				28.88

**FUNNEL, PRESSURE EQUALIZING, TEFLON® METERING STOPCOCK**

With Teflon® adjustable bore metering plug. Turning the adjustment knob allows flow rate to be controlled from full flow to drop wise. The metering plug completely solves the problems of sudden overflow or non-flow during addition of reagents.

Item #	Capacity (mL)	Joint	Stopcock Bore (mm)	Price (each)
F611410	10	14/20	2	164.59
F611425	25	14/20	2	164.59
F611925	25	19/22	2	167.77
F611460	60	14/20	2	165.05
F611960	60	19/22	2	167.65
F612460	60	24/40	2	176.32
F614125	125	24/40	2	197.85
F614250	250	24/40	2	223.38
F614500	500	24/40	4	243.24
<b>Accessories:</b>				
S191125	Replacement 2mm Teflon® Metering Only			45.05
S191530	Replacement 4mm Teflon® Metering Only			51.69

**FUNNEL, PRESSURE EQUALIZING**

With 1:5 Teflon® stopcock.

Item #	Capacity (mL)	Joint	Stopcock Bore (mm)	Price (each)
F621410	10	14/20	2	143.75
F621425	25	14/20	2	148.37
F622425	25	24/40	2	162.39
F621460	60	14/20	2	153.10
F621960	60	19/22	2	156.57
F622460	60	24/40	2	164.70
F621125	125	14/20	2	160.31
F629125	125	19/22	2	171.12
F624125	125	24/40	2	175.56
F629250	250	19/22	2	197.27
F624250	250	24/40	2	200.80
F624500	500	24/40	4	219.45
F62241L	1000	24/40	4	263.46
<b>Accessories:</b>				
S181125	Replacement 2mm Teflon® Plug Only			12.54
S181530	Replacement 4mm Teflon® Plug Only			20.97

**FUNNEL, PRESSURE EQUALIZING, GLASS STOPCOCK**

With glass stopcock, graduated.

Item #	Capacity (mL)	Joint	Stopcock Bore (mm)	Price (each)
F621410G	10	14/20	2	139.7
F621425G	25	14/20	2	139.7
F621460G	60	14/20	2	139.7
F622460G	60	24/40	2	157.2
F621125G	125	14/20	2	144.03
F624250G	250	24/40	2	186.88
<b>Accessories:</b>				
S461230	Replacement 2mm Glass Plug Only			11.61
S691230	Replacement S.S. Retention for 2mm Glass Stopcock			2.43

**FUNNEL, PRESSURE EQUALIZING, TEFLON® STOPCOCK**

With straight bore Teflon® stopcock in pressure equalizing line, graduated.

Item #	Capacity (mL)	Joint	Stopcock Bore(mm)	Price (each)
F671425	25	14/20	2	185.44
F672460	60	24/40	2	215.06
F674125	125	24/40	2	217.26
F674250	250	24/40	2	241.80
F674500	500	24/40	4	261.21
F67241L	1000	24/40	4	305.10
<b>Accessories:</b>				
S181125	Replacement 2mm Teflon® Plug Only			12.54
S181530	Replacement 4mm Teflon® Plug Only			20.97

**FUNNEL, PRESSURE EQUALIZING, HIGH VACUUM VALVE**

With Teflon® extended tip valve for semi-needle valve adjustment.

Item #	Capacity (mL)	Joint	Stopcock Bore (mm)	Price (each)
F641425	25	14/20	0-4mm	141.44
F641460	60	14/20	0-4mm	156.96
F641960	60	19/22	0-4mm	162.05
F642460	60	24/40	0-4mm	186.19
F641125	125	14/20	0-4mm	158.93
F649125	125	19/22	0-4mm	165.63
F644125	125	24/40	0-4mm	189.77
F644250	250	24/40	0-4mm	203.74
<b>Accessories:</b>				
S660004T	0-4mm High Vacuum Metering Plug and Control Knob			39.28
R010	Viton® O-ring for 0-4mm high vacuum plug shaft			1.16

**MANIFOLD, VACUUM/INERT GAS, DOUBLE**

General purpose double bank manifold for use with vacuum and inert gas.

Supplied with 0-4mm high vacuum valves for grease-free operation.

Both banks are made from 22mm medium wall tubing and have all banks open. Ports are spaced 100mm center to center and have an O.D. of 10mm.

Item #	Number of Ports	Overall Width	Valve Orifice (mm)	Price (each)
M111004	4	450	0-4mm	578.03
M111005	5	550	0-4mm	652.52
<b>Accessories:</b>				
S540004	0-4mm High Vacuum Plug and Control Knob. (With Viton® O-ring at tip)			32.80
R010	Viton® O-ring for 0-4mm High Vacuum Plug Shaft			1.16
R007	Viton® O-ring for 0-4mm High Vacuum Valve Tip O-ring			1.16

**MANIFOLD, VACUUM/INERT GAS, DOUBLE**

Same as the manifold above except with front-left and rear-right 10mm hose connections.

Item #	Number of Ports	Overall Width	Valve Orifice (mm)	Price (each)
M171005	5	550	0-4mm	652.52
<b>Accessories:</b>				
S540004	0-4mm High Vacuum Plug and Control Knob. (With Viton® O-ring at tip)			32.80
R010	Viton® O-ring for 0-4mm High Vacuum Plug Shaft			1.16
R007	Viton® O-ring for 0-4mm High Vacuum Valve Tip O-ring			1.16

**MANIFOLD, VACUUM/INERT GAS, DOUBLE**

Same as the manifold above except with front-left-right and rear-left 10mm hose connections.

Item #	Number of Ports	Overall Width	Valve Orifice (mm)	Price (each)
M101003	3	350	0-4mm	481.70
M101004	4	450	0-4mm	578.03
M101005	5	550	0-4mm	652.52
<b>Accessories:</b>				
S540004	0-4mm High Vacuum Plug and Control Knob (With Viton® O-ring at tip)			32.80
R010	Viton® O-ring for 0-4mm High Vacuum Plug Shaft			1.16
R007	Viton® O-ring for 0-4mm High Vacuum Valve Tip O-ring			1.16



**MANIFOLD, VACUUM/INERT GAS, DOUBLE**

Same as the manifold above except with front- right and rear- left 10mm hose connections.

Item #	Number of Ports	Overall Width (mm)	Valve Orifice (mm)	Price (each)
M141004	4	450	0-4mm	578.03
M141005	5	550	0-4mm	652.52

**Accessories:**

S540004	0-4mm High Vacuum Plug and Control Knob (With Viton® O-ring at tip)	32.80
R010	Viton® O-ring for 0-4mm High Vacuum Plug Shaft	1.16
R007	Viton® O-ring for 0-4mm High Vacuum Valve Tip O-ring	1.16

**MANIFOLD, VACUUM/INERT GAS, DOUBLE**

Same as the manifold above except with front-left and rear-left-right 10mm hose connections.

Item #	Number of Ports	Overall Width (mm)	Valve Orifice (mm)	Price (each)
M471004	4	450	0-4mm	578.03
M471005	5	550	0-4mm	652.52

**Accessories:**

S540004	0-4mm High Vacuum Plug and Control Knob (With Viton® O-ring at tip)	32.80
R010	Viton® O-ring for 0-4mm High Vacuum Plug Shaft	1.16
R007	Viton® O-ring for 0-4mm High Vacuum Valve Tip O-ring	1.16

**MANIFOLD, VACUUM/INERT GAS, ALL GLASS**

With 4mm double oblique, high vacuum hollow glass stopcocks precision ground with corresponding numbers on barrel and plug. Back/upper vacuum chambers on stopcock are evacuated with a separate hole in the plug in order to hold the plug into the stopcock barrels. Beams are 22mm O.D. with front-left-right and rear-left right 10mm hose connections. The distance between stopcocks is 75mm center to center.

Item #	Number of Ports	Overall Width (mm)	Price (each)
M411003	3	300	504.50
M411004	4	375	656.91
M411005	5	450	798.91

**MANIFOLD, VACUUM/INERT GAS, ALL GLASS**

With 4mm double oblique, high vacuum hollow glass stopcocks precision ground with corresponding numbers on barrel and plug. Back/upper vacuum chambers on stopcock are evacuated with a separate hole in the plug in order to hold the plug into the stopcock barrels. Beams are 22mm O.D. with front-left and rear-right 10mm hose connections. The distance between stopcocks is 75mm center to center.

Item #	Number of Ports	Overall Width (mm)	Price (each)
M181003	3	300	502.49
M181004	4	375	652.92
M181005	5	450	794.87

**MANIFOLD, VACUUM/INERT GAS, ALL GLASS**

With 4mm double oblique, high vacuum hollow glass stopcocks precision ground with corresponding numbers on barrel and plug. Back/upper vacuum chambers on stopcock are evacuated with a separate hole in the plug in order to hold the plug into the stopcock barrels. Beams are 22mm O.D. with front-right and rear-left 10mm hose connections. The distance between stopcocks is 75mm center to center.

Item #	Number of Ports	Overall Width (mm)	Price (each)
M401004	4	375	652.92
M401005	5	450	794.87

**MANIFOLD, VACUUM/INERT GAS, ALL GLASS**

With 4mm double oblique, high vacuum hollow glass stopcocks precision ground with corresponding numbers on barrel and plug. Back/upper vacuum chambers on stopcock are evacuated with a separate hole in the plug in order to hold the plug into the stopcock barrels. Beams are 22mm O.D. with front-left-right and rear-left 10mm hose connections. The distance between stopcocks is 75mm center to center.

Item #	Number of Ports	Overall Width (mm)	Price (each)
M421003	3	300	504.50
M421004	4	375	654.89
M421005	5	450	796.90

**MANIFOLD, VACUUM/INERT GAS, ALL GLASS**

With 4mm double oblique, high vacuum hollow glass stopcocks precision ground with corresponding numbers on barrel and plug. Back/upper vacuum chambers on stopcock are evacuated with a separate hole in the plug in order to hold the plug into the stopcock barrels. Beams are 22mm O.D. with front-left-right and rear-right 10mm hose connections. The distance between stopcocks is 75mm center to center.

Item #	Number of Ports	Overall Width (mm)	Price (each)
M431003	3	300	504.50
M431004	4	375	654.89
M431005	5	450	796.90

**MANIFOLD, VACUUM/INERT GAS, ALL GLASS**

With 4mm double oblique, high vacuum hollow glass stopcocks precision ground with corresponding numbers on barrel and plug. Back/upper vacuum chambers on stopcock are evacuated with a separate hole in the plug in order to hold the plug into the stopcock barrels. Beams are 22mm O.D. with front-left and rear-left-right 10mm hose connections. Distance between stopcocks is 75mm center to center.

Item #	Number of Ports	Overall Width (mm)	Price (each)
M441005	5	450	796.90

**MANIFOLD, VACUUM/INERT GAS, ALL GLASS**

With 4mm double oblique, high vacuum hollow glass stopcocks precision ground with corresponding numbers on barrel and plug. Back/upper vacuum chambers on stopcock are evacuated with a separate hole in the plug in order to hold the plug into the stopcock barrels. Beams are 22mm O.D. with front-right and rear-left-right 10mm hose connections. The distance between stopcocks is 75mm center to center.

Item #	Number of Ports	Overall Width (mm)	Price (each)
M451004	4	375	654.89
M451005	5	450	796.90

**MANIFOLD, HIGH VACUUM SOLID GLASS STOPCOCKS**

With 4mm double oblique, high vacuum solid glass stopcocks precision ground with corresponding numbers on barrel and plug. Solid glass stopcocks have constant pressure retention devices. Beams are 22mm O.D. with front-left-right and rear-left-right 10mm hose connections. The distance between stopcocks is 75mm center to center.

Item #	Number of Ports	Overall Width (mm)	Price (each)
M250003	3	300	503.87
M250004	4	375	654.31
M250005	5	450	796.26
<b>Accessory:</b>			
S691656	Replacement Stainless Steel Retention Kit For 16.2/56 Glass Stopcock		2.43

**MANIFOLD, HIGH VACUUM SOLID GLASS STOPCOCKS**

With 4mm double oblique, high vacuum solid glass stopcocks precision ground with corresponding numbers on barrel and plug. Solid glass stopcocks have constant pressure retention devices. Beams are 22mm O.D. with front-left and rear-right 10mm hose connections. The distance between stopcocks is 75mm center to center.

Item #	Number of Ports	Overall Width (mm)	Price (each)
M230003	3	300	501.85
M230004	4	375	652.34
M230005	5	450	794.29
<b>Accessory:</b>			
S691656	Replacement Stainless Steel Retention Kit For 16.2/56 Glass Stopcock		2.43

**MANIFOLD, HIGH VACUUM SOLID GLASS STOPCOCKS**

With 4mm double oblique, high vacuum solid glass stopcocks precision ground with corresponding numbers on barrel and plug. Solid glass stopcocks have constant pressure retention devices. Beams are 22mm O.D. with front-left and rear-left-right 10mm hose connections. The distance between stopcocks is 75mm center to center.

Item #	Number of Ports	Overall Width (mm)	Price (each)
M290004	4	375	652.34
M290005	5	450	794.29

**Accessory:**

S691656	Replacement Stainless Steel Retention Kit For 16.2/56 Glass Stopcock	2.43
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**MANIFOLD, HIGH VACUUM SOLID GLASS STOPCOCKS**

With 4mm double oblique, high vacuum solid glass stopcocks precision ground with corresponding numbers on barrel and plug. Solid glass stopcocks have constant pressure retention devices. Beams are 22mm O.D.

with front-right and rear-left-right 10mm hose connections. Distance between stopcocks is 75mm center to center.

Item #	Number of Ports	Overall Width (mm)	Price (each)
M300005	5	450	794.29

**Accessory:**

S691656	Replacement Stainless Steel Retention Kit For 16.2/56 Glass Stopcock	2.43
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**MANIFOLD, HIGH VACUUM SOLID GLASS STOPCOCKS**

With 4mm double oblique, high vacuum solid glass stopcocks precision ground with corresponding numbers on barrel and plug. Solid glass stopcocks have constant pressure retention devices. Beams are 22mm O.D. with front-right and rear-left 10mm hose connections. The distance between stopcocks is 75mm center to center.

Item #	Number of Ports	Overall Width (mm)	Price (each)
M240004	4	375	652.34

**Accessory:**

S691656	Replacement Stainless Steel Retention Kit For 16.2/56 Glass Stopcock	2.43
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**MANIFOLD, HIGH VACUUM SOLID GLASS STOPCOCKS**

With 4mm double oblique, high vacuum solid glass stopcocks precision ground with corresponding numbers on barrel and plug. Solid glass stopcocks have constant pressure retention devices. Beams are 22mm O.D. with front-left-right and rear-left 10mm hose connections. The distance between stopcocks is 75mm center to center.

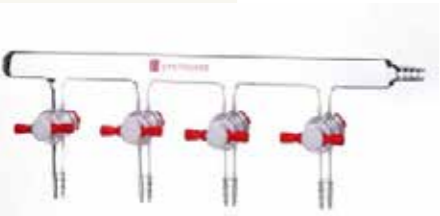
Item #	Number of Ports	Overall Width (mm)	Price (each)
M260003	3	300	501.85
M260004	4	375	652.34
M260005	5	450	794.29
<b>Accessory:</b>			
S691656	Replacement Stainless Steel Retention Kit For 16.2/56 Glass Stopcock		2.43



**MANIFOLD, HIGH VACUUM SOLID GLASS STOPCOCKS**

With 4mm double oblique solid glass stopcocks have constant pressure retention devices. Beams are 22mm O.D. with front-left-right and rear-right 10mm hose connections. The distance between stopcocks is 75mm center to center.

Item #	Number of Ports	Overall Width (mm)	Price (each)
M280004	4	375	652.34
M280005	5	450	794.29
<b>Accessory:</b>			
S691656	Replacement Stainless Steel Retention Kit For 16.2/56 Glass Stopcock		2.43



**VACCUM MANIFOLD, TEFLON® STOPCOCKS**

General purpose manifold with 2mm or 4mm Teflon® stopcocks. Main tube is 22mm O.D. with serrated hose connection (10mm O.D.) at right side. Delivery ports have 10mm serrated hose connections. The distance between stopcocks is 75mm.

Item #	Number of Ports	Stopcock Bore (mm)	Price (each)
M190042	4	2	306.08
M190044	4	2	330.33
M190064	6	4	470.43
<b>Accessory:</b>			
S181125	Replacement 2mm Teflon® Plug Only		12.54
S181530	Replacement 4mm Teflon® Plug Only		20.97



**VACUUM MANIFOLD, TEFLON® STOPCOCKS**

General purpose manifold with 2mm or 4mm Teflon® stopcocks. Main tube is 22mm O.D. with serrated hose connection (10mm O.D.) at left side. Delivery ports have 10mm serrated hose connections. Distance between stopcocks is 75mm.

Item #	Number of Ports	Stopcock Bore (mm)	Price (each)
M500044	4	4	330.33
M500064	6	4	470.43
<b>Accessory:</b>			
S181530	Replacement 4mm Teflon® Plug Only		20.97



**VACUUM MANIFOLD, TEFLON® STOPCOCKS**

General purpose manifold with 2mm or 4mm Teflon® stopcocks. Main tube is 22mm O.D. with serrated hose connection (10mm O.D.) at both ends. Delivery ports have 10mm serrated hose connections. The distance between stopcocks is 75mm.

Item #	Number of Ports	Stopcock Bore (mm)	Price (each)
M490042	4	2	317.92
M490044	4	4	344.19
M490062	6	2	433.77
M490064	6	4	480.02
<b>Accessory:</b>			
S181125	Replacement 2mm Teflon® Plug Only		12.54
S181530	Replacement 4mm Teflon® Plug Only		20.97



**MANIFOLD, NITROGEN/ARGON LINE, TEFLON®**

With a 14/20 outer joint at the center to fit a rubber septum for keeping syringes under an inert environment, cutting down on the number used. Main tube is 22mm O.D. and both end connections (10mm). Delivery ports have 8mm hose connections.

Item #	Number of Ports	Stopcock Bore (mm)	Joint	Price (each)
M211042	4	2	14/20	270.10
M211044	4	4	14/20	343.96
<b>Accessory:</b>				
S181125	Replacement 2mm Teflon® Plug Only			12.54
S181530	Replacement 4mm Teflon® Plug Only			20.97

**MANIFOLD, NITROGEN/ARGON LINE, TEFLON®**

With 14/20 outer joint at the center to fit a rubber septum for keeping syringes under an inert environment, cutting down on the number used. Main tube is 22mm O.D. with left hose connections (10mm). Delivery ports have 8mm hose connections.

Item #	Number of Ports	Stopcock Bore (mm)	Joint	Price (each)
M531042	4	2	14/20	270.10
<b>Accessory:</b>				
S181125	Replacement 2mm Teflon® Plug Only			12.54



**MANIFOLD, NITROGEN/ARGON LINE, TEFLON®**

With 14/20 outer joint at the center to fit a rubber septum for keeping syringes under an inert environment, cutting down on the number used. Main tube is 22mm O.D. with right hose connections (10mm). Delivery ports have 8mm hose connections.

Item #	Number of Ports	Stopcock Bore (mm)	Joint	Price (each)
M541044	4	4	14/20	343.96
<b>Accessory:</b>				
S181530	Replacement 4mm Teflon® Plug Only			20.97



**VACUUM MANIFOLD, HIGH VACUUM VALVES**

With a serrated hose connection (10mm O.D.) at right hand side. Main tube is 22mm O.D. and the distance between valves is 100mm center to center.

Item #	Number of Ports	Stopcock Bore (mm)	Overall Width (mm)	Price (each)
M202403	3	0-4	325	423.95
M202404	4	0-4	425	477.77
M202405	5	0-4	525	532.80
<b>Accessory:</b>				
S540004	0-4mm high Vacuum Plug and Control Knob (With Viton® O-ring at tip)			32.80
R010	Viton® O-ring for 0-4mm High Vacuum Plug Shaft			1.16
R007	Viton® O-ring for 0-4mm High Vacuum Valve Tip			1.16

**VACUUM MANIFOLD, HIGH VACUUM VALVES**

With a serrated hose connection (10mm O.D.) at left hand side. Main tube is 22mm O.D. and the distance between valves is 100mm center to center.

Item #	Number of Ports	Stopcock Bore (mm)	Overall Width (mm)	Price (each)
M522403	3	0-4	325	423.95
M522404	4	0-4	425	477.77
M522405	5	0-4	525	532.80
<b>Accessory:</b>				
S540004	0-4mm high Vacuum Plug and Control Knob (With Viton® O-ring at tip)			32.80
R010	Viton® O-ring for 0-4mm High Vacuum Plug Shaft			1.16
R007	Viton® O-ring for 0-4mm High Vacuum Valve Tip			1.16

**MANIFOLD, DOUBLE, HOLLOW GLASS STOPCOCKS, SPHERICAL JOINT**

With 35/20 ball joints and 4mm double oblique high vacuum hollow glass stopcocks precision ground with corresponding numbers on barrel and plugs. Back/upper vacuum chambers on stopcock are evacuated with a separate hole in the plug in order to hold the plug into the stopcock barrels. Ball sockets: front-left-right, rear-right.

Item #	Number of Ports	Overall Width (mm)	Glass Stopcock	Price (each)
M270004	4	365	Hollow	544.35
M270005	5	450	Hollow	633.29

**MANIFOLD, DOUBLE, HOLLOW GLASS STOPCOCKS, RIGHT HAND SIDE**

With high vacuum hollow glass stopcocks. The smaller O.D. 17mm front tube is for inert gases and the larger O.D. 22mm back tube is for vacuum, which has a 35/20 socket on the right hand side. Hose connection: front-left.

Item #	Number of Ports	Hose Connections (mm)	Glass Stopcock	Price (each)
M340004	4	10	Hollow	513.51

**MANIFOLD, DOUBLE, HOLLOW GLASS STOPCOCKS, LEFT HAND SIDE**

Similar to above manifold, but with the 35/20 socket on the left-hand side. Hose connection: front-left-right.

Item #	Number of Ports	Hose Connections (mm)	Glass Stopcock	Price (each)
M350004	4	10	Hollow	513.51

**MANIFOLD, DOUBLE, HIGH VACUUM VALVE AND 35/20 SPHERICAL JOINT**

This manifold is designed to incorporate a 0-8mm high vacuum valve as the vacuum shut-off. The front tube is for inert gases (17mm O.D.), with a 10mm hose connection. The rear tube is for vacuum (22mm O.D.), with two 35/20 socket joints. Please order each component separately.

Item #	Description	Price (each)
M360004	Vacuum/Gas Manifold	629.42
<b>Accessories:</b>		
S540008	0-8mm High Vacuum Plug and Control Knob (Viton® O-ring at Tip)	42.80
S450035	#35 Ball Stopper	27.14
CC3525	Clamps for 35/20 Ball Joint	19.40
R108	Tip O-ring for 0-8mm High Vacuum Valve Plug	1.73
R110	Shaft O-ring for 0-8mm High Vacuum Valve Plug	1.80

**MANIFOLD, WITH #15 O-RING JOINTS**

With 4mm double hollow high vacuum stopcocks. This four-port manifold is fitted with two 14/20 and two 24/40 inner joints, and is 100mm center to center joints. #15 O-ring joint stopper (S480015) and #15 O-ring joint to serrated hose adapter need to be ordered separately. Viton® O-rings can be ordered using Part #: R116.

Item #	Description	Price(each)
M150004	Vacuum/Gas manifold	732.85
<b>Accessories:</b>		
CC2815	#15 O-ring Joint Stainless-Steel Clamp	14.39
R116	#116 Viton® O-ring	2.60
S480015	#15 O-ring Joint Stopper	15.66
M131604	10mm O.D. Serrated Hose Connection	18.02
M131605	12mm O.D. Serrated Hose Connection	21.71

**MANIFOLD, VACUUM, SINGLE, WITH #15 O-RING JOINTS**

Four ports are spaced 100mm center to center, with 0-8mm high vacuum valves mounted on a 45° angle to the operator for easy access. Overall width is 395mm. Standard taper components or stoppers are available below and need to be ordered separately.

Item #	Description	Price (each)
M311508	Vacuum Manifold, Single Bank	526.63
<b>Accessories:</b>		
S540008	0-8mm High Vacuum Plug and Control Knob, Viton® O-ring at Tip	42.80
CC2815	#15 O-ring Joint Stainless Steel Clamp	14.39
R116	#116 Viton® O-ring	2.60
S480015	#15 O-ring Joint Stopper	15.66
M131604	10mm O.D. Serrated Hose Connection	18.02
M131605	12mm O.D. Serrated Hose Connection	21.71

**MANIFOLD, DOUBLE BANK, WITH #15 O-RING JOINTS**

Forward facing 0-8mm high vacuum valves allow easy operation of manifold inside of a fume hood. Main parts are spaced 100mm center to center. Adapter components or stoppers are available below and need to be ordered separately.

Item #	Description	Price (each)
M330804	Vacuum Manifold, Single Bank	875.95
<b>Accessories:</b>		
S540008	0-8mm High Vacuum Plug and Control Knob, Viton® O-ring at Tip.	42.80
CC2815	#15 O-ring Joint Stainless Steel Clamp	14.39
R116	#116 Viton® O-ring	2.60
S480015	#15 O-ring Joint Stopper	15.66
M131604	10mm O.D. Serrated Hose Connection	18.02
M131605	12mm O.D. Serrated Hose Connection	21.71

**MANIFOLD, SOLVENT TRANSFER**

Supplied with a high vacuum valve with a PTFE O-ring at the tip and PTFE wiper to protect Viton® O-ring on the shaft

Item #	Joints	Overall Height * Width (mm)	Price (each)
M164380	24/40	140*380	131.09
<b>Accessory:</b>			
S600004T	0-4mm PTFE Protected High Vacuum Valve (Fully Enclosed)		34.76

**STOPPER, WITH #15 O-RING JOINT**

For use with manifolds having #15 O-ring joints. Supplied complete with one #116 (R116) Viton® O-ring.

Item #	Description	Price(each)
S480015	#15 O-ring Joint Stopper	15.66
<b>Accessories:</b>		
CC2815	#15 O-ring Joint Stainless Steel Clamp	14.39
R116	#116 Viton® O-ring	2.60

**ADAPTER, #15 O-RING JOINT TO SERRATED HOSE CONNECTION**

Item #	Description	Price(each)
M131604	10mm O.D. Serrated Hose Connection	18.02
M131605	12mm O.D. Serrated Hose Connection	21.71
<b>Accessories:</b>		
CC2815	#15 O-ring Joint Stainless Steel Clamp	14.39
R116	#116 Viton® O-ring	2.60

**ADAPTER, #15 O-RING JOINT TO INNER JOINT**

Item #	Description	Price (each)
M131514	From #15 O-ring Joint to 14/20 Inner Joint	28.36
M131519	From #15 O-ring Joint to 19/22 Inner Joint	29.52
M131524	From #15 O-ring Joint to 24/40 Inner Joint	30.21



**VACUUM TRAP, SPHERICAL JOINTS**

With 35/20 spherical joints for added flexibility. Trap body is 50mm O.D. and 360 mm in length. Please order the three adapters and 35/20 SS pinch clamp separately.

Item #	Joint	Description	Price (each)
V175036	35/20	Vacuum Trap Body	108.34
V175037	35/20	Top Adapter, 16mm O.D. Outlet	31.36
V175038	35/20	Middle Adapter/Pump Adapter 16mm O.D. Outlet	28.53
V175039	35/20	Bottom Adapter, 16mm O.D. outlet	26.97
CC3525	35/20	Clamps for 35/20 Ball Joints	19.40

**VACUUM TRAP, 35/20 BALL JOINTS**

For use with vacuum manifolds having 35/20 socket joints. Please order the pump adapter and socket clamp separately.

Item #	Joint	Outer Body O.D. (mm)	Length of Outer Body Below Joint(mm)	Price (each)
V415045	45/50	50	250	136.98
<b>Accessory:</b>				
V175038	Middle Adapter/Pump Adapter, 16mm O.D. Outlet			28.53
CC3525	Clamps for 35/20 Ball Joints			19.40

**VACUUM TRAP, #15 O-RING JOINT**

Supplied with two R116 Viton® O-rings.

Item #	Joint	O.D. Outer Body(mm)	Outer Body Length Below Joint (mm)	O.D. Inner & Side Tube (mm)	Price (each)
V325045	45/50	50	250	18	120.24
<b>Accessories:</b>					
CC2815	#15 O-ring Joint Stainless Steel Clamp				14.39
R116	#116 Viton® O-ring				2.60
A910001	Adapter with #15 O-ring Joint, 19mm Outlet, 90° Angle				37.25
A910002	Adapter with #15 O-ring Joint, 19mm Outlet, Straight				44.53

**VACUUM TRAP, WITH #15 O-RING JOINTS**

Two-piece design, with a 0-12mm high vacuum valve as the shut off. Connection is made via a 57mm O-ring flat flange (CC0057 supplied) and a #331 Viton® O-ring (Part #: R331 Supplied). Outer body length below flange is 300mm. Smaller size tubing adapters are also available below. Please order #15 O-ring joint stainless steel clamp (CC2815) separately.

Item #	Description	Price (each)
V381512	Vacuum Trap with #15 O-ring Joint	300.63
<b>Accessories:</b>		
S540012	0-12mm High Vacuum Plug and Control Knob (with Viton® O-ring at Tip)	48.57
CC0057	57mm Horseshoe Clamp	68.61
CC2815	#15 O-ring Joint Stainless Steel Clamp	14.39
R116	#116 Viton® O-ring	2.60
R331	#331 Viton® O-ring	11.73

**VACUUM TRAP, WITH #15 O-RING JOINT**

For use with above manifolds with a #15 O-ring joint. The seal between upper and lower parts is made with a 57mm flat O-ring flange. The trap body is 57mm O.D. x 300mm in length. Complete trap assembly comes with CC0057 horseshoe clamp, one R331 Viton® O-ring, and two R116 Viton® O-rings.

Item #	Description	Price(each)
V391557	Vacuum Trap Assembly, Complete	281.24
<b>Accessories:</b>		
CC0057	57mm Horseshoe Clamp	68.61
CC2815	#15 O-ring Joint Stainless Steel Clamp	14.39
R116	#116 Viton® O-ring	2.60
R331	#331 Viton® O-ring	11.73

**ADAPTER, CONNECTING, INLET**

Adapter has a #15 O-ring joint with a 0-4 mm high vacuum valve at a 90° angle connected to a piece of 10mm O.D. medium wall tubing. Overall height is 100mm. Each adapter is supplied completely with one #116 Viton® O-ring.

Item #	Description	Price(each)
A560001	Adapter, 90°, with #15 O-ring Joint	79.00
<b>Accessories:</b>		
S540004	High vacuum valve, with Viton® O-ring at Tip	32.80
CC2815	#28 Clamp for #15 O-ring Joint	14.39
R116	#116 Viton® O-ring	2.60





DUAL VACUUM TRAP ASSEMBLY, WITH #15 O-RING JOINTS

For use with manifold having a #15 O-Ring joint on banks. The O-Ring joint at the far left (A) is used to connect to the manifold via a pinch clamp (Pinch clamp not included). Assembly has a serrated hose connection on the right side (D). E and G are 0-12mm high vacuum valves to be used as shut offs. F is a 0-4mm high vacuum valve used to shut off a 9mm O.D tubing connection on the rear of the trap assembly. H is a 0-8mm high vacuum valve. The pre-trap (B) uses two 28/15 ball joints to add flexibility to the assembly. The pre-trap connects to the large trap (C) via a 57mm horseshoe clamp. Trap comes complete with two #15 O-Ring Joint clamps (CC2815) and two O-Rings (R116), one 57mm horseshoe clamp (CC0057) and one 57mm Flange O-Ring (R331). All high vacuum valves are included.



Item #	Description	Price(each)
V115712	Dual Trap Assembly, Complete	934.57
Accessories:		
S540004	0-4mm High Vacuum Plug and Control Knob Viton® O-ring at Tip.	32.80
S540008	0-8mm High Vacuum Plug and Control Knob Viton® O-ring at Tip.	42.80
S540012	0-12mm High Vacuum Plug and Control Knob Viton® O-ring at Tip	48.57
CC0057	57mm Horseshoe Clamp	68.61
CC2815	#15 O-ring Joint Stainless Steel Clamp	14.39
R116	#116 Viton® O-ring	2.60
R331	#331 Viton® O-ring	11.73



VACUUM TRAP, MICRO, DEWAR

Small scale dry ice, Dewar style trap. The dry-ice chamber is 40mm I.D.× 60mm in length. Choice of Glass or PTFE stopcock.

Item #	Lower Reservoir (MI)	Stopcock Type	Stopcock Bore (mm)	Price (each)
V200100G	100	Glass	2	237.76
V200100	100	Teflon®	2	229.79
Accessory:				
S181125	Replacement 2mm Teflon® Plug Only			12.54
S461230	Replacement 2mm Glass Plug Only			11.61
S691230	Replacement S.S Retention for 2mm Glass Stopcock			2.43



VACUUM TRAP, DEWAR TYPE

Dry ice, Dewar style trap condenser designed for large volume solvent removal. Choice of Glass or PTFE stopcock. With 10mm hose connections.

Item #	Lower Reservoir (MI)	Stopcock Type	Stopcock Bore	Inner Chamber I.D. × Depth (mm)	Price (each)
V210250G	250	Glass	4	59*230	376.59
V210250	250	Teflon	4	59*230	393.16
V210500G	500	Glass	4	75*275	397.38
V210500	500	Teflon	4	75*275	413.55
V211000G	1000	Glass	4	95*330	417.36
V211000	1000	Teflon	4	95*330	426.77
Accessory:					
S181530	Replacement 4mm PTFE Plug Only				20.97
S461740	Replacement 4mm Glass Plug Only				14.73
S691740	Replacement S.S Retention for 2mm Glass Stopcock				2.43



**VACUUM TRAP**

With joints for easy removal of condensate. Center tube hose connection is always 10mm for easy connection to manifold bank tubes which are also with 10mm hose connection.

Item #	Joint	O.D. Outer Body (mm)	Length, Outer Body Below Joint (mm)	O.D. Inner & Side Tube (mm)	Price (each)
V163024	24/40	30	200	10	90.32
V163229	29/42	32	200	10	92.63
V164034	34/45	40	225	16	113.42
V164050	40/50	45	250	16	119.72
V165045	45/50	50	250	22	134.16
V165050	50/50	55	275	26	156.68
V165550	55/50	60	300	30	185.21

**VACUUM TRAP**

With joints for easy removal of condensate. Body length is measured below the joint.

Item #	Joint	O.D. Outer Body (mm)	Outer Body Length Below Joint (mm)	O.D. Inner & Side Tube (mm)	Price (each)
V103029	29/42	32	200	10	84.38
V103834	34/45	40	225	13	95.81
V104045	40/50	50	250	16	110.71
V105045	45/50	50	250	22	126.42
V105050	50/50	55	275	26	148.25
V105550	55/50	60	300	30	176.78

**VACUUM TRAP**

Trap is designed for large volume solvent removal by vacuum. With 40/35 joint. Connections at center tube is 12mm O.D. while side tube is 10mm.

Item #	Flask Capacity (mL)	Fits Dewar Flask Size	Approx. Overall Height × Width (mm)	Price (each)
V120500	500	1900 mL	310 × 130	118.85
V121000	1000	4300 mL	340 × 130	127.92

**STORAGE VESSEL, #15 O-RING JOINT**

Storage vessel with a #15 O-ring joint on the sidearm and a high vacuum valve to control gas or liquid flow into the vessel. Supplied complete with one #116 Viton® O-ring.

Item #	Capacity (mL)	Valve Size	Approx. Height (mm)	Price (each)
S490050	50	0-4mm	190	102.05
S490100	100	0-8mm	235	115.45
S490350	350	0-8mm	240	129.08
<b>Accessories Components:</b>				
S600004T	0-4mm PTFE Protected High Vacuum Valve (Fully Enclosed)			34.76
S600008T	0-8mm PTFE Protected High Vacuum Valve (Fully Enclosed)			44.99
CC2815	#28 Clamp for #15 O-ring Joint			14.39
R116	#116 Viton® O-ring			2.60

**STORAGE FLASK, #15 O-RING JOINT**

Flask has a #15 O-ring joint on the sidearm and a high vacuum valve to control gas or liquid flow into the vessel. Supplied complete with one #116 Viton® O-ring.

Item #	Capacity (mL)	Valve Size	Approx. Height (mm)	Price (each)
S520250	250	0-4mm	160	90.52
S520500	500	0-8mm	190	102.33
S521000	1000	0-8mm	220	109.03
<b>Accessories Components:</b>				
S600008T	0-8mm PTFE Protected High Vacuum Valve (Fully Enclosed)			44.99
CC2815	#28 Clamp for #15 O-ring Joint			14.39
S600004T	0-4mm PTFE Protected High Vacuum Valve (Fully Enclosed)			34.76
R116	#116 Viton® O-ring			2.60

**SOLVENT STILL HEAD, REPURIFICATION (GREASE-FREE)**

Head only. Condenser and flasks not supplied. Access port has threaded 14/10 joint to accept a Teflon®-lined silicone septum with a compression cap (supplied). Threaded 14/10 joint also accepts a regular 14/20 glass or Teflon® stopper (not supplied).

Item #	Capacity (mL)	Joint	Price (each)
S134250	250	24/40	264.79
S134500	500	24/40	369.09
<b>Accessories:</b>			
S211444	Replacement 4mm Double Oblique PTFE Plug		31.59
RC112	Replacement Nylon® Compression Cap		1.73
R1420	Replacement Teflon®-lined Silicone Septum		3.23





### SOLVENT STILL HEAD

Similar to product listed above but with a drip tip on the delivery port instead of a 14/20 inner joint. With 4mm straight bore stopcock in the upper portion for easy syringe needle access.

Item #	Capacity (mL)	Top Joint	Bottom Joint	Price (each)
S234504	500	24/40	24/40	311.97
S234004	1000	24/40	24/40	324.27
<b>Accessories:</b>				
S181530	Replacement 4mm Teflon® Plug Only			20.97
S201530	2mm Teflon® "T"-bore Stopcock Plug			27.78

### SOLVENT STILL HEAD

Syringe port has a 14/20 outer joint for a rubber septum and a 4mm Teflon® stopcock. Solvent is drained through 2mm T-bore Teflon® stopcock. The drainage arm has a 14/20 inner joint.

Item #	Capacity (mL)	Top Joint	Bottom Joint	Price (each)
S244504	500	24/40	24/40	321.96
S244004	1000	24/40	24/40	334.26
S244509	1000	24/40	29/42	339.92
<b>Accessories:</b>				
S181530	Replacement 4mm Teflon® Plug Only			20.97
S201530	2mm Teflon® "T"-bore Stopcock Plug			27.78
A741420	Evacuation/Purging Adapter, 14/20			62.14

### SOLVENT STILL HEAD, HIGH VACUUM VALVES

For great solvent/chemical resistance. The two 0-4mm high vacuum valves have Teflon® covers over the two Viton® O-rings on the shaft, as well as one integral Teflon® O-ring on the tip. This design aids in not exposing any material other than Teflon® to any solvents. Syringe port has a 4mm Teflon® stopcock and a 14/20 outer joint. The delivery port has 14/20 inner joint.

Item #	Capacity (mL)	Joint	Price (each)
S264250	250	24/40	472.05
Accessories:			
S181530	Replacement 4mm Teflon® Plug Only		20.97
S660004T	0-4mm PTFE Protected High Vacuum Valve (Fully Enclosed)		39.28
A741420	Evacuation/Purging Adapter, 14/20		62.14



### SOLVENT STILL, BUILT-IN CONDENSER

Grease-free design. Same as product listed above, but with a 14/10 threaded joint and Teflon®-lined septum for syringe access.

Item #	Capacity (mL)	Joint	Price (each)
S144125	125	24/40	472.05
<b>Accessories:</b>			
S211444	Replacement 4mm Double Oblique PTFE Plug		31.59
RC112	Replacement Nylon® Compression Cap		1.73
R1420	Replacement Teflon®-lined Silicone Septum		3.23



### DISTILLING HEAD, SOLVENT

Upper sampling port has a 4mm Teflon® stopcock with a 14/20 outer joint for use with septa. Lower drain is centered to allow total drainage of storage head. Upper and lower joints are 24/40.

Item #	Take-off Joint	Capacity (mL)	Double Oblique Stopcock Bore (mm)	Price (each)
S251250	14/20	250	2	253.24
S254250	24/40	250	2	345.75
S254500	24/40	500	2	373.47
S254000	24/40	1000	2	384.45
<b>Accessories:</b>				
S181530	Replacement 4mm Teflon® Plug Only			20.97
S211944	Replacement 2mm Double Oblique PTFE Plug			26.51



**STOPPER, PENNY-HEAD, GLASS, HOLLOW**

All sizes are with joints. Heavy wall design.

Item #	Joint	Price (each)
S401410	14/10	13.17
S401420	14/20	13.58
S401922	19/22	14.90
S402440	24/40	15.71
S402942	29/42	19.52
S403445	34/45	25.24
S404550	45/50	35.23

**STOPPER, PENNY-HEAD, GLASS, SOLID**

All sizes are with joints. Heavy wall design.

Item #	Joint	Price (each)
S291018	10/18	11.20
S291030	10/30	11.78
S291420	14/20	12.31
S291922	19/22	14.15
S292440	24/40	17.67
S292942	29/42	21.55

**STOPPER, GLASS, FLASK LENGTH, PENNY-HEAD**

All sizes are with joints. Heavy wall design.

Item #	Joint	Price(each)
S280013	# 13	5.72
S280016	# 16	6.81
S280019	# 19	8.03
S280022	# 22	8.66
S280027	# 27	10.97
S280032	# 32	14.85
S280038	# 38	20.62

\* All sizes are solid except #32 and #38, which are hollow

**STOPPER, CAP DESIGN**

For apparatus having an inner opening.

Item #	Joint	Price (each)
S391420	14/20	14.27
S392440	24/40	15.94
S392942	29/42	19.75

**STOPPER, SPHERICAL, PENNY-HEAD**

Hollow stopper for use with spherical socket joint.

Item #	Description	Price(each)
S450035	35/20 Ball Joint	27.14
<b>Accessory:</b>		
CC3525	Metal Clamp for 35/20 or 35/25 Spherical Joint	19.40

**STOPPER, TEFLON®**

Teflon® handle stoppers for easy gripping.

Item #	Joint	Price (each)
S111420	14/20	29.22
S111922	19/22	30.49
S112425	24/25	39.45
S112440	24/40	40.66
S112942	29/42	57.75
S113445	34/45	71.56

**STOPPER, TEFLON®, FLASK LENGTH**

Teflon® handle stoppers for easy gripping.

Item #	Joint	Price (each)
S120013	# 13	14.90
S120016	#16	16.98
S120022	#22	19.52
S120027	#27	28.88
S120038	#38	53.82

**STOPPER, PTFE**

Teflon® stopper has a Nylon® extraction nut permitting easy removal of the stopper from the glass outer joint. Can be used with high vacuum.

Item #	Joint	Price (each)
S531018	10/18	20.39
S531420	14/20	21.95
S531922	19/22	22.47
S532440	24/40	36.33



**SLEEVE, TEFLON®, RIBBED WITH GRIPPING RING**

To seal joints without grease.

Item #	Joint	Price (each)
T131420	14/20	13.69
T131922	19/22	14.55
T132440	24/40	15.77
T132942	29/42	23.51
T133445	34/45	31.76

**JOINT CLIP, STANDARD TAPER JOINT**

Made of polyacetal plastic.

Item #	Joint	Price (each)
CS001420	14/20	3.53
CS001922	19/22	3.64
CS002440	24/40	3.76
CS002942	29/42	4.04
CS003445	34/45	4.39
CS004050	40/50	4.68
CS004550	45/50	6.65

**SPRING, STAINLESS STEEL**

Use with hooks.

Item #	Length of Coil (mm)	Price (each)
TH006	6.35	1.56
TH025	25.0	1.56
TH032	32.0	1.56

**GLASS CUTTER, NATURAL DIAMOND**With rack on shank for breaking off single or double strength glass.  
Extra-large natural diamond for durability.

Item #	Price (each)
DC18001	43.89

**O-RING, VITON®**

For solvent and chemical compatibility.

Item #	Dimensions (mm)			Description	Price (each)
	Size	I.D.	W		
R006	006	3.70	1.80	O-Ring (For H14- and V13- Series)	1.16
R007	007	3.70	1.78	For 0-4mm High Vacuum Plug Tip or 5/5 Threaded Joint	1.16
R008	008	4.50	1.78	O-ring for #7 Internal Thread	1.33
R010	010	6.07	1.78	For 0-4mm High Vacuum Plug Shaft or 5/5 Threaded Joint	1.16
R011	011	7.65	1.88	O-ring, Size 011 for S181125 Stopcocks	1.39
R013	013	10.8	1.78	O-ring for 15mm Stopper of Internal Thread	1.80
R014	014	12.30	1.78	O-ring for 14/10 Threaded Joints, Microscale	2.37
R107	107	5.23	2.62	O-ring for Thermometer/Inlet Adapters	1.73
R107EP	107	5.23	2.62	EP O-ring, #7 GL Thread	1.83
R108	108	6.0	2.62	Top O-ring for 0-8mm High Vacuum	1.73
R110	110	9.2	2.62	O-ring for 0-8mm High Vacuum Valve Plug/0-12mm High Vacuum Valve Tip O-ring	1.80
R111EP	111	10.77	2.62	EP O-ring, #15 GL Thread	1.90
R112	112	12.4	2.62	0-12mm High Vacuum Valve Shaft O-ring	1.80
R116	116	18.7	2.62	#15 O-ring Joint	2.60
R121	121	26.6	2.62	O-ring for 25mm Stopper of Internal Thread	5.78
R212	212	21.8	3.50	O-ring for 25mm Stopper of Internal Thread	3.47
R212EP	212	21.8	3.50	EP O-ring, #25 GL Thread	3.57
R217	217	29.7	3.50	O-ring for #25 O-ring Joint	5.49
R221	221	21.8	3.50	Replacement #221 O-ring for Rodaviss Joint	3.47
R223	223	40.9	3.50	Replacement #223 O-ring for Rodaviss Joint	6.35
R225	225	4.72	3.50	O-ring for #50 Internal Thread	7.16
R226	226	50.4	3.50	O-ring for #40 Internal Thread	7.46
R229	229	59.9	3.50	O-ring for #50 Internal Thread	8.66
R331	331	56.5	5.33	O-ring for 57mm Flat O-ring Flange	11.73
R339	339	81.9	5.33	O-ring for 80mm Flat O-ring Flange	11.96





#### CLAMP, HORSESHOE STYLE

Made of aluminum with black epoxy coating. Used for flat flange glassware.

Item #	For Flange Size	Price (each)
CC0057	57mm	68.61
CC0080	80mm	84.08



#### CLAMP, PINCH, STAINLESS STEEL, SPHERICAL

With a screw type locking nut. Made of 304 stainless steel. Used for O-ring or spherical joints.

Item #	Spherical Joint Size/O-ring Joint Size	Price (each)
CC0012	12/5 Ball Joint, or #5 O-ring Joint Stainless Steel Clamp	9.82
CC0018	18/8 Ball Joint, or #9 O-ring Joint Stainless Steel Clamp	13.69
CC2815	28/15 Ball Joint, or #15 O-ring Joint Stainless Steel Clamp	14.39
CC3525	35/20,35/25 Ball Joint, or #25 O-ring Joint Stainless Steel Clamp	19.40
CC0050	50/30 Ball Joint, or #30 O-ring Joint Stainless Steel Clamp	57.98
CC0065	65/40 Ball Joint, or #40 O-ring Joint Stainless Steel Clamp	58.21
CC0075	75/50 Ball Joint, or #50 O-ring Joint Stainless Steel Clamp	101.24



#### CLAMP THERMOMETER EXTENSION

Extension rod is 10mm in diameter. Total length: 200mm.

Item #	Price (each)
W140200	36.96



#### SPATULAS

Made of 304 Stainless Steel. One end rounded. One end tapered.

Item #	Length (mm)	Price (each)
W160100	100	4.22
W160120	120	4.62
W160125	125	4.80
W160140	140	5.20
W160150	150	5.38
W160160	160	5.61
W160180	180	6.01
W160200	200	6.58
W160220	220	7.22
W160230	230	8.09



#### ALUMINUM SUPPORT JACK

Aluminum support jacks are used to support various types of glassware and equipment used in the lab.

Item #	Dimensions(cm)	Price (each)
J111018	10*10*14	88.73
J111525	15*15*28	157.50
J112028	20*20*29	233.63
J112532	20*25*38	336.00



#### SUPPORT STAND

Cast iron base and chrome plated rod. The base features two holes which are tapped to fit the included rod.

Item #	Base Size	Pole Height	Rod Thickness	Price (each)
J390260	200*125mm (8x5 inches)	600mm	10mm	51.20
J390270	250*160mm (10x6 inches)	600mm	10mm	73.22
J390280	315*200mm (12x8 inches)	700mm	10mm	100.46



#### BOSSHEAD

Chrome plated finish, plastic headed screws. For rods up to 15mm in diameter.

Item #	Price (each)
W200002	16.00



#### BOSSHEAD

Chrome plated finish with plastic headed screws. For rods up to 15mm in diameter.

Item #	Price (each)
W200002Z	16.00



#### BOSSHEAD

Chrome plated finish. For rods up to 16mm in diameter.

Item #	Price (each)
W200002B	16.00



#### BOSSHEAD

Matte black finish. For rods up to 19mm in diameter.

Item #	Price (each)
J111200	16.00



**FOUR FINGER CLAMP (SHANK)**

Die-cast alloy, Ni/Cr plated finish, with cork lined interlocking jaws accepts articles up to 80mm in diameter.  
(Clamp total length is approximately 250mm).

Item #	Model	The Length of the Rod is (mm)	Price (each)
W170004	Chromed	154	19.01

**THREE FINGER DOUBLE ADJUST-ABLE CLAMP (LARGE)**

Double adjustable, PVC coated prongs, made of chrome-plated alloy. Accepts objects from 0 to 87mm.  
(Clamp total length is approximately 270mm).

Item #	The Length of the Rod is (mm)	Price (each)
W181103	152	17.97

**THREE FINGER DOUBLE ADJUST-ABLE CLAMP (SMALL)**

Double adjustable, PVC coated prongs, made of chrome-plated Zinc-alloy. Accept objects from 0 to 60mm.  
(Clamp total length is approximately 222mm).

Item #	The Length of the Rod is (mm)	Price (each)
W192203	154	16.00

**CHAIN CLAMP**

With chain and spring. For diameters from 80 to 150mm.

Item #	The Length of the Rod is (mm)	Price (each)
W150150	220	59.94

**CAP, COMPRESSION, WITH HOLE**

Replacement caps with hole for use with thermometer/inlet adapters or microscale reaction vials.

Item #	Size (mm)	Possible Application	Material	Price (each)
RC005	8	Side Port Hickman Still Head	Phenolic	0.64
RC009	13	Thermometer/Inlet Adapters	Nylon 66®	1.16
RC112	20	14/10 Threaded Joints, Microscale	Nylon 66®	1.73
RC2440	24	24/40 Rodaviss® Joint	Nylon 66®	2.89

**SEPTUM, TEFLON®-LINED SILICONE RUBBER**

Made of silicone rubber with PTFE face.

Item #	Size (mm)	Possible Application	Price (each)
R1408	8	Side port Hickman Still Head	1.27
R1413	13	Thermometer/Inlet Adapters	1.50
R1420	20	14/10 Threaded Joints	3.23

**REMOVABLE HOSE CONNECTION, FOR GL THREAD**

With caps listed below. Order each part separately.

Item #	Size	Style	Price (each)
R201402	14	Straight	1.68
R201801	18	Straight	5.89
RC14	14	#14 Nylon® Cap with 9.5mm Hole	1.33
RC18	18	#18 Nylon® Cap with 11mm Hole	2.77

**PLURO-STOPPER**

Used with Buchner and fritted glass funnels. Sold as a set of 8.

Item #	Size	Top/Bottom O.D. (mm)	Top/Bottom I.D. (mm)	Price (Complete Set)
P10	#1	21×11	17×7	25.41
	#2	30×20	23×12	
	#3	37×22	31×16	
	#4	48×30	45×22	
	#5	58×38	50×30	
	#6	69×45	60×36	
	#7	84×65	70×52	



**SEPTUM, STOPPER, SLEEVE TYPE**

Flanged type stopper with a hollow plug and sleeve extension that folds down over the neck of the vessel, tubing, etc. The diaphragm can be punctured with a syringe needle, resealing after needle is withdrawn. Made of natural rubber.

Item #	For Use With	Price (each)
RS111420	14/20 Outer Joint	1.50
RS111922	19/22 Outer Joint	1.91
RS112440	24/40 Outer Joint	2.66
RS112942	29/42 Outer Joint	4.16

**SEPTUM, STOPPER, SLEEVE TYPE THREADED**

Stoppers are made from natural white rubber.

Item #	Joint	Price (each)
RS121420	14/20	1.73
RS121922	19/22	1.85
RS122440	24/40	3.00

**SEPTUM, STOPPER, SLEEVE TYPE**

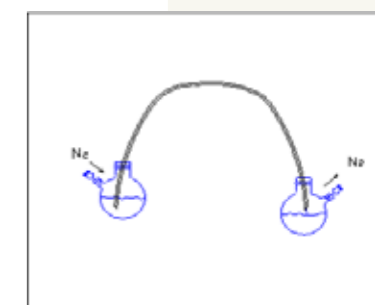
Stoppers are made from natural white rubber for use with 5mm OD NMR Tubes.

Item #	NMR TUBE O.D. (mm)	Price (each)
RS1305	5	4.97

**CANNULA, STAINLESS STEEL**

For the transfer and handling of air sensitive materials.

Item #	Gauge	O.D. (mm)	I.D. (mm)	Needle Length (mm)	Price (each)
C701618	16	1.65	1.20	460	32.57
C701624	16	1.65	1.20	600	44.88
C701636	16	1.65	1.20	900	65.95
C701818	18	1.30	0.80	460	32.57
C701824	18	1.30	0.80	600	44.88
C701836	18	1.30	0.80	900	65.95
C702018	20	0.90	0.60	460	32.57
C702024	20	0.90	0.60	600	44.88
C702036	20	0.90	0.60	900	65.95
C702218	22	0.70	0.40	460	32.57
C702224	22	0.70	0.40	600	44.88
C702236	22	0.70	0.40	900	65.95

**SYRINGE NEEDLE, STAINLESS STEEL**

Long needle for solvent retrieval. Female lure lock connector. Beveled non-coring tip.

All of our needles are compatible with both lure lock and lure slip syringes.

Item #	O.D. (mm)	Length (mm)	Price (each)
S386150	0.6	150	8.26
S386200	0.6	200	8.49
S386300	0.6	300	9.01
S389150	0.9	150	8.26
S389200	0.9	200	8.49
S389300	0.9	300	9.01
S380216	1.2	180	8.26
S380221	1.2	200	8.49
S380230	1.6	300	9.01



Gauge Sizes:  
16 gauge = 1.194mm I.D.  
18 gauge = 0.838mm I.D.



### SAMPLE SYRINGE

Borosilicate glass syringe with permanent graduations.  
Does not have a lure lock, but has a lure slip tip.  
Compatible with syringe needles listed above.

Item #	Specifications	Packaging	Price (each)
S371200	1ml	10/pack	173.25
S371202	2ML	10/pack	28.88
S371203	5ML	10/pack	34.13
S371204	10ML	5/pack	26.25
S371205	20ML	Each	8.40
S371206	30ML	Each	13.65
S371207	50ML	Each	23.63
S371208	100ML	Each	40.95

### MICROLITER SAMPLE SYRINGE

Borosilicate syringe used for precise sample delivery in volumes from 0.5ul-1ml.

Item #	Specifications	Needle O.D.	Price (each)
S371001	0.5ul	0.5mm	49.88
S371002	1ul	0.5mm	49.88
S371003	5ul	0.6mm	49.88
S371004	10ul	0.5mm	30.45
S371005	25ul	0.5mm	30.45
S371006	50ul	0.5mm	30.45
S371007	100ul	0.5mm	30.45
S371008	250ul	0.5mm	98.70
S371009	500ul	0.5mm	110.25
S371010	1000ul	0.5mm	126.00
S371101	1ul	0.7mm	63.00
S371102	5ul	0.7mm	63.00
S371103	10ul	0.7mm	46.20
S371104	25ul	0.7mm	46.20
S371105	50ul	0.7mm	46.20
S371106	100ul	0.7mm	46.20

\*S3710 = Gas phase with beveled tip,  
S3711 = Liquid phase with blunt tip.

### STOPCOCK, TEFLON® STRAIGHT BORE

With 1:5 Teflon® plug and a threaded pressure nut. Stopcock barrels are polished to prevent PTFE plug from scratching.

Item #	Bore (mm)	Plug Size	Stem O.D. (mm)	Price (each)
S101502	2	11/25	8	32.92
S101504	4	15.2/30	10	49.84
S101506	6	16/35	12	61.79
Accessories:				
S181125	Replacement 2mm Teflon® Plug Only			12.54
S181530	Replacement 4mm Teflon® Plug Only			20.97
S181635	Replacement 6mm Teflon® Plug Only			28.76

### STOPCOCK REPLACEMENT PLUG, 1:5 TEFLON®, STRAIGHT BORE

This replacement kit is complete with one Teflon® plug (1:5 taper), one Teflon® washer, and one O-ring.

Item #	Plug Size	Bore (mm)	Stopcock Type	Price (each)
S181125	11/25	2	Handle and Nut	12.54
S181530	15.2/30	4	Handle and Nut	20.97
S181635	16/35	6	Handle and Nut	28.76

### STOPCOCK REPLACEMENT PLUG, 1:5 TEFLON®, METERING VALVE

With a threaded Teflon® needle valve for the fine control of flow through the bore of the stopcock plug. This replacement kit is complete with all of the components.

Item #	Plug Size	Bore (mm)	Price (each)
S191125	11/25	2	45.05
S191530	15.2/30	4	51.69



**STOPCOCK, 1:5 TEFLON® T-BORE**

Stopcock with three stems sealed 90° apart. Teflon® plug has a “T” shaped bore to connect any two or all three stems.

Item #	Plug Size	Bore (mm)	Stem O.D. (mm)	Price (each)
S161530	15.2/30	2	8	72.65
S161635	16/35	4	10	87.32
<b>Accessories:</b>				
S201530	Replacement 4mm Teflon® Plug Only			27.78
S201635	Replacement 6mm Teflon® Plug Only			33.26

**STOPCOCK REPLACEMENT PLUG, 1:5 TEFLON®, T-BORE**

This replacement kit is complete with one Teflon® plug (1:5 taper), one Teflon® washer, and one O-ring.

Item #	Plug Size	Bore (mm)	Price (each)
S201530	15.2/30	2	27.78
S201635	16/35	4	33.26

**STOPCOCK, 1:5 TEFLON®, DOUBLE OBLIQUE BORE**

With polished barrels.

Item #	Plug Size	Bore O.D. (mm)	Stem O.D. (mm)	Price (each)
S171244	12.9/44	2	10	69.71
S171444	14.4/44	4	10	81.54
<b>Accessories:</b>				
S211944	Replacement 2mm Double Oblique PTFE Plug			26.51
S211444	Replacement 4mm Double Oblique PTFE Plug			31.59

**STOPCOCK REPLACEMENT PLUG, 1:5 TEFLON®, DOUBLE OBLIQUE BORE**

This replacement kit is complete with one Teflon® plug (1:5 taper), one Teflon® Washer, and one O-ring.

Item #	Plug Size	Bore (mm)	Price (each)
S211944	12.9/44	2	26.51
S211444	14.4/44	4	31.59

**STOPCOCK, TEFLON®, 120° BORE**

A (1:5 taper) Teflon® stopcock with three sidearms sealed 120° apart. Plug has a bore to allow connection of any two arms at once.

Item #	Plug Size	Bore O.D. (mm)	Stem O.D. (mm)	Price (each)
S411530	15.2/30	2	8	74.10
<b>Accessories:</b>				
S221530	2mm Teflon® 120° Bore Stopcock Plug			44.93

**STOPCOCK, STRAIGHT BORE, GLASS, INTERCHANGEABLE**

Plugs and barrels are ground to be interchangeable, with 1:10 taper.

Item #	Bore O.D. (mm)	Stem O.D. (mm)	Supplied	Price (each)
S321230	2	8	Complete	39.85
S321740	4	10	Complete	44.47
S322044	6	12	Complete	57.58
<b>Accessories:</b>				
S461230	Replacement 2mm Glass Plug Only			11.61
S461740	Replacement 4mm Glass Plug Only			14.73
S462044	Replacement 6mm Glass Plug Only			20.56
S691230	Replacement S.S. Retention for 2mm Glass Stopcock			2.43
S691740	Replacement S.S. Retention for 4mm Glass Stopcock			2.43
S692044	Replacement S.S. Retention for 6mm Glass Stopcock			2.43

**STOPCOCK REPLACEMENT PLUG 1:10, GLASS**

To be used with constant pressure retention kit (S69- series).

Item #	Bore (mm)	Plug Size (mm)	Stopcock Type	Price (each)
S461230	2	12/30	Straight Glass	11.61
S461740	4	17/40	Straight Glass	14.73
S462044	6	20/44	Straight Glass	20.56

**REPLACEMENT STAINLESS STEEL RETENTION KIT**

Use with glass stopcock.

Item #	Plug Size(mm)	Price (each)
S691230	12/30	2.43
S691740	17/40	2.43
S691750	17.35/50	2.43
S691656	16.2/56	2.43
S692044	20/44	2.43



**STOPCOCK, GLASS, T-BORE**

With solid glass plug and a constant pressure retention spring and clip.

Item #	Plug Size	Bore O.D. (mm)	Stem O.D. (mm)	Price (each)
S310217	12/30	2	8	71.96
S311740	17/40	4	10	77.93
S312044	20/44	6	12	82.41
<b>Accessories:</b>				
S510217	Replacement "T"- bore Glass Plug, 2mm Hole			15.77
S511740	4mm Glass "T"-bore Stopcock Plug			19.01
S512044	Replacement "T"- bore Glass Plug, 6mm hole			25.76
S691230	Replacement S.S. Retention for 2mm Glass Stopcock			2.43
S691740	Replacement S.S. Retention for 4mm Glass Stopcock			2.43
S692044	Replacement S.S. Retention for 6mm Glass Stopcock			2.43

**STOPCOCK, GLASS, HIGH VACUUM, DOUBLE OBLIQUE BORE**

With solid glass plug. Barrel and plug are precision ground hand lapped with corresponding numbers on the barrel and plug. With constant pressure retention spring and clip.

Item #	Plug Size	Bore Size (mm)	Sidearm O.D. (mm)	Price (each)
S391656	16.2/56	4	10	74.56
<b>Accessories:</b>				
S691656	Replacement S.S. Retention Kit for 16.2/56 Glass Stopcock			2.43

**STOPCOCK, GLASS, HOLLOW PLUG, DOUBLE OBLIQUE, HIGH VACUUM**

Precision ground with corresponding numbers on the barrel and plug. Lower vacuum chamber is evacuated via a separate 2mm hole in the plug which is not in the line of flow.

Item #	Plug Size	Bore (mm)	Sidearm O.D. (mm)	Price (each)
S351656	16.2/56	4	10	149.17

**STOPCOCK, GLASS, HOLLOW PLUG, OBLIQUE, HIGH VACUUM**

Precision ground with corresponding numbers on the barrel and plug. Lower vacuum chamber is evacuated via a separate 2mm hole in the plug which is not in the line of flow.

Item #	Plug Size	Bore (mm)	Sidearm O.D. (mm)	Price (each)
S341750	17.35/50	4	10	98.01
S342565	25/65	8	16	123.47

**STOPCOCK, GLASS, HOLLOW PLUG, OFFSET, HIGH VACUUM**

Precision ground with corresponding numbers on the barrel and plug. Lower vacuum chamber is evacuated via a separate 2mm hole in the plug which is not in the line of flow

Item #	Plug Size	Bore (mm)	Sidearm O.D. (mm)	Price (each)
S701240	12.6/40	2	8	69.48
S701754	17.35/50	4	10	82.30
S701756	17.35/50	6	12	100.14

**STOPCOCK, GLASS, HOLLOW PLUG, 90°, HIGH VACUUM**

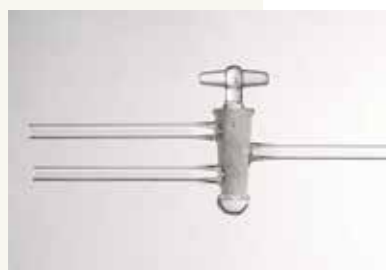
Precision ground with corresponding numbers on the barrel and plug. Lower vacuum chamber is evacuated via a separate 2mm hole in the plug which is not in the line of flow.

Item #	Plug Size	Bore (mm)	Sidearm O.D. (mm)	Price (each)
S711240	12.6/40	2	8	69.48
S711754	17.35/50	4	10	82.30
S711756	17.35/50	6	12	105.45

**STOPCOCK, GLASS, HOLLOW PLUG, T-TYPE, HIGH VACUUM**

Precision ground with corresponding numbers on the barrel and plug. Lower vacuum chamber is evacuated via a separate 2mm hole in the plug which is not in the line of flow.

Item #	Plug Size	Bore (mm)	Stem O.D. (mm)	Price (each)
S721240	12.6/40	2	8	76.52
S721754	17.35/50	4	10	90.04



**VALVE, HIGH VACUUM, PTFE, O-RING, 90°**

With two 9mm O.D. sidearms sealed to the barrel at a 90° angle to one another. The non-rotating PTFE plug has three O-rings, the tip O-ring making the primary seal on the precision formed taper seat.

Item #	Description	Price (each)
S550004	0-4mm High Vacuum Valve, 90°, Complete	56.31
S550008	0-8mm High Vacuum Valve, 90°, Complete	73.21
S550012	0-12mm High Vacuum Valve, 90°, Complete	84.19

**Accessories:**

S540004	0-4mm High Vacuum Plug and Control Knob Viton® O-ring at Tip	32.80
S540008	0-8mm High Vacuum Plug and Control Knob Viton® O-ring at Tip	42.80
S540012	0-12mm High Vacuum Plug and Control Knob Viton® O-ring at Tip	48.57

**VALVE, HIGH VACUUM, PTFE, O-RING, 180°**

The non-rotating PTFE shaft has three O-rings, the tip O-ring making the primary seal on the precision formed taper seat. For replacement Viton O-ring kit, See R007, R010, or R108 and R110.

Item #	Description	Price (each)
S560004	0-4mm High Vacuum Valve, 180°	60.59
S560008	0-8mm High Vacuum Valve, 180°	95.52

**Accessories:**

S540004	0-4mm High Vacuum Plug and Control Knob Viton® O-ring at Tip	32.80
S540008	0-8mm High Vacuum Plug and Control Knob Viton® O-ring at Tip	42.80

**VALVE, HIGH VACUUM, PTFE, O-RING, THREE-WAY**

With two 9mm O.D. sidearms sealed to the barrel at a 90° angle to one another. The non-rotating PTFE plug has three O-rings, the tip O-ring making the primary seal on the precision formed taper seat.

Item #	Description	Price (each)
S580008	0-8mm High Vacuum Valve, (3-way)	162.28
S580012	0-12mm High Vacuum Valve, (3-way)	205.13

**Accessories:**

S540008	0-8mm High Vacuum Plug and Control Knob Viton® O-ring at Tip	42.80
S540012	0-12mm High Vacuum Plug and Control Knob Viton® O-ring at Tip	48.57

**VALVE, HIGH VACUUM, PTFE, O-RING, T-TYPE**

With two 9mm O.D. sidearms sealed to the barrel at a 90° angle to one another. The non-rotating PTFE plug has three O-rings, the tip O-ring making the primary seal on the precision formed taper seat. For replacement Viton O-ring kit, see R110 and R112.

Item #	Description	Price (each)
S590012	0-12mm High Vacuum Valve, (3-way)	102.28

**Accessories:**

S540012	0-12mm High Vacuum Plug and Control Knob Viton® O-ring at Tip	48.57
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**VALVE, HIGH VACUUM, TEFLON® PROTECTED, 180°**

With two 9mm O.D. sidearms sealed to the barrel at a 180° angle to one another. Viton® O-rings on PTFE shaft are protected with precision Teflon® wipers. The plug has a machined-in integral PTFE tip O-ring to make the primary seal. This design provides an excellent vacuum tight seal without exposing any material other than Teflon to chemicals.

Item #	Description	Price (each)
S620004	0-4mm High Vacuum Valve, 180°	54.69
S620008	0-8mm High Vacuum Valve, 180°	76.41
S620012	0-12mm High Vacuum Valve, 180°	96.27

**Accessories:**

S600004T	0-4mm PTFE Protected High Vacuum Valve (Fully Enclosed)	34.76
S600008T	0-8mm PTFE Protected High Vacuum Valve (Fully Enclosed)	44.99
S600012T	0-12mm PTFE Protected High Vacuum Valve (Fully Enclosed)	56.48

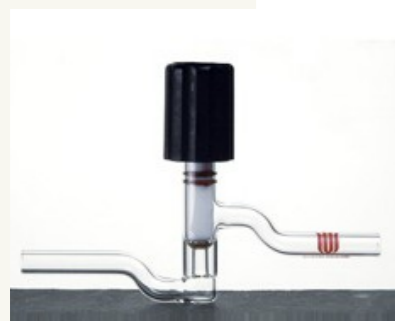
**VALVE, HIGH VACUUM, TEFLON® PROTECTED, LOW HOLD UP**

With two 9mm O.D. sidearms bent to minimize hold up of liquids. Viton® O-rings on PTFE shaft are protected with precision Teflon® wipers. The plug has a machined-in integral PTFE tip O-ring to make the primary seal. This design provides an excellent vacuum tight seal without exposing any material other than Teflon® to chemicals.

Item #	Description	Price (each)
S630004	0-4mm High Vacuum Valve, (Low Hold Up)	57.81
S630008	0-8mm High Vacuum Valve, (Low Hold Up)	87.66
S630012	0-12mm High Vacuum Valve, (Low Hold Up)	103.09

**Accessories:**

S600004T	0-4mm PTFE Protected High Vacuum Valve (Fully Enclosed)	34.76
S600008T	0-8mm PTFE Protected High Vacuum Valve (Fully Enclosed)	44.99
S600012T	0-12mm PTFE Protected High Vacuum Valve (Fully Enclosed)	56.48



**VALVE, HIGH VACUUM, TEFLON® PROTECTED, 90° METERING**

Viton® O-rings on PTFE shaft are protected with precision Teflon® wipers. The plug has a machined-in integral PTFE tip O-ring to make the primary seal. This design provides an excellent vacuum tight seal without exposing any material other than Teflon® to chemicals.

Item #	Description	Price (each)
S640008	0-8mm High Vacuum Valve (3-way)	102.80
<b>Accessories:</b>		
S600008T	0-8mm PTFE Protected High Vacuum Valve (Fully Enclosed)	44.99

**VALVE, HIGH VACUUM, TEFLON® PROTECTED, 90° METERING**

Viton® O-rings on PTFE shaft are protected with precision Teflon® wipers. The plug has a machined-in integral PTFE tip O-ring to make the primary seal. This design provides an excellent vacuum tight seal without exposing any material other than Teflon® to chemicals. The glass portion has two sidearms sealed to the barrel at a 90° angle to one another.

Item #	Description	Price(each)
S670008	0-8mm High Vacuum Valve, 90° (Teflon® Covered O-rings)	90.78
<b>Accessories:</b>		
S660008T	0-8mm High Vacuum Metering Plug and Control Valve (Teflon® covered O-ring)	46.75

**VALVE, HIGH VACUUM, TEFLON® PROTECTED, LOW HOLD UP, METERING**

Viton® O-rings on PTFE shaft are protected with precision Teflon® wipers. The plug has a machined-in integral PTFE tip O-ring to make the primary seal. This design provides an excellent vacuum tight seal without exposing any material other than Teflon® to chemicals. With two 9mm O.D. sidearms bent to minimize hold up of liquids.

Item #	Description	Price (each)
S680004	0-4mm High Vacuum Valve, Low Hold Up	59.08
S680008	0-8mm High Vacuum Valve, Low Hold Up	91.89
S680012	0-12mm High Vacuum Valve, Low Hold Up	108.80
<b>Accessories:</b>		
S660004T	0-4mm High Vacuum Metering Plug and Control Valve (Teflon® Covered O-ring)	39.28
S660008T	0-8mm High Vacuum Metering Plug and Control Valve (Teflon® Covered O-ring)	46.75
S660012T	0-12mm High Vacuum Metering Plug and Control Valve (Teflon® Covered O-ring)	59.05

**PLUG, HIGH VACUUM, TEFLON® PROTECTED**

Complete with control knob. Viton® O-rings on PTFE shaft are protected with precision Teflon® wipers. The plug has a machined-in integral PTFE tip O-ring to make the primary seal. This design provides an excellent vacuum tight seal without exposing any material other than Teflon® to chemicals.

Item #	Description	Price(each)
S600004T	0-4mm PTFE Protected High Vacuum Valve (Fully Enclosed)	34.76
S600008T	0-8mm PTFE Protected High Vacuum Valve (Fully Enclosed)	44.99
S600012T	0-12mm PTFE Protected High Vacuum Valve (Fully Enclosed)	56.48

**PLUG, HIGH VACUUM, TEFLON® PROTECTED, METERING**

Complete with control knob. Viton® O-rings on PTFE shaft are protected with two precision Teflon® wipers. The plug has a machined-in integral PTFE tip O-ring to make the primary seal. This design provides an excellent vacuum tight seal without exposing any material other than Teflon® to chemicals.

Item #	Description	Price (each)
S660004T	0-4mm High Vacuum Metering Plug and Control Valve (Teflon® Half-covered O-ring)	39.28
S660008T	0-8mm High Vacuum Metering Plug and Control Valve (Teflon® Half-covered O-ring)	46.75
S660012T	0-12mm High Vacuum Metering Plug and Control Valve (Teflon® Half-covered O-ring)	59.05

**High Vacuum Valve with Internal Thread**

Item #	Description	Price (each)
S600004N	0-4mm High Vacuum Valve with Internal Thread	52.14
S600008N	0-8mm High Vacuum Valve with Internal Thread	67.49



### SUBLIMATOR

A grease-free, two-piece sublimation apparatus consisting of an upper water cooled condenser and lower vessel to hold the material to be sublimed. The sublimate collects on the lower end of the condenser, which has a flat bottom. Complete setup is constructed using a grease-free, threaded valve. Connection of the condenser and lower vessel via an O-ring joint enables the two parts to be gently separated for maximum product recovery. Complete apparatus consists of the cold finger, condenser, lower vessel, Viton O-ring, and a stainless steel pinch clamp.

Item #	Description	Capacity (mL)	Joint Size	O-Ring Size	Clamp Size	Price (each)
S732510	10mL Sublimation Complete	10	25	217	35	210.16
S734040	40mL Sublimation Complete	40	40	226	65	272.07
S735060	60mL Sublimation Complete	60	50	229	75	359.04
Accessories:		Application				Price(each)
CC3525	#35 Stainless Steel Clamp or #25 O-ring Joint					19.40
CC0065	#65 Stainless Steel Clamp or #25 O-ring Joint					58.21
CC0075	#35 Ball Joint or #50 O-ring Joint					101.24
R217	#217 Viton® O-ring for #25 O-ring Joint					5.49
R226	#226 Viton® O-ring for #40 O-ring Joint					7.46
R229	#229 Viton® O-ring for #50 O-ring Joint					8.66
S600004T	0-4mm PTFE Protected High Vacuum Valve (Fully Enclosed)					34.76

### SUBLIMATOR, WITH 2MM GLASS STOPCOCK

Supplied with a special 25mL long-neck flask for small volume efficiency. Plastic keck clip sold separately.

Item #	Stopcock	Joint	Price (each)
D232440G	2mm Glass	24/40	179.67
Accessories:			
DF302425	Flask, Round Bottom, Long Neck, 25mL		21.78
S461230	Replacement 2mm Glass Plug Only		11.61
S691230	Replacement S.S. Retention for 2mm Glass Stopcock		2.43

### SUBLIMATION APPARATUS

Two-piece grease-free sublimator with a flat bottom to enable heating on a hot plate stirrer. Condenser has a large top opening for use with dry ice/acetone or liquid nitrogen. Connection between the flask and condenser is made with a flat O-ring joint, permitting parts to be gently separated for maximum product recovery. The capacity listed is below the bottom of the cold finger. Vacuum control is provided by a 0-8mm high vacuum valve. Complete apparatus consists of the condenser, flask, Viton® O-ring and a horseshoe clamp.

Item #	Description	Capacity (mL)	O-Ring Size	Flange Size (mm)	Price (each)
S740100	100mL Sublimator Complete	100	331	57	442.89
S740150	150mL Sublimator Complete	150	339	80	548.28
Accessories:					
R331	#331 Viton® O-ring				11.73
CC0057	57mm Horseshoe Clamp				68.61
S600008T	0-8mm PTFE Protected High Vacuum Valve (Fully Enclosed)				44.99
Accessories:					
R339	#339 Viton® O-ring				11.96
CC0080	80mm Flange Horseshoe Clamp				84.08
S600008T	0-8mm PTFE Protected High Vacuum Valve (Fully Enclosed)				44.99



**ADAPTER, GAS INLET/OUTLET**

For microscale applications.

Item #	Joint	Hose Connection O.D. (mm)	Price (each)
A301410	14/10	8	15.89

**ADAPTER, VACUUM, WITH 1:5 TEFLON® STOPCOCK**

For microscale applications.

Item #	Joint	Stopcock Bore (mm)	Hose Connection O.D. (mm)	Price (each)
A381410	14/10	2	8	55.62

**ADAPTER, INLET OR THERMOMETER**

With a compression cap and Viton® O-ring to form a vacuum tight seal. To use it as syringe port, simply replace the O-ring with Teflon®-lined septum. Cap accommodates 5.0-7.5mm O.D. thermometer. Supplied with one Nylon® cap (RC009) and one Viton® O-ring (R107).

Item #	Joint	Price (each)
A771410	14/10	21.20

**ADAPTER, THERMOMETER, WITH HOSE CONNECTION**

With a compression cap and Viton® O-ring to form a vacuum tight seal. To use it as syringe port, simply replace the O-ring with Teflon®-lined septum. Cap accommodates 5.0-7.5mm O.D. thermometer. Supplied with one Nylon® cap (RC009) and one Viton® O-ring (R107).

Item #	Joint	Price (each)
A781410	14/10	30.44

**ADAPTER, DISTILLATION, THREADED**

Supplied with one holed compression cap and one Viton® O-ring. For replacement cap, see RC112; for Viton® O-ring, see R014.

Item #	Joint	Price(each)
A351410	14/10	36.73

**ADAPTER, CLAISEN, THREADED**

Supplied with two holed compression caps, two Viton® O-rings and two Teflon®-lined silicone rubber septa. For replacement caps, see RC112; for Viton® O-rings, see R014; for septa, see R1420.

Item #	Joint	Price (each)
A371410	14/10	37.54

**ADAPTER, VACUUM TAKEOFF, THREADED**

Supplied with one holed compression cap and one Viton® O-ring. For replacement cap, see RC112; for Viton® O-ring, see R014.

Item #	Joint	Price (each)
A621410	14/10	39.85

**CONDENSER, REFLUX, JACKETED, THREADED**

I.D. of inner tube is designed large enough to accept a thermometer. Supplied with one holed compression cap and one Viton® O-ring. For replacement cap, see RC112, for Viton® O-ring, see R014.

Item #	Joint	Jacket Length (mm)	Hose Connection O.D. (mm)	Price (each)
C201080	14/10	80	8	48.86





CONDENSER, AIR REFLUX, THREADED

Supplied with one holed compression cap, and one Viton® O-ring. For replacement cap, see RC112; for Viton® O-ring, see R014.

Item #	Joint	Effective Length (mm)	Price (each)
C221410	14/10	100	25.24



COLUMN, DISTILLING, VIGREUX

Supplied with one holed compression cap and one Viton® O-ring. For replacement cap, see RC112; for Viton® O-ring, see R014.

Item #	Joint	Overall Length (mm)	Length Indented Section (mm)	Price (each)
C221410B	14/10	122	75	49.38



COLUMN, AIR REFLUX, 14/20 JOINT

For cooling with air.

Item #	Joint	Overall Length (mm)	Length Between Joints (mm)	Price (each)
C221420	14/20	143	96	26.40



CONDENSER, COIL REFLUX

For low boiling solvents. Supplied with one holed compression cap and one Viton® O-ring. For replacement cap, see RC112; for Viton® O-ring, see R014; for septa, see R1420.

Item #	Joint	Price (each)
C321410	14/10	129.48



TUBE, DRYING, 90° BENT

To hold desiccant.

Item #	Joint	Price (each)
A851410	14/10	19.29



HICKMAN STILL HEAD

Designed for microscale fractional distillation. Supplied with one compression cap, one Viton® O-ring and one Teflon® - faced silicone rubber septum. For replacement cap, see RC112; for Viton® O-ring, see R014, for septa, See R1420.

Item #	Joint	Price (each)
H101410	14/10	39.85



HICKMAN STILL HEAD, WITH SIDE PORT

Side port with cap and 8mm Teflon®-lined septum for syringe injection or retrieval. Designed for microscale fractional distillation. Supplied with one compression cap, one Viton® O-ring and one Teflon® -faced silicone rubber septum. For replacement caps, see RC005 and RC112; for Viton® O-ring, see R014 and R006; for septa, see R1408 and R1420. The bottom tube of this product is approximately 1.6mm thick.

Item #	Joint	Price (each)
H121410	14/10	44.24



DISTILLATION HEAD, HICKMAN-HICKMAN-HINKLE, WITH SIDE PORT

This head has a threaded side port with septum and cap for easier syringe access to well contents. Supplied with one compression cap, one Viton® O-ring and one Teflon®-faced silicone rubber septum. For replacement caps, see RC005 and RC112; for Viton® O-ring, see R014 and R006; for septa, see R1408 and R1420. The bottom tube of this product is approximately 3.7mm thick.

Item #	Joint	Price (each)
H141410	14/10	52.96

**TUBE, CRAIG RECRYSTALLIZATION**

Complete with a glass outer tube and an inner plug

Item #	Capacity Below Grind	Price (each)
T140002	2mL, Complete	13.81

**VIAL, CONICAL REACTION, HEAVY WALL, GRADUATED**

Supplied with one holed compression cap, one Viton® O-ring and one Teflon®-faced silicone rubber septum. For replacement cap, see RC112, For Viton® O-ring, see R014; for septa, see R1420.

Item #	Joint	Capacity (mL)	Price (each)
V130501	5/5	0.1	11.04
V130701	7/10	0.1	12.54
V130711	7/10	1	16.54
V131003	14/10	3	17.21
V131005	14/10	5	17.21
V131008	14/10	8	17.21

5/5 joint uses RC005 cap, R1408 septa and R006 O-ring

7/10 joint uses RC009 cap, R1413 septa and R107 O-ring

14/10 joint uses RC112 cap, R1420 septa, and R014 O-ring

**CONICAL REACTION VIAL, 14/20, GRADUATED**

Heavy wall vials have an internal conical bottom and a flat bottom.

Item #	Joint	Capacity mL	Price (each)
V141003	14/20	3	13.74
V141005	14/20	5	13.98
V141008	14/20	8	15.54

**FUNNEL, FILTER**

With 14/20 joints and a 20mm O.D. fritted disc.

Item #	Joint	Disc O.D. (mm)	Disc Porosity	Price (each)
F381420M	14/20	20	M	77.39

**FLASK, ROUND BOTTOM, THREADED**

Supplied with one holed compression caps, one Viton® O-rings and one Teflon®-faced silicone rubber septum. For replacement cap, see RC112; for Viton® O-ring see R014; for septa, see R1420.

Item #	Joint	Capacity (mL)	Price (each)
F301005	14/10	5	18.89
F301010	14/10	10	18.89
F301025	14/10	25	18.89

**FLASK, PEAR SHAPE, THREADED**

Supplied with one compression cap, one Viton® O-ring and one Teflon®-faced silicone rubber septum. For replacement cap, see RC112; for Viton® O-ring, see R014; for septa, see R1420.

Item #	Joint	Capacity (mL)	Price (each)
F321005	14/10	5	20.28
F321010	14/10	10	20.56
F321025	14/10	25	20.56

**FLASK, ROUND BOTTOM, 3-NECK**

Microscale, round bottom flask with three 14/10 outer ground joints externally threaded. For replacement caps, see RC112; for Viton® O-rings, see R014; for septa, see R1420.

Item #	Joint	Capacity (mL)	Price (each)
F591025	14/10	25	52.67
F591050	14/10	50	52.67

**FILER FUNNEL, HIRSCH**

With 10mm O.D. fritted disc of coarse porosity for all microscale application with 14/10 joints. The capacity above disc is approximately 7mL. The O.D. of the plain stem is 7mm.

Item #	Porosity	Price (each)
F650010C	C	38.64

**FUNNEL, MICRO**

For reagent addition.

Item #	Description	Price (each)
F740027	27mm O.D. on Top	7.97



**STILL, SOLVENT REFLUX, MICROSCALE**

Capacity of collection bulb is 15mL and has a side syringe port with cap and septum for removal of solvent. With 2mm Teflon® stopcock and 14/20 joints.

Item #	Description	Price (each)
S431015	Complete, w/o Two Neck Flask	194.96
F411125	Two Neck Flask, 14/20, 25ml	41.23
RC005	8mm Side Port Cap with Hole	0.64

**FLASK, ERLLENMEYER, THREADED**

Supplied with one compression cap, one Viton® O-ring and one Teflon® faced silicone rubber septum. For replacement cap, see RC112; for Viton® O-ring, see R014; for septa, see R1420.

Item #	Joint	Capacity (mL)	Price (each)
F501005	14/10	5	15.19
F501010	14/10	10	16.75
F501025	14/10	25	16.75

**FLASK, FILTERING, MICROSCALE**

Top is tooled for a #2 neoprene filter adapter or #3 rubber stopper.

Item #	Capacity (mL)	Price (each)
F150025	25	17.50
F150050	50	17.50

**HEAT TRANSFER BLOCK FOR MINI VIALS**

Aluminum heat transfer block, used in place of a glass sand in microscale experiments. It has holes to hold 3.0 and 5.0mL heavy wall reaction vials and four Craig crystallization tubes, one hole on the top for a standard thermometer.

Item #	Price (each)
H200001	52.85

Small hole I.D. is approximately: 11mm

Large hole I.D. is approximately: 20mm

**HEATING TRANSFER BLOCK FOR ROUND BOTTOM FLASK**

Aluminum heat transfer block, used in place of a glass sand in microscale experiments. It will hold 5, 10, and 25mL round bottom flasks, one hole on the top for a standard thermometer.

Item #	Price (each)
H200003	53.94

Small hole I.D. is approximately: 24mm

Medium hole I.D. is approximately: 26mm

Large hole I.D. is approximately: 37mm

**SPIN VANE FOR VIALS**

Magnet is encased in PTFE and is used with conical shaped mini-vials.

Item #	Vial Size (mL)	Price (each)
S470001	3.0 and 5.0	21.14

**STIR BAR, CYLINDRICAL**

Cylindrical Magnetic Stir Bar (PTFE), with pivot ring

Item #	Specifications	Packaging	Price (each)
SB0515	5*15mm	5/pack	36.23
SB0620	6*20mm	5/pack	41.48
SB0628	6*28mm	5/pack	60.90
SB0835	8*35mm	2/pack	43.05
SB0740	7*40mm	2/pack	43.05
SB0845	8*45mm	2/pack	43.05
SB1050	10*50mm	Each	35.18
SB1255	12*55mm	Each	54.08
SB1485	14*85mm	Each	100.80

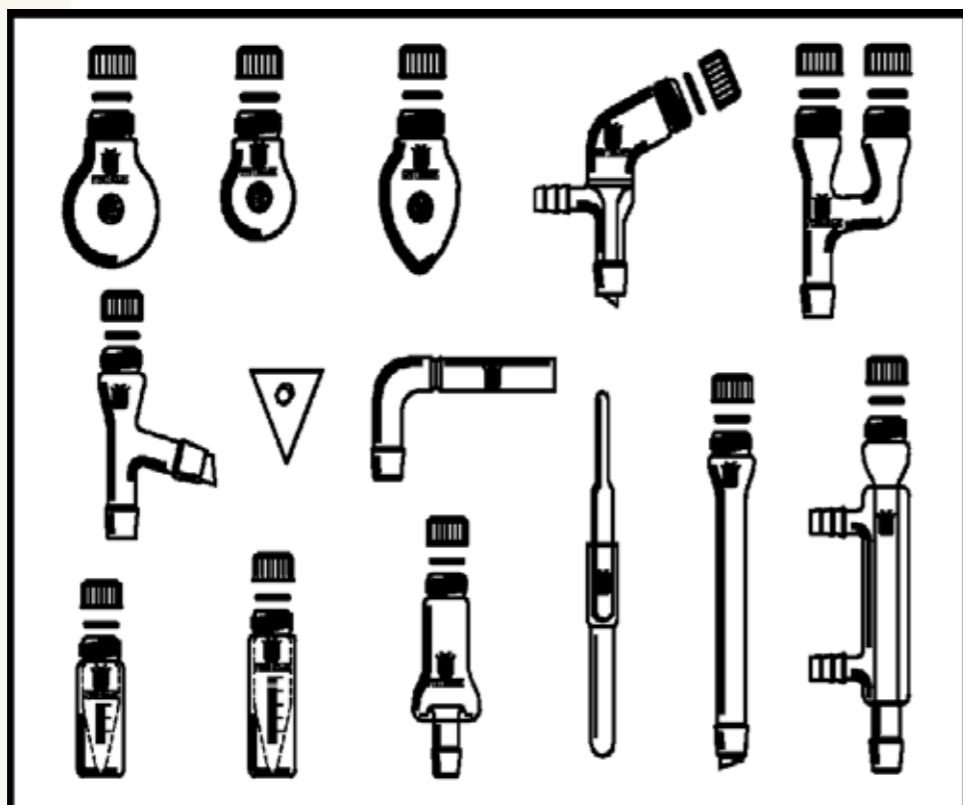


\*Can't be used in round bottom flasks. These are meant for flat bottom flasks only.

**KIT, MICROSCALE, THREADED, 14 PIECES**

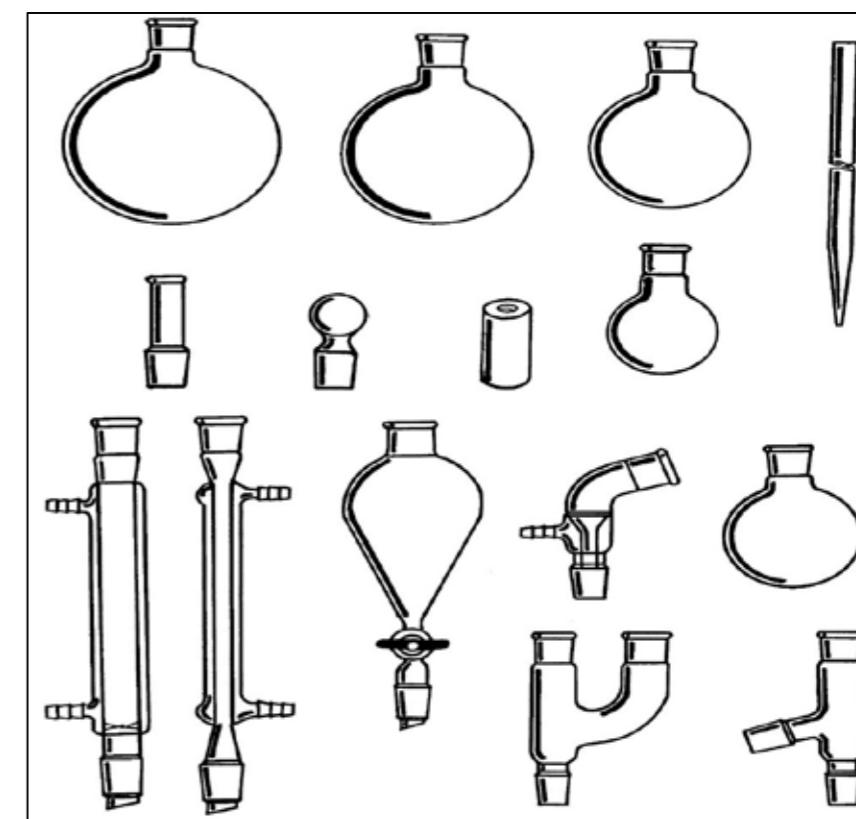
This kit contains one each of the following components.

Item #	Description	Quantity	Price
K151410	Microscale Kit	1	354.99 w/o Case & Insert
A371410	Claisen Adapter	1	37.54
A351410	Distillation Adapter	1	36.73
A621410	Vacuum Takeoff Adapter	1	39.85
C221410	Air Reflux Condenser	1	25.24
C201080	Jacket Condenser	1	48.86
A851410	Drying Tube	1	19.29
H101410	Hickman Still Head	1	39.85
T140002	Craig Recrystallization Tube, 2mL	1	13.81
V131003	Heavy Wall Conical Vial, 3mL	1	17.21
V131005	Heavy Wall Conical Vial, 5mL	1	17.21
F301010	Round Bottom Flask, 10mL	1	18.89
F301025	Round Bottom Flask, 25mL	1	18.89
F321010	Pear Shape Flask, 10mL	1	20.56
S470001	Spinvane, Teflon®	1	21.14
<b>Accessories:</b>			
K130902	Clear Plastic Storage Case (Sold Separately)	1	19.01


**KIT, ORGANIC CHEMISTRY, 14/20**

For use in college organic laboratory teaching courses. Case sold separately.

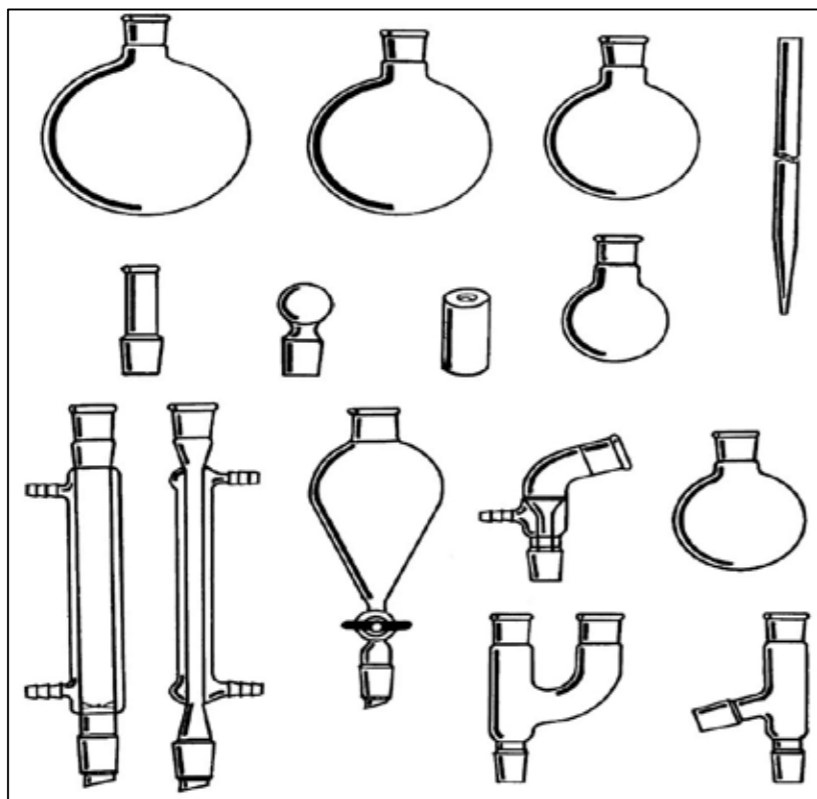
Item #	Description	Quantity	Price
K161420	Organic Chemistry Kit, Complete	1	446.52 w/o Case & Insert
A371420	Claisen Adapter	1	44.12
A351420	Distillation Adapter, 75° Angle	1	34.14
A621420	Vacuum Takeoff Adapter	1	38.18
A451420	Inlet/Thermometer Adapter	1	13.74
C150190	West Condenser, 190mm Jacket Length	1	58.16
C171200	Distillation Column, 200mm Jacket Length	1	57.35
F301425	Round Bottom Flask, 25mL	1	16.70
F301450	Round Bottom Flask, 50mL	1	16.70
F301100	Round Bottom Flask, 100mL	1	16.70
F301250	Round Bottom Flask, 250mL	1	22.52
F301500	Round Bottom Flask, 500mL	1	27.67
F451125	Separatory Funnel, 125mL	1	101.64
S401420	Glass Penny-head Stopper	1	13.58
T151922	Bleed Tube	1	5.03
<b>Accessories:</b>			
K130903	Black Storage Case with Foam Inserts (Sold Separately)	1	82.47



**KIT, ORGANIC CHEMISTRY, 19/22**

For use in college organic laboratory teaching courses. Case sold separately.

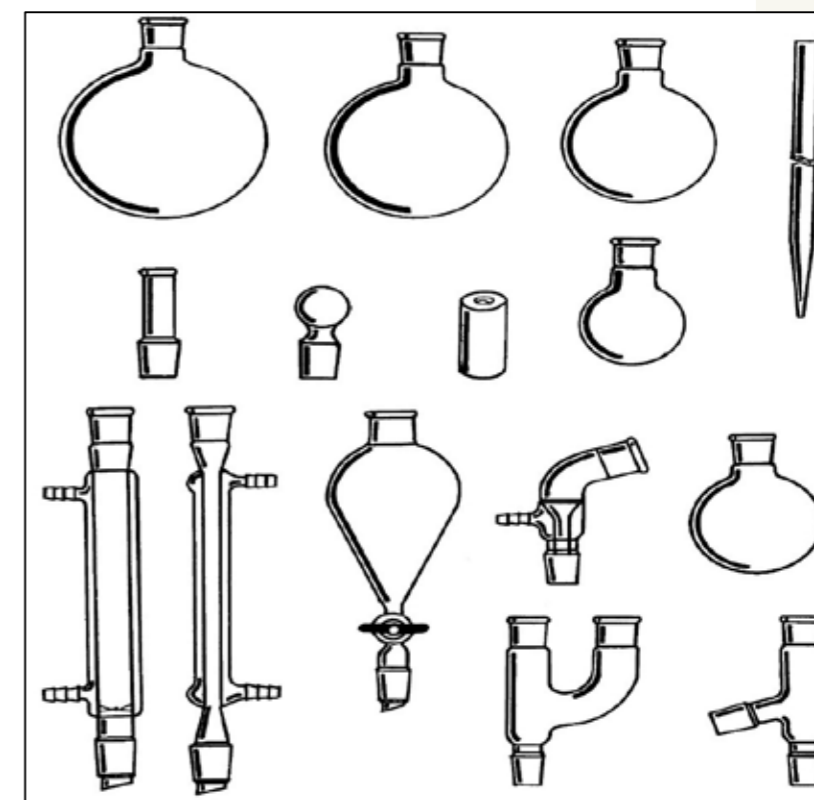
Item #	Description	Quantity	Price
K161922	Organic Chemistry Kit, Complete	1	455.36 w/o Case & Insert
A371922	Claisen Adapter	1	44.99
A351922	Distillation Adapter, 75° Angle	1	36.68
A621922	Vacuum Takeoff Adapter	1	40.26
A451922	Inlet/Thermometer Adapter	1	14.27
C150190	West Condenser, 190mm Jacket Length	1	58.16
C179200	Distillation Column, 200mm Jacket Length	1	61.05
F301925	Round Bottom Flask, 25mL	1	16.93
F301950	Round Bottom Flask, 50mL	1	17.04
F309100	Round Bottom Flask, 100mL	1	17.27
F309250	Round Bottom Flask, 250mL	1	22.47
F309500	Round Bottom Flask, 500mL	1	26.28
F459125	Separatory Funnel, 125mL	1	105.63
S401922	Glass Penny-head Stopper	1	14.90
T151922	Bleed Tube	1	5.03
<b>Accessories:</b>			
K130903	Black Storage Case with Foam Inserts (Sold Separately)	1	82.47


**KIT, ORGANIC CHEMISTRY, 24/40**

For use in college organic laboratory teaching courses.

Item #	Description	Quantity	Price
K162440	Organic Chemistry Kit, Complete	1	514.55 w/o Case & Insert
A372440	Claisen Adapter	1	51.05
A352440	Distillation Adapter, 75° Angle	1	43.66
A622440	Vacuum Take-off Adapter	1	44.47
A452440	Inlet/Thermometer Adapter	1	21.48
C151190	West Condenser, 190mm Jacket Length	1	73.64
C174200	Distillation Column, 200mm Jacket Length	1	69.07
F302425	Round Bottom Flask, 25mL	1	17.16
F302450	Round Bottom Flask, 50mL	1	17.16
F304100	Round Bottom Flask, 100mL	1	17.33
F304250	Round Bottom Flask, 250mL	1	23.68
F304500	Round Bottom Flask, 500mL	1	27.44
F454125	Separatory Funnel, 125mL	1	109.84
S402440	Glass Penny-head Stopper	1	15.71
T151922	Bleed Tube	1	5.03

\*\*\*NO CASE AVAILABLE FOR THIS KIT.\*\*\*





**5MM NMR TUBES, 100MHZ, CAPS, ECONOMY GRADE, 7"**  
Manufactured from Borosilicate 33 expansion tubing from Germany.  
Diameter: 5mm.

Item #	Spec	Price (each)
XWE-5MM-7	5/Box	10.34
XWE-5MM-7-50	50/Box	87.44



#### NMR TUBE WASHER

With 24/40 inner joint and 10mm hose connection. For 5mm/7" length NMR tubes only. The NMR tube is inserted into the tube cleaner with its plastic cap placed on the closed end to provide support and a vacuum seal. The washing solvent is sequentially added through the side tube while a vacuum is applied through the hose connection.

Item #	Joint	Price (each)
T100024	24/40	102.74



#### DESICCATOR, NON-VACUUM

Glass desiccator, clear. Includes lid and ceramic plate.

Item #	Specifications	Approx. Volume	Effective Height	Price (each)
B135115	150mm	1500mL	110mm	66.15
B135118	180mm	3000mL	145mm	86.63
B135121	210mm	4500mL	170mm	120.75
B135124	240mm	7000mL	195mm	178.50
B135130	300mm	13000mL	245mm	273.00
B135140	400mm	25000mL	255mm	887.25



#### DESICCATOR, VACUUM

Glass vacuum desiccator with port and stopcock on lid. Includes lid and ceramic plate. Comes with A682440G vacuum adapter.

Item #	Specifications	Approx. Volume	Effective Height	Price (each)
B135415	150mm	1500mL	110mm	106.58
B135418	180mm	3000mL	145mm	136.50
B135421	210mm	4500mL	170mm	191.63
B135424	240mm	7000mL	195mm	295.58
B135430	300mm	13000mL	245mm	446.25



#### HEAVY WALL BEAKER, LOW FORM, DUAL GRADUATION

Heavy wall construction with Borosilicate 33 expansion glass.

Item #	Capacity (mL)	Packaging	Price (each)
B200050	50	Each	7.51
B200100	100	Each	7.85
B200250	250	Each	7.93
B200500	500	Each	10.46
B231000	1000	Each	16.22



#### HEAVY WALL BEAKER, LOW FORM, DUAL GRADUATION

Item #	Capacity (mL)	Packaging	Price (each)
B220050	50	10/pack	75.14
B220100	100	10/pack	78.54
B220250	250	10/pack	79.28
B220500	500	10/pack	104.58

#### VOLUMETRIC FLASK, HEAVY WALL, WITH GLASS STOPPER, CLASS A

Heavy wall volumetric flasks with a glass stopper. To contain, not to deliver.

Item #	Specifications	Price (each)
F811305N	5mL, Class A, #13 Glass Stopper	36.50
F811310N	10mL, Class A, #13 Glass Stopper	36.73
F811320N	20mL, Class A, #13 Glass Stopper	37.54
F811325N	25mL, Class A, #13 Glass Stopper	38.23
F811350N	50mL, Class A, #13 Glass Stopper	38.81
F816100N	100mL, Class A, #16 Glass Stopper	41.81
F819200N	200mL, Class A, #19 Glass Stopper	50.59
F819250N	250mL, Class A, #19 Glass Stopper	56.36
F819500N	500mL, Class A, #19 Glass Stopper	67.57
F81221LN	1000mL, Class A, #22 Glass Stopper	74.84



#### VOLUMETRIC FLASK, HEAVY WALL, WITH TEFLON STOPPER, CLASS A

Heavy wall volumetric flasks with a PTFE stopper. To contain, not to deliver.

Item #	Specifications	Price (each)
F811305SN	5mL, Class A, #13 Teflon Stopper	35.41
F811310SN	10mL, Class A, #13 Teflon Stopper	35.63
F811320SN	20mL, Class A, #13 Teflon Stopper	36.41
F811325SN	25mL, Class A, #13 Teflon Stopper	37.09
F811350SN	50mL, Class A, #13 Teflon Stopper	37.64
F816100SN	100mL, Class A, #16 Teflon Stopper	40.56
F819200SN	200mL, Class A, #19 Teflon Stopper	49.07
F819250SN	250mL, Class A, #19 Teflon Stopper	54.67
F819500SN	500mL, Class A, #19 Teflon Stopper	65.54
F81221LSN	1000mL, Class A, #22 Teflon Stopper	72.60



**GL45 WIDE MOUTH MEDIA STORAGE BOTTLE WITH COLOR CAPS**

Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM standards, Type I, Class A requirements.

Part Number	Volume (mL)	Cap	Thread	Price
B140100	100	GL45-L (Green)	GL45	\$10.85
B140250	250	GL45-H (Yellow)	GL45	\$12.44
B140500	500	GL45-F (Pink)	GL45	\$15.15
B141000	1000	GL45-C (Red)	GL45	\$18.58
<b>Caps</b>				
GL45-L	Cap for 100mL Media Storage Bottle, Green, Supplied with PP Drip-free Pouring Ring			\$3.81
GL45-H	Cap for 250mL Media Storage Bottle, Yellow, Supplied with PP Drip-free Pouring Ring			\$3.81
GL45-F	Cap for 500mL Media Storage Bottle, Pink, Supplied with PP Drip-free Pouring Ring			\$3.81
GL45-C	Cap for 1000mL Media Storage Bottle, Red, Supplied with PP Drip-free Pouring Ring			\$3.81

**Warning: Caps must be removed from bottles for autoclaving!**

**DISH, CRYSTALLIZING, WITH SPOUTS**

Top of each dish is reinforced and fire polished to reduce chipping

Item#	Approx. Diameter x Height (mm)	Approximate Capacity (mL)	Price (each)
P290170	80 x 40	150	23.79
P290700	100 x 50	250	31.76
P291200	150 x 75	900	46.78
P292600	200 x 115	2000	105.26

**HOT PLATE MAGNETIC STIRRER, DIGITAL DISPLAY, 5 INCH**

Model	MS-H-PRO <sup>+</sup>
Heating Plate (mm)	Φ135 (5 inch)
Heating Plate Material	Stainless Steel with Ceramic Coating
Motor Type	DC Brushless
Motor Input (W)	18
Motor Output (W)	10
Consumption (W)	550
Voltage (VAC)	100-120/200-240
Frequency (Hz)	50/60
Stirring Position	1
MAX. Stirring (H <sub>2</sub> O)	20L
MAX Stirring Bar	80mm
Speed Range (rpm)	100-1500
Speed Display	LCD
Speed Resolution	±1 rpm
Heating Output	500 W
Heating Temperature Range (°C)	Room Temp-340, Increment 1
Accuracy (°C)	±1 (<100°C) ±1%(>100°C)
Safety (°C)	360
Temperature Display	LCD
Temperature Resolution(°C)	±0.1
Temperature Sensor External	PT1000
External Sensor Accuracy (°C)	±0.2
Safety Alarm	50°C
Timer	-
Data Transport	RS232
DIN EN60529	IP42
Dimension (W*D*H)	160*280*85 mm
Weight (kg)	2.8
Ambient Temperature(°C)	5-40
Ambient Humidity	80%

This MS-H-Pro hot plate stirrer is designed for liquid to liquid and liquid to solid mixing. It is supplied with back-lit LCD displays for both heating and stirring functions. The PID temperature technology provides quick and accurate temperature control over the entire temperature range (room temperature to 340°). The stainless steel heating plate with ceramic coating is chemically resistant and scratch proof. Connected to the PT1000 temperature sensor, it provides precise temperature control, overshoot protection, and reproducible results.



Item #	Model	Description	Price
871442010118	MS-H-Pro <sup>+</sup>	5 Inch Digital Display Heating Magnetic Stirrer	614.46
<b>Accessories:</b>			
SW18900016	PT1000	MS-H- Pro <sup>+</sup> External Temperature Sensor	154.62
SW18900017	MSPS01	PT1000 Adapter	72.65

**Warranty: 1 year parts and labor.**



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