

Liquid Master

Ideal for Sampling Various Liquids

The Liquid Master is ideal for taking samples from low and medium viscosity liquids. It is available in a range of lengths and diameters to give a range of sample volumes.

The Liquid Master is easy to use and is designed to be quickly stripped down for cleaning.



Type: Single Point & Cross Sectional Sampling

Materials: 316L stainless steel, Food grade PTFE or standard PP

Operation:

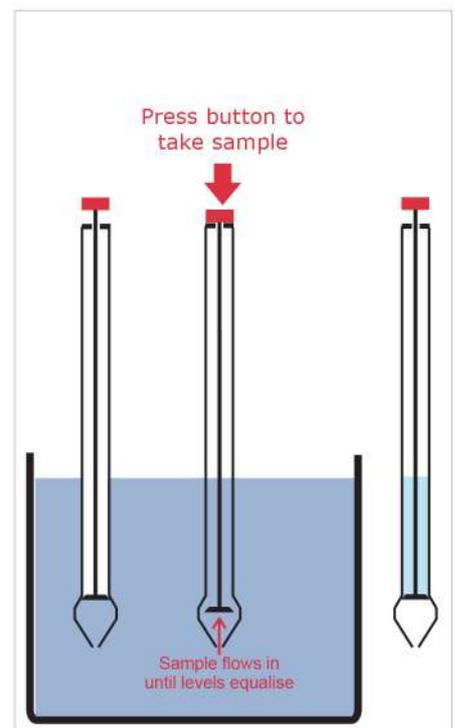
Technique 1 - Point Sampling

Insert the sampler. Press the push button to take the sample. Remove the sampler.

Technique 2 - Cross Sectional

Press the Push Button and then slowly insert the sampler into the product. As the sampler is pushed in a cross sectional sample is taken. Release the push button at the required depth to stop any more liquid from entering the Sampler. Remove the sampler.

NB. To take a large sample the sampler needs to be inserted deep into the product.





Sampler Tip
Seal arrangement prevents
sample from dripping



Push Button to open the
valve in the tip and take
the sample



Quick & easy to use



Part No.	Product Contact Material	Length	Maximum Sample Volume	Diameter
5035J-1000	PTFE/FEP	1000mm	500ml*	35mm
5035J-1500	PTFE/FEP	1500mm	1000ml*	35mm
5035J-2000	PTFE/FEP	2000mm	1500ml*	35mm
5035S-600	316L stainless steel & silicone O-ring	600mm	150ml**	25mm
5035S-1000	316L stainless steel & silicone O-ring	1000mm	270ml**	25mm
5035S-1500	316L stainless steel & silicone O-ring	1500mm	420ml**	25mm
5035S-2000	316L stainless steel & silicone O-ring	2000mm	500ml**	25mm
5035T-600	PTFE/FEP	600mm	150ml**	25mm
5035T-1000	PTFE/FEP	1000mm	270ml**	25mm
5035T-1500	PTFE/FEP	1500mm	390ml**	25mm
5035T-2000	PTFE/FEP	2000mm	510ml**	25mm
5035T-2500	PTFE/FEP	2500mm	660ml**	25mm
5035P-600	Polypropylene	600mm	150ml**	25mm
5035P-1000	Polypropylene	1000mm	270ml**	25mm
5035P-2000	Polypropylene	2000mm	420ml**	25mm

Cleaning Brushes - See page 184

Storage Cases - See page 186

XRF Certification - See page 196

*A 5ml sample will be taken for every 10mm the Liquid Master is inserted into the product

**A 3ml sample will be taken for every 10mm the Liquid Master is inserted into the product

Pump Sampler

Highly effective hand operated sample pump

Pump Samplers allow the liquids to be simply and quickly sampled. The chance of cross contamination is greatly reduced by using new dip-tube and bottles for each sample.

- Suitable for use with low to medium viscosity liquids.
- Single Point Sampler
- PE, PTFE or 316L stainless steel product contact parts

Operation:

1. Cut the sampling tube to the required length or use the pre cut sterile tube.
2. Screw the collecting bottle to the base of the hand pump.
3. Insert one end of the sampling tube through the hand pump and into the collecting bottle.
4. Drop the other end of the sampling tube into the product. At the required depth pump the handle. Several pumps will fill the sample collecting bottle.

Pump Efficiency

The Pump Sampler is highly efficient and is able to pump water to a height of about 4m



The pump is not a product contact part. Only the tube and collecting bottle come into contact with the product

PTFE Sampler Set

Part No. 5020T-01

Set Includes

- 1 off plastic hand pump with PTFE bottle adapter
- 1 off PFA Bottle (180ml)
- 1 off Sampling Tube - PTFE - 5m
- 1 off Tube cutter
- 1 off Stainless steel hose weight
- 1 off Carrying case



Part No.	Description
5020T-01	PTFE Pump Sampler Set
Spares:	
5020A-09	Hand Pump - Plastic
5020A-11	Adapter for pump and PFA sample bottles (type 5020A-03 and 5020A-04)
5020T-05	Sampling Tube - PTFE - 5m
5020T-100	Sampling Tube - PTFE - 100m
5020T-100USP	USP Class VI Sampling Tube - PTFE - 100m with cert
5020A-07	Tube cutter
Bottles:	
5020A-03	Sample bottle - PFA - 90ml
5020A-04	Sample bottle - PFA - 180ml

Use Your Existing Sample Collection Bottles

If you wish to use your own sample bottles then PTFE adapters are available for a wide variety of standard bottle neck sizes. However, if your bottle has an unusual thread we can make you a special PTFE adapter.

When ordering an adapter please post us one of your bottles.

We keep bottle adapters for GL45 threads in stock.



Part No.	Description
5020X-45P	Bottle adapter for bottles with GL45 thread. Suitable for the plastic pumps.
5020X-1	Special bottle adapter for plastic pump. Up to 50mm neck size
5020X-2	Special bottle adapter for plastic pump. Up to 100mm neck size
5020X-3	Special bottle adapter for plastic pump. Neck diameter larger than 100mm

PE Sampler Set

Part No. 5020P-01



Set Includes:

- 1 off plastic hand pump with PE bottle adapter
- 10 off PE Bottles (100ml)
- 1 off Sampling Tube - PE - 10m
- 1 off Tube cutter
- 1 off Stainless steel hose weight
- 1 off Carrying case



Part No.	Description
5020P-01	PE Pump Sampler Set (see above for contents)
Spares:	
5020A-09	Hand Pump Plastic (without adapter)
5020A-10	Adapter for pump and PE sample bottles (type 8130A)
5020P-100	Sampling Tube - PE - 100m with general cert
5020P-101	Sampling Tube - PE - 100m with batch cert
5020A-07	Tube cutter
Bottles:	
8130A-100	Sample bottle - PE - 100ml
8130A-250	Sample bottle - PE - 250ml
8130A-500	Sample bottle - PE - 500ml
8130A-1000	Sample bottle - PE - 1000ml

Stainless Steel Sampler Set

Part No. 5020S-02



Set Includes:

- 1 off stainless steel hand pump and stainless steel bottle adapter
- 10 off PE Bottles (100ml)
- 1 off Sampling Tube - PE - 10m
- 1 off Tube cutter
- 1 off Stainless steel hose weight
- 1 off Carrying case



Part No.	Description
5020S-02	Stainless Steel Pump Sampler Set
Spares:	
5020S-01	Hand Pump Stainless Steel
5020P-100	Sampling Tube - PE - 100m
5020T-100	Sampling Tube - PTFE - 100m
5020A-07	Tube cutter
Bottles:	
8130A-100	Sample bottle - PE - 100ml
8130A-250	Sample bottle - PE - 250ml
8130A-500	Sample bottle - PE - 500ml
8130A-1000	Sample bottle - PE - 1000ml

Pre-cut & Pre-sterilised Tube



Individually bagged LDPE tube ready to use straight from the bag.

- Made from LDPE which conforms to FDA, EC 1935/2004 & EU 10/2011
- Individually bagged
- Available sterile

Part No.	Tube Length	Sterile	Qty Per Box
5020L-01	1m	No	100
5020L-01S	1m	Yes	100
5020L-02	2m	No	20
5020L-02S	2m	Yes	20
5020L-04	4m	No	15
5020L-04S	4m	Yes	15

TeleScoop

The Extendable Sampler For Liquid Sampling



The TeleScoop is suitable for taking samples from liquids and suspensions.

A range of light weight, aluminium telescopic handles is available which makes this the ideal sampler to use when sampling from places such as: overhead gantries, river banks, water outlets etc.

The attachments are all interchangeable with the telescopic rods.

Attachments for telescopic rods

	<p>Stainless Beaker</p> <p>5065B-1000B</p> <p>Sampling beaker made from hygienic 304 stainless steel</p>
	<p>Angular Beaker 5065B</p> <p>The beaker can be easily adjusted to the required angle</p>
	<p>Bottle Holder 5065D</p> <p>Suitable for bottles up to 95mm diameter. Price includes one 750ml LDPE bottle</p>
	<p>Pendulum Beaker 5065C</p> <p>Always swings to the upright position</p>
	<p>Deep Catch Net 5065N</p> <p>190 x 430mm Mesh size 2 to 5mm</p>
	<p>Surface Net 5065M</p> <p>310 x 280mm Mesh size 2 to 5mm</p>
	<p>Multi Purpose</p> <p>The heads can be quickly interchanged by our simple clip system.</p>



Telescopic Rods

Easily adjustable to the required length.
Robust, light weight aluminium or stainless steel construction.



Telescoop Rods



Part No.	Description	Length	Material
5065A-1200	Telescopic Rod	720 to 1200mm	Aluminium & plastic
5065A-2500	Telescopic Rod	1320 to 2500mm	Aluminium & plastic
5065A-2800	Telescopic Rod	1020 to 2800mm	Aluminium & plastic
5065A-3000	Telescopic Rod	1230 to 3000mm	Aluminium & plastic
5065A-4500	Telescopic Rod	1720 to 4500mm	Aluminium & plastic
5065A-6000	Telescopic Rod	1820 to 6000mm	Aluminium & plastic
5065S-1500	Telescopic Rod	800 to 1500mm	316L stainless steel & PTFE
5065S-3000	Telescopic Rod	1500 to 3000mm	316L stainless steel & PTFE
5065S-4500	Telescopic Rod	1500 to 4500mm	316L stainless steel & PTFE

Telescoop Attachments & Spares



Part No.	Description	Volume	Material
5065B-600	Angular Beaker	600ml	Polypropylene
5065B-1000	Angular Beaker	1000ml	Polypropylene
5065B-2000	Angular Beaker	2000ml	Polypropylene
5065B-1000B	Angular Beaker	1000ml	304 Stainless Steel
5065C-600	Pendulum Beaker	600ml	Polypropylene
5065C-1000	Pendulum Beaker	1000ml	Polypropylene
5065C-2000	Pendulum Beaker	2000ml	Polypropylene
5065C-1000B	Pendulum Beaker	1000ml	304 Stainless Steel
5065D-750	Bottle Holder	750ml	Polypropylene & Aluminium, LDPE bottle
8125A-750	Spare Bottle	750ml	LDPE
5065M-310	Surface Catch Net	310 x 280mm	Polypropylene & Polyamide
5065N-190	Deep Catch Net	190 x 430mm	Polypropylene & Polyamide

Bottle Sampler

Takes Samples Straight into the bottle

The Bottle Sampler takes samples straight into the bottle. The spring loaded mechanism means that liquid only flows in when the handle is squeezed allowing samples to be taken from set locations.

- Low to medium viscosity liquids.
- Single Point liquid sampling
- Sampler body - 316L stainless steel, Bottle - glass

Ideal for taking quick samples direct into the bottle. The sampler is available with a cover that goes over the bottle to stop the bottle from getting wet.



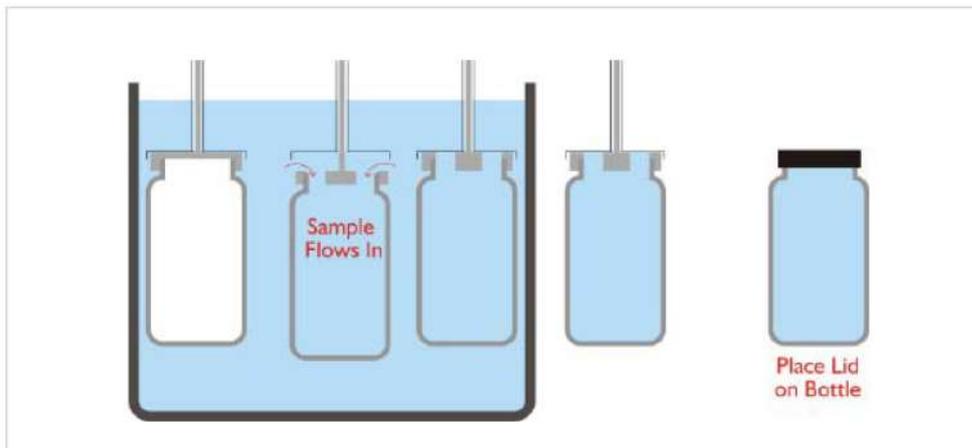
Sampler with protective cover that also helps to keep the bottle dry during sampling



Bottle Sampler with protective Bottle Cover



Bottle Sampler without Bottle Cover



Part No.	Overall Length	Bottle Cover	Bottle Size
5031S-1000	1000mm	No	500ml
5031C-1000	1000mm	Yes	500ml
5031S-1500	1500mm	No	500ml
5031C-1500	1500mm	Yes	500ml

Accessories	
8020N-1100	Narrow cleaning brush - 1100mm
8020N-1600	Narrow cleaning brush - 1600mm
5031B-500	Spare 500ml Bottle
XRF Certification	See page 196

Cup Sampler

Suitable for high and low viscosity liquids and suspensions

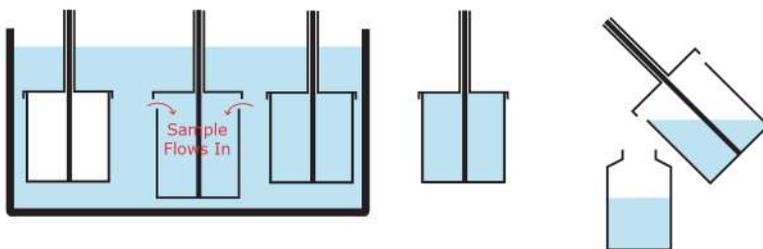
The ever popular Cup Sampler is ideal for sampling liquids and suspensions. The device is manufactured from 316 stainless steel. The Cup Sampler enables discrete samples to be easily taken from known heights within the product.

- Single Point Liquid Sampler
- 316L stainless steel product contact parts



Operation

1. Insert the sampler to the required depth.
2. Squeeze handle which pushes the cup away from the lid, allowing the liquid to enter the cup.
3. After filling remove the sampler. To empty the sampler either tip the sampler whilst squeezing the handle or unscrew the collecting cup.



5030A-600



Part No.	Overall Length	Nominal Cup Volume	Max. Diameter of Cup
5030A-600	600mm	100ml	55mm
5030A-1000	1000mm	100ml	55mm
5030A-1500	1500mm	100ml	55mm
5030J-1000	1000mm	500ml	80mm
5030J-1500	1500mm	500ml	80mm

Accessories	
8020N-1100	Narrow Cleaning Brush - 1100mm
8020N-1600	Narrow Cleaning Brush - 1600mm
Storage Cases	See pages 186-187
XRF Certification	See page 196

Fluid Point Sampler

Take liquid samples from a known point



The Fluid Sampler is ideal for sampling pharmaceuticals, cosmetics and food stuffs. The design allows rapid point sampling from drums, kegs and most containers. To take a sample simply insert the sampler into your liquid and then pull the handle to take the sample. After sampling push down the handle to eject the sample.

- Manufactured in 316L stainless steel with a silicone seal (FDA grade)
- Available in different lengths
- Easy to clean
- Available from stock for fast delivery worldwide



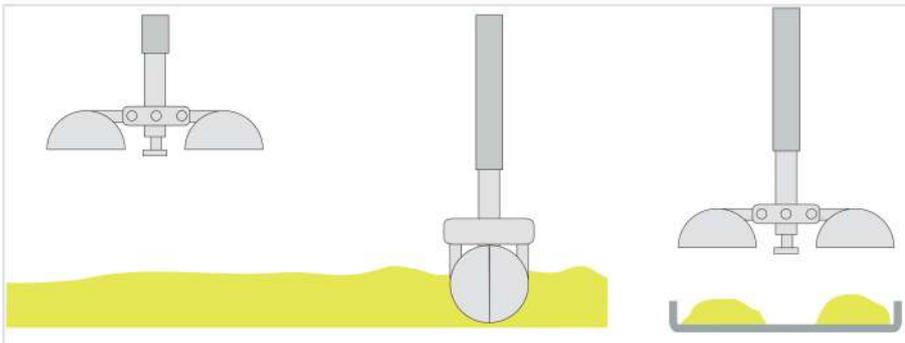
Part No.	Length	Diameter	Max. Sample Volume	Material
5551S-600	600mm	25mm	160ml	316L ss
5551S-1000	1000mm	25mm	300ml	316L ss
5551S-1500	1500mm	25mm	450ml	316L ss

Snapper

Snaps Shut to Capture Sediment & Sludge

The Snapper has been specially designed to take samples of sediment and sludge in rivers, wells, tanks etc.

- Simple to use
- Holds approximately 250ml
- Automatically snaps shut on contact with the sediment
- Spring loaded mechanism
- Use with the telescopic pole that extends up to 4.5m



Part No.	Description
5061A-250	Snapper - 250ml sample volume
5061T-4500	Telescopic rod. Extends up to 4.5m



Deep Water Sampler – 2.5L

Large volume environmental sampler

The deep water sampler is ideal for liquid and water sampling. It can be used in tanks, wells, containers, rivers and the sea.

Operation is simple. As the sampler is lowered into the liquid the material flows through it. When you start to pull the rope the bottom valve closes which means you take a sample from that point.

To discharge the liquid simply open the valve on the side. The Deep Water sampler is quick and easy to use.

- Graduated
- Supplied with 15m rope
- Transparent so its easy to inspect what has been sampled
- Made from robust plexiglass
- Ideal for chemical and environmental sampling
- Stratified sampling is quick and easy



Part No.	Nominal Volume	Diameter	Height	Weight	Material
5079A-2500	2500ml	130mm	340mm	1.3Kg	Plastic - Plexiglass

In Stream Sampler



The In Stream Sampler is a useful piece of equipment for taking samples from a product that is flowing. Alternatively it can be used to take samples directly from containers or vessels.

The In Stream Sampler is made from robust 316L stainless steel. It can be used for sampling both powders and liquids.

- Multi purpose sampler
- 316L stainless steel
- Crevice free interior
- Available from stock
- Polished finish



Part No.	Nominal Volume	Internal Diameter	Handle Length
A996-500	500ml	80mm	1000mm



Utility Dipper

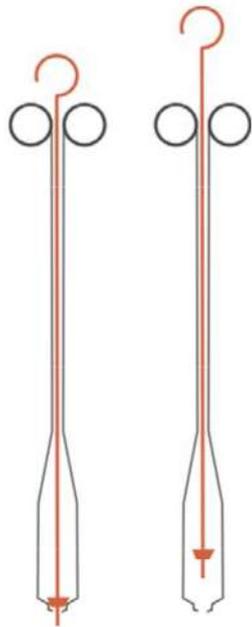
Simple Liquid Sampler

An all stainless steel sampler suitable for sampling liquids and suspensions.

- Takes a sample at the surface of the liquid
- Made from 316L Stainless steel

Operation

1. Insert the sampler into the product. The liquid will flow into the sampler.
2. Withdraw the sampler from the product
3. Raise the centre control rod to discharge the sample



Raise the centre control rod (shown in red) to discharge the product



304



Part No.	Overall Length	Nominal Cup Volume	Max. Diameter of Cup
5170A-50	460mm	50ml	32mm
5170A-100	540mm	100ml	32mm

Enviro Dipper

The Enviro Dipper is a simple and yet effective method of taking a surface sample. Simply lower the bucket into the liquid.

The stainless steel bucket can be ordered with either a stainless steel chain or a braided polypropylene cord.

Part No.	Description
A725-300	Stainless Steel Bucket - 300ml
5070S-10	Chain - 316 stainless steel - 10m - with 316ss shackle
5070S-25	Chain - 316 stainless steel - 25m - with 316ss shackle
5070S-50	Chain - 316 stainless steel - 50m - with 316ss shackle
5070P-10	Braided Cord - Polypropylene 10m
5070P-25	Braided Cord - Polypropylene 25m
5070P-50	Braided Cord - Polypropylene 50m
5070D-04	Standard heavy duty hand reel



U-D Doser

Accurate Unit Dose Sampling

Ideal for accurately sampling specific volumes of liquids. Designed specifically for unit dose sampling of liquids in the pharmaceutical industry.

- Suitable for sampling low to medium viscosity liquids.
- Ideal for low volume (unit dose) sampling.
- Made from Sampler body - 316 stainless steel, Syringe - PP & PE

Sample Chamber is designed so that the outside of the syringe is not contaminated during sampling. The syringe can therefore be used as a carrying container for taking the sample back to the laboratory.

Operation



1. Select a new syringe



2. Connect the syringe to the push rod



3. Attach outer cover. The sampler is now ready for use.



4. Pull up handle to take the sample, the graduations allow an accurate sample to be taken



5ml U-D Doser		30ml U-D Doser		60ml U-D Doser	
Part No.	Length	Part No.	Length	Part No.	Length
5010A-600	600mm	5010B-600	600mm	5010C-600	600mm
5010A-1200	1200mm	5010B-1200	1200mm	5010C-1200	1200mm
5010A-1800	1800mm	5010B-1800	1800mm	5010C-1800	1800mm
Spare - 5ml syringes		Spare - 30ml syringes		Spare - 60ml syringes	
5010S-05	Pack of 100	5010T-30	Pack of 56	5010T-60	Pack of 40
Options	Cleaning brushes	See page 184			
	Storage cases	See pages 186-187			
	XRF Certification	See page 196			

Sub Sampler

With Removable Glass Bottle

An ideal liquid sampler for most common liquids including water, oils, sludge etc.

- Manufactured from spark suppressant brass
- Bottle can be easily removed using patented click system
- 130mm diameter - 300mm high - 3 kg weight

Operation

1. Lower Sub Sampler to the required depth.
2. Pull up sharply on the lowering cable to pull the stopper out of the bottle.
3. Wait a few seconds for the liquid to flow into the bottle
4. Pull up the Sub Sampler and retrieve the sample



Part No.	Volume	Material	Dimensions (Diameter x Height)	Ex Rated
5073A-1000	1000ml	Nickel plated brass & glass	125 x 300mm	Yes*

* Make sure the sampler is properly earthed (grounded) use the Ex Hand Reel (5070D-05) and Copper cable (5070C)

Hand Reels, Cables & Chain

Hand reels and cables are essential accessories when using sub samplers (Bomb Samplers). The standard heavy duty hand reel is suitable for most situations. However if you are using the sampler in an Ex rated environment use the Hand Reel Ex with the copper cables.

Do not use stainless steel chain for use in ATEX environments.



Part No.	Description
5070D-04	Standard Heavy Duty Hand Reel - made from polypropylene
5070D-05	Ex Hand Reel - for Ex use rated environments. Made from conductive plastic. Supplied with earthing leads and clip. Use with copper cable (5070C)

Part No.	Description	Part No.	Description
5070S-10	Chain - 316 stainless steel - 10m	5070P-10	Polypropylene - braided cord - 10m
5070S-25	Chain - 316 stainless steel - 25m	5070P-25	Polypropylene - braided cord - 25m
5070S-50	Chain - 316 stainless steel - 50m	5070P-50	Polypropylene - braided cord - 50m
5070D-10	PTFE coated stainless wire - 10m	5070C-10	Copper - braided cable - 10m
5070D-25	PTFE coated stainless wire - 25m	5070C-25	Copper - braided cable - 25m
5070D-50	PTFE coated stainless wire - 50m	5070C-50	Copper - braided cable - 50m

Sub Sampler Pro

The Best Selling Heavy Duty Liquid Sampler

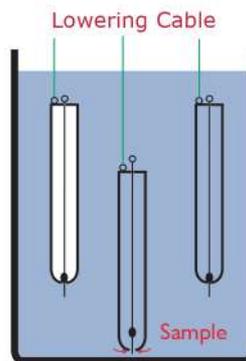
The Sub Sampler Pro (sometimes called a 'Bomb Sampler') is used throughout the world for both chemical and environmental sampling. Its unique double action means it can sample from a set distance from the bottom of a container or alternatively at a mid-point.



A. Sample from the bottom of a container

- Use a **Lowering Cable**

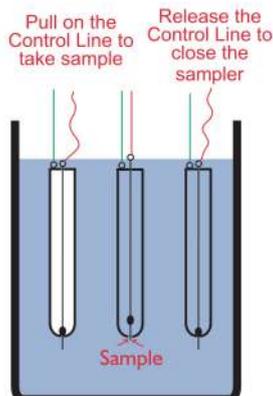
The Sub Sampler Pro is lowered until the plunger assembly touches the bottom of the container. As the plunger assembly is pushed up the sample is able to enter the device. When the sampler is raised the plunger will drop down and seal the sampler.



B. Mid-height Sampling

- Use a **Lowering Cable** and a **Control Line**

Lower the Sub Sampler Pro into the liquid. At the required sampling depth pull on the control line to raise the plunger. This will allow the liquid to enter the sampler. Release the control line and the plunger will drop down and seal the sampler.



Part No.	Nominal Volume	Material	Diameter x Length	Ex Rated
5072B-500	500ml	316L Stainless steel	66 x 300mm	No
5072A-500	500ml	Nickel plated brass	50 x 430mm	No
5072A-1000	1000ml	Nickel plated brass	75 x 438mm	Yes*

* Make sure the sampler is properly earthed (grounded) use the Ex Hand Reel (5070D-05) and Copper cable (5070C)
Don't forget to order your Hand Reel and Cable - see page 106

Easy Pumps

Economical and versatile pumps

The Easy Pump Range is ideal for many laboratory applications where small to medium quantities of liquid need to be pumped. Easy pumps are available either hand or foot operated.

Each pump is supplied with a Universal Bung - this allows the pump to be used with any container which has a round opening between 30 and 70mm.

These pumps are designed to be easy to install, easy to use and easy to clean.



Hand Operated Easy Pumps

Part No.	Tube Diameter	Maximum length of Dip Tube	Tube Material	Capacity
5056A-18	18mm	700mm	Rigid PP	26L/min
5056A-12	12mm	700mm	Rigid PP	14L/min
5056B-16	16mm	700mm	Rigid PVDF	20L/min

Every EasiPump is supplied with a Universal Bung - for use with openings 30 to 70mm in diameter

Foot Operated Easy Pumps

Part No.	Tube Diameter	Maximum length of Dip Tube	Tube Material	Capacity
5058A-22	22mm	900mm	Rigid PP	30L/min
5058B-16	16mm	700mm	Rigid PVDF	20L/min
5058C-18	18mm	900mm	304 Stainless steel	26L/min

Every EasiPump is supplied with a Universal Bung - for use with openings 30 to 70mm in diameter

Stainless Pump

Stainless Barrel Pumps are ideal for quickly and easily transferring large volumes. The product contact parts of the pump are stainless steel (304 grade) and PTFE (for the piston gasket).

The Stainless Pump is ideal for hygienic applications.

Two Styles of Stainless Pump are available

Type 1 - Pump has a rigid stainless steel delivery tube

Type 2 - Pump has a flexible PTFE lined hose complete with a ball valve

Type 1 Part No.	Type 2 Part No.	Max. Submersible Length	Overall Length	Capacity
5900A-475	5900B-475	360mm	475mm	220ml/stroke
5900A-685	5900B-685	570mm	685mm	350ml/stroke
5900A-1030	5900B-1030	910mm	1030mm	560ml/stroke

Anti-Static Set Part No.: 8200A-05



Use the Anti-Static Set to ensure that the pump is properly earthed when working with flammable liquids.

Note: Don't forget to order a suitable pump connector - see below

PP Barrel Pump

PP Barrel Pumps are ideal for quickly and easily transferring large volumes.

Two styles of delivery pipe are available:

- **Type 1** with a rigid polypropylene delivery tube

- **Type 2** with a flexible PVC discharge tube (complete with stopcock)

Type 1 Part No.	Type 2 Part No.	Max. Submersible Length	Overall Length	Capacity
5900A-01	5900B-01	500mm	595mm	200ml/stroke
5900A-02	5900B-02	650mm	740mm	230ml/stroke
5900A-03	5900B-03	800mm	895mm	260ml/stroke
5900A-04	5900B-04	1000mm	1090mm	300ml/stroke
5900A-05	5900B-05	1250mm	1340mm	300ml/stroke

Note: Don't forget to order a suitable pump connector - see below



Pump Connectors



Brass Connector - R2" Internal Barrel Thread
Suitable for Stainless Barrel Pump
Part No. 8200S-01



PVC Bung - for 40 to 70mm openings
Suitable for either PP or Stainless Barrel Pumps
(only suitable for non flammable liquids)
Part No. 8200P-02



Gas Tight Barrel Connector - R2" Internal Barrel Thread & non-return valve with 1/8" thread
Suitable for Stainless Barrel Pump
Part No. 8200S-02



Tri-sure Internal Coarse Thread
Part No. 8200P-04



R2" Internal Steel Barrel Thread
Part No. 8200P-01



Mauser 2" Thread
Part No. 8200P-03

Part No.	Description	Suitable for Stainless Pump	Suitable for PP Pump
8200S-01	Brass Connector. R2"	Yes	No
8200S-02	Gas Tight Connector. R2"	Yes	No
8200P-02	PVC bung	Yes	Yes
8200P-01	PP Connector. R2".	Yes	Yes
8200P-03	PP Connector. Mauser 2"	Yes	Yes
8200P-04	PP Connector. Tri sure	Yes	Yes