ADELPHI MANUFACTURING

Product Guide

Adelphi Manufacturing Ltd

CERTIFIED
ISO 9001

UKAS
MANAGEMENT
SYSTEMS
001

ECO
FRIENDLY

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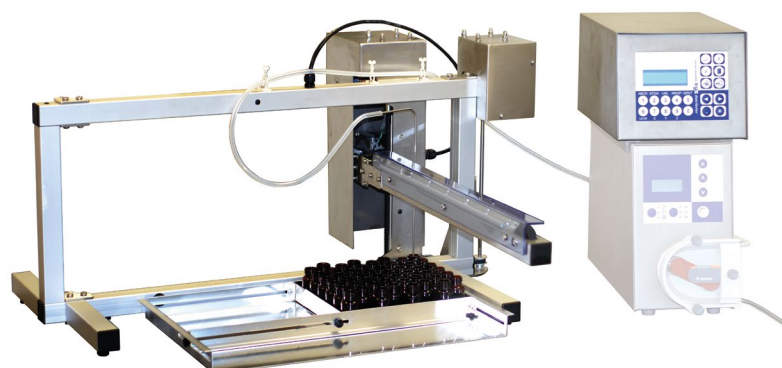
Adelphi offers a range of equipment designed to facilitate the efficient filling, closing and inspecting of vials in a laboratory or R&D environment.

XYZ Distributor

The XYZ Distributor is designed to be used in conjunction with the Peristaltic Dispenser, and enables vials, bottles and ampoules to be filled automatically in trays. The Z axis is the diving nozzle movement that allows liquid to be automatically filled from above the neck or into the neck.

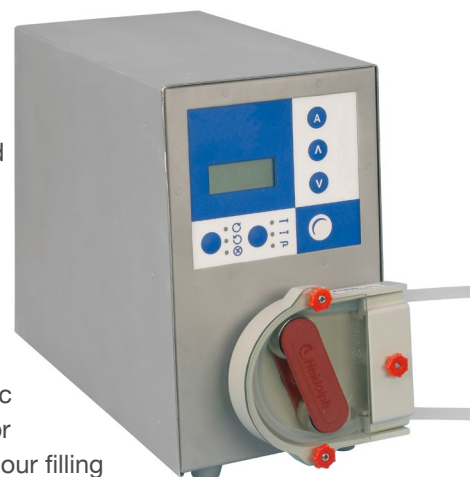| Item code	Specification
3525000	**XYZ DISTRIBUTOR**
Electricity (selectable)	240 V AC, 50/60 Hz, 500 W (120 V optional)
Movement space (mm)	X = 520, Y= 335, Z= 155
Electronics	Mircoprocessor
Weight (kg)	Control: 4.5. XYZ: 9.0
Dimensions distribution (mm)	790 × 625 × 390
Control dimensions (mm)	200 × 280 × 180
Drip delay	0.0 – 0.9 secs
Max vial height (mm)	200
Min neck opening (mm)	8
Tray fill area (mm)	410 × 265

Features:

- Control box remote from moving nozzle frame suitable for use in laminar flow cabinet

- Adjustable trays are supplied so that bottles are held in an orderly fashion

- Setting up is easy using the menu-driven LCD displays

- Special trays can be made to suit odd shaped bottles

- Fills straight rows or honeycombed configurations

Peristaltic Dispenser

This unit can be operated by hand, foot switch, or will cycle automatically with a delay of up to 10 seconds between fills. The pump runs at a constant speed for a precisely determined period of up to 100 seconds, can run forwards or backwards, and has a choice of three filling modes: Braked stop – Soft stop – Stop with suck back.

Like all peristaltic pumps the liquid only comes into contact with the inside of one uninterrupted length of silicone tubing which will withstand repeated sterilisation. Bacteriological inline filtration can be performed at the outlet side of the pump. This peristaltic dispenser can be combined with our XYZ Distributor to offer quick, easy, and hygienic filling of whole trays of vials or bottles automatically, or with our filling jig for filling small numbers of ampoules.

The Peristaltic Dispenser can be supplied with a range of sizes of high strength silicone tubing from 0.8mm bore to 8mm bore, with either a 1.6mm or 2mm wall thickness.

Please ask for further details on the size to best suit your requirements.

Item code	Specification
3510000	**PERISTALTIC DISPENSER**
Volumes (ml)	1 to 1,000
Repeatability	± 0.5%
Max flow rate (ml)	36 ml/sec (standard pump. Twin pump option available)
Electricity	240 V AC, 50 Hz, 50 W (120 V optional)
Weight (kg)	Nett 8.5, Gross 10.5
Carton size (cm)	44 × 23 × 43

Powered Vial Crimper

An air operated power crimper with stand and foot pedal and interchangeable screw-in heads.

The unit gives fast and reliable crimping or decapping and reduces operator fatigue. The stand is made from stainless steel and the crimping unit which may be used separately is of corrosion resistant nickel electro plate.

Item code	Specification
6030500	**POWERED VIAL CRIMPER**
Length (mm)	370
Width (mm)	230
Height (mm)	420
Weight (kg)	Operational: 9.85, Shipping: 10.40
Air	at 4 bar
6030501S	**BENCH STAND**
6030502	**FOOT PEDAL**

Item code	Specification
6030503	13 mm crimping head for plain seals
6030504	13 mm crimping head for flip-off seals
6030505	20 mm crimping head for plain seals
6030506	20 mm crimping head for flip-off seals
6030507	13 mm decapping head for plain seals
6030508	13 mm decapping head for flip-off seals
6030509	20 mm decapping head for plain seals
6030510	20 mm decapping head for flip-off seals
6030514	20mm crimping head for flip tear-up seals

Note: other head sizes are available. Please ask for further details.

Manual Vial Crimper

This benchtop vial crimper provides a manual alternative to hand crimping and decapping operations. Unit height and position are adjustable to accommodate a variety of vial sizes allowing the operator to work in a comfortable position. The unit is manufactured from stainless steel. Heads are quickly and easily changed without the use of tools since they simply screw in and out.

All crimping and decapping heads are interchangeable with the powered vial crimper.

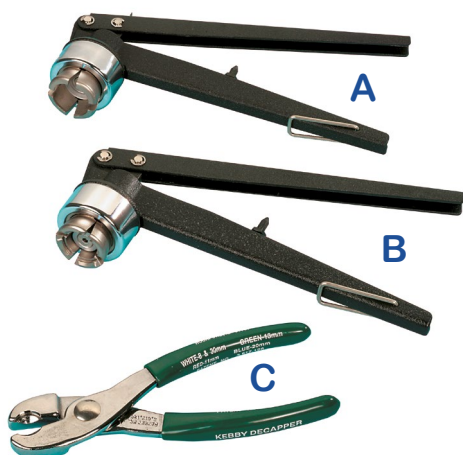| Item code	Specification
6030555-1	**MANUAL VIAL CRIMPER WITH STAND**
Length (mm)	305
Width (mm)	254
Height (mm)	457
Operational weight (kg)	9.5

Crimping and Decapping Tongs

Hand crimping tongs (A)

Fitted with hardened steel jaws for long life and reproducibility of seal crimp quality. There is an adjustable stop to ensure that equal pressure is supplied to each crimp.

Item code	Size*
6030613	13 mm plain seals
6030614	13 mm flip-off seals
6030620	20 mm plain seals
6030621	20 mm flip-off seals
6030622	20mm flip tear-up seals

Hand decapping tongs (B)

With hardened steel jaws for the easy removal of crimp top seals, by squeezing the handles together.

Item code	Size*
6030722	13 mm seals
6030721	20 mm seals

Hand decapping pliers (C)

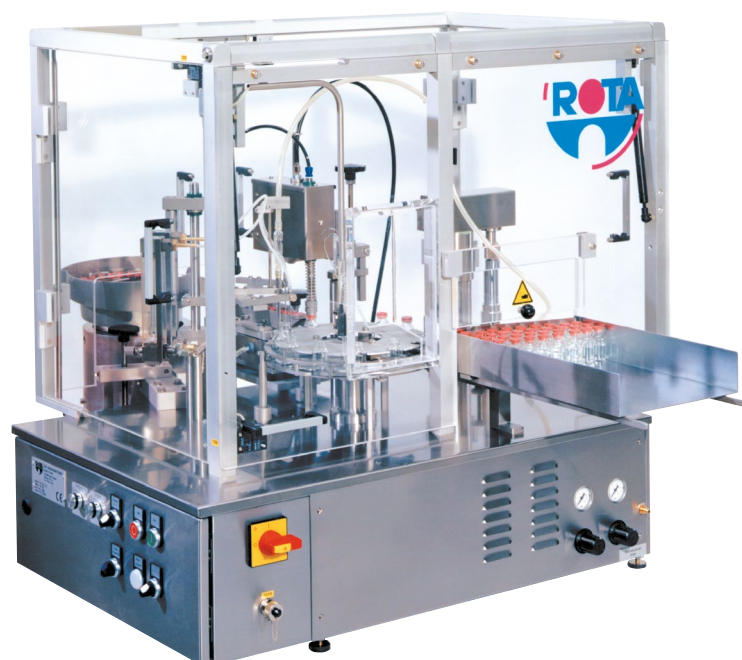For removing seals from vials with a press and wrench action. The handles are plastic coated.

Item code	Size*
6030713	13 mm seals
6030720	20mm seals

* Other sizes available. Please enquire.

Vial Processing – Production

If your requirements stretch beyond the abilities of manual or semi-automatic equipment, Adelphi is able to supply fully automatic vial processing machinery. As the sole UK representative of ROTA since 1976, Adelphi can offer expert advice, and reliable servicing and spares support.

Please see our '**Ampoule and vial Processing – Production**' data sheet, or our website for further information.

AMPOULE PROCESSING EQUIPMENT

Adelphi offers a range of equipment designed to facilitate the efficient opening, filling, closing and inspecting of ampoules in a laboratory or R&D environment.
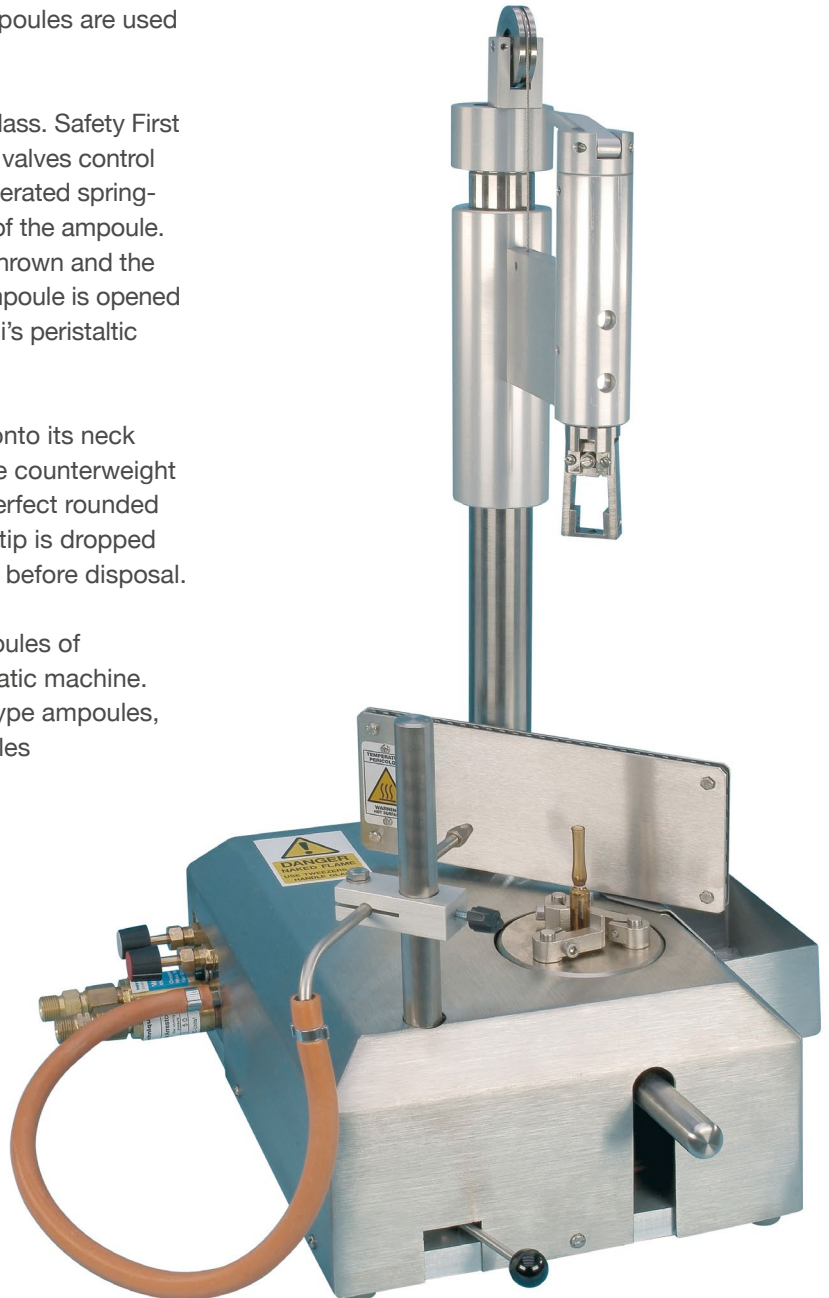
OC Ampoule Processing Machine

This machine has been designed in response to demand from small-scale producers and R&D laboratories where closed ampoules are used to obviate the need for internal washing.

A flame of mixed gas and oxygen is applied to melt the glass. Safety First flashback arrestors are fitted to the gas inlets and needle valves control the settings. The ampoules are placed into a manually operated spring-loaded chuck, and a flame is brought to bear on the top of the ampoule. As the flame approaches the glass, an electric switch is thrown and the chuck rotates. When the opening station is in use, the ampoule is opened with the flame. The ampoules are then filled using Adelphi's peristaltic dispenser and filling jig.

When closing an ampoule, the gripper jaws are placed onto its neck and the flame applied. As the glass becomes plastic, the counterweight pulling on the jaws draws off the ampoule neck and a perfect rounded finish is achieved with very little practice. The drawn off tip is dropped into a detachable box at the side of the machine to cool before disposal.

The sealing process is quick and produces closed ampoules of regular height, and quality matching that from an automatic machine. Although specially designed to open and close closed type ampoules, this versatile machine will also handle open type ampoules after washing.

Item code	Specification
6035000	**OC AMPOULE PROCESSING MACHINE**
Ampoule Size (ml)	1-50 open or closed
Output	Approximately 600 per hour
Length (mm)	380
Width (mm)	400
Height (mm)	660
Weight (kg)	Operational: 22, Shipping: 46
Crate size (cm)	49 x 44 x 85
Electricity	240 V AC, 50 Hz, 200 W (120 V optional)
Gas	Natural gas or propane at 0.5 bar
Oxygen	Standard commerical supply at 1 bar

Twin-Jet Ampoule Sealer

This hand operated unit is designed for use with natural or bottled gas and air. A mixer valve enables the user to adjust the flame for optimum heat. A small air pump is available for situations where compressed air is not available. A pressure regulator/gauge is recommended to keep the flow constant with a compressed air supply.

The ampoule is placed and held on the adjustable platform and turned while manually drawing off the ampoule top with tweezers.
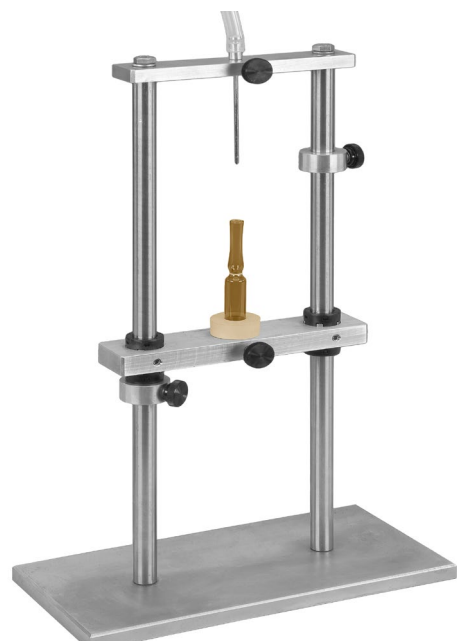
Item code	Specification
6002100	**TWIN-JET AMPOULE SEALER**
Ampoule Size (ml)	1-50 open type
Output	up to 10 per minute
Length (mm)	125
Width (mm)	210
Height (mm)	280
Weight (kg)	Nett: 1.86 (excl. air compressor), Gross: 2.4
Electricity	240 V AC, 50 Hz, (120 V optional) to power air compressor (if required)
Gas	Natural gas supply or bottled butane or propane gas at 0.5 bar
Air	Compressed air at 1 bar (optional compressor supplied)
Carton size (cm)	35 × 31 × 17
6002110	**PRESSURE REGULATOR/GAUGE**
6002119	**AIR PUMP**

Filling Jig

A useful hand operated accessory for use with the Peristaltic Dispenser designed to ensure the clean filling of small necked containers such as ampoules without wetting the wall of the container where it is to be sealed.

The container is placed in a custom-made holder and raised by hand to a predetermined stop when the needle will be centred inside the container.

Item code	Specification
3510090	**FILLING JIG**
Overall Size (mm)	210 × 105 × 345
Weight (kg)	2.8

Adelphi offers a small range of equipment designed to facilitate the efficient filling and closing of tubes in a laboratory or R&D environment.

Vesta 1C – Tube Sealer

Compact and robust in a stainless steel case with clear, simple controls, the Vesta 1C offers a low maintenance tube closing solution, ideal for small batch production. The unit has been designed for laboratory sealing and small production runs of plastic or laminate tubes, which are sealed, trimmed and coded.

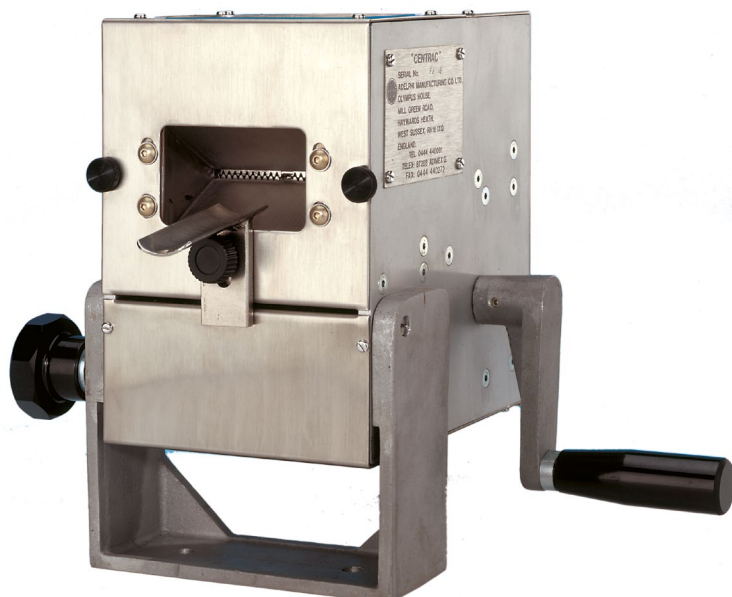| Item code	Specification
3140001	VESTA 1C UNIT
Tube seal range	10–50 mm diameter
Output (per minute)	Up to 4
Electricity	240 V AC, 50/60 Hz, 500 W (120 V optional)
Air supply (per minute)	20 litres at 6 Bar
Overall size	400 × 345 × 700 mm
Weight	31 kg
31406	PAIR OF BESPOKE TUBE CUPS FOR EACH TUBE SIZE
3140601	SET OF NUMERALS 0–9 (L-SHAPED)
3140601-A-Z	LETTERS AND NUMBERS (L-SHAPED)

Centrac FCC – Tube Closer

Designed to close collapsible metal tubes, the Centrac FCC is operated by a handle, which requires two turns to close, fold and crimp the tube giving a double fold. An adjustable rest is provided to locate tubes in the correct position, a gauge plate regulates the depth of fold required, and a wing nut adjusts the depth of crimp.

All working parts are fully guarded. The angle of operation is infinitely variable through 90°. Coding jaws are supplied as standard to hold up to 4 figures and/or letters for batch marking.

Item code	Specification
3101000	CENTRAC FCC TUBE CLOSER
Output (per minute)	Up to 10
Tube diameters	From 12 mm to 40 mm
Depth of base in vertical position	203 mm
Depth of base in horizontal position	267 mm
Width of base	191 mm
Width of handle	330 mm
Height in vertical position	308 mm
Height in horizontal position	267 mm
Weight	11.6 kg
3110000	NUMERALS 0–9 FOR CODING JAWS
3111001-26	LETTERS A–Z FOR CODING JAWS

Tube-Folding Pliers

These tube-folding pliers provide a simple method of reliably closing individual metal tubes. They are hand held with plastic handles for comfort and safety.

Item code	Specification
4001100	TUBE CLOSING PLIERS
Output (per minute)	Up to 10
Tube diameters	From 12 mm to 40 mm
Depth of base in vertical position	203 mm
Weight	300 gm

Tube Processing – Production

If your requirements stretch beyond the abilities of manual or semi-automatic equipment, Adelphi is able to supply fully automatic tube processing machinery. As the sole UK representative of TGM since 1995, Adelphi can offer expert technical sales advice, and reliable servicing and spares support.

Please see our 'Tube Processing – Production' data sheet, or our website for further information.

Adelphi's Apollo Liquid Viewers offer a simple yet effective method of detecting particulate matter present in liquids.
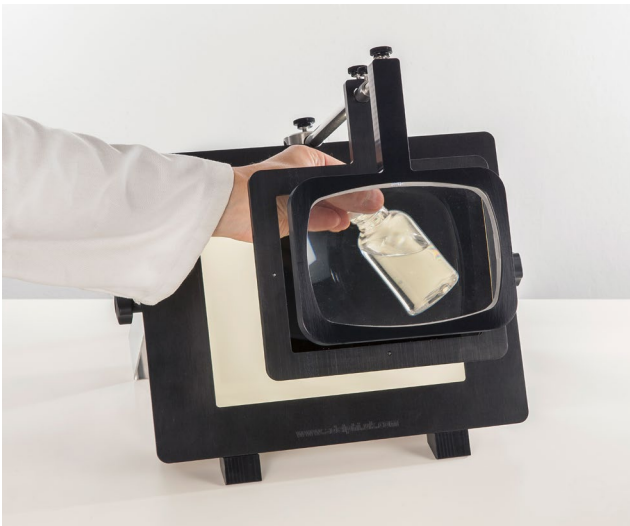

Apollo I Liquid Viewer

Designed for use in pharmaceutical and laboratory environments, the Apollo I Liquid Viewer has a polarised inspection light for the detection of particulate matter in transparent liquids contained in ampoules, vials and bottles. Particulate contamination can be unintentionally present in injections and intravenous infusions, and this unit provides a simple method of detection.

To operate, simply hold the container between the light panel and the polarising screen, shake or swirl the container, and any particles will show as bright specks against a dark background.

Features:

- Compact and hygienic stainless steel body

- Adjustable viewing angle to suit individual working preferences

- Adjustable magnifier

- LED light source for optimum bulb life

- Tool free assembly

- Offers a clear, polarised, and magnified image

- Includes padded storage bag for safe storage & transport

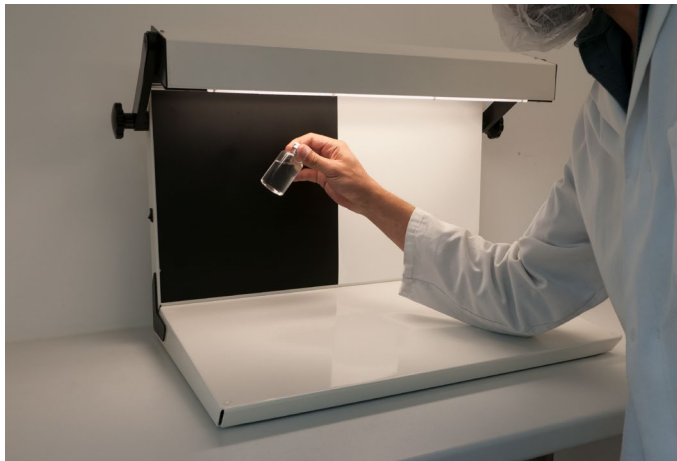| Item code	Specification
6031300	**APOLLO I LIQUID VIEWER**
Length (mm)	320
Width (mm)	295
Height (mm)	420 (max)
Weight (kg)	Nett: 4.9 Gross: 7.2
Carton size (cm):	50 x 41 x 27
Electricity:	110/240V AC 50/60HZ

Apollo II Liquid Viewer

Designed for use in pharmaceutical and laboratory environments, the Apollo II Liquid Viewer provides a simple method for the detection of visible particles in ampoules, vials, and bottles.

The unit is operated by simply swirling each individual container in front of both panels, and observing for any particulate contamination (other than air bubbles) unintentially present in the solution. In front of the black panel, light coloured particulates will be visible, and in front of the white panel, dark coloured particulates will be visible.

This unit conforms to the European Pharmacopoeia Specification 2.9.20.

Features:

- Adjustable lamp unit for comfortable working height

- Uses two energy efficient LED lamps

- Fold up frame for space saving & easy storage

- Removable diffuser for use with coloured glass

- Conforms to European Pharmacopoeia 2.9.20

- Intuitive assembly with no tools required

Item code	Specification
6031510	**APOLLO II LIQUID VIEWER**
Length (mm)	714
Width (mm)	420
Height (mm)	450
Weight (kg)	Nett: 10 Gross: 7.9
Carton size (cm):	76 x 52.5 x 26.5
Electricity:	100/240V AC 50/60HZ

Adelphi manufactures the highly regarded Response range of filling machines, ideal for small to medium batch production environments.

Response
Benchtop Filler

Adelphi manufactures the highly regarded Response benchtop volumetric filling machine, and can deliver reliable after sales support wherever you are in the world. This pneumatically driven filler is suitable for filling liquids, creams or solids in suspension thanks to its versatile filling head design.

The Response is adaptable, accurate, hygienic and easy to use. It is available in single
or twin-head configurations, with a comprehensive range of nozzles, hoppers and other accessories available to meet your individual requirements.

These machines are ideally suited to those wanting to start automating a previously manual filling process, and those that don't currently require the output levels offered by a fully automated solution. However, once production demands increase, Response units can be mounted onto an Automation Base to create an extremely flexible fully automatic filling machine.
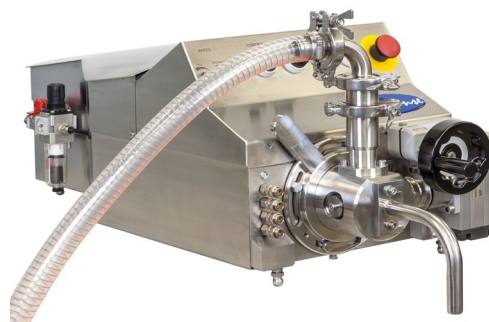
(Below left) heated hopper for hot fills.

(Below right) pipe feed attached, for liquid fills.

(Above) with standard hopper for filling creams, pastes, and solids in suspension

Versatile and accurate

The Response features a revolutionary head designed to handle liquids, creams, pastes, and solids in suspension efficiently. A variety of nozzle designs are available, including cut-off nozzles for a clean fill with no dripping. The forward and backward stroke can be varied independently to optimise filling characteristics, and it has the ability to fill volumes of 5ml to 1000ml, with an accuracy ±0.25%, using one of three interchangeable honed pump sets.

Simple and safe to use

Volumes are accurately and easily set by means of a hand wheel and digital counter, and the unit can be set to single shot or continuous operation. All controls are within easy reach of the operator at the front of the unit, with a foot switch as an option. With quick-release fittings and the need for just a single tool, strip-down for cleaning is quick and easy. All access is from the front of the machine without the need to remove the cover, and all moving parts are enclosed at all times. The unit is fully CE Marked.

Hygienic

The Response is designed to minimise cleaning time and to meet the highest standards of hygiene. A 304 stainless steel monocoque construction with curved and sloping surfaces meets GMP requirements, and all contact parts are manufactured in 316L stainless steel, PTFE and Viton. The innovative pumping system is designed to be clean and lubricant free, and all hose/hopper connections are triclover as standard.

MODEL	Specification	
	SINGLE HEAD	TWIN HEAD
Accuracy	±0.25%	±0.25%
Output (per minute)	<40	<80
Height without hopper / tank	340mm	340mm
Depth	840mm	840mm
Width without conveyor	343mm	343mm
Weight	41kg	44kg
Air consumption per cycle	5 litres at 6 bar	5 litres at 6 bar
Volume range	5ml– 1 litre	5ml–100ml

Accessories

Standard Nozzles

A wide variety of interchangeable nozzles are available for different products. A remote nozzle for dosing into or over food etc. can also be supplied.

Special Nozzles

Cut-off nozzles for a clean fill with no dripping are available, and are attached to the Response using the same fixings as any other nozzle. They are pneumatically operated and powered through the accessory ports on the front of the machine.

Hoppers & Tanks

Available in 316L stainless steel and in standard 20 litre and 50 litre sizes, our hoppers can be supplied plain, insulated for cold products or electrically heated for hot fills. All are connected with hygienic Tri-Clover type fittings.

Counter

A counter attachment is available to contol multiple shots.

Mixers & Stirrers

We can supply a variety of mixers and stirrers, free standing or lid mounted, in a variety of sizes.

Other Accessories

- **Diving nozzles**

- **Remote cut-off nozzle**

- **Level control sensor fitted to hopper**

- **Spinning table for filling irregular shaped jars**

- **2-speed filling system**

- **Stainless steel benches and trolleys**

- **Bag and pouch filling system**

Response
ATEX Filler

CAT II 2 G c T 5 (100 Degrees Celsius) automatic filling machine.

ATEX is the name commonly given to the European Directive for controlling explosive atmospheres. Our Response Filler can be adapted to comply with directive 94/9/EC (also known as 'ATEX 95' or 'the ATEX Equipment Directive') on the approximation of the laws of Members States concerning equipment and protective systems intended for use in potentially explosive atmospheres.

There are three zones relating to ATEX compliancy – Adelphi can adapt our Response base unit or automation system to be Zone 1 (10 – 1,000 hours per year in the explosive atmosphere) and Zone 2 (0-10 hours per year in the explosive atmosphere) compliant. We will provide the relevant documentation to support your purchase and ensure peace of mind.

Our standard Response machines are adapted to adhere to ATEX requirements, and are made with qualified pneumatic components. We engineer-out any possible sources of static build up, and we ensure good earthing via an Earth Point included at the rear. Materials such as stainless steel are used to replace some aluminium and plastic parts, and the machine is raised on different feet to allow grounding. Additionally, the hopper comes with a lid to reduce fumes.

Our ATEX adapted Response fillers can come with various seal and O-ring options, which we will assess to ensure compatibility with your product:

• Fluoroelastomer (VITON)
• EPDM
• Perfluoroelastomer (KALREZ)

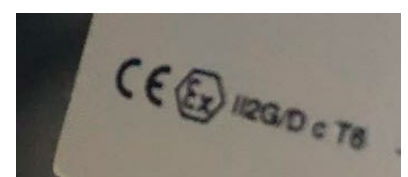We have lodged a technical file (09XT005) with an approved body.

Please note that our ATEX machines do not cover explosive risks from dust; only gas.

The Earth Point

ATEX compliant feet

Look for the 'EX' mark for assurance that our parts are ATEX approved

Response

Monobloc Filler

Adelphi's Response Monobloc Filler provides many advantages for customers compared with traditional inline packaging systems.

Key features and benefits:

- Capable of filling 5ml to 250ml containers
- Space-saving design
- Ten-minute strip down time
- Hygienic stainless steel construction; all wetted parts are 316 stainless steel
- Response volumetric filler fill-accuracy +/- 0.25%
- Quick and easy to change parts from one fill-size container to another
- Easy-to-use intuitive HMI touch screen controls for your operator
- Designed to effectively handle liquids, oils, creams, pastes and solids in suspension
- Speed of operation in the region of 35 per minute
- Reduced labour costs

The Response Monobloc Filler can incorporate the following elements to give a complete turnkey packaging line:

- In-feed table
- Bottle blower
- Filler
- Automatic cap placement
- Capper
- Labeller
- Collection table

	Specification
Accuracy	±0.25%
Output (per minute)	30 - 35
Height without hopper / tank	2032 mm
Depth	810 mm
Width without conveyor	1120 mm
Weight (approx)	275 kg (plus Response base unit and hopper)
Air consumption per cycle	7.5 litres at 6 bar
Volume range	5 ml – 250ml
Electrical consumption	Single phase 240VAC, 13A supply
Maximum bottle diameter	85 mm (outer diameter)
Maximum bottle height	250 mm
Maximum cap diameter	45 mm

The Response Monobloc Filler has been designed to work with our Adelphi Response Volumetric FIler, but it can also be configured to incorporate fillers from other suppliers.

Suitable container dimensions:

External diameter up to 85mm
Height up to 250mm
Cap diameter up to 45mm

Response

Automation System

	Specification
MODEL	**AUTOMATION BASE**
Accuracy	±0.25%
Output (per minute)	Dependent
Height without hopper / tank	1800 mm
Depth	1070 mm
Width without conveyor	1650 mm
Weight	396 kg + Responses
Air consumption per cycle	40 litres per cycle
Volume range	5 ml–1 litre

Key features and options

- Variable speed conveyor with adjustable guides, rails, and delrin or stainless steel slats

- Logic controls for gating and sensing systems and up to four Response fillers

- Neck location system

- Pneumatic cut-off nozzles to ensure a clean fill with no dripping

- 'Rise while fill' or 'bottom up fill' of container, into neck or fixed nozzle fill system

- Fully interlocked guarding around operating area

- Frame mounted hopper or tank with up to four triclover outlets, manifold and heated jacket

- Other bespoke additions depending on your requirements

(Right) close-up of filling area

(Above) automation base with three Response units fitted, seen from the rear

Automation base with three Response units fitted: Operator's view from the front

Adelphi Manufacturing

Masterfil®

Pharma Hygiene Products

Adelphi Healthcare Packaging