



ADELPHI  
Masterfil®

Product Guide





Adelphi Masterfil offers a wide range of automatic liquid filling machinery ideal for full-scale production environments.

## Masterfil<sup>®</sup> Automatic Volumetric Filler

Volumetric pumping systems are suited to dealing with a wide range of product viscosities, thrive in harsh production environments, and lend themselves well to applications where accuracy of fill volume is essential.

Masterfil has a range of 4 heavy duty frames, sized for growth, which can accommodate 2 to 12 filling heads (extra heads can be added to match increased output requirements).

Honed 316L grade stainless steel filling cylinders are available in 1, 3, 5 or 6 litre capacities, and as single or double acting units. Filling nozzles are adjustable to fill foaming and non-foaming products of high or low viscosity, and an enhanced cleaning system can be specified as an option.

	Specification
Accuracy	±0.2%
Output	500 per hour per head
Height	2.3m
Depth	2.3m
Frame width	1.2/1.6/2/2.4m
Weight	1640 kg (approx)
Working pressure	6 bar (0.6Mpa)
Air consumption	230/420 litres per cycle (single/twin drive)
Volume range	50ml – 25 litres
Electricity supply	240V–420V

### Key Features

- PLC controlled, with recipe-driven HMI
- Single or double action product cylinders of 1, 3, 5 or 6 litre capacity
- Variable fill speeds can be used during a filling cycle
- Totally enclosed 304 stainless steel and PVC filling area
- 316L stainless steel / PTFE / Viton contact parts
- Nozzles can be static, or programmed to dive and rise whilst filling or fill into neck, depending on product type
- Fully automatic container handling system includes 'no container, no fill' sensing
- Quick change of volume with digital readout
- Flushing circuit for in-place cleaning (optional).
- ATEX compliant (optional)
- Choice of pneumatic or servo operation
- Pharmaceutical grade stainless steel box section conveyor with variable speed control





## Masterfil<sup>®</sup> Automatic Flowmeter Filler

Mass or magnetic flow liquid filling machines provide great flexibility and lend themselves well to applications where quick product changeover times and ease of cleaning are essential.

Adelphi's comprehensive range of standard frames, nozzles, and conveyors ensure that our fillers can comfortably process containers ranging from 50 ml to 25 litres in volume. With a choice of between four and twelve filling heads, and a range of flowmeter options, most requirements can be comfortably met.

	Specification
Accuracy	±0.2%
Output	500 per hour per head
Height	2.3 m
Depth	2.3 m
Frame width	1.2/1.6/2/2.4 m
Weight	785 kg (approx)
Working pressure	6 bar (0.6 Mpa)
Air consumption	10 litres per cycle
Volume range	50 ml – 25 litres
Electricity supply	240V–420V

### Key Features

- Minimum down time between liquid and container changeover
- Ability to fill a wide range of container sizes
- Quick and easy to clean
- Totally enclosed 304 stainless steel and PVC filling area
- Variable fill speeds can be used during a filling cycle
- Pharmaceutical grade stainless steel box section conveyor with variable speed control
- Nozzles can be static, or programmed to dive and rise whilst filling or fill into neck, depending on product type
- PLC controlled, with recipe-driven HMI
- Fully automatic container handling system includes 'no container, no fill' sensing
- Quick change of volume with digital readout.
- ATEX compliant (optional)
- Flushing circuit for in-place cleaning (optional)





# SEMI-AUTOMATIC FILLING MACHINES

Adelphi Masterfil offers a wide range of semi-automatic liquid filling machinery, ideal for small batch production environments.

## Masterfil<sup>®</sup> Volumetric Filler

### Key Features

- Able to fill a wide range of container sizes
- Accurate to  $\pm 0.2\%$
- Quick and easy to clean
- 316L stainless steel / PTFE / Viton contact parts
- Variable fill speeds can be used during the filling cycle
- Nozzles can be static, or set to dive and rise whilst filling or fill into neck, depending on product type
- Single or double action product cylinder
- Flushing circuit for in-place cleaning (optional)
- 1 or 2 filling heads
- Non-drip cut-off nozzle



	Specification
	5 LITRE FILLER
Accuracy	$\pm 0.2\%$
Output (per minute)	6 per min.
Height (approx)	1.8 m
Depth (approx)	1.8m
Width (approx)	0.7m
Weight (approx)	179 kg
Working Pressure	6 Bar (0.6Mpa)
Air Consumption	55 litres per cycle
Volume Range	250ml – 5 litre



## Masterfil® Flowmeter Filler

### Key Features

- Able to fill a wide range of container sizes
- Accurate to  $\pm 0.2\%$
- Quick and easy to clean
- 316L stainless steel / PTFE / Viton contact parts
- Can utilise either electro-magnetic or Coriolis technology
- Nozzles can be static, or set to dive and rise whilst filling or fill into neck, depending on product type
- Optimum output is achieved by key pad controls and with no pistons to clean, changeover time is reduced
- Minimum down time between liquid and container changeovers.
- 1 or 2 filling heads
- Non-drip cut-off nozzle



	Specification
	5 LITRE FILLER
Accuracy	$\pm 0.2\%$
Output (per minute)	6 per min.
Height (approx)	2.2m
Depth (approx)	1.8m
Width (approx)	0.7m
Weight (approx)	179kg
Working Pressure	6 Bar (0.6 Mpa)
Air Consumption	5 litres per cycle
Volume Range	500ml – 5 litre +
Electricity Supply	240V



## Masterfil® Weigh Scale Filler

### Key Features

- 316L stainless steel / PTFE / Viton contact parts
- Suitable for washdown, hazardous or other hostile environments
- Quick and easy to clean.
- 'No container, no fill'
- Bulk and trickle fill speeds
- Non-drip cut-off nozzle
- Quick changeover
- Automatic tare check to verify correct container size
- Flushing circuit for in-place cleaning (optional)
- Nozzles can be static, or set to dive and rise whilst filling or fill into neck, depending on product type
- Available in 'bench-height' and 'floor-mounted' configurations



	Specification
	<b>WEIGH SCALE FILLER – BENCH-HEIGHT</b>
Accuracy	±0.2%
Output (per minute)	6 per min.
Height (approx)	2.2m
Depth (approx)	1.8m
Width (approx)	1.2m
Weight (approx)	181kg
Working Pressure	6 Bar (0.6 Mpa)
Air Consumption	5 litres per cycle
Volume Range	1–25 litres
Electricity Supply	240V

	Specification
	<b>WEIGH SCALE FILLER – FLOOR-MOUNTED</b>
Accuracy	±0.2%
Output (per minute)	Dependent on application
Height (approx)	2.4m
Depth (approx)	1.4m
Width (approx)	0.6m
Weight (approx)	Dependent on application
Working Pressure	6 Bar (0.6 Mpa)
Air Consumption	10 litres per cycle
Volume Range	10 – 1000 litres
Electricity Supply	240V



Adelphi Masterfil offers a wide range of capping and closing machinery, with options to suit small to full-scale production.

## Mastercap® Indexing Capper

The Mastercap single head indexing capper provides a reliable and versatile capping operation at speeds of up to 60 caps per minute, and is designed to handle:

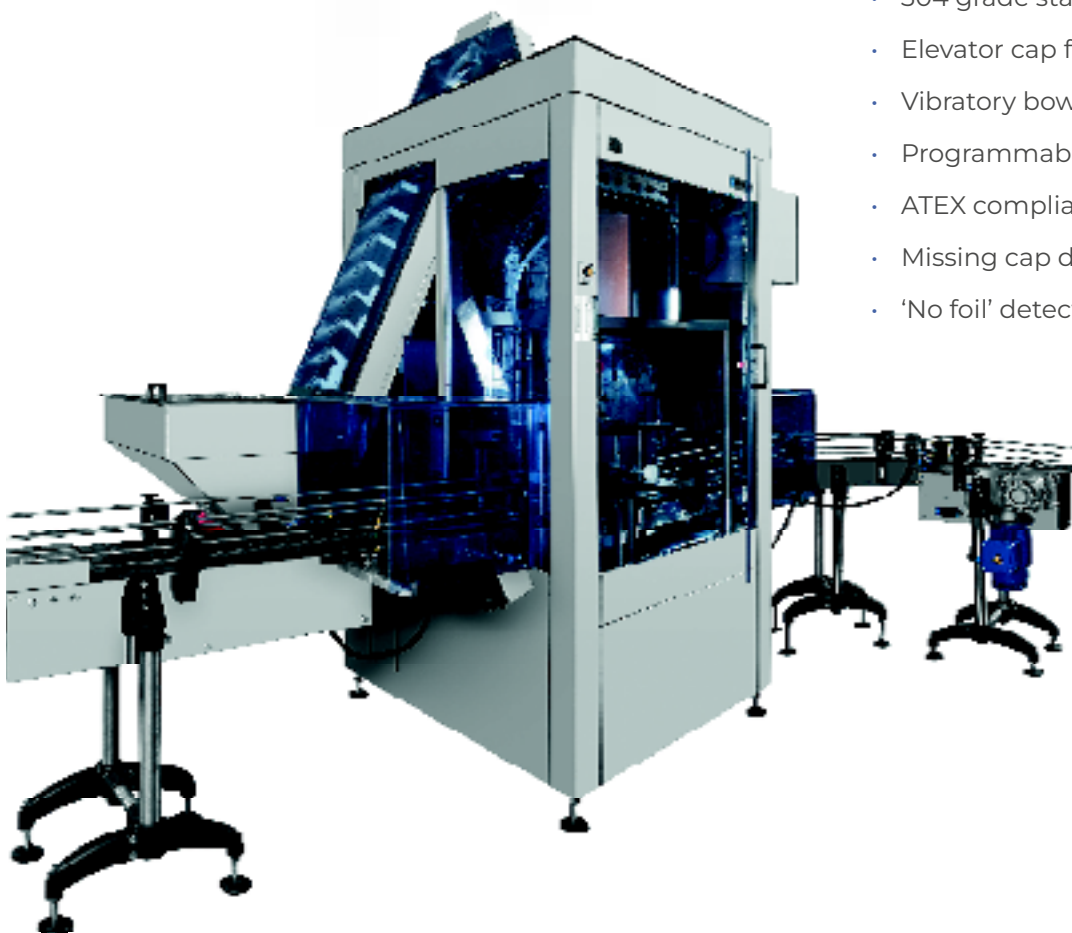
- Screw caps.
- Press-on caps.
- Tamper proof caps.
- Aerosol overcaps.
- Inserts.

The machine comes with an elevator cap feeder and 304 stainless steel cladding as standard, although options such as bowl feeders and ATEX certification are available.

	Specification
Cap range	20–80 mm
Output	60 containers per minute
Height	2.4–2.8m (approx)
Depth	1.3m (approx)
Width	2.3m (approx)
Weight	650 kg (approx)
Working pressure	6 bar (0.6Mpa)
Electricity supply	240V

### Key Features and Options

- Easily adjustable variable torque magnetic clutch
- In-line model available for containers up to 25 litres
- ‘No container, no cap’ and queue sensing
- Push button height adjustment
- Cap track low level detection
- 304 grade stainless steel cladding
- Elevator cap feeder/sorter
- Vibratory bowl feeder
- Programmable touch screen HMI controls
- ATEX compliant
- Missing cap detector.
- ‘No foil’ detection and cap reject



## Mastercap<sup>®</sup> Semi-Automatic Cap Tightener

Designed to handle screw, press on and tamper proof caps, this semi-automatic machine is ideal for companies operating medium batch production runs of different containers.

Caps are hand placed onto the containers which then travel along the conveyor until they reach the locating starwheel. A capping head then descends and tightens the cap to a predetermined level of torque. The head then rises and the now capped container continues down the line.



## Mastercap<sup>®</sup> Handheld Cap Tightener

A hand held semi-automatic solution that is ideal for those operating small batch production runs. Application torque can be quickly and easily adjusted, and caps will be tightened to a consistent level every time.

Usually these are fitted to the side of our semi-automatic filling machines on a retractable tether, however they can also be supplied as stand alone units if required.





Adelphi manufactures the highly regarded Masterfil range of drum and IBC filling and decanting machines.

## Masterfil® Boom Fillers

Boom Fillers can be specified with a choice of 'flowmeter', 'weigh scale' or 'double acting volumetric' dosing systems, as required. Pre-programmed recipes are selected via a full colour touch screen HMI, and the operator uses controls located at the end of the boom arm to control the fill cycle.

Designed to deliver a wide range of volumes, these fillers are normally used to fill drums, IBCs and other large volume containers; however their versatility often results in their being used to fill smaller containers on a pallet as a back-up to other machines.

In addition, it is possible to specify your Boom Filler with a bench height filling station and dedicated nozzle assembly. In this way, your new boom filling machine can also be used as a semi-automatic bottle filling machine.



	Specification		
MODEL	WEIGH SCALE BOOM	FLOWMETER BOOM	VOLUMETRIC BOOM
Accuracy	±0.2%	±0.2%	±0.2%
Output (per minute)	Dependent on application	Dependent on application	Dependent on application
Height (approx)	Dependent on specification	Dependent on specification	Dependent on specification
Depth (approx)	Dependent on specification	Dependent on specification	Dependent on specification
Width (approx)	Dependent on specification	Dependent on specification	Dependent on specification
Working Pressure	6 Bar (0.6Mpa)	6 Bar (0.6Mpa)	6 Bar (0.6Mpa)
Volume Range	20–1,000 kg	20–1,000 litres	500 ml –200 litres
Electricity Supply	240V	240V / 420V	240V

## Masterfil<sup>®</sup> Drum Decanting Unit

The Masterfil Drum Decanting Unit is designed to automate the process of decanting high value additives from drums or IBCs, into a blending tank. Favoured by lube oil manufacturers, these units offer levels of precision, repeatability and safety that are extremely difficult to match manually.

Pre-programmed recipes are selected using the full colour touch screen HMI, and on screen instructions guide the operator safely through each stage of the process.

The drum can be tilted to ensure that maximum product removal is achieved. The drum is then rinsed with hot base oil to ensure that product wastage is minimised. Furthermore, in the rinsing kettle, hot oil is used to flush the lance of any remaining product, and minimise the opportunity for cross contamination.



### Key Features

- 304 stainless steel construction
- Full colour HMI control
- Rinsing kettle with weigh scale option (from 500 litres to 1,000 litres)
- Drum platform incorporating roller conveyor, tilting mechanism and weigh scale

	Specification
MODEL	DRUM DECANTING UNIT
Accuracy	±0.2kg (minimum of 10kg)
Maximum Product Viscosity	8,000 Cst
Maximum Product Temperature	100 Celcius
Rinsing Kettle Volume	500 litres – 1,000 litres
Cleaning Pump Output	50 L/min @ 3000 Cst
Decanting Pump Output	50 L/min @ 3000 Cst
Height (approx)	3.2m
Depth (approx)	1.9m
Width (approx)	2.2m
Weight (approx)	1.7m
Working Pressure	5 Bar
Electricity Supply	240V–420V

## Integrated Full Lines & Complete Project Management

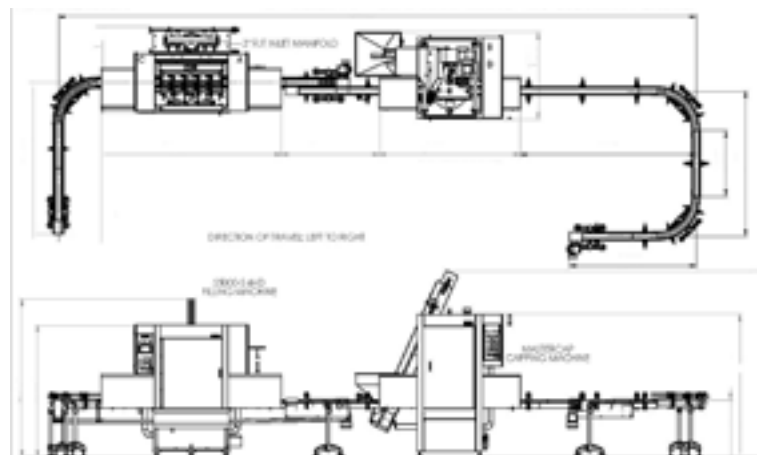
Increasingly we are providing complete packaging lines for our customers, to save them the burden of dealing with multiple suppliers. Dealing with Adelphi Masterfil as just one single experienced supplier is of huge benefit to our customers, and from our perspective we prefer to be responsible for the whole project and not reliant on others wherever possible.

As the filler is generally the heart of any packaging line, we believe that not only is it essential that we are able to offer this service, but we are also in the ideal position to do so.

Adelphi have vast experience of pulling together complete filling lines including one of the largest inline lube oil filling lines in the world for a customer in Nigeria. However, we are as accustomed to delivering highly technical pharmaceutical and cosmetic filling lines as we are with more robust agrochemical filling lines and those for lube oil.

Below are just some of the many items we can bring together for your project:

- Rotary infeed/outfeed
- Washing
- Sterilising
- Induction Sealing
- Labelling and Coding
- Elevators
- Case Packers
- Conveyor Systems
- Paletisers
- Container Unscramblers
- Shrink Wrappers
- Ink Jet Printers
- Visual Inspection



## INDUSTRIES WE SERVE

### Chemical

From industrial chemicals to household products and agrochemicals, Adelphi Masterfil have many years experience manufacturing machinery to suit these product types. We can engineer-out any potential sources of corrosion from our standard machine design, and add anti-corrosive fluid inlet tubing and seals where required, for your complete peace of mind.

### Lube Oil, Petroleum and Automotive

We are an industry leader in this field and have a large and established international customer base. Our machines are installed worldwide in hundreds of blending plants, operated by both small independent companies and multinational brands. There are many examples of our machines still operating reliably over 30 years after installation.

### Cosmetics and Personal Care

Whether the products are exclusive to a luxury spa or hotel, or part of a high-volume range sold through multinational supermarkets, cosmetics and personal care product manufacturers can rely on us to supply the highest quality stainless steel process machinery.

### Food and Beverage

All of our machines are manufactured with food hygiene in mind, and our range is ideal for food production environments where manufacturers require stainless steel construction of the highest quality. All product contact parts are manufactured from pharmaceutical grade 316L stainless steel or hygienic PTFE.

### Research and Laboratory

Our products are perfectly suited for use by researchers and laboratory environments in which liquid-based drugs are produced. All our products conform to strict pharmaceutical regulations, and can be supplied with the relevant certification. Customers in this area cover the spectrum of life sciences and clinical diagnostics, striving to improve global healthcare, to create new life-saving treatments for hospitals, or to advance veterinary medicine.

### E-Liquid

Manufacturing processes in the production of E-liquids will benefit from the use of our high quality filling and capping machines. All our products are designed with hygiene in mind, using pharmaceutical grade 316L stainless steel for wetted parts.

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# The Adelphi Group of Companies

## Adelphi Manufacturing

Adelphi Manufacturing offers manual and semi-automatic equipment designed to aid the efficient opening, filling, closing and inspecting of a variety of containers such as capsules, ampoules, vials, syringes, tubes and bottles. It also offers a range of pharmaceutical dispensing equipment, and is the sole UK agent for TGM tube fillers and ROTA ampoule fillers.

[sales@adelphi.uk.com](mailto:sales@adelphi.uk.com)  
[www.adelphi-le.com](http://www.adelphi-le.com)

## Adelphi Masterfil

Manufacturers of filling and capping machinery, from single machines to complete turnkey lines. Adelphi Masterfil primarily serves the lube oil, chemical (including household and agrochemical), cosmetics and food industries.

[sales@masterfil.com](mailto:sales@masterfil.com)  
[www.masterfil.com](http://www.masterfil.com)

## Pharma Hygiene Products

Pharma Hygiene Products is a leading supplier of high quality stainless steel process equipment, from standard utensils and containers, to custom designed mixing vessels to suit a number of manufacturing industries. All are made to pharmaceutical standards in 304 and 316L grade stainless steel.

[info@pharmahygieneproducts.com](mailto:info@pharmahygieneproducts.com)  
[www.pharmahygieneproducts.com](http://www.pharmahygieneproducts.com)

## Adelphi Healthcare Packaging

Suppliers of a comprehensive range of glass, plastic and aluminium containers, high precision dispensing systems, various closures including stoppers, crimp seals and screw caps as well as a range of boxes, held in stock ready for immediate dispatch worldwide.

[sales@adelphi-hp.com](mailto:sales@adelphi-hp.com)  
[www.adelphi-hp.com](http://www.adelphi-hp.com)



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