



# ADELPHI MANUFACTURING

## Product Guide

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## RESPONSE VOLUMETRIC FILLERS

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.

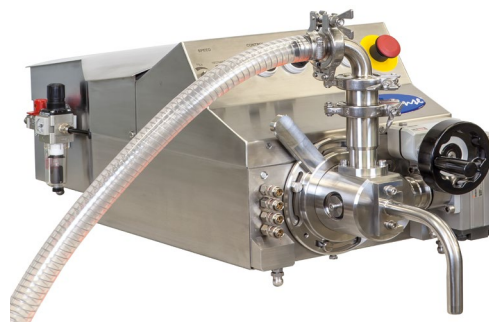


(Above) with standard hopper for filling creams, pastes, and solids in suspension



(Below left) heated hopper for hot fills.

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





# RESPONSE VOLUMETRIC FILLERS



## 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  $\pm 0.25\%$ , 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.

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





# RESPONSE VOLUMETRIC FILLERS

## 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 control 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 VOLUMETRIC FILLERS

### 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 Member 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.

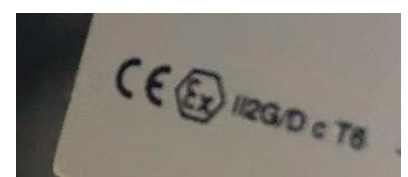
Please note that our ATEX machines do not cover explosive risks from dust; only gas.



**The Earth Point**



**ATEX compliant feet**



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



## RESPONSE VOLUMETRIC FILLERS

# 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  $\pm 0.25\%$
- 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	$\pm 0.25\%$
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 Filler, 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 VOLUMETRIC FILLERS

## Response Automation System

	Specification
MODEL	AUTOMATION BASE
Accuracy	±0.25%
Output (per minute)	Dependent
Height without hopper / tank	1800mm
Depth	1070mm
Width without conveyor	1650mm
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



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

(Right) close-up of filling area



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

