Better filling by design

Innovation with your business needs in mind

- Modular
- Efficient
- Hygienic
- Scalable
**F-600 AT A GLANCE**

- **Product supply:** Easily interchangeable manifolds and tanks can be specified.
- **Machine frame:** Designed with simplicity and scalability in mind, the semi-automatic F-600 frame offers a cost-effective upgrade path.
- **Product dosing:** Able to accept a wide variety of dosing technologies, with standard options being flowmeters or servo-driven volumetric pumps.
- **Control system:** Omron PLC control with a full colour touch screen HMI is recommended as standard, but other approved systems can be specified.
- **Safety Guarding:** High level guarding to protect the operator from unintended product contact.
- **Filling nozzles:** Quick strip to facilitate superior hygiene levels.
- **Nozzle carrier:** Servo-driven vertical axis for complex RWF profiles, and in-to-trough priming and purging.
- **Machine enhancements:** Can cost effectively grow to meet changing production demands, culminating in a fully automated multi-head configuration.
- **Transport Kaddy:** For transporting volumetric pump blocks and other wetted components for off-site cleaning.
- **User Interfaces:** Ergonomically designed with operator comfort, safety and efficiency in mind.

**Flexible options**

A semi-automatic **System F-600** can be cost effectively upgraded with additional filling heads, and automated by fitting a conveyor and additional safety guarding.

If an increase in production demand is anticipated, the machine can be configured from the outset on the wider **System F-1200** frame, with twice the potential capacity of the **System F-600**.

Upgrading from the **System F-600** to the **System F-1200** is possible. A large number of components are directly transferable, and the majority of wetted components can also be re-used if you choose to upgrade further within the **System range**.

**The System F range – a step change in filling equipment design**

All elements of the design have been questioned, and many deep-rooted industry norms have been challenged through the innovative integration of proven technologies.

The result is a robust, modular filling system that delivers outstanding production flexibility and output, as well as cost-saving efficiency and future-proof scalability.

**System F-600** is exactly what a modern liquid-filling machine should be.
## System F-600

### Machine Frame
- Robust yet simple modular design
- Welded box frame construction and asymmetrical surfaces and a clear view of floor area
- Standard mounting points accommodate a variety of modules
- Cost effectively upgraded to System F-1200 specification as production demand increases

### Product Supply
- **Manifold**
  - Designed to deliver consistent flow rates across all filling heads
  - Can be quickly removed for convenient cleaning
  - Pit- and crevice-free interior for exceptional hygiene standards
- **Tank**
  - Pit- and crevice-free, with open internal angles to eliminate bug traps and ensure hygiene standards
  - Mounted directly to valve blocks to eliminate unhygienic connection points and avoid increased machine footprint and trip hazards
- **Product Dosing**
  - Product cylinders ranging from 100 ml to 5 litres offer the ability to fill volumes from 20 ml to in excess of 5 litres on one machine. Servo-driven product pistons deliver accuracy of up to +/-0.05%, and Disk Valve technology (patent pending) permits, without modification, the accurate filling of:
    - low viscosity liquids
    - pastes with viscosity in excess of 500,000 cPs and challenging rheology characteristics
    - soft particulates of up to 12mm diameter
  - extremely abrasive products, without causing damage to high-value components
- **Scalability:** Future upgrades do not need to be considered at the point of purchase:
  - Up to 4 volumetric cylinders can be mounted on an F-600 frame.
  - Additional filling heads can be retrofitted at any time, at minimum cost, and with minimum downtime.
  - A large number of System F-600 components can be re-used when upgrading to an F-1200 frame, offering the potential for an 8-head fully automated volumetric filler.
- **Versatility:** System F-600 can accommodate different product dosing technologies according to customer need. Usually volumetric or flowmeter options are selected.

### Volumetric Dosing
Adelphi has developed four key enhancements to this proven dosing technology:
- **Hygiene:** The quick-strip design permits:
  - a twin-head filler to be stripped of all wetted assemblies and fitted with a pre-cleaned set in less than 5 minutes
  - full strip of removed assemblies to component level within 5 minutes
  - Component cleaning away from the production area
- **Flowmeter Dosing**
  - System F-600 can accept either mass or mag flowmeters – the benefits and limitations of each option can be explained by a member of our sales team. Flowmeters introduce no moving components to the product flow area, so are considered easy to flush clean.
  - Proven dosing technology: Adelphi has developed four key enhancements to this volumetric or flowmeter options are selected.
  - Can accommodate different product

### Nozzle Carrier
- The servo driven nozzle carrier is fast, precise, and almost silent in operation. A vertical stroke of 550mm means the System F-600 nozzle carrier permits:
  - rise-and-fill filling of large hand-held containers, accepting complex RWF profiles to optimise filling speed
  - maintenance of a clean filling zone by diving the nozzles into the trough for priming and purging

### Filling Nozzles
- Non-drip nozzles are designed to individual requirements, with inward or outward opening shut-off valves.
  - Nozzle pitch either fixed at 250mm, or with the option of quick and easy pitch adjustment (minimum 40mm) using an innovative nozzle body trigger release system
  - Nozzle bodies are designed to ensure a smooth product flow path and maximum hygiene
  - Remove an individual nozzle assembly and replace with a pre-cleaned assembly in under 20 seconds, and strip to component level in under 1 minute. This results in reduced production downtime, as well as a less pressured cleaning routine
  - Nozzle body slider (patent pending) eliminates the risk of injury or mechanical damage in case of an obstruction during the nozzle dive sequence

### Safety Guarding
- Static high level guarding protects the operator from unintended product contact. This static guarding is easily raised to offer unhindered access to the filling nozzles during product changeover routines.

### Control System
- Omron has been selected as Adelphi’s preferred control system supplier. Their systems are cost effective, compact, and backed by worldwide support and next-day delivery.
  - System F-600 can also be specified with Siemens, Allen-Bradley, or Mitsubishi systems.

### Machine Enhancements
- System F-600 can cost effectively grow with your production requirements, negating the need to write off existing equipment.
  - **Wetted Parts:** An extra set of wetted parts to facilitate fast changeovers and thorough off-site cleaning
  - **Capping station:** Add a hand capping station to ensure consistent cap application torque, and reduce the likelihood of repetitive strain injuries
  - **Service Contract:** Regular preventative maintenance ensures continued machine efficiency, and reduced machine downtime. Special servicing and spares rates are offered with Service Contracts
  - **Pitch adjustment:** Upgraded nozzle carrier and trigger release nozzle bodies to enable quick and easy pitch adjustment down to 40mm
  - **Conveyor:** Conveyor and associated container handling systems to enable automation of the filling process.
  - **Neck Location:** The System H neck location module enables automation of the filling process when filling bottles rather than tubs and pots.
  - **Full guarding:** Additional guarding as required when automating a semi-automatic System F-600 or upgrading to a System F-1200.

### User Interfaces
- A stressed machine operator generally results in reduced production output, so System F-600 has been designed with operator comfort, safety, and efficiency in mind.
  - Mechanical touchpoints are user friendly and require only moderate effort to operate
  - Heavy containers can be presented at a comfortable height for strain free removal after filling
  - Entirely tool-less machine adjustment, and largely tool-less component level strip-down
  - Front-mounted full colour, 7-inch touch-screen HMI offering intuitive navigation of the operating menu
  - Configurable security settings to restrict access to critical machine settings
  - USB connectivity for convenient recipe back-up
The Adelphi System Range

With our System range, we are developing an entirely new set of packaging machines that are not only excellently engineered, but thoroughly designed. A clear focus on innovation that serves business needs, with radical improvements that often surpass current industry norms, results in a harmony of function and form.

MODULAR
Tailored to your needs at a favourable price

Individual machines can quickly be specified to your requirements thanks to System’s modular designs. Every module is a standard item that can be held in stock, so there is little need for time-consuming engineering input, and our fast delivery times will help you get your production up and running quickly.

EFFICIENT
Maximum output with minimum input

Innovative design and use of the latest technology ensure that our System machines deliver superior levels of accuracy and speed, and extremely efficient product and container changeover routines, while using less energy. That means increased output at less cost and with less down-time.

HYGIENIC
Inherently clean design with easy access

Every element of our System range is designed with hygiene in mind, with quick-strip product contact parts manufactured in 316L-grade stainless steel, and no horizontal surfaces where fluids can pool. The area under our machines is also visible and easily accessible to aid the maintenance of a clean production environment.

SCALABLE
Buy for today, save for tomorrow

With our System range, you no longer have to pay now for capacity that you hope you will need in the future. Instead you can quickly and cost-effectively grow your filling line, simply by adding or upgrading modules only when you need to.