



**Permex  
Systems  
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LIQUID HANDLING SPECIALISTS

**Permex Systems Limited** offer over 40 years of experience in liquid filling and handling from container filling to specialised production line machinery. From design through to ongoing service we are trusted by our customers to complete any project from the simplest to the most complex.

**PSL** create systems based on all four principle methods of liquid measurement:

- Mass • Weight • Volume • Level

**PSL** will provide the equipment to suit your needs either from our standard range or by producing a design tailored specifically for you. Any liquid, thick, thin, flammable, corrosive, toxic...

**...we have tackled them all**

## PANDA FOR TOP FILLING, MULTI-PALLET, MULTI LAYER

With its fingertip height control the Panda can reach IBCs, pallets of 200 litre drums and pallets of multi-layered containers with equal ease. Panda has all the advantages of hands-off filling including higher productivity, improved safety and reduced wastage.

Choose from an extensive list of add-ons including LevelGuard overfill protection, vapour removal hoods and trolley mount.



## GAZELLE FOR SINGLE CONTAINER FILLING

The gazelle with its simple design and multi-axis adjustment is ideal for filling containers on a conveyor. Gazelle can be configured for top or submerged filling & can measure by any of the four methods that **PSI** offer for liquid metering. **PSI** also offer conveyor based solutions for capping, lidding, infeed and outfeed of containers.

The list of bolt ons for Gazelle includes drip cups, vapour extraction hoods and LevelGuard overfill protection.

## PREMIER LOW COST MASS FLOW FILLING MACHINE

The Premier offers both the accuracy of filling by mass and Trade approval in a package priced competitively with traditional weigh filling systems.

With options for a 25mm or 50mm NB liquid handling system, flow rates from as low as 10kg/min up to more than 300kg/min can be achieved facilitating splash free filling of containers from 10kg up to 1000kg IBC's.

Two height settings enable direct on-pallet filling of 25 or 200 litre sizes with raised table tops available to extend the capacity to smaller packs.

## JUMBO FOR SUBMERGED FILLING

The Jumbo with its heavy duty arm offers submerged filling of containers to reduce foaming or evaporation of the liquid being filled. Movement is by pneumatically adjustable arm with the filling nozzles injecting into the containers under control of a rodless cylinder.

Sub-surface filling with nozzle rising to follow the liquid level is available to those who need to avoid coating the nozzle with product. Rise at final top up is a benefit offered to those who wish to extract that extra little bit of productivity from the machine. Jumbo can span up to 5 pallets or IBC's placed around it with nominally 38-50mm bore liquid handling systems, thinner liquids can be filled at rates up to 300 litres per minute.

## A DESIGN TAILORED FOR THE FOOD & DRINK INDUSTRY



Needs of the food and drink industry encompass the use of easily cleanable pipework and valves manufactured in materials that cannot spoil the flavour, colour or edibility of the product. Easy wash down and disassembly for cleaning are vital for equipment in these environments.

With experience in fruit juice packing **PSI** were able to meet these criteria in a compact mobile packing machine for 25 litre containers. Based on the Gazelle, a unique machine was designed for the customer with a detachable in feed and separate outfeed conveyor. All three sections can be moved and re-assembled anywhere around the factory.

The machine uses weighing technology to accurately measure the filled quantity and is provided with a Permex Mk 42 easystrip filling head with additional clean-in-place washing accessories.

## A DESIGN TAILORED FOR THE CHEMICAL INDUSTRY

Multiple sizes of container, products from bulk or road tankers, dilution and blends for specialist customers and all within a flammable hazard environment. **PSI** were the choice for packing off the solvents, with two Jumbo machines, one on a mobile trolley and one filling over a pallet-size conveyor. Both machines featuring rise with fill sub-surface filling to maximise production rates safely.

Two PC's in the office were used to enable creation of a filling campaign for the day, with all package sizes and products available from drop down menus to allow easy set up of the entire days filling jobs. Each job is loaded in turn onto the second PC which supervises the work and records the data, passing control to the local Jumbo during each filling cycle for maximum accuracy.

Using both Zener and Galvanic technologies combined with IS fielbus control and liquid measurement by mass, the system has packed in excess of a million containers over the past five years.



## A DESIGN TAILORED FOR THE VEHICLE BUILDING INDUSTRY



When one of the major motor manufacturers established that the oil level in their engines leaving the production line was inconsistent, they approached **PSI** as a reliable and innovative partner to help solve the problem.

Due to manufacturing variances in engine components, simply filling the engines with an accurately measured quantity of oil was not enough! For an engine to operate as designed the oil LEVEL is the most important factor. **PSI** developed a pair of lineside machines, the first of which injected a sensing probe into the dipstick opening of the pre-filled engine to establish the oil level. This level combined with the engine type, read from the engine identification tag, is used to perform an integration the result of which gives the precise amount of oil required to bring the engine level to its exact design specification. The quantity of oil needed is passed to a **PSI** designed filler further down the line that automatically adds the calculated amount of oil to the engine.



## A DESIGN TAILORED FOR THE OIL INDUSTRY

Based on the Permex Gazelle, a semi-automatic pail & jerry can filler was developed to give quick set up and product change over, in line with the low stock holding and mixed order demand placed on today's lubrication suppliers. The Gazelle was supplied as part of a fully conveyerised package including semi-automatic filling by weight, capping or lidding, transferral to powered conveyor followed by ink jet marking and removal to pallet by vacuum hoist. The complete system, supplied as one of three specially designed filling lines, was exported to China for use by one of the major Oil companies.



## FLOWMETERING & INSTRUMENTATION

**PSI**'s experience in liquid weighing, metering and instrumentation, combined with in-house programming ability makes us a reliable & trustworthy choice for components or systems.

Our BS EN ISO 9001:2000 approval means we can take on your trickiest applications & offer complete turnkey solutions or simply help you to make the right choice of parts for the job.



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PO Box 7747, Braintree, Essex CM7 4WP  
Tel: 08453 451603 Fax: 08453 451604  
Email: enquiries@permexsystems.com  
Website: www.permexsystems.com