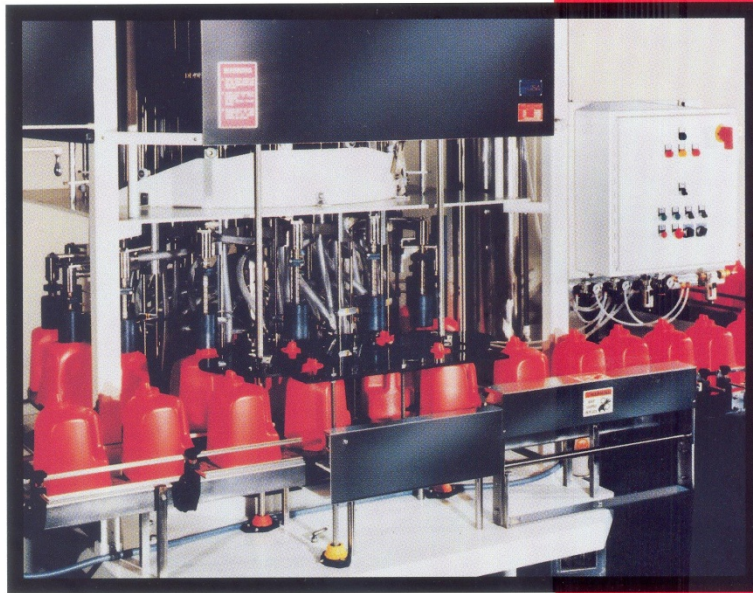


LAUB\HUNT POSIFILLER® ROTARY VOLUMETRIC FILLER

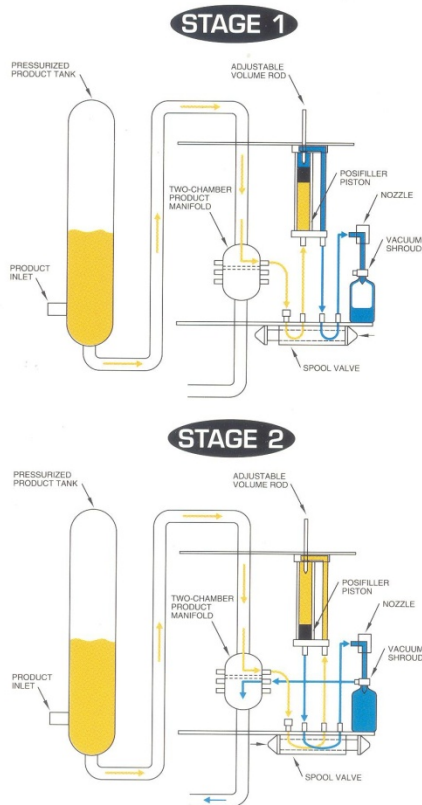


- Fill Accuracy of $\pm 1/4$ of 1%
- No-Drip Fill Nozzles
- Stainless Steel Fill System
- On The Fly Volume Adjustment
- Speeds up to 600/cpm
- Compact Design
- Widest Volume Range



LAUB\HUNT
PACKAGING SYSTEMS

THEORY OF OPERATION OF THE POSIFILLER®



It is important to note that the **Posifiller®** is an enclosed system. No air is allowed into the system from the surge tank, through the **Posifiller®** premeasuring cylinder or through the fill nozzles.

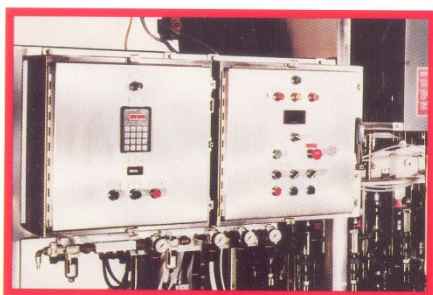
Fluid product is introduced into a pressurized surge tank and is then distributed through a centralized product manifold to the **Posifiller®** cylinders. A free-floating piston, driven by the product, travels between two positive stops. The lower stop is the bottom cylinder block, the upper stop is the adjustable volume rod, which determines the stroke of the piston inside the cylinder. This stroke of the piston determines the volume of the fill.

The key is having pressurized product on both sides of the piston at all times. To achieve this, a unique four-way spool valve is used. When there is no bottle present, the fill nozzle is closed and sealed. There is equalized product pressure on both sides of the piston placing the system in neutral. When a nozzle is cammed open by a container, pressure is relieved on one side of the piston. High-pressure product forces the piston in one direction while the low-pressure product is dispensed through the spool valve and nozzle into the bottle.

The system is designed so that the piston completes one up and one down cycle to exactly fill each bottle. Once the piston has traveled its full stroke in one direction, the spool valve is mechanically shifted reversing the product flow causing the piston to be pushed in the opposite direction. The second half of the total volume is displaced into the bottle which is now full. The piston is at its original position and the fill nozzle is closed.

The volume rod which limits the stroke of the piston is individually adjustable on each **Posifiller®** premeasuring cylinder, enabling fine tuning to achieve the $\pm 1/4$ of 1% accuracy. The rods are attached to a motorized volume plate, operated by push-button on the control panel, which adjusts fill volumes on all stations at once.

CONTROL SYSTEMS



Washdown Capable System

All drive motors are located on top of the machines for easy washdown capability. The standard NEMA-12 electrical system can also be upgraded to NEMA-4X washdown or NEMA-7 (explosion-proof) standards.

CIP (Clean-In-Place) Product Flush System

A manual CIP system is standard and an automatic CIP system is available as an option. Product change is greatly simplified. In most cases, when two products are compatible, only air-cleaning the system is required. In other applications a solvent-flush cycle can be utilized where the cleaning agent is returned to a holding vessel by the vacuum system's air-diaphragm pump.

BENEFITS OF THE LAUBHUNT SYSTEM

Posifiller® high speed fillers are designed to accommodate a wide range of products from water-thin to heavy syrups and container sizes from 1 oz. to 5 gallon.

- **No tools are required to change starwheels and only minimum tools are necessary for a complete size changeover of container height and diameter.**

- **Positive container handling. The nozzle is inserted into the container while still held by the infeed starwheel. At the discharge end, the starwheels make contact with the container before the nozzle is withdrawn.**
- **Nozzles are specially designed for each application, including special laminar flow or bottom fill nozzles for foamy products.**

Fill Accuracy of +/- 1/4 of 1%

Extreme accuracy is achieved by moving the piston between positive stops. The spouts finish the fill and close submerged so that ambient air cannot enter the filling valves when the fill is complete. Attention to details like this result in extremely high accuracy. There are 46 claims in our first patent and 31 in our second relating to this accuracy.

No-Drip Fill Nozzles

When the spout is removed from the container, a vacuum on the bottom tip picks up drips that might fall on the next container or on the filler bed.

Stainless Steel Fill System

Brass cylinders with plastic and stainless steel components are standard. Where greater levels of sanitation are required or corrosive products have to be handled T304 or T316L stainless steel cylinders are utilized.

On-The-Fly Volume Adjustment

A motor powered adjustment sets the fill volume for all cylinders while the machine is running. Individual adjustment of each piston's stroke establishes an equalized fill for each cylinder.

Speeds up to 600/cpm

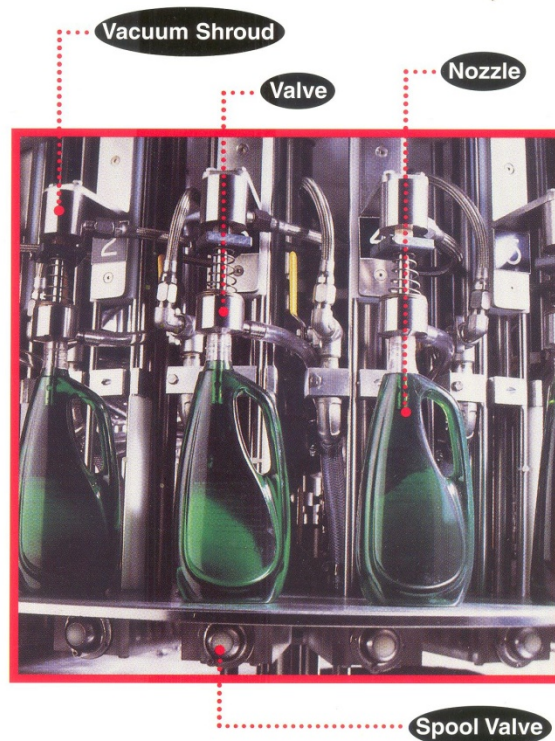
Machines are built both as In-Line and Rotary fillers. They start at a minimum of 4 heads for the In-Line version and 8 for the Rotary version. Machines as large as a 12 head In-Line and 60 heads Rotary can be produced due to the compact design of the system.

Compact Design

The unique design of the **Posifiller®** systems allows for a smaller cross section piston to be used saving up to 35% of the floor space required, as both piston strokes, up and down, are used for product filling. Cylinders of only half the maximum volume required are used, thus reducing overall table diameter required.

Widest Volume Range

Posifillers® are designed to accommodate a wide range of containers sizes, from 1 oz. to 5 gallon. Unmatched range capacity enables the fillers to run from 1 oz. to 2.5 gallon on one machine with the same set of pistons.



DIMENSIONS AND SPECIFICATIONS

PITCH DIAMETER		FRONT TO CENTER A		LENGTH B		WIDTH C		TABLE DIAMETER D		STATIONS AVAILABLE
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	
48	1219	47	1194	77	1956	60	1524	54	1372	6 to 20
60	1524	53	1346	89	2261	72	1829	66	1676	12 to 25
72	1829	59	1499	101	2565	84	2134	78	1981	15 to 30
84	2134	65	1651	113	2870	96	2438	90	2286	20 to 35
96*	2438	71	1803	125	3175	108	2743	102	2591	24 to 48
108*	2743	77	1956	137	3480	120	3048	114	2896	24 to 54
120*	3048	83	2108	149	3785	132	3353	126	3200	30 to 60

* Frames over 8 ft. are subject to special dimensions based on design

Standard Features

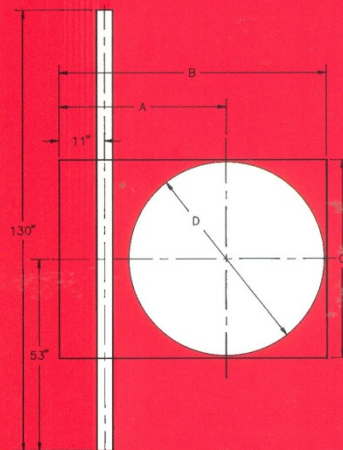
- Steel construction, painted with white epoxy
- T304 Stainless and brass cylinders
- No container/No fill system
- Individually adjustable cylinders
- Prewired NEMA-12 electrical system
- Product return vacuum system
- On-the-fly volume adjustment
- Motorized volume compensation
- DC Drive with safety clutch
- Safety guarding
- 10 ft. SS conveyor channel with 4.5" delrin chain and half round guide rails with plastic adjusting knob
- Manual Clean-in Place system

Optional Features

- All stainless steel construction
- T316L Stainless and delrin cylinders
- NEMA-4X washdown-capable electrics
- NEMA-7 explosion-proof electrics
- Bottom fill nozzles
- AC inverter drive with PLC
- Counter: cpm
- Infeed/discharge safety clutches
- Magnetic safety interlocks
- Automatic central lubrication system
- Independent conveyor drive
- CIP-Automatic Clean-in-Place system
- Down stream photoeye
- Alert light tower with sound alarm
- Tangential discharge

Additional Optional Features

- Temperature compensation in conjunction with automatic check weigher.
- Synchronized or Monoblocked Capping Systems available with most standard cappers.



LAUB\HUNT OFFERS A COMPLETE LINE

Packaging Systems: Full "turnkey" service. Complete packaging lines designed, engineered, built and installed. Filling lines from bottle unscramblers to case packers with central control systems. Customer training, videos and full function trial runs prior to on-site installation.

Liquid Fillers: Rotary and In-Line fillers, Gravity, **Pressure/Gravity**, Vacuum and Pressure Metering systems. Machines are available from 4 to 120 heads providing speeds up to 1000 cpm.

All stainless steel machines, special chemical protection for products like bleach, food grade machines for hot and cold beverage filling, bottom-up fillers for foamy products. Fillers for detergents, cosmetics, personal care and household products.

Accessories: In-Line unscramblers for bottles received in re-shippers, "No-Drop" case packers. Rotary Chuck and In-Line Screw Cappers, Fitment Inserters, Pluggers and Overcappers.



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Changes in machine design or specifications are a result of continual machine improvement. Laub\Hunt reserves the right to change specifications without prior notice.

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