

ASTERRA

SHEMESH AUTOMATION
PRUDENT PACKAGING SOLUTIONS



Advanced Rotary Piston Filler

- Robust, Consistent, Versatile and Accurate
- Applicable to containers of most common shapes and sizes in the food & beverage, chemicals and cosmetics industries
- Suitable for low viscous products as fruit juices and inc as well as high viscous products, with or without solids as goulash, paté, sauces, pastes, tomatoes, honey, puree, jam, wax etc.
- Filling accuracy of +/- 2ml, depending on volume and product characteristics



Let us build your vision

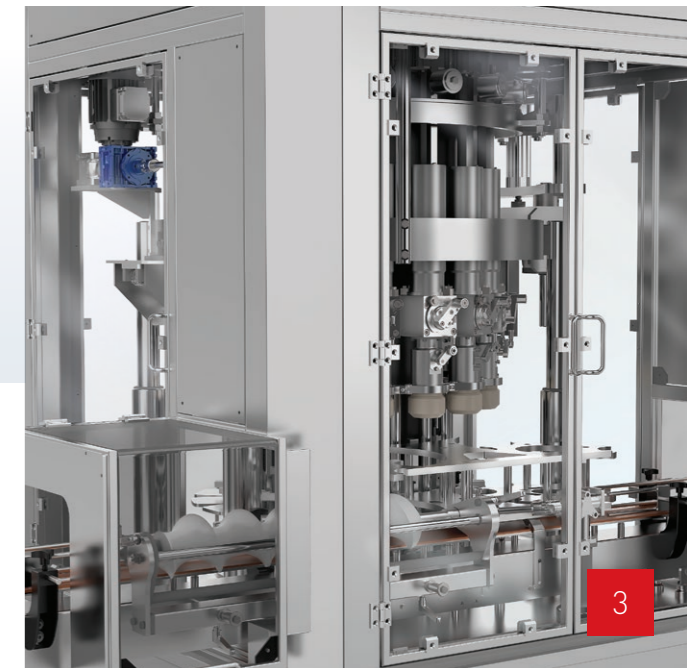
ASTERRA is ROBUST, VERSATILE, HIGH PERFORMANCE Positive Displacement high technology based, small footprint, low utilities, sustainable Rotary Piston Filling Machine. ASTERRA is equipped with cam driven filling stations each featuring a state-of-the-art SA nozzle proprietary design to fill your product with near zero leaks, splashes, bubbles, or overflow with **ultra-high accuracy of +/- 2ml of filling volume.**



ASTERRA How it Works

ASTERRA has cam driven piston technology at each filling station, significantly lowers utilities consumption and reducing costs while boosting portioning speeds and accuracy levels, resulting in lower footprint overall.

The ASTERRA is easily adjusted to fill various product dimensions consistently and accurately with high range of viscosities and is applicable for hot products that are up to 95° Celsius. ASTERRA is fully controlled from the Siemens or Allen-Bradley HMI & PLC, is constructed of 304/316 stainless steel and features **USDA/ FDA approved materials as well as sub 30 minutes, tools-free change over.**



Additional Features:

■ Robust, Sanitary design construction

- Main frames and construction base made of AISI stainless steel 304. All product contact parts are AISI 316 stainless steel or FDA compliant polymer
- SA proprietary mechanical cam and nozzles design. Programmable Bottom-Up portioning speed graph to adjust for various foaming and viscosities degrees. Drip/Splash/Overflow proprietary prevention mechanisms
- Clean design stainless steel conveyor construction
- Sub 30 minutes, toolless changeover
- CIP (clean in place) & WIP (wash in place) available
- Stainless steel frame barrier guard with Lexan doors
- "No can – no fill" device with anti-breakage safety
- Pistons entirely in stainless steel, Cylinders in high thickness stainless steel
- No tool removal of pistons and valve plugs
- Smart, hermetically sealed AISI 316 electropolished rounded reservoir with level controls and auto reload features

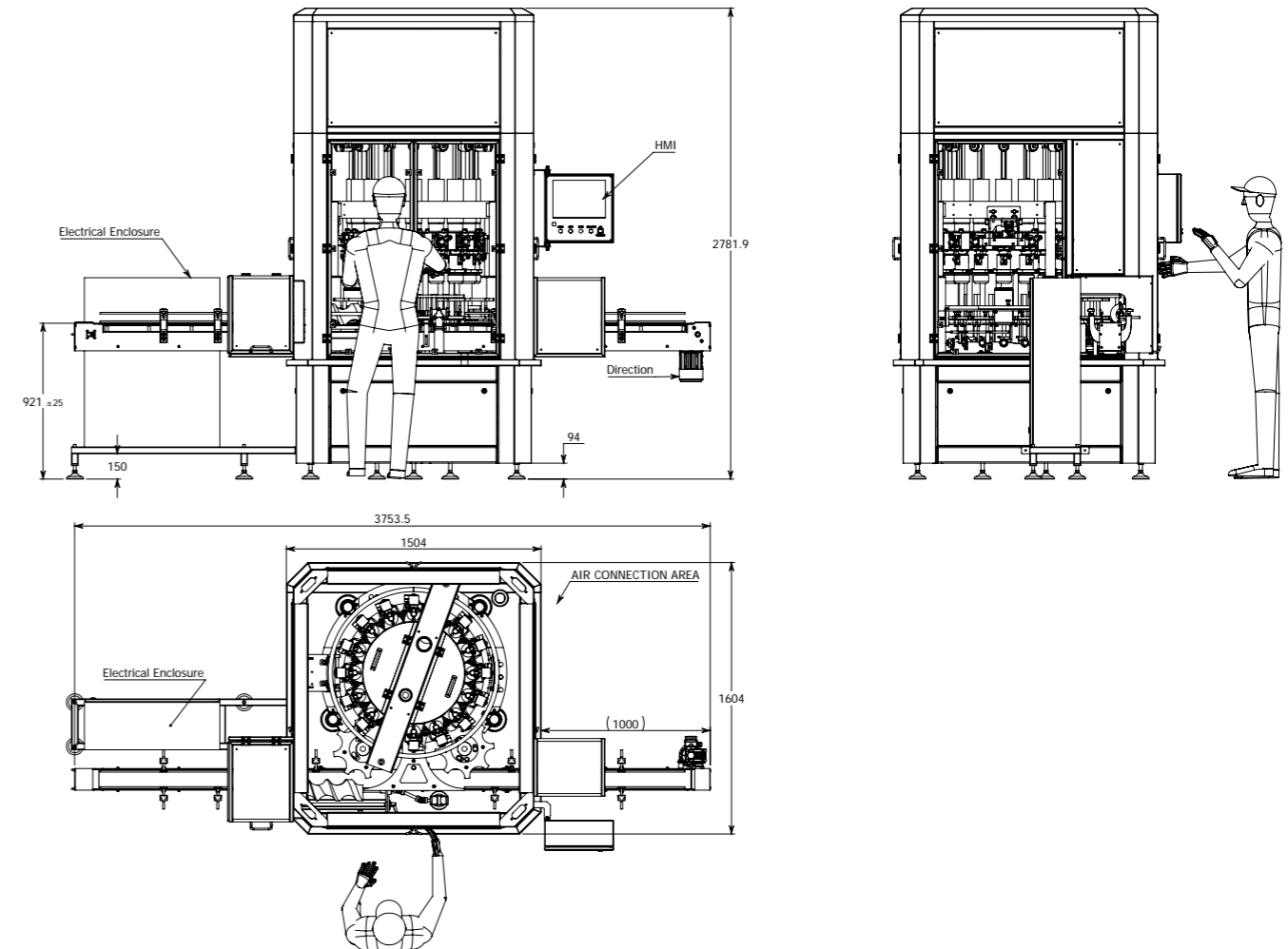
OPTIONAL FEATURES

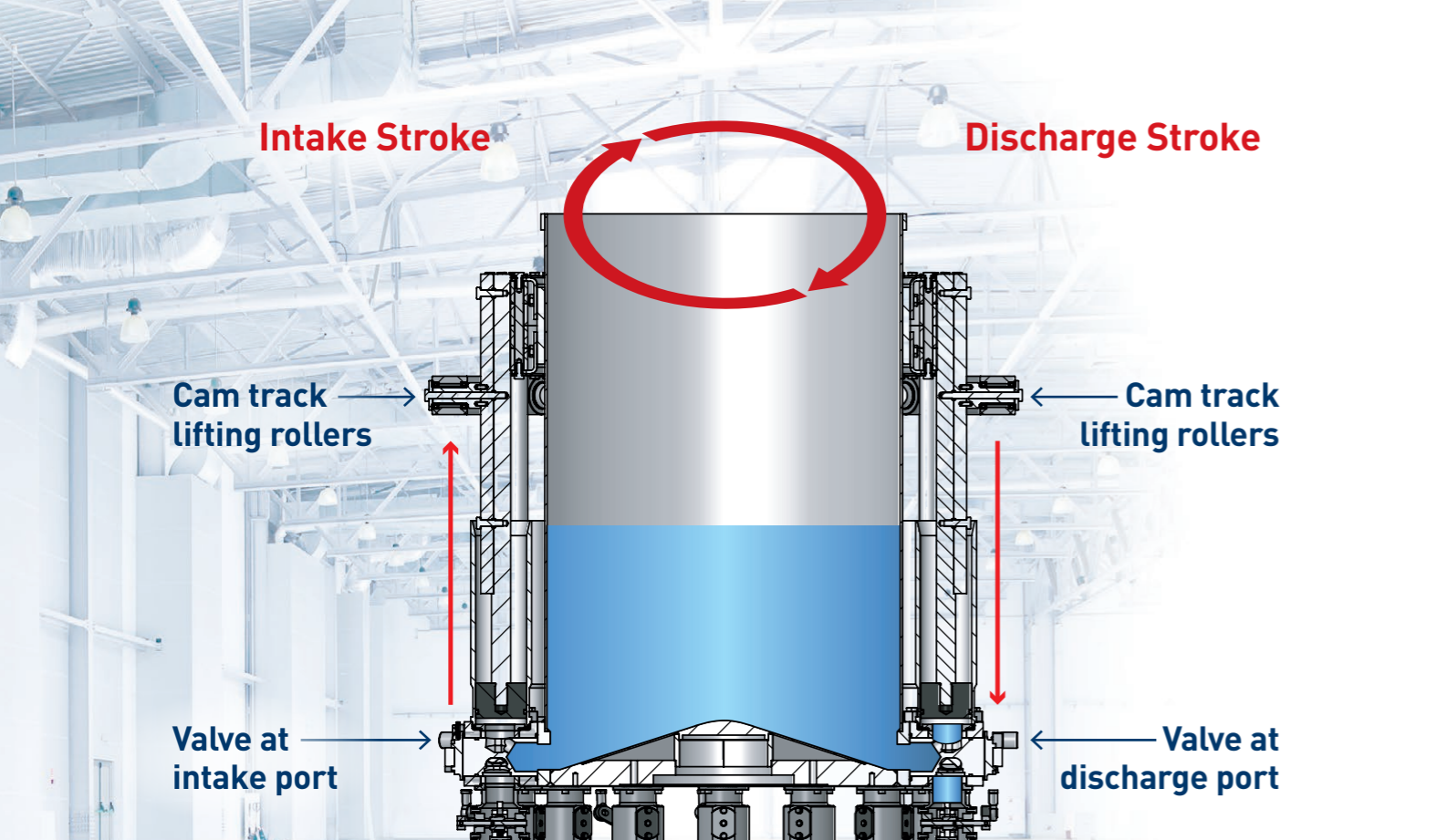
- Explosion proof machine enhancement
- Corrosion proof machine enhancement
- Bottom-up fill
- Tank agitators
- Hot fill
- Counter clockwise rotation
- Monoblock Capper
- Complete flush in place system, built in spray balls and spray bars

STANDARD SA SPECIFICATIONS

- Industry 4.0 ready
- Festo (Germany) pneumatics and Servo systems
- Complete SST304/316 design
- FDA approved piping as applicable
- SIEMENS (Germany) or Allen Bradley (Optional) PLC & HMI
- SIEMENS/Allen Bradley-based & Rittal (Germany) made electrical cabinet
- SEW gears and motors
- BANNER sensors
- E-stop buttons and safety interlocks wired through CAT IV safety controller
- Interlocks on all access panels
- Traffic light controller state machine
- EU/OSHA Compliant

How the **ASTERRA** measures up





How the **ASTERRA** works

- 1 Containers arrive from the feeding conveyor to a controlled, motorized screw feeder and a star wheel specifically designed as per the required product size.
- 2 Once containers are drawn into the cylinders the pistons are lifted by the piston roller traveling up an inclined cam track. At the top of the piston stroke the valve is rotated, closing the intake port and opening the discharge port. On the down-stroke, the piston gently moves the product out of the cylinder, through the valve and into the container. If no container is present, the valve remains in the intake position and the product is gently returned to the filler bowl.
- 3 Once the dosing cycle has taken place, containers are directed out of the ASTERRA while running stable on the ASTERRA exit conveyor.



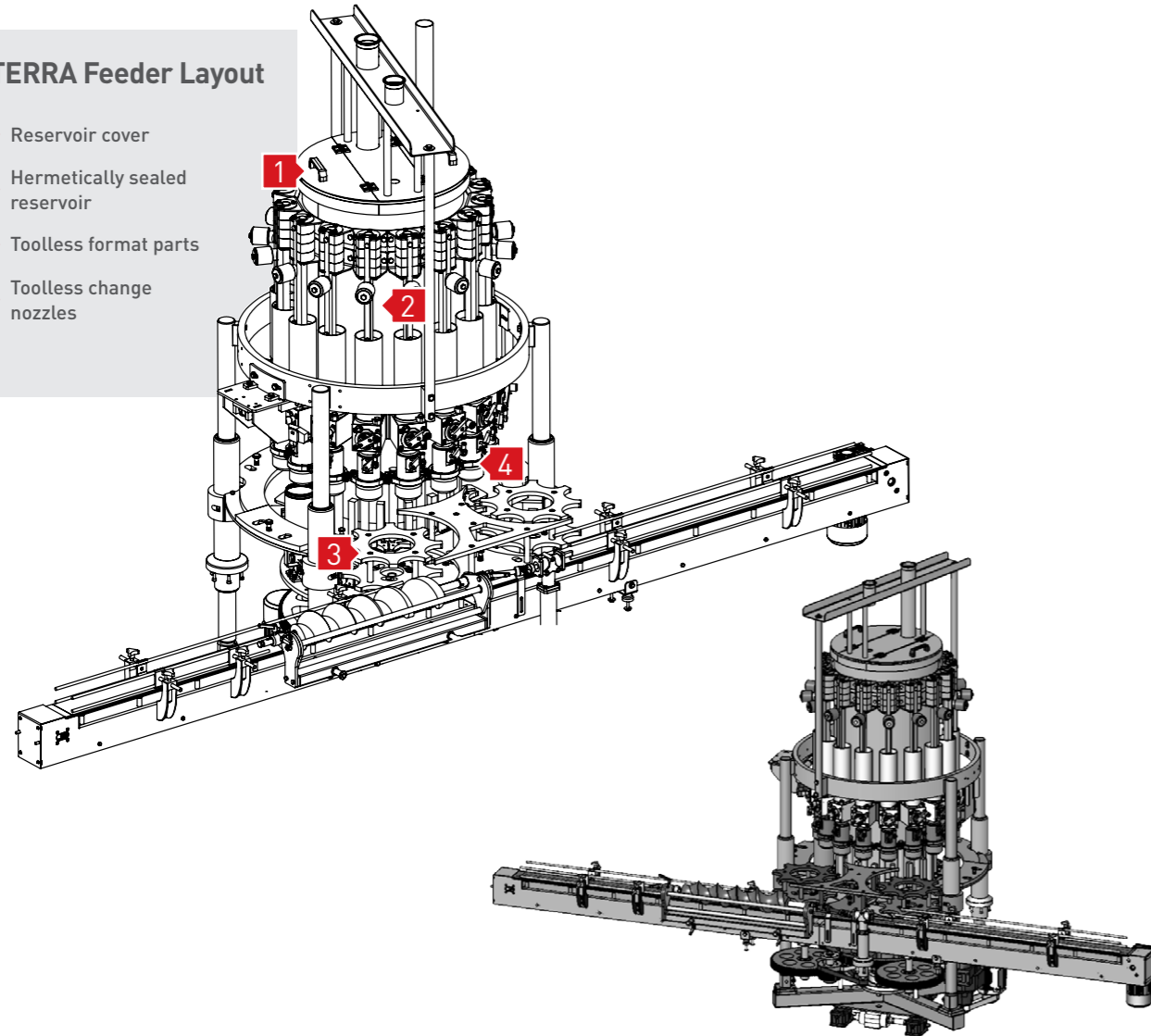
“Shemesh Automation is one of my favourite suppliers. Not only is their equipment reliable and innovative, but the people behind this name have also managed over the years to prove to us loyalty and service rarely seen in the industry.”

Gabi Cherniak, Senior Project Manager,
Teva Pharmaceuticals Industries.

ASTERRA - Key modules

ASTERRA Feeder Layout

- 1 Reservoir cover
- 2 Hermetically sealed reservoir
- 3 Toolless format parts
- 4 Toolless change nozzles



Technical Specifications

Number of Stations	16	20	24	36	46	56	62	72
Max Rated Speed [cpm] *	300	400	600	900	1200	1500	1500	1500
Bottle Diameter [mm]	Ø50 - Ø110	Ø50 - Ø110	Ø50 - Ø110	Ø50 - Ø110	Ø50 - Ø90	Ø50 - Ø90	Ø50 - Ø80	Ø50 - Ø80
Dosage [mL] **	1200	1200	1200	800	800	800	750	750
Main Reservoir volume [L]	150	260	450	650	750	960	960	960
Indicative Footprint Area [L x W [mm]]	1500 x 1400	1700 x 1600	1900 x 1900	2300 x 1900	2500 x 2100	2500 x 2100	2800 x 2500	2800 x 2500

* Throughput may vary subject to product characteristics as viscosity and temperature as well as dosing dosage amount.

** Subject to change cylinders and pistons size.



Company overview

Built on over **30 years of tradition and quality**, Shemesh Automation is a family owned and operated business. It has become synonymous with innovation and is home to powerful engineering, design and technology.

The company's expertise is in the development, design and manufacturing of fully automatic packaging, filling, capping, sealing and labelling machines for the cosmetic, pharmaceutical, beauty, biotech, chemical, food and beverage, and nonwovens industries.

Shemesh has its main offices in the US, UK, France and Israel. Its London-based headquarters coordinates global operations and its Israeli office takes advantage of the incredible local engineering talent and innovation. Shemesh's unique combination of UK customer-centric service with an Israeli start-up mentality, to push the technical boundaries, has greatly contributed to its success.

Service & Support

As expert machine designers and integrators we offer a complete end-to-end service. We can supply everything from a single component to a turnkey solution for a full production line.

We deploy our expertise and added value to support our customers around the world as well as to provide a competitive edge.

Shemesh provides a **One-Stop-Shop** which eliminates the costs of dealing with multiple vendors. We provide integral services that cover all aspects of technical support and after sales needs in one contract: reliable, cost-effective, integrated end-to-end solutions.



Global presence

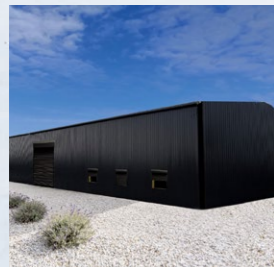


Wisconsin, USA
North America HQ

State-of-the-art machine showroom, sales and after-sales support, spare parts inventory and North American logistics centre.

Hampshire, UK
Global Headquarters

CEO's office, Marketing, Strategy, Business Development and Finance.



Semur-en-Auxois, France
European HQ

French team, Tech centre featuring state-of-the-art machinery showroom, sales and after-sales support and European logistics centre.

Tel Aviv, Israel
R&D and Manufacturing

Operations, R&D, Engineering and Manufacturing.



WORLDWIDE

15

International branches

- United Kingdom
- North America
- France
- Latin America
- Israel
- Spain
- United Arab Emirates
- South Africa
- India
- China & Hong Kong
- Japan & Indonesia
- Australia & New Zealand

Over

1800

machines...

CAPACITY

x2

Manufacturing sites

...supported in over

30

countries

6

Trade shows per year

Global representation

Shemesh Automation collaborates with teams on complex Fortune 500 projects and has gained not only a proven and trusted network to put at your disposal, but also invaluable knowledge to help drive your projects.

We share our expertise to guarantee the maximum productivity of your machinery. Our global network of sales representatives and After Sales service specialists offer you flexible and efficient support. Our highly-qualified technicians ensure a fast solution whenever and wherever you need it.

REGIONAL HEADQUARTERS

United Kingdom

Shemesh Automation UK Ltd
Contact: Mr. Andrew Hayward

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Shemesh USA Inc
Contact: Mr. Jim Livermore

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Shemesh Automation France
Contact: Ms. Nelly Desbiens

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Shemesh Automation Israel Ltd
Contact: Mr. Luis Coronel

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Shemesh Automation India
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Japan & Indonesia

Shemesh Automation Japan & Indonesia
Contact: Mr. Kentaro Taguchi

Australia & New Zealand

Shemesh Automation Australia
& New Zealand
Contact: Mr. Cameron McKenzie

LATIN AMERICA

Contact: Mr. Nir Baram

GLOBAL SALES

Contact: Mr. Luis Coronel



Explosion proofed & Corrosion proofed

Corrosive or alcohol-based solutions dictate that your equipment is duly fitted to professionally handle these delicate environments. Years of experience in the field made it possible for us to tailor for you the exact protection so your production is safe and stable while your people and equipment are well protected keeping your facility at the top of the range.

All of our machines are constructed using SST 304/316L, and are available with anti corrosive proprietary coating. As well as the machine base, all vital parts such as nozzles and pumps are also specially treated.

For all sales enquiries please contact us via sales@shemeshautomation.com

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Let us build your vision