

shawpak

MEDICAL PACKAGING SOLUTIONS

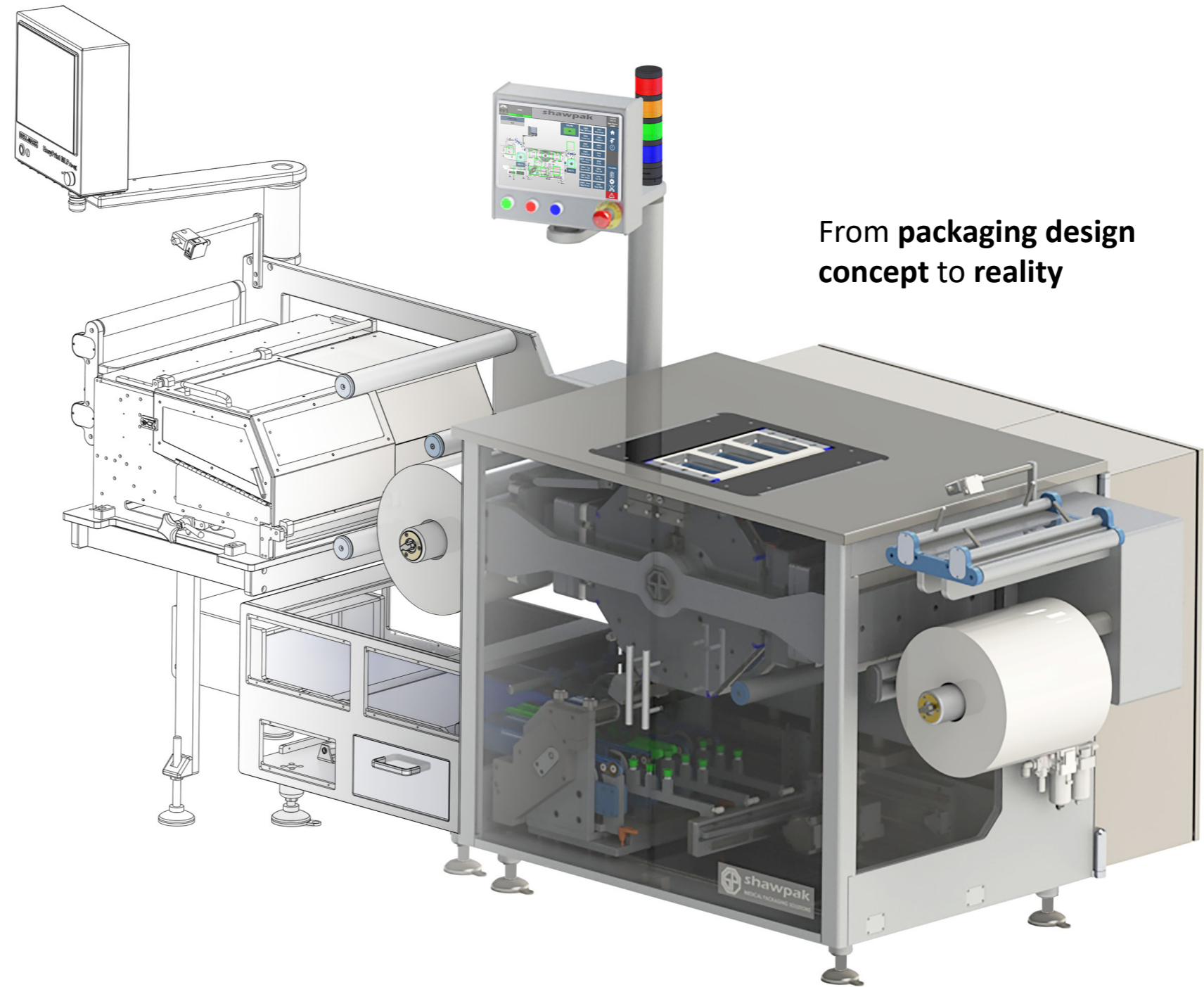


rotary thermoforming machine



The **shawpak RT series** is a revolutionary machine offering a thermoforming solution to your packaging needs that is totally unique.

Designed, manufactured and built in the UK at our state-of-the-art engineering facility based in Derby, every care has been taken to ensure the machines are built to the highest quality.



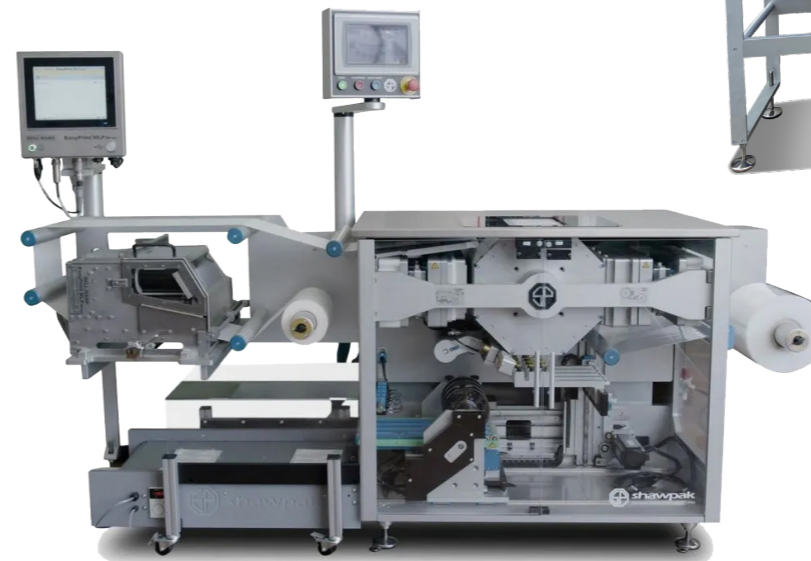
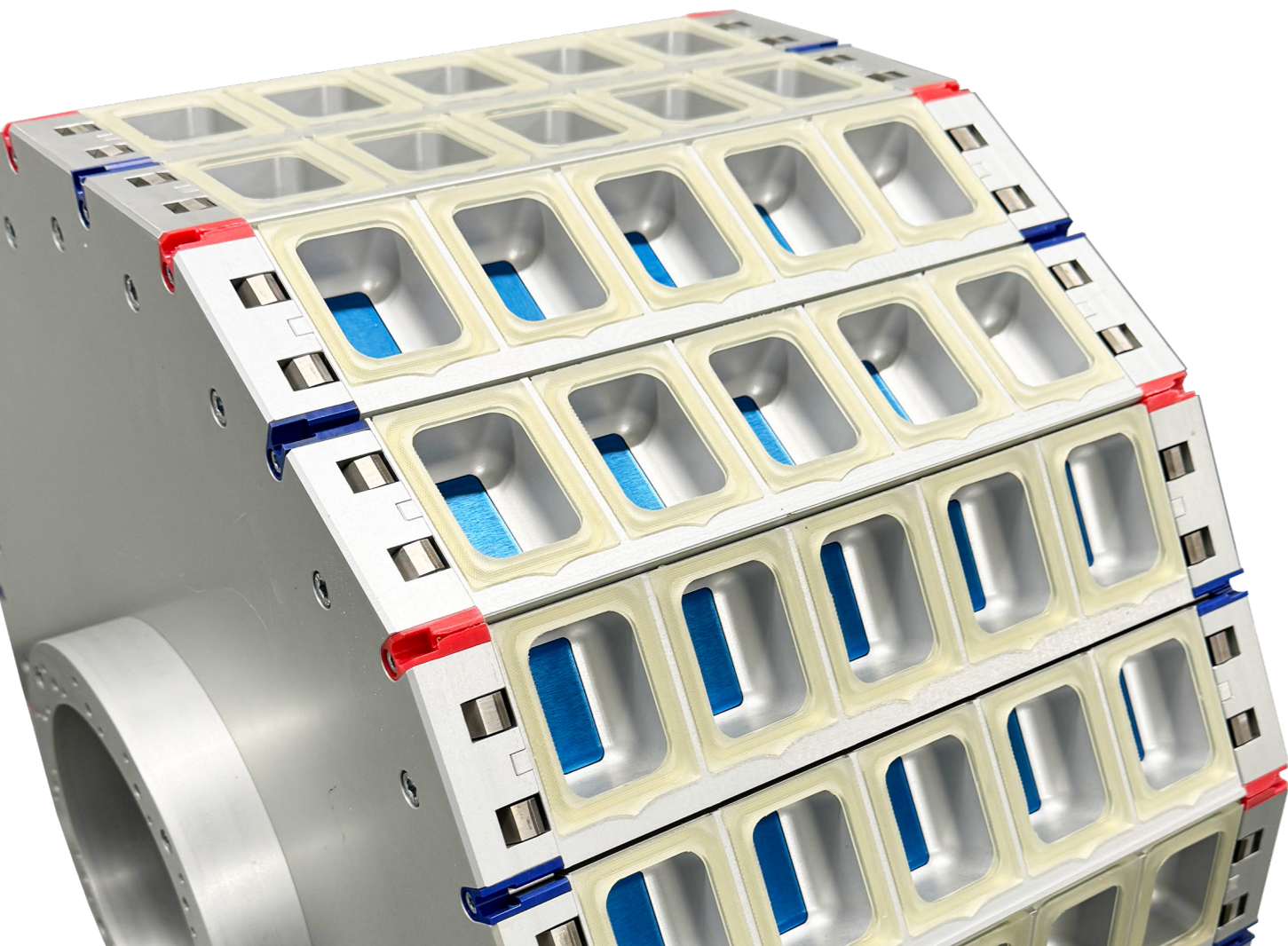
From **packaging design**
concept to reality



Amazingly flexible, portable, energy efficient and above all compact and easily intergrated into an automated cell.

These are just a few of its unique attributes. The **shawpak** is just so different - its tiny size and flexible layout means that it can be configured in so many different ways to suit the customer's requirements.

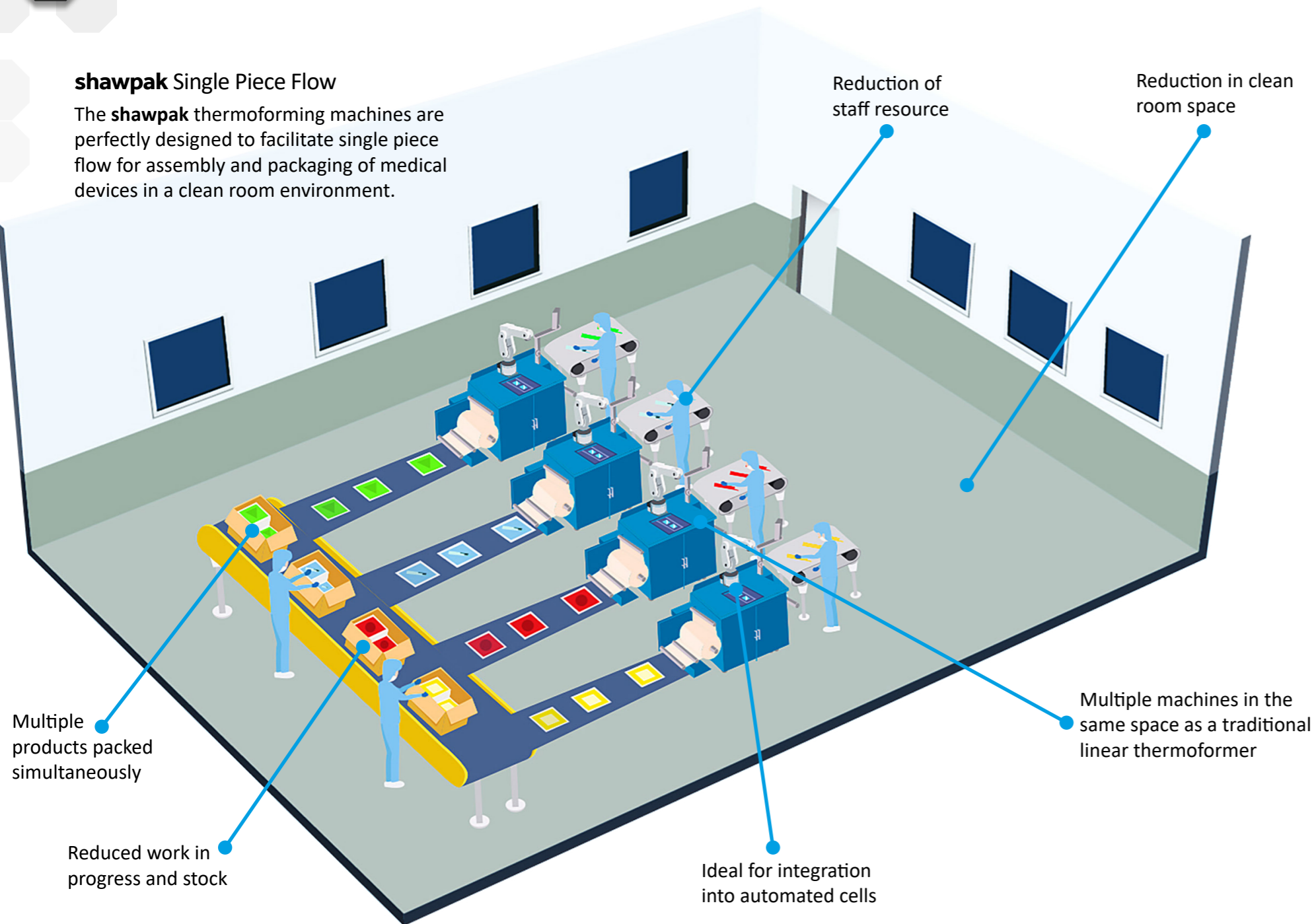
The innovative **shawpak** machine brings not only an increase in efficiency but also future proofs your production plans. The machine is designed to accept multiple tool and pack sizes, and all machines are designed to form both rigid and flexible blisters as standard. The **shawpak** thermoforming machine is very versatile and made to each customers bespoke application.





shawpak Single Piece Flow

The **shawpak** thermoforming machines are perfectly designed to facilitate single piece flow for assembly and packaging of medical devices in a clean room environment.



The benefits of single piece flow are the small footprint and loading area, enabling the **shawpak** machine to be integrated easily into production cells, which increases production efficiencies. There are no tool changes needed and this reduces double handling as it's directly packaged.

Packaging product direct from automated assembly lines reduces; packaging errors, product contamination and eliminates repeat inspection.

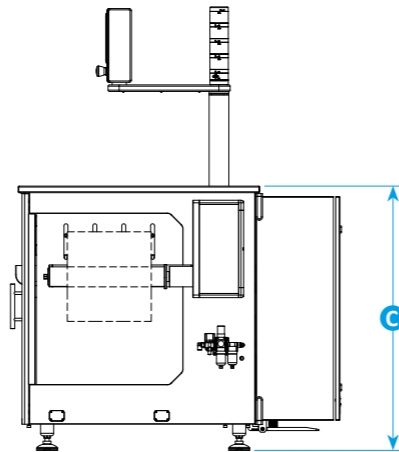
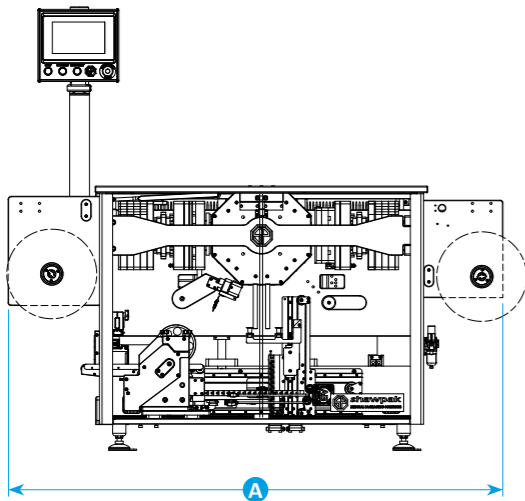
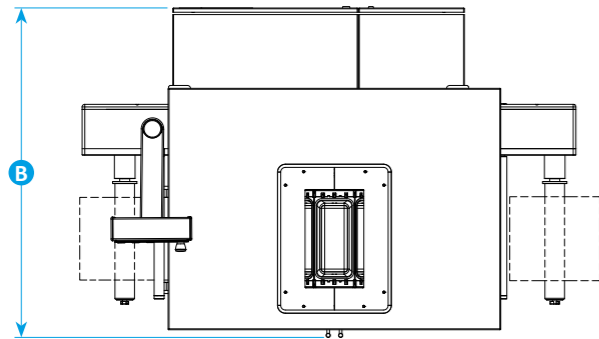
Shawpak offer a turnkey solution and can assist with all aspects of the packaging process, from pack design to material selection.

AN OPTIMUM SINGLE
PIECE FLOW SYSTEM



shawpak RT Series Machine Dimensions

Model	Max Flexible Pack Size mm (inches)	Max Die cut Pack Size mm (inches)	Machine Dimensions mm (inches)		
			A	B	C
RT32-20	320 x 200 x 80 (12 ^{5/8} x 7 ^{7/8} x 3 ^{5/32})	300 x 180 x 80 (11 ^{13/16} x 7 ^{3/32} x 3 ^{5/32})	1705 (67 ^{1/8})	1133 (44 ^{19/32})	1004 (39 ^{1/2})
RT42-25	420 x 250 x 100 (16 ^{1/2} x 9 ^{27/32} x 3 ^{30/32})	400 x 230 x 80 (15 ^{3/4} x 9 ^{1/16} x 3 ^{5/32})	1825 (71 ^{27/32})	1212 (47 ^{11/16})	1004 (39 ^{1/2})
RT62-25	620 x 250 x 100 (24 ^{13/32} x 9 ^{27/32} x 3 ^{30/32})	600 x 230 x 80 (23 ^{5/8} x 9 ^{1/16} x 3 ^{5/32})	1905 (75)	1409 (55 ^{15/32})	1004 (39 ^{1/2})



At **shawpak** electrical panels are designed, manufactured and built in-house, compliant to UL 508A standards.

The control systems used In the **shawpak** RT series are Rockwell Allen-Bradley and as standard consists of:-

- Compact GuardLogix PLC
- Kinetix 5300 Servo drives with TLP servo motors.
- 9" PanelView Plus Colour Touch Screen HMI:-
 - Display / editing of all parameters / setpoints (Access level restrictions apply).
 - E.g. Recipe settings, Settings for temperature, pressure, time and speed
 - Machine cycle time and batch counters
 - Machine message banner
 - Alarm alerts
 - 3 levels of login access



Shawpak's RT series offer a low cost power consumption for all models.

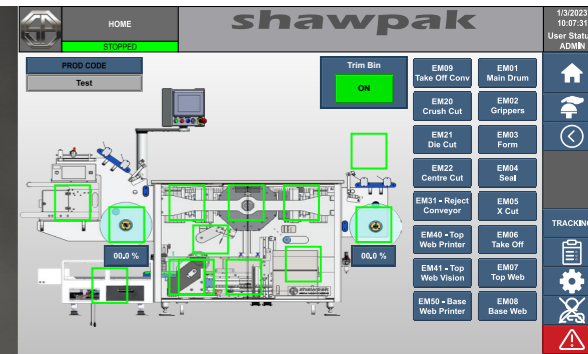
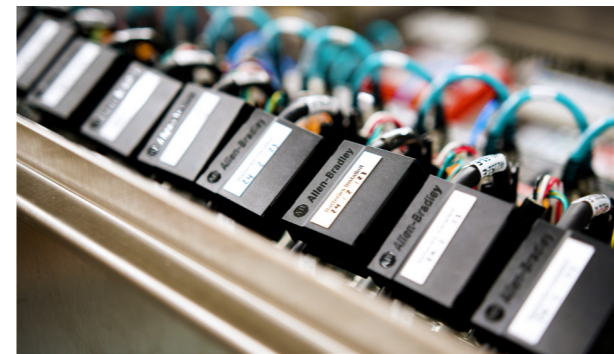
Power Supply:

Voltage: 230v

Phase: Single Phase

Cycles: 50/60hz

Air Supply: 6 bar Minimum – Clean and dry supply





The **shawpak** Thermoforming Process

Process 4 - Top Web Unwind

As with the base web, accurate tension and lateral tracking control of the top web are essential for reliable lidding. The **shawpak** top web unwind has the same servo motor driven unwind as the base web unwind. Tension is also controlled in order to register pre-printed web material into position. As well as tension control, web tracking and alignment are critical to ensure the top web feeds on to the drum in the required position. Lateral position can be adjusted in 0.1mm increments either manually or automatically with the top web auto tracking option.

Process 5 - Sealing Station

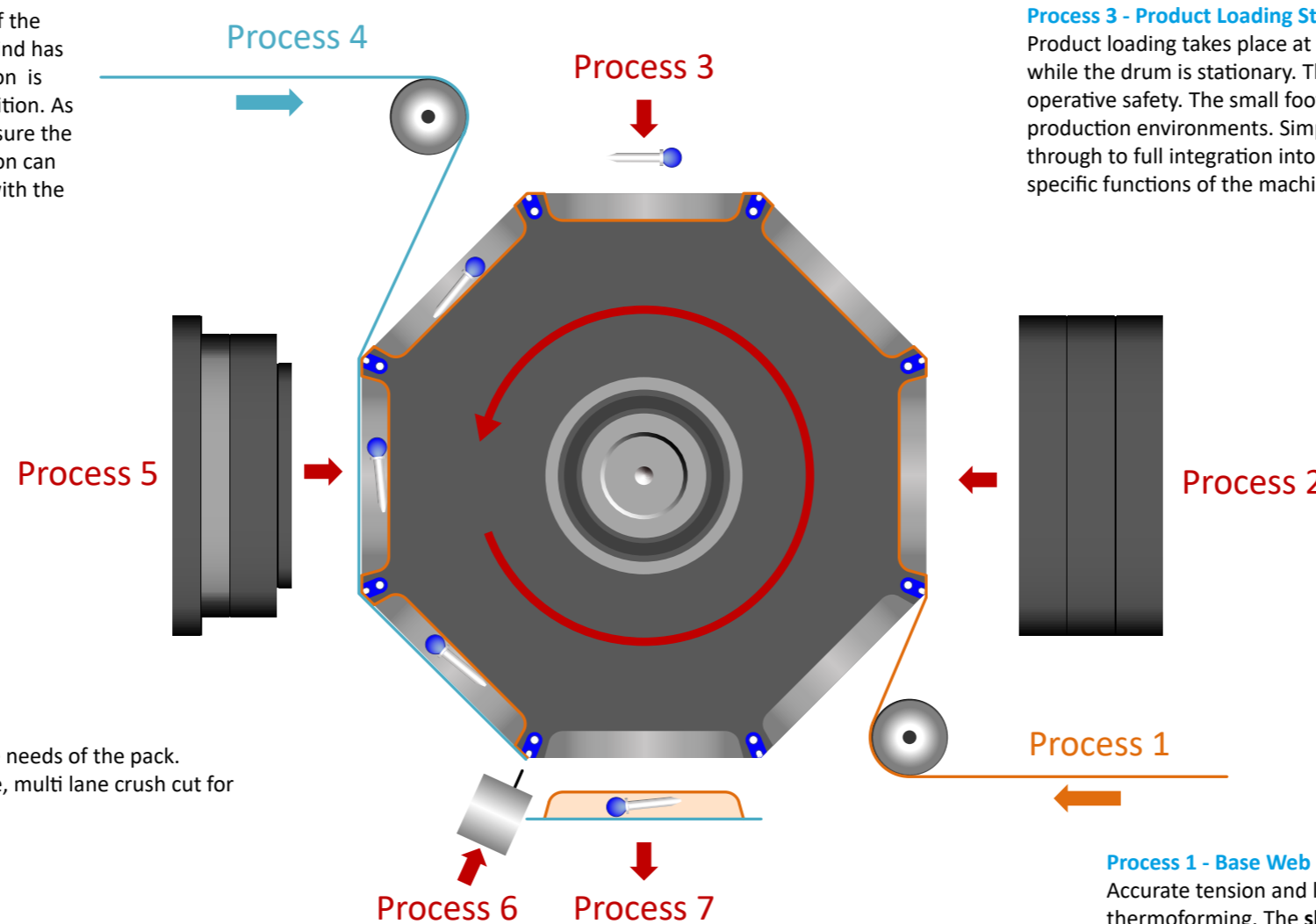
Once loaded the drum will rotate anti-clock wise. At this point the top web of material will be rolled onto the drum to captivate the product in the cavity prior to the sealing process. Once at the seal station the seal plate will operate to pre-defined time and pressure settings. The Airflex bellows system ensures the seal tool produces a perfectly even pressure over the required seal area. All process parameters are monitored each machine cycle and measured back to ensure the cycle has been completed to the set specification. As with the forming station, all settings are logged for each job and restored the next time the particular tool set is to be run.

Process 6 - Cutting

The **shawpak** has many different types of cutting available to suit the needs of the pack. These include a crosscut knife, centre cutter, plunge perforation knife, multi lane crush cut for pack separation/perforation cut and die cutting for rigid packs.

Process 7 - Outfeed Station

Once the product has been cut vacuum suckers will ensure the product is removed from the cavity under controlled conditions to ensure precise placement onto the conveyor and to confirm that the pack has been ejected from the forming drum. The discharge conveyor can be configured to suit individual customer requirements. A sensor is used to ensure the pack exits the machine, other inspection systems can also be integrated at this stage.



Process 3 - Product Loading Station

Product loading takes place at the very top of the drum. Multiple pockets can be loaded at a time while the drum is stationary. The loading area is guarded by bespoke safety infills which ensure operative safety. The small footprint of the **shawpak** makes it easy to integrate into many different production environments. Simple manual loading can take place from a workstation right the way through to full integration into an automated production cell. Machine height, process orientation and specific functions of the machine can all be customised to meet individual customer requirements.

Process 2 - Film Forming Station

The ten stage Pureform forming process has been developed specifically for the **shawpak**. Temperature, vacuum and compressed air are all used in combination to generate the perfect forming conditions for the film being processed. All settings are monitored each machine cycle and measured back to ensure the cycle has been completed to specification. The principles of the unique **shawpak** process eliminates the need for numerous vacuum holes on the thermoforming cavity leading to high quality formings with minimal cosmetic witness marks. All form settings are logged for each job and restored the next time that particular tool set is to be run.

Process 1 - Base Web Unwind

Accurate tension and lateral tracking control of the base web are essential for reliable thermoforming. The **shawpak** has a unique servo motor driven unwind to control tension to the exact tolerance of the material to be used. This flexible control means the **shawpak** can handle delicate 50 micron flexible films right through to 800 micron rigids. As well as tension control, web tracking and alignment are critical to ensure the web feeds on to the drum centrally and is captivated by the grippers each side. Lateral position can be adjusted in 0.1mm increments either manually or automatically with the base web auto tracking option.

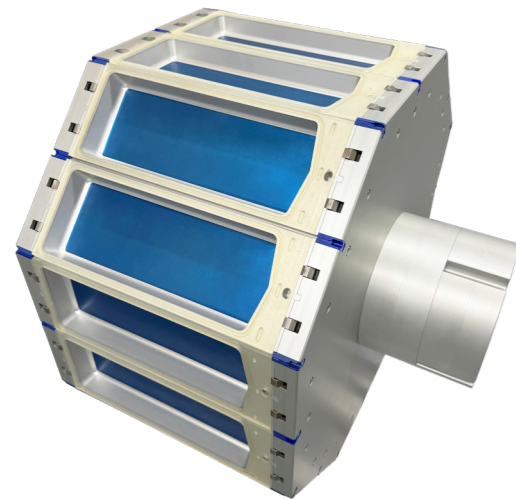
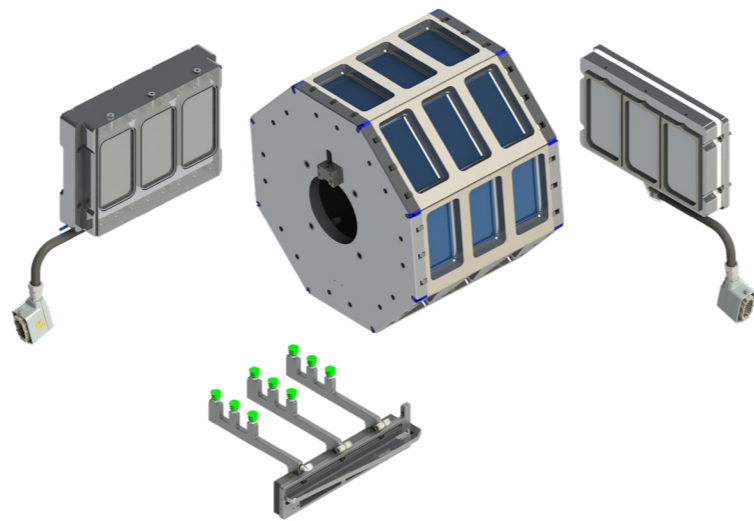


shawpak Tooling

A tool set consists of four main parts:

- Forming Drum
- Form Heater
- Seal Heater
- Controlled Take-off Assembly
- Die cut Cutting Board & Base (if required)

The innovative design means that tooling is compact, economic and above all quick and simple to change.



Forming Drum

The forming drum is completely bespoke to the product and cavities are designed around the size and shape of the medical device. This can be as simple as a basic rectangle through to a contoured 3D design with embossed surfaces.

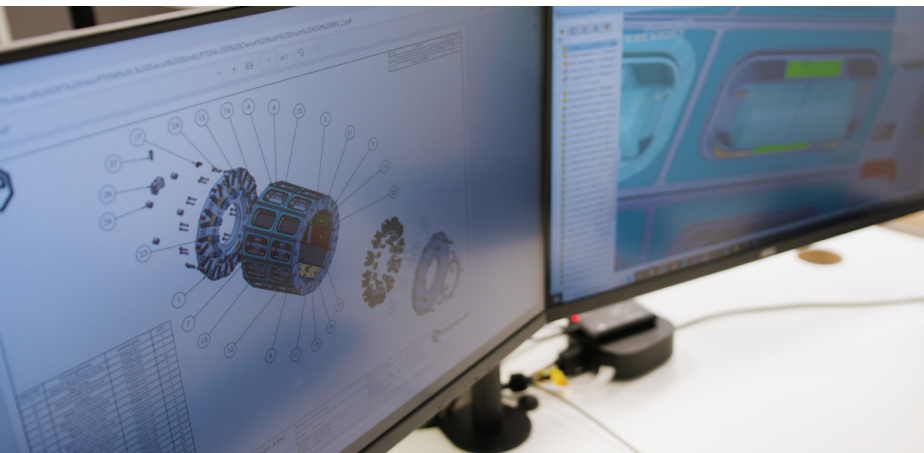
The drum design allows pack support and control of the product throughout the whole process to ensure packaging integrity is not compromised.

shawpak Pureform

Pureform is **shawpak's** unique forming process that eliminates witness blow holes and cold spots. Through high pressure air flow the Pureform process rapidly evacuates the air between the forming material and heater plate allowing highly consistent direct contact which eliminates any cold spots on the forming material. Airflow is through slots on the outer edge of the cavity without leaving any witness marks. These combined features give excellent consist clarity to the blister.



All **Shawpak** tooling is designed, manufactured and built in-house utilising the latest CAD/CAM technology.





shawpak Specifications

Main Machine	Standard	Option
Rotary Index Drive	●	
Clear Acrylic Front Guards & Doors	●	
Operator Interface Mounted on a Swivel Arm	●	
Electric/Pneumatic Enclosures	●	
Bolt Down Machine Feet	●	
Four Colour Light Beacon		○

Forming Head	Standard	Option
Airflex Form Bellows	●	
Digital Form Pressure Control	●	
Servo Driven Toggle Lock Form Head	●	
Pureform Heater	●	
Plug Assist		○

Sealing Head	Standard	Option
Airflex Form Bellows with Digital Pressure Control	●	
Servo Driven Toggle Lock Form Head	●	

Base Web Unwind	Standard	Option
Base Web Servo Drive Unwind - Ø76mm Mandrel	●	
Base Web Edge Detection - Passive		○
Base Web Auto Tracking Adjustment		○
Splice Table		○

Top Web Unwind	Standard	Option
Top Web Servo Drive Unwind - Ø76mm Mandrel	●	
Top Web Edge Detection - Passive		○
Top Web Auto Tracking Adjustment		○
Auto Print Registration Sensor for Pre-Printed Materials		○
Splice Table		○

Cutting	Standard	Option
Servo Driven Crosscut	●	
Centre Cut		○
Double Crosscut		○
Multi Lane Crush Cut		○
Multi Lane Perforation Cut		○
Plunge Cut Perforator		○
C Hole Punch (top & base web)		○
Die Cut Station with Pack Ejection		○

Outfeed	Standard	Option
Standard Low-Level Outfeed Conveyor	●	
Swan Neck Conveyor (standard height of 850mm)		○
Reject Conveyor		○

Overprint and Coding	Standard	Option
HD Digital Printer		○
Thermal Inkjet Printer		○
Thermal Transfer Printer		○
In Line Pre-Printed Label Applicator		○
In-line Print and Apply Label Applicator		○

Vision & Inspection	Standard	Option
Pack Discharge Confirmation Sensor	●	
OCR Vision Inspection		○
Product In Pack Detection Sensor		○
Splice Detection		○

Bench Top	Standard	Option
Bench Top with Loading Station	●	
Load Area Illuminated Infill Panels		○
Bench Top to Customer Requirements		○
Open Top (for automated loading)		○

External Finish	Standard	Option
Natural Anodise	●	

Control	Standard	Option
9" Colour Touch Screen	●	
Data Logging to SD Card		○
Data Logging via Ethernet Connection		○

Integration	Standard	Option
Manual Rotary Filling Station		○
Automatic Rotary Filling Station		○
Robot Loading		○
Production Line Integration		○

Electrical	Standard	Option
Remote Access Module		○
Voltage Surge Protector		○
Anti-Static Bar		○

Other	Standard	Option
Draft IQ/OQ Protocols		○
Tool Set Trolley		○
Essential Spares c/w Maintenance Cabinet		○



The **shawpak** method means no gripper chains and no trim, leading to much less maintenance, contamination and down-time. Coupled with this, the product is placed into the mould that creates the form, meaning no blister edges can ever be trapped in the seal.

Another great benefit is that coding and labelling is kept simpler on a single lane basis.





shawpak Servicing & Spares

At **shawpak**, we take pride in working alongside our customers to provide a seamless, ongoing support service to aid continuous production and minimal downtime.

To ensure our customers benefit the utmost, it is important for us to be able to tailor our service plans around our customers individual needs.

Our service specialists are able to define highly economical maintenance plans to provide a worry-free approach to service and maintenance and enhance the performance of your packaging systems.



Setting You Up

shawpak's installation and commissioning process ensures efficiency from day one. As we understand the production process, we are able to set up your equipment line in the most effectual way. Having an installation carried out by one of our experienced service specialists will provide optimum performance and correct OEM set up.



4 Year Total Care Plan

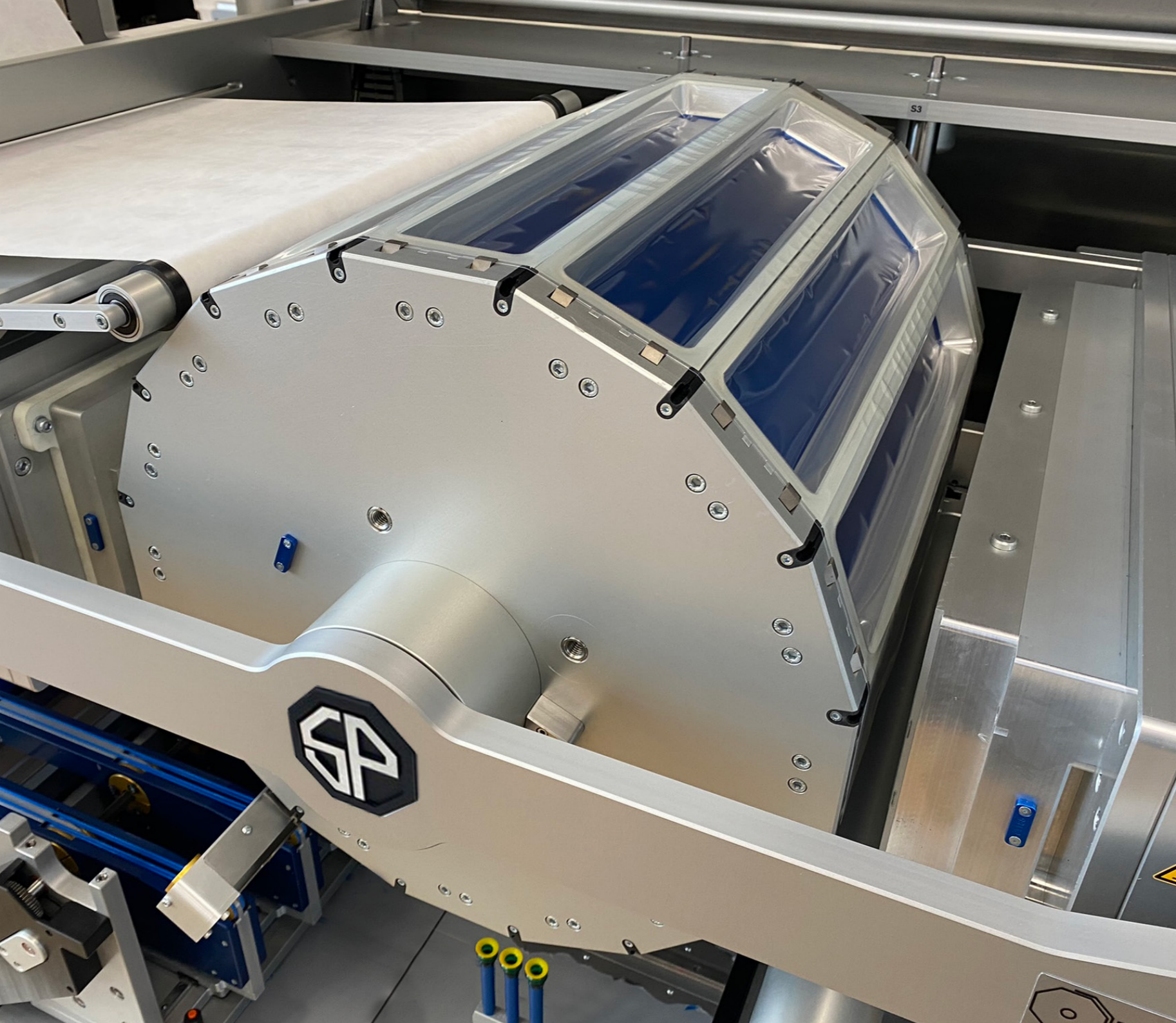
Our 4 Year Total Care Plan is a highly economical preventative maintenance plan we have put together to provide a worry free approach to service and maintenance to ensure increased efficiency and reduced downtime. This plan is based on one visit per annum comprising of a full service visit including on site labour and all mechanical parts changed by a qualified OEM engineer. This plan allows you to have a four year fixed budget for maintenance.

By having a **shawpak** total care plan in place, it means you'll have the benefit of a routine maintenance schedule planned around your production requirements.

4 Year Calibration Plan

Our 4 Year Calibration plan is created for a proactive and easy to budget for approach to calibration. This plan is based on one visit per annum comprising of a full machine and tooling calibration.





shawpak

The creation of the **shawpak** was an invention by David Shaw, CEO of Riverside Medical Packaging.

Following the initial development of the **shawpak** rotary thermoformer, **shawpak** launched at Riverside Medical Packaging Co Ltd in 2018 on the back of 35 years of medical device packaging experience.

From packaging design concept to reality **shawpak** design, build and manufacture standard, bespoke, and automated packaging machinery solutions.

Parts are machined in-house at our manufacturing facility which includes a range of CNC routers, a multi-bar turn mill centre and a range of 3 axis and 5 axis milling centres.

The **shawpak** range of products and services include:

- RT Series: RT32-20 | RT42-25 | RT62-25 | RT82-20
- LP Series: LP60-30 3SS | LP60-30 4SS | LP60-60 3SS
- LB Series: LB63-38
- LT Series: LT63-38
- SS Series
- Integrated Solutions
- Upgrades & Replacement Parts
- Remote Technical Support
- Maintenance Plans
- Training



shawpak are ISO 9001:2015 certified.



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MEDICAL PACKAGING SOLUTIONS

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