



# SEPHA

THINK SMARTER

INNOVATORS OF SPECIALISED EQUIPMENT FOR PACKAGE LEAK  
DETECTION, PRODUCT RECOVERY AND BLISTER PACKAGING IN  
THE PHARMACEUTICAL AND HEALTHCARE MARKETS SINCE 1980.

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## CONTENTS

About Us	04
<b>1. PACKAGING SOLUTIONS</b>	<b>07</b>
EZ Blister II	10
<b>2. PRODUCT INTEGRITY</b>	<b>13</b>
BlisterScan	16
VisionScan	18
PakScan	20
MediScan	22
<b>3. PRODUCT RECOVERY</b>	<b>25</b>
Press Out - Manual, Manual Wide, Semi-Automatic	28
Press Out - Automatic	30
Press Out - Universal, Mini-Universal	32
Which Press Out? Quick Reference Table	34
Customer Service	35





SMARTER RECOVERY

SMARTER PACKAGING

SMARTER INTEGRITY

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# ABOUT US

Since our foundation in 1980, Sepha have established a global reputation for innovation and development of specialised, high quality equipment for use in the manufacture of pharmaceutical blister packs, medical device and healthcare products. Our products enable customers to create high quality blister packs, to accurately detect leaks and weak seals in packaging, and to recover high value products from blister packs. Smarter thinking is at the core of our business and the customers who use our products around the world on a daily basis. We offer a smarter alternative to how they recover, leak test and package their products.

Sepha has established a strong global sales, customer service and support network in all major pharmaceutical manufacturing markets. We work with the majority of the world's top pharmaceutical companies and our products help them reduce production costs, improve their efficiencies and verify the integrity of the products they produce.

All of Sepha's products are designed, developed and manufactured in our UK headquarters to ensure the highest standards of quality. Our award winning innovations and designs are covered by patents, registered designs, or copyright.

We support our customers in meeting the stringent demands placed upon them by the highly competitive and regulated pharmaceutical markets. SEPHA endeavours to develop lasting partnerships with all of our customers, irrespective of their location across the world, and in many cases have become regarded as a natural extension of their R&D, production and packaging departments.



**PACKAGING SOLUTIONS**



**PRODUCT INTEGRITY**



**PRODUCT RECOVERY**



BLISTER PACKING MACHINES AND SERVICES  
THAT OFFER FLEXIBILITY AND HIGH QUALITY  
BLISTER PACKS FROM A WIDE VARIETY OF  
PACKAGING MATERIALS.

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# 1. PACKAGING SOLUTIONS





# 1. PACKAGING SOLUTIONS

SMALL SCALE, HIGH QUALITY BLISTER PACKAGING MACHINES AND SERVICES THAT ARE IDEAL FOR R&D, PRODUCT DEVELOPMENT AND CLINICAL TRIALS.

“THIS RANGE HAS BEEN DEVELOPED IN RESPONSE TO GLOBAL DEMAND FROM MAJOR PHARMACEUTICAL AND CLINICAL TRIAL LABORATORIES FOR BLISTER PACKING SOLUTIONS THAT ARE FLEXIBLE, ADAPTABLE AND CAPABLE OF HANDLING COMPLEX PACK DESIGNS AT MINIMAL COST.”

Ideal for small batches of pharmaceutical, medical or nutraceutical products from tablets and capsules to ampoules and medical devices, the EZ Blister range is economical, time efficient and suitable for:

- clinical trials and stability studies
- package development
- marketing samples
- low volume production eg. of specialist drugs

The compact and easy to use models provide a 3-in-1 operational flexibility and combine the convenience of a lab-scale machine with the capability of a full sized production machine.

## **CONTROL YOUR SCHEDULE**

Why wait until your Production Department can fit your small R&D batches into their busy schedule? EZ Blister gives your lab total control, so clinical trials and stability studies are completed on time and to budget. Every day

saved in R&D is a day when a new product can make extra profits on the marketplace. Your blister packing department also benefits as they will not have to clean and set-up large scale packaging equipment for small batches.

## **FLEXIBILITY**

With the capability to handle all thermoform and cold-form materials the EZ Blister offers high quality packs for all requirements including child-resistant/peelable blister packs, sachets, and monitored unit dose packs.

## **REPEATABLE RESULTS**

Programme bespoke settings for temperature, air pressure and dwell time through the electronically monitored controls or use the EZ Blister pre-set limits for easy operation.

For more information about R&D blister packing visit [www.sepha.com](http://www.sepha.com)



## EZ BLISTER II

# EZ BLISTER II

EZ BLISTER II IS A COMPACT, CUSTOMIZABLE, COMMERCIALLY COMPETITIVE BLISTER PACKAGING MACHINE FOR CLINICAL TRIAL LABORATORIES AND FACILITIES REQUIRING LOW VOLUME PACKAGING SOLUTIONS. IT SHARES THE TECHNOLOGY AND PROCESSES OF LARGER PRODUCTION MACHINES TO CREATE HIGH QUALITY PACKAGING.

EZ Blister II has a range of options that can be selected to tailor and format the machine to meet individual commercial, manufacturing and technological requirements. It is engineered and manufactured in the UK to GMP standards.

Blister packing of tablets, capsules, medical devices, ampoules, sachets, pouches and other products can be achieved from either thermoforming (eg. alu/pvc) or cold forming (alu/alu). Optional Teflon coatings and a pressure booster help optimize production when using difficult materials, and full pack traceability can be assured with the addition of a coding system.

### FEATURES

- Customizable to individual commercial and manufacturing requirements
- Easy use interface
- Compact space saving bench top design
- Precision engineered crimped sealing plates
- Capacity to produce 12 packs per minute
- Forms from pre-cut pieces of forming material
- Cold forming capability
- Fast set-up and minimal training required
- Tool-less change over of format parts in less than 2 minutes
- All machine parts either 316L or 304 stainless steel, anodized aluminium or PTFE
- Perforated cutting tools
- Pressure boost facility available and fully 21CFR part 11 compliant





## OPTIONS

- Casing choice of stainless steel grade 316L or stainless steel grade 304
- Coding facility
- Teflon coated forming plates
- Mobile workstation with optional reel holder
- Tooling design service
- Pack design service
- Modified Atmosphere Pack (MAP)



## MACHINE OPERATION

The EZ Blister II offers a 3-in-1 manufacturing process based on:

### FORMING

Pre-cut pieces of forming material are placed in the machine to create trays that are formed to exact product requirements.

### SEALING

The formed trays are sealed using crimped plates. Product traceability can be achieved by choosing the option of code embossing the pre-cut lidding foil.

### PERFORATING AND CUTTING

The sealed trays are cut and perforated using a precision die cutter to produce high quality finished packs.

## TECHNICAL SPECIFICATION

<b>OPERATION</b>	Semi-automatic	
<b>CASING CONSTRUCTION</b>	Stainless Steel (Grade 316L or 304)	
<b>FORMAT DIMENSIONS</b>	Format Area (Thermoform and Coldform):	180 x 120mm
	Standard Max. Draw Depth (Thermoform):	9mm* (Up to 14mm with plug assist)
	Standard Max. Draw Depth (Coldform):	9mm*
	Max. Foil Width:	165mm
<small>*Material dependant - deeper pockets may be considered upon request</small>		
<b>CONTROLS</b>	Temperature:	0 - 200°C
	Pressure:	12.10kN (20.10 with pressure booster)
	Timers:	0 - 99.99 sec
	Counter:	0 - 999 cycles
<b>UTILITIES</b>	Electrical:	110/230V single phase 6A
	Air Pressure:	6 Bar (10 Bar with pressure booster)
	Air Consumption:	14.5 litres/stroke at max. speed
<b>OPERATING SPEED</b>	Approx. 12 cycles per minute for any single operation	
<b>MACHINE DIMENSIONS</b>	715mm (W) x 550mm (L) x 530mm (H)	
<b>MACHINE WEIGHT</b>	125kg (275lbs) / Shipping Weight: 200kg (440lbs) / Tooling: 15kg (35lbs)	
<b>TOOLING CHANGEOVER</b>	2 - 3 minutes	

TECHNOLOGICALLY ADVANCED, NON-DESTRUCTIVE  
PACKAGE LEAK TESTING MACHINES THAT DELIVER  
ACCURACY, EFFICIENCY AND PRODUCT INTEGRITY  
ACROSS PHARMA, FOOD AND OTHER MARKETS.

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## 2. PRODUCT INTEGRITY





## 2. PRODUCT INTEGRITY

INNOVATIVE, NON-DESTRUCTIVE PACKAGE LEAK DETECTION EQUIPMENT THAT ENABLES OUR CUSTOMERS TO IMPROVE THE ACCURACY OF THEIR LEAK DETECTION PROCEDURES AND REDUCE COSTS.

“OUR GOAL IS TO DEVELOP SMARTER, MORE ACCURATE, NON-DESTRUCTIVE LEAK DETECTION EQUIPMENT THAT IS SIMPLE TO USE, SAVES OUR CUSTOMERS TIME AND MONEY, IMPROVES THEIR ENVIRONMENTAL FOOTPRINT AND GUARANTEES MORE ACCURATE, RELIABLE AND REPEATABLE RESULTS.”

Our technology based, non-destructive leak detection range is capable of detecting leaks in a wide range of pharmaceutical blister packs, sachets, pouches and medical device packaging. Our test process is clean and dry, allowing product that has been tested to be recovered and returned to the production line.

### WHY TEST BLISTER PACKS FOR LEAKS?

Testing is vital to ensure drug stability through protection from moisture, air and bacteria. Leak testing also minimises reject blisters and reduces deblistering and excess waste disposal. Performing leak testing before stability studies will confirm that all results apply to blisters which are known to be properly sealed.

### FULLY VALIDATED RESULTS

With a reliable validation process as standard, operator subjective judgments and errors are avoided.

### 21 CFR Part 11

All of our machines have data capture and export capabilities, and can form part of a 21 CFR Part 11 compliant system.

### ACCURATE AND CLEAR READINGS

Academic studies and whitepapers have proven that Sepha technology is significantly more accurate and reliable at detecting leaks in blisterpacks than other destructive methods of leak detection. Our detection technology can test for leaks as small as 7 micron and will identify the precise pocket or area of the pack that is leaking. These results can then be stored and exported for quality control and audit records.

To compare various leak testing methods visit [www.sepha.com](http://www.sepha.com)



**BLISTERSCAN**

# BLISTERSCAN

NON-DESTRUCTIVE LEAK DETECTION DEVICE FOR BLISTER PACKS. USES NON-CONTACT LASER SCANNING TECHNOLOGY TO DETECT LEAKS AND WEAK SEALS IN INDIVIDUAL POCKETS.

## FEATURES

- Detects leaks as small as 7µm in individual blister pockets
- Non-destructive clean and dry process so packaging and its contents are not damaged. Fewer samples are destroyed - less waste generated
- Fully validatable - faults identified by machine, not operator, removing subjectivity. Comprehensive GMP or GAMP validation documents available
- Full web testing, with no limit on number of pockets
- Can be set to operate at same rejection level as Blue Dye Test (30-50µm)
- Fast, semi-automatic set-up with self-testing mechanism to verify the functionality of the sensor each time
- Automatic sampling and statistical testing
- Test data can be automatically collected, printed and stored or downloaded for post-test analysis. Results stored for 10 years min.
- Innovative product recognition feature means product-specific test data is stored automatically in pre-designated file locations

- Easy calibration using tool supplied. Select calibration options through the touch screen display

## TRACING THE SOURCE OF A LEAK

BlisterScan instantly pinpoints the location of a faulty pocket seal. Further graphical analysis is provided for each individual blister pocket.

This improves your blister packing process by enabling engineers to trace and identify the source of a leak, according to current PAT (Process Analytical Technology) thinking.

The BlisterScan screen shows a pass (green) or fail (red) result for each blister pocket and also indicates the absence of a blister pack (black).



SEPHA LEAK TEST SERVICE GIVES CUSTOMERS A 'SNAPSHOT' OF THE QUALITY OF THEIR CURRENT STABILITY BATCHES. THE TEST DATA RESULTS ARE RETURNED IN GRAPHICAL AND TABULAR FORM FOR ANALYSIS.



### MACHINE OPERATION

No specialist knowledge or training is required:

1. Custom tooling is inserted into the tooling holder and is automatically scanned as soon as the drawer is closed. BlisterScan automatically selects the correct test method and displays pre-determined information (e.g. Nest Number, Product Name, Test Method, Date and Time).
2. Operator fills in the relevant batch data via the touch screen and keyboard.
3. The drawer is opened and the blister pack is placed onto the plate.
4. The drawer is closed to seal the test chamber. The operator presses the START button on the touch screen.

5. A Pass or Fail result is indicated immediately on completion of the scans (approx. 2 minutes after the start).

### LOW COST TOOLING

Test method development, and two low-cost custom-made plates, are required for each different blister format.

### TEST METHOD

A beam of light scans the individual pockets before and after applying a vacuum. After a set dwell time the blister pockets are scanned again. A Pass or Fail result is given based on a comparison of the 'before' and 'after' readings against a predetermined leakage acceptance level. From the results, a correlation with the hole size can be made.

## TECHNICAL SPECIFICATION

<b>BLISTER WEB</b>	Up to 320mm width (13") Up to 150mm length (6")	
<b>TEST CYCLE TIME</b>	1 - 6 mins	
<b>MEASUREMENT RANGES</b>	Down to hole size of less than 7 microns	
<b>TOOLING CHANGEOVER</b>	Approx. 30 seconds	
<b>CONFIGURATION</b>	DVD	CD-ROM drive
<b>OPTIONS</b>	Ethernet	2 x USB
<b>POWER SUPPLIES</b>	Electrical:	110/230V AC Single Phase
	Air:	6 Bar
<b>USER INTERFACES</b>	VGA LCD MMI colour wide angle touch screen display	
<b>HARDWARE</b>	with virtual instruments. Integral QWERTY keyboard. Printer	
<b>SOFTWARE</b>	System can be run in compliance with 21 CFR Part 11	
<b>CONSTRUCTION</b>	Stainless Steel (Grade 316L)	
<b>MACHINE DIMENSIONS</b>	630 (W) x 770 (L) x 1600 (H) mm (25 x 30 x 63")	
<b>MACHINE WEIGHT</b>	125kg (275lbs) / Shipping Weight: 300kg (660lbs)	
<b>WARRANTY</b>	Supplied with a 12 month warranty. After this period we recommend the customer takes out a Service Agreement.	



**VISIONSCAN**

# VISIONSCAN

VISIONSCAN IS A TOOL-LESS, NON-DESTRUCTIVE LEAK DETECTION DEVICE FOR PHARMACEUTICAL BLISTER PACKS.

## FEATURES

- Non-destructive seal and leak detection device designed for blister packs
- Incorporates high resolution imaging technology that will detect defects in individual blister pockets, channel leaks and weak seals down to 15 micron
- Tool-less. Ideal for production lines running multiple products
- Can test multiple packs per test cycle
- Rapid test time of less than 60 seconds per test
- Operating system can store up to 30,000 product types
- Simple operator use via a touch screen interface
- Can test packs that contain tablets / capsules in multiple material / design formats
- Objective, repeatable pack test for each product
- Capable of storing and exporting data for audit and quality control purposes
- Can form part of 21CFR part 11 compliant system
- Improved environmental impact
- Flexible, mobile table top device

Using the latest camera imaging technology, it offers modern pharmaceutical manufacturers a flexible, reliable, objective and cost saving alternative to destructive blister pack test methods such as blue dye. VisionScan is simple to operate and requires no tooling, making it ideal for high volume pharmaceutical manufacturers and packagers where high levels of quality control, cost reduction and multiple product changes are required.





## MACHINE OPERATION

VisionScan utilizes high resolution camera and projection technologies, combined with vacuum pressure to determine if weak seals or leaks are present in blister packs. It is simple to operate and generates accurate, reliable, repeatable results with clear pass or fail information. Test methods are developed for various pack formats and are stored in the inbuilt PC as 'recipes' for the pack type.

### 1. LOAD PACKS AND SELECT PRODUCT (IMAGE 1)

Packs are loaded by the operator into the test chamber and the drawer closed. The operator then selects the product being tested from the product recipe library.

### 2. START TEST AND ACQUIRE REFERENCE IMAGES (IMAGE 2)

Once the drawer is closed the operator presses the 'Start Test' button. An LED light grid is projected onto the blister packs, the camera takes

a reference image and the operator then confirms that correct number of packs is present. This image is then referenced against the pre-stored 'recipe'.

### 3. VACUUM PHASE (IMAGE 3)

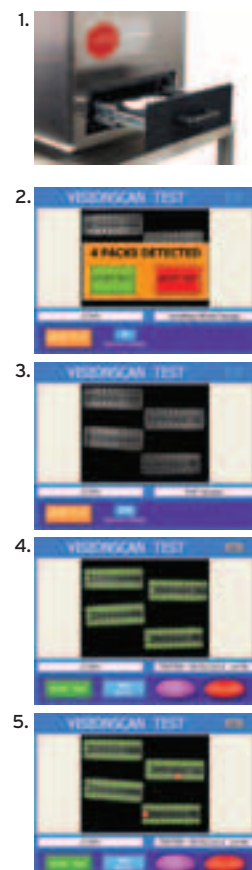
A vacuum is then applied in the test chamber. The camera captures an image of the packs under vacuum, and after a set dwell time the process is repeated, with the images referenced against the pre-stored recipe for the pack type. VisionScan software will then determine irregularities and defects in the packs and give a pass or fail result for each individual pocket in the blister packs.

### 4. PASS OR FAIL SCREEN - PASS (IMAGE 4), FAIL (IMAGE 5)

The results for each blister pack and individual pocket will then be available for the operator to see on the screen. A simple 'green' for pass or 'red' for fail result will be shown for each pocket. VisionScan is capable of detecting defects down to 15 micron.

## TECHNICAL SPECIFICATION

<b>OPERATION</b>	Semi-automatic
<b>CONSTRUCTION</b>	304 Stainless Steel casework
<b>TEST AREA</b>	220mm x 160mm
<b>CAMERA RESOLUTION</b>	1600 x 1200
<b>MEASUREMENT RANGE</b>	Will detect defects down to 15 micron
<b>MINIMUM BLISTER</b>	5mm deep x 5mm wide
<b>POCKET DIMENSIONS</b>	(pack dependent)
<b>OPERATING SPEED</b>	Less than 60 seconds per cycle
<b>MACHINE DIMENSIONS</b>	450 (W) x 500 (L) x 725 (H) mm
<b>SOFTWARE</b>	Windows XP PC with 15" touch screen operator interface 2 x USB ports, 1 x Ethernet port
<b>AUDIT COMPLIANCE</b>	Can be 21 CFR part 11 compliant
<b>MACHINE WEIGHT</b>	80kg / Shipping Weight: 100kg





**PAKSCAN**

# PAKSCAN

NON-DESTRUCTIVE MULTI-PRODUCT LEAK TESTING FOR POUCHES, SACHETS, SMALL MEDICAL DEVICES AND OTHER FLEXIBLE PACKS (NON-POROUS MATERIALS) WHICH CONTAIN DRY POWDER OR A SOLID COMPONENT.

## FEATURES

- **NON-DESTRUCTIVE TEST REDUCES WASTE COSTS**

Tested samples can be replaced in the packaging line as they are not damaged during the test process. This test is clean and dry, unlike the Methylene Blue Dye method, therefore PakScan generates less waste and reduces associated waste disposal costs.

- **TEST MULTIPLE PACKS SIMULTANEOUSLY**

PakScan inspects up to 4 large sachets simultaneously, each pack measuring up to 275mm x 90mm x 50mm. This speeds up testing and offers a more representative view of the entire production web. The machine can be customised for smaller or larger format areas or to accommodate users' specific sample size requirements.

- **IDENTIFIES LEAKS FROM 10µm**

PakScan identifies leaks in individual packs as small as 10µm, depending on the pack size and format. The system can also be pre-programmed at the same rejection levels as the Blue Dye Test, if required.

- **FULLY VALIDATABLE SYSTEM**

PakScan test results are generated automatically based on the pre-programmed test method used for each pack. As operator subjectivity is removed, the system can be validated. Complete GMP or GAMP validation documents are available.

- **CLEAR RESULT INDICATOR SCREEN**

Intact pouches show a green 'Pass' result and leaking pouches show a red 'Fail' result.



# A TOUCH SCREEN USER INTERFACE MONITORS THE PAKSCAN PROGRESS THROUGH A VIRTUAL INSTRUMENT PANEL.



## MACHINE OPERATION

Sample packs are loaded into a custom designed product nest and the test chamber lid is closed. There are then 4 key test phases:

### 1. EVACUATION PHASE

A pre-determined level of vacuum is applied to generate an expansive force which is monitored throughout the test cycle.

### 2. STABILISATION PHASE

Following evacuation of the vacuum, a stabilisation phase allows the air temperature to normalise.

### 3. DECAY TEST PHASE

The decay test phase measures any reduction in head space pressure. If the expansive force decays by more than a set amount the pack will be classed as a failure.

### 4. GROSS HOLE IDENTIFICATION PHASE

At the end of the decay phase, if the reactive force is less than the pre-determined level in the test method, a pack will be classed as a gross leak failure.

## TECHNICAL SPECIFICATION

<b>OPERATION</b>	Semi-automatic
<b>CONSTRUCTION</b>	All product contact areas constructed from Stainless Steel (Grade 316)
<b>PACK TYPE</b>	Sachets, pouches, bags, MAPs - in flexible and non-porous materials
<b>PACK DIMENSIONS</b>	275 x 90 x 50mm (10.8 x 3.7 x 2") per pack
<b>POWER SUPPLIES</b>	Electrical: 110/230V 1kva Single Phase Air: 6 Bar
<b>OPERATING SPEED</b>	Up to 4 cycles per minute
<b>SOFTWARE</b>	System can be run in compliance with 21 CFR Part 11
<b>MACHINE DIMENSIONS</b>	650 (W) x 750 (L) x 1660 (H) mm (25 x 30 x 65")
<b>MACHINE WEIGHT</b>	150kg (330lbs) / Shipping Weight: 180kg (400lbs)
<b>TOOLING CHANGEOVER</b>	Approx. 3 minutes A different product nest is required for each product to be tested



**MEDISCAN**

# MEDISCAN

MEDISCAN IS A TOOL-LESS, NON-DESTRUCTIVE LEAK DETECTION DEVICE FOR LARGER SINGLE NON-POROUS POUCHES, SACHETS AND MEDICAL DEVICE PACKAGING.

IT INCORPORATES THE LEAK DETECTION TECHNOLOGY AND SOFTWARE, DEVELOPED BY SEPHA, THAT IS UTILIZED ON A DAILY BASIS BY TOP GLOBAL PHARMA COMPANIES TO ENSURE PRODUCT INTEGRITY IN THEIR PHARMACEUTICAL PRODUCTION LINES.

## FEATURES

- Non-destructive seal integrity and leak detection device
- No tooling required, making it highly flexible across a number of pack types and sizes
- Capable of detecting weak seals, channel leaks and holes down to 10 micron
- Table top device
- Capable of handling wet or dry non-porous packages up to 100mm x 200mm x 250mm
- Easy operator use via touch screen interface and easy load chamber
- Capable of storing multiple test methods for up to 10,000 product types
- User defined password protection ensuring multiple operator use
- Fully validatable system
- Production of objective and repeatable results
- Test results can be printed, exported via USB (x2) or integrated into local quality control system via Ethernet cable
- Fast, efficient test speed
- Audit data available and fully 21CFR part 11 compliant



# A NON-DESTRUCTIVE LEAK TEST MACHINE GIVING ACCURATE, OBJECTIVE MEASUREMENTS TO ENSURE OPTIMAL PRODUCT INTEGRITY.



## MACHINE OPERATION

Sample packs are loaded into a custom designed product nest and the test chamber lid is closed. There are then 4 key test phases:

### 1. EVACUATION PHASE

A pre-determined level of vacuum is applied to generate an expansive force which is monitored throughout the test cycle.

### 2. STABILISATION PHASE

Following evacuation of the vacuum, a stabilisation phase allows the air temperature to normalise.

### 3. DECAY TEST PHASE

The decay test phase measures any reduction in head space pressure. If the expansive force decays by more than a set amount the pack will be classed as a failure.

### 4. GROSS HOLE IDENTIFICATION PHASE

At the end of the decay phase, if the reactive force is less than the pre-determined level in the test method, a pack will be classed as a gross leak failure.

## TECHNICAL SPECIFICATION

<b>OPERATION</b>	Semi-automatic
<b>CONSTRUCTION</b>	304 Stainless Steel Casework
<b>PACK TYPE</b>	Sachets, pouches, bags, MAP's and flexible packaging (non-porous)
<b>PACK DIMENSIONS</b>	Up to: 250 (L) x 200 (W) x 100 (D) mm
<b>OPERATING SPEED</b>	Up to 2 cycles per minute
<b>SOFTWARE</b>	Easy to use operator touchscreen interface
<b>MACHINE DIMENSIONS</b>	700 (W) x 400 (L) x 500 (H) mm (27 x 15 x 20")
<b>MACHINE WEIGHT</b>	80kg / Shipping Weight: 100kg
<b>TOOLING CHANGEOVER</b>	No tooling required

A COMPREHENSIVE RANGE OF PRESS-OUT  
DEBLISTERING MACHINES THAT OFFER SPEED,  
EFFICIENCY AND SAFETY IN THE RECOVERY OF  
VALUABLE PRODUCT.

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# 3. PRODUCT RECOVERY



# 3. PRODUCT RECOVERY



A COMPREHENSIVE RANGE OF AUTOMATIC, SEMI-AUTOMATIC AND MANUAL DEBLISTERING MACHINES THAT ENABLE THE SAFE RECOVERY OF VALUABLE PRODUCT FROM ALL TYPES OF REJECTED BLISTER PACK.

Sepha are the global leader in innovation and development of pharmaceutical deblistering equipment. Our machines are used globally on a daily basis by the majority of leading pharmaceutical companies to recover valuable product from blister packs.

All models in the Press-Out range allow rapid changeover and minimum downtime with maximum hygiene and efficiency. Using minimal pressure to extract tablets and capsules ensures that foil pieces do not detach from the blisters and prevents product damage during the deblistering process. SEPHA has products suitable for push-thru blisters as well as child resistant or peelable blisters.

## WHY RECOVER PRODUCT FROM BLISTER PACKS?

Blister packs are rejected because of: empty pockets; incorrect product; incorrect batch coding; leak test failure; and inventory changes. The recovered product can immediately be repackaged increasing production yields.

## REDUCE WASTE DISPOSAL COSTS

It is generally less expensive to dispose of empty blisters than filled ones, so it makes sense to

separate active product from waste packaging before disposal.

## ENVIRONMENTAL POLICY

Deblistering can help to meet legislative requirements whilst minimising the impact of manufacturing processes on the environment.

## INVENTORY MANAGEMENT

Manage fluctuating market demands and organise inventory efficiently by emptying existing blister stocks and repacking products into alternative formats.

## INCREASE STAFF MOTIVATION

Emptying blisters by hand is tedious and repetitive. Mechanical deblistering prevents sore or cut fingers, and reduces the risk of RSI or Carpal Tunnel Syndrome.

**For more information on the benefits of deblistering visit [www.sepha.com](http://www.sepha.com)**



**PRESS OUT**  
MANUAL

**PRESS OUT**  
MANUAL WIDE

**PRESS OUT**  
SEMI AUTOMATIC

# PRESS OUT

## MANUAL / MANUAL WIDE / SEMI-AUTOMATIC

PORTABLE MANUAL AND SEMI-AUTOMATIC DEBLISTERING MACHINES FOR RECOVERING TABLETS AND CAPSULES FROM PUSH-THRU BLISTERS WITH IN-LINE LAYOUT. MANUAL WIDE AND SEMI-AUTOMATIC MODELS ALSO HANDLE DIAGONAL / OFFSET LAYOUTS.

### FEATURES

- Portable
- No air supplies needed
- Non-slip safety pads
- Fully cGMP and easily cleaned
- Single change part
- Handles PVC/alu as well as alu/alu blisters
- Flexible - can be adjusted quickly to suit any push-thru blister pack
- Easy to use - no specialist skills needed
- Product recovered cleanly and hygienically
- Ideal for small batches
- Affordable

PRESSOUT  
MANUAL



PRESSOUT  
MANUAL WIDE



PRESSOUT  
SEMI-AUTOMATIC





## TOOLING

The single set of tooling is fully adjustable. A simple settings scale is printed on the platen plate for fast set-up within 1-2 minutes. Training takes less than 15 minutes.

### PRESSOUT MANUAL / MANUAL WIDE

#### MACHINE OPERATION

Blister packs are manually fed through a set of rollers by turning a handle. The tablets or capsules are simultaneously removed from the blister pack and separated from the waste packaging.

#### MANUAL MODEL -

In-line layout blister packs only.

#### MANUAL WIDE MODEL -

Handles blister packs with Diagonal / Offset layout as well as the more traditional 'In-line' design.

### PRESSOUT SEMI-AUTOMATIC

#### MACHINE OPERATION

Single blister packs are automatically fed through a set of rollers. The tablets or capsules are simultaneously removed from the blister pack and separated from the waste packaging. This machine uses the same patented deblistering mechanism as the Press-Out Manual Wide, but is driven by an electrical motor which runs continuously, providing an automated feed which increases the deblistering rate to 40 blisters per minute.

## TECHNICAL SPECIFICATION

	MANUAL	MANUAL WIDE	SEMI-AUTOMATIC
<b>OPERATION</b>	Manual	Manual	Semi-automatic
<b>BLISTER TYPE</b>	Push-thru	Push-thru	Push-thru
<b>BLISTER LAYOUT</b>	In-line	In-line and Diagonal / Offset	In-line and Diagonal / Offset
<b>FORMAT</b> Width	120mm (4.7")	170mm (6.7")	170mm (6.7")
<b>DIMENSIONS</b> Length	Unlimited	Unlimited	Unlimited
<b>CONSTRUCTION</b>	All product contact areas constructed from Stainless Steel (Grade 316) and ABS Food Grade		
<b>POWER SUPPLIES</b>	None required	None required	Electricity: Single Phase 110/230V
<b>OPERATING SPEED</b>	Up to 20 blisters per minute	Up to 20 blisters per minute	Up to 40 blisters per minute
<b>MACHINE DIMENSIONS</b>			
Width	200mm (8")	380mm (15")	365mm (14.4")
Length	300mm (12")	295mm (12")	340mm (13.4")
Height	200mm (8")	230mm (9")	250mm (9.8")
<b>MACHINE WEIGHT</b>	6.5kg (15lbs)	8kg (18lbs)	16kg (35lbs)
<b>SHIPPING WEIGHT</b>	8.5kg (19lbs)	11.5kg (25lbs)	28kg (61lbs)
<b>TOOLING CHANGEOVER</b>	3 minutes	3 minutes	3 minutes



## PRESS OUT AUTOMATIC

# PRESS OUT AUTOMATIC

DEBLISTERING MACHINE FOR RECOVERING TABLETS AND CAPSULES FROM PUSH-THRU AND MULTI-PRODUCT BLISTERS WITH IN-LINE AND DIAGONAL / OFFSET LAYOUTS.

### FEATURES

- Automatic feed
- Easy to use with no specialist skills required
- User interface with fault indicators
- Variable speed up to 60 blisters per minute
- Handles PVC/alu as well as alu/alu blisters
- No air supplies needed
- Low-cost tooling, fast turnaround
- Fully cGMP
- Custom or adjustable tooling
- Maintenance free
- No product or foil contamination
- Easy and fast to clean
- Wide model available for larger packs



# STATE-OF-THE-ART DEBLISTERING SOLUTION FOR THE PHARMACEUTICAL INDUSTRY WITH UNRIVALLED RECOVERY RATES, FLEXIBILITY AND SPEED.



## MACHINE OPERATION

The speed of the machine operation can be varied to a maximum of 60 blisters per minute.

1. Blister packs are fed automatically from the magazine stack through a set of rollers.
2. The tablets or capsules are gently eased out of the blister and are collected separately from the waste packaging.
3. A status panel on the user interface allows operators to quickly and easily identify the location of any faults during machine operation.

## TOOLING

Custom tooling is required for each different blister pack size. Format changeover, which does not require tools, is fast and easy.

## TECHNICAL SPECIFICATION

	AUTOMATIC	AUTOMATIC WIDE
<b>OPERATION</b>	Automatic	Automatic
<b>BLISTER TYPE</b>	Push-thru and Multi-product	Push-thru and Multi-product
<b>BLISTER LAYOUT</b>	In-line and Diagonal / Offset	In-line and Diagonal / Offset
<b>FORMAT</b> Width	105mm (4.1")	150mm (5.9")
<b>DIMENSIONS</b> Length	120mm (4.7")	120mm (4.7")
<b>CONSTRUCTION</b>	All product contact areas constructed from Stainless Steel (Grade 316) and ABS Food Grade	
<b>POWER SUPPLIES</b>	Electricity: Single Phase 110/230V	
<b>OPERATING SPEED</b>	Up to 60 blisters per minute	Up to 60 blisters per minute
<b>MACHINE DIMENSIONS</b>		
Width	620mm (24.4")	620mm (24.4")
Length	620mm (24.4")	620mm (24.4")
Height	1170mm (46.1")	1170mm (46.1")
<b>MACHINE WEIGHT</b>	65kg (143lbs)	85kg (187.4 lbs)
<b>SHIPPING WEIGHT</b>	120kg (264lbs)	140kg (308.6lbs)
<b>TOOLING CHANGEOVER</b>	3 minutes	3 minutes



**PRESS OUT**  
UNIVERSAL

**PRESS OUT**  
MINI UNIVERSAL

# PRESS OUT

## UNIVERSAL

## MINI UNIVERSAL

FULLY AUTOMATED, HIGH SPEED DEBLISTERING MACHINE CAPABLE OF REMOVING PRODUCT FROM UP TO 50 BLISTER PACKS PER MINUTE. SOPHISTICATED, GENTLE CUTTING TECHNOLOGY MAKES IT IDEAL FOR RECOVERING HIGH VALUE, FRAGILE TABLETS AND CAPSULES FROM ALL TYPES OF BLISTER PACK MATERIAL, INCLUDING ALU/ALU AND CHILD RESISTANT PACKS.

### FEATURES

- Automated, variable speed control & operation setting
- Capable of removing product from child resistant packs
- Automatic feed
- Can deblisten up to 50 blister packs per minute
- Handles all pack formats
- Integrated 316 Stainless Steel product collection bin
- Zero contamination levels
- Fully cGMP
- Sophisticated, easy to operate software control system
- Temperature and humidity monitoring option
- Easy access for fast cleaning and product changeover



# PRESS OUT

## UNIVERSAL



POU is the deblistering machine of choice for the world's largest producers of pharmaceutical blister packs because of its quality, flexibility, speed and unrivalled product recovery rates.

### MACHINE OPERATION

Products are recovered with zero shard contamination or product damage during a rapid 4 stage operation.

#### STAGE 1:

Packs are loaded into a feeding magazine and then auto-fed to the integrated cutting station.

#### STAGE 2:

The lidding material in each pack is precision cut around the base of each pocket using pack specific tooling to ensure zero product damage and contamination.

#### STAGE 3:

The packs are then rotated to specific press out tooling where the product is gently pushed out into the integrated, removable, 316 stainless steel collection bin. Product can now be safely returned to the production line for rework if required.

#### STAGE 4:

Empty blister packs are rotated to separate removable waste bin for disposal.

### POU MINI

Similar in features to the larger POU, only semi-automatic. Further details available on request from Sepha.

### TOOLING



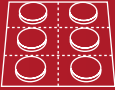





Custom tooling is supplied for each different pack size with fast delivery times.

## TECHNICAL SPECIFICATION

	MINI UNIVERSAL	UNIVERSAL
<b>OPERATION</b>	Semi-Automatic	Automatic
<b>BLISTER TYPE</b>	Push-thru and Child-resistant / Peelable / Multi-product	
<b>BLISTER LAYOUT</b>	All	All
<b>FORMAT</b> Width	Minimum 30mm (1.2")	Maximum 105mm
<b>DIMENSIONS</b> Length	Minimum 65mm (2.5")	Maximum 140mm
	*larger pack sizes may be possible upon request	
<b>CONSTRUCTION</b>	All product contact areas constructed from Stainless Steel (Grade 316) and ABS Food Grade	
<b>POWER SUPPLIES</b>	Electricity: Single Phase 110/230V Air Supply: 6 Bar	
<b>OPERATING SPEED</b>	Up to 20 blisters per minute	Up to 50 blisters per minute
<b>MACHINE DIMENSIONS</b>		
Width	620mm (24")	650mm (25.5")
Length	620mm (24")	1200mm (47")
Height	1325mm (52")	1300mm (51")
<b>MACHINE WEIGHT</b>	80kg (176lbs)	300kg (660lbs)
<b>SHIPPING WEIGHT</b>	150kg (330lbs)	420kg (924lbs)
<b>TOOLING CHANGEOVER</b>	1 minutes	5 minutes

# WHICH PRESS OUT?

## QUICK REFERENCE TABLE

BLISTER PACK TYPE (Perforated and Unperforated)	PRESS-OUT MANUAL	PRESS-OUT MANUAL WIDE	PRESS-OUT SEMI AUTOMATIC	PRESS-OUT AUTOMATIC	PRESS-OUT UNIVERSAL MINI	PRESS-OUT UNIVERSAL
<b>PUSH-THRU</b>						
PVC/Alu PVDC/Alu PP/Alu ACLAR/Alu 	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓
Alu/Alu 	✓	✓	✓	✓	✓	✓
<b>CHILD-RESISTANT</b>						
Push-Thru 	✓	✓	✓	✓	✓	✓
Peelable 	-	-	-	-	✓	✓
<b>DIAGONAL / OFFSET</b> 	-	✓	✓	✓	✓	✓
<b>MULTI-PRODUCT</b>						
In-line 	✓	✓	✓	✓	✓	✓
Staggered 	-	-	-	-	✓	✓
<b>CIRCULAR</b> 	-	-	-	-	✓	✓

# CUSTOMER SERVICE

CUSTOMER SUPPORT AND CUSTOMER CONFIDENCE IN OUR PRODUCTS IS AT THE CORE OF THE SEPHA BUSINESS. WE WANT TO ENSURE THAT OUR CUSTOMERS BUY THE CORRECT PRODUCT FOR THEIR NEEDS AND THAT THEY ARE FULLY TRAINED IN HOW TO OPERATE OUR EQUIPMENT. IF SOMETHING SHOULD GO WRONG, WE HAVE A FAST, QUALITY RESPONSE AVAILABLE FROM OUR SERVICE ENGINEERS AND PARTNERS.

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## **INITIAL CONSULTATION**

Before purchasing a machine from Sepha we will work with you to ensure that the product, and associated tooling, meets your needs and is designed to meet your specific production requirements.

## **INSTALLATION**

All machines are supplied with comprehensive documentation and an Instruction Manual. We also provide on-site training or a demonstration video.

## **VALIDATION**

If required, validation assistance can be given in the form of protocols to be completed by the end user.

## **TECHNICAL & CUSTOMER SUPPORT SERVICES**

Experienced staff are available at all times to provide a high level of support and advice on a wide range of technical and pharmaceutical processing and production issues.

## **MAINTENANCE-FREE OPERATION**

SEPHA EZ Blister and Press-Out machines are virtually maintenance-free, requiring only cleaning. All parts to be cleaned are easily removed from the unit and can be thoroughly washed in hot water and dried at elevated temperatures.

## **WARRANTY**

All machines and component parts are supplied with a 12 month warranty (including labour) applicable from date of installation. This excludes normal wear and tear or loss of parts.

## **EXTENDED WARRANTY**

We offer an extended warranty plan that extends the initial 12 month warranty. This service includes customer and machine specific service level agreements, on call service plans and tele-support plans.

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All SEPHA products are covered by patents, registered trade marks or copyrights.

All SEPHA machines conform to CE certification requirements.

**Sepha Ltd**

Unit 25

Carrowreagh Business Park

Carrowreagh Road, Dundonald

Belfast BT16 1QQ

Northern Ireland

United Kingdom

**T:** +44 (0)28 9048 4848

**F:** +44 (0)28 9048 0890

**E:** info@sepha.com

**www.sepha.com**

