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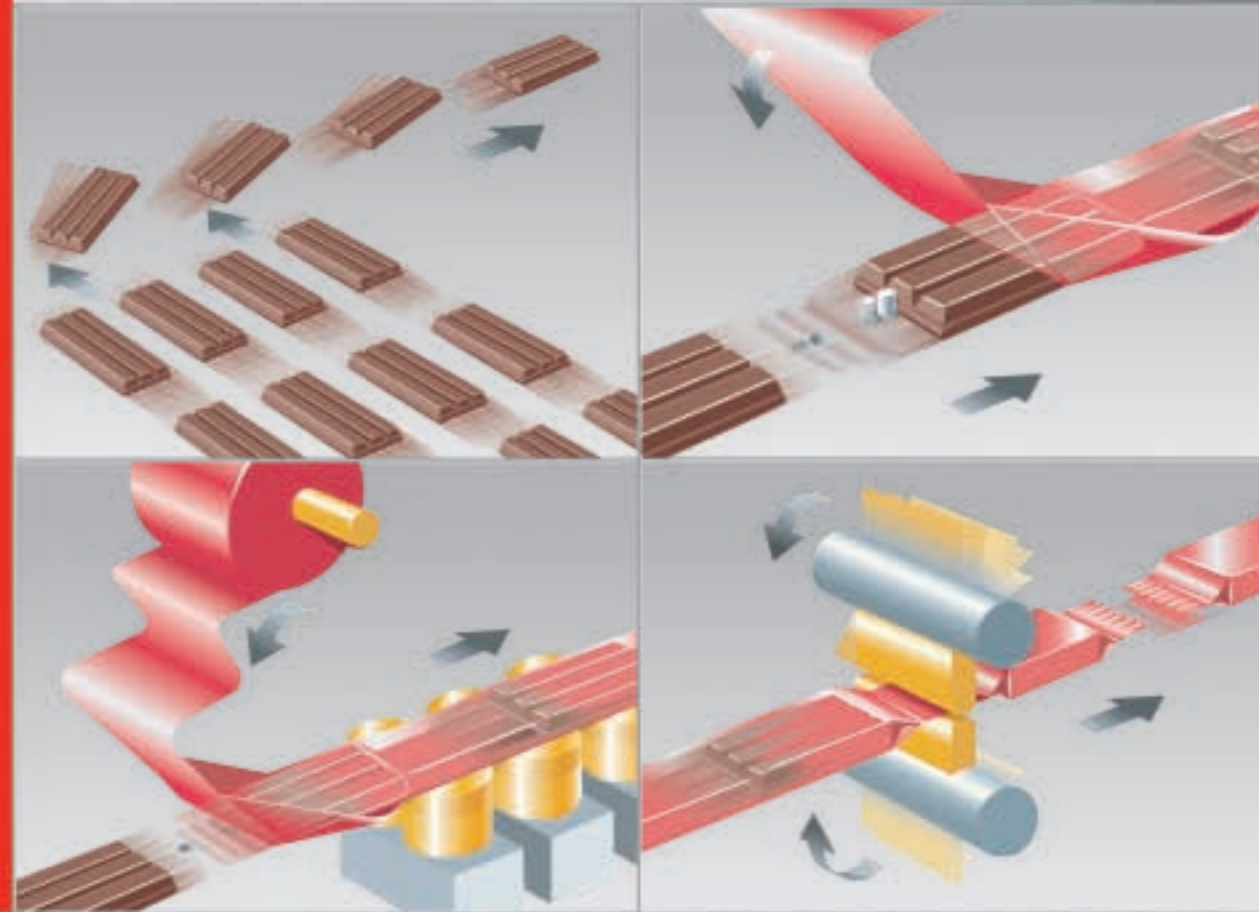
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Members of the Bradman Lake Group Ltd  
A Langley Holdings Company



## Flow Wrapping Machinery

### Technology You Can Trust

The data and material depicted in this document are given for reference only and can be changed without preliminary notice.

The company protects its intellectual property with patents and other means.

Designed and produced by Selwyn Taylor Limited





## The Bradman Lake Group

The Bradman Lake Group is a privately owned business specialising in the design, development, manufacture and service of packaging machinery to an extensive range of industries globally. The company is composed of three key brands. Each of the brands, Autowrappers, Bradman Lake and Europack, has many years of knowledge with their own specialised range of equipment.

Bradman Lake Group has integrated the brands to become a major supplier of packaging technology to the Bakery and Biscuit, Confectionery, Frozen Foods, Dry Foods, Consumer and Healthcare industry sectors.

Combining the strengths of these brands, with experience amounting to over 200 years, has made the Bradman Lake Group a world class supplier of stand-alone and integrated packaging machinery lines and services. Bradman Lake Group equipment is at work in more than 20,000 installations, all supported by a global network of sales and service support.

Bradman Lake has plants in Bristol and Beccles in the United Kingdom and Charlotte, North Carolina, in the United States, with regional offices in China and Russia.

## Flow Wrapping Machinery

For many products the pillow style pack produced by a horizontal form fill and seal type of flow wrapping machine is the most practical and economic form of packaging. The flow wrap combines high speed with good barrier protection and is forgiving with regard to product tolerances.

The Autowrappers brand is a world-leading supplier of this type of machine. For over half a century, Autowrappers have designed and manufactured flow wrapping machines for a wide variety of applications in an extensive range of industries. All around the world leading companies in the chocolate and confectionery, biscuit, bakery, fresh and frozen foods, pharmaceutical, household and personal products industries look to the Autowrappers brand for innovative and reliable solutions to packaging problems.

From our plants in the UK and the US we can supply anything from a 'stand alone' machine for low speed, hand fed applications up to a fully automatic system to meet the demands of the most sophisticated hi-tech processing and packaging lines. Systems can include automatic feeding, product storage, and multiple flow wrapping for primary wrapping and multi-packing.

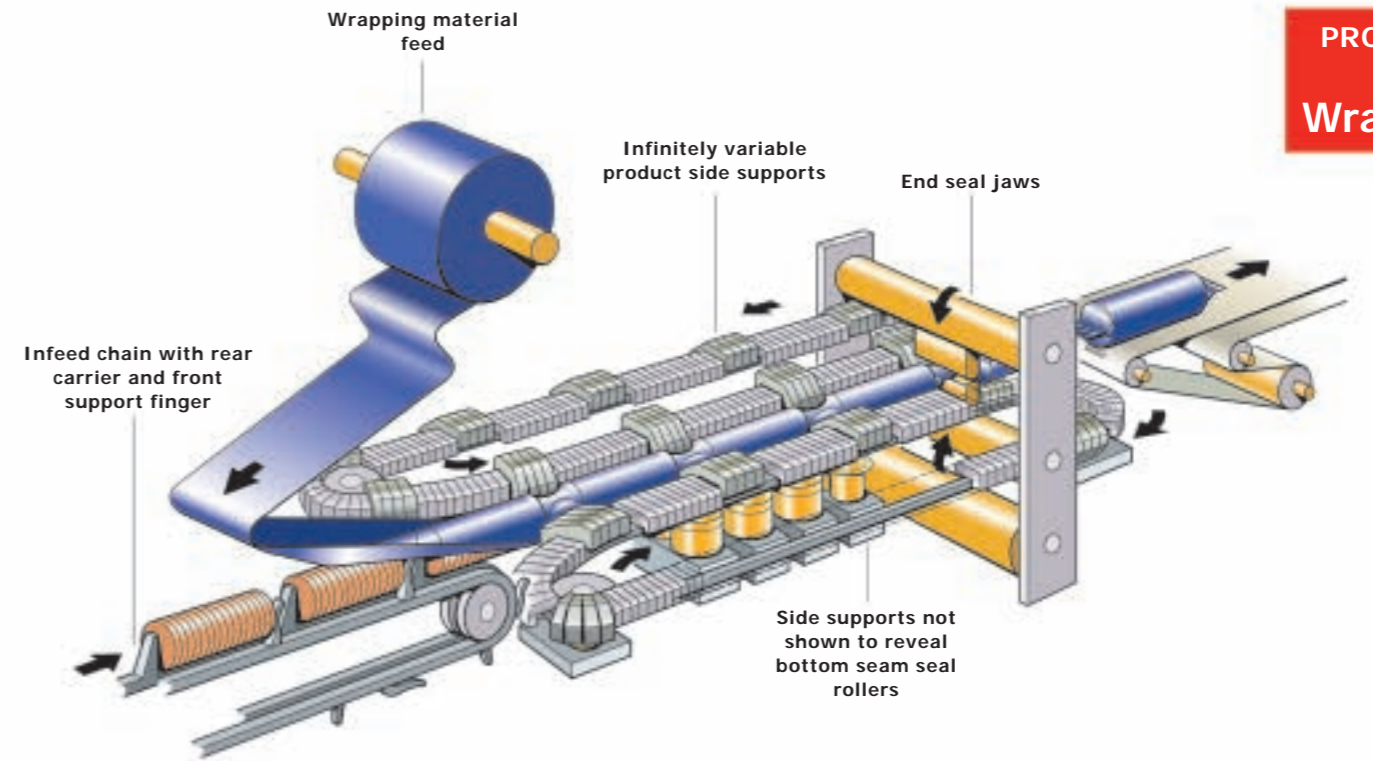
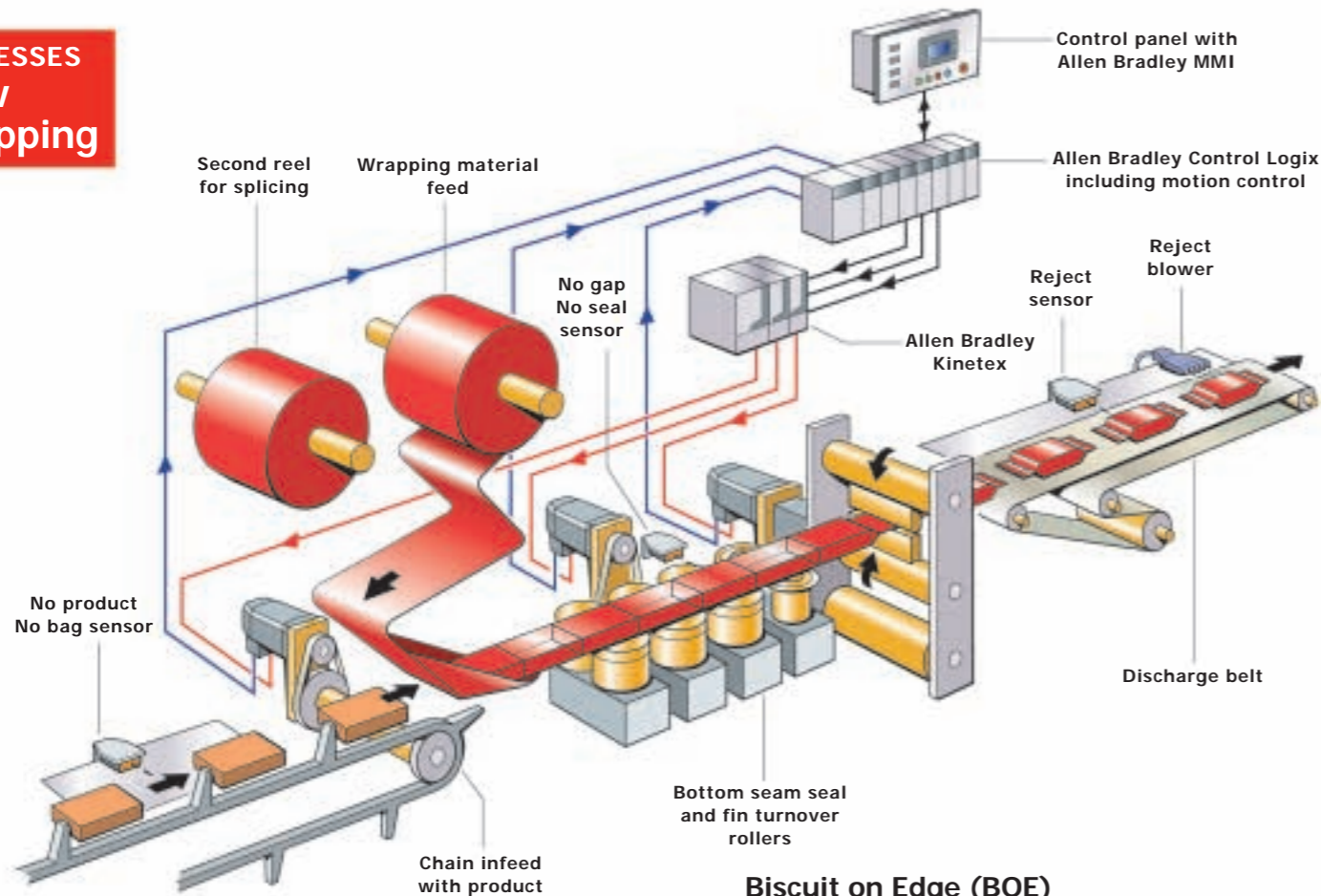
Autowrappers Flowtronic machines operate at the highest levels of efficiency. The machines have clean modern lines, are simple to operate and maintain as well as being able to accommodate a wide range of product sizes with simple and quick change over. Advanced features, including no product/nobag, no gap/noseal and the 'soft jaws' feature, which is unique to our machinery, ensure maximum machine availability whilst minimising the risk of product damage and wastage. A wide range of optional features is available for the Autowrappers Flowtronic machines allowing precise adaptation to meet your specific requirements. Fundamental to our success is the firm belief that our responsibility to customers does not end when the equipment is delivered.

Bradman Lake highly trained technicians provide world-wide support by site visits or through modem links both during and after the warranty period.

Accreditation to ISO9001 with frequent independent audits ensures consistent and measurable quality control of all operations including sales, design and manufacture.







### Standard Pillow Pack

Single overall pillow style pack with crimped end fins, with or without gussets, and a longitudinal sealed seam turned flat against the underside of the pack.

### Operation

Autwrappers Flowtronic range epitomise the standard principles of horizontal form fill and seal flow wrapping machines. A single web of material is fed from the reel mounted over the machine infeed whilst the product is manually or automatically loaded into the pockets of the continuously moving infeed chain. As the material passes around a folding box it is formed into a tube. The product passes through the folding box and is inserted into the tube of material. At this point the infeed carrier falls away and the product is transported by the material towards the end seal jaws of the wrapping machine. A series of rollers close the longitudinal seam of the pack whilst maintaining precise control of the wrapping material and a final pair of fin turning rollers fold the fin flat against the underside of the pack. The rotating end seal jaws close the end of the pack and the integral knife cuts the pack to the correct length. The bottom seam seal rollers and end seal jaws may be cold or heated depending on the type of wrapping material.

### Biscuit on Edge (BOE)

This pack is generally the same as the standard pillow pack but, as the name suggests, the biscuits are placed on their edges and wrapped as collations rather than single products. The pack ends are always gusseted on BOE machines.

#### Soft Jaws

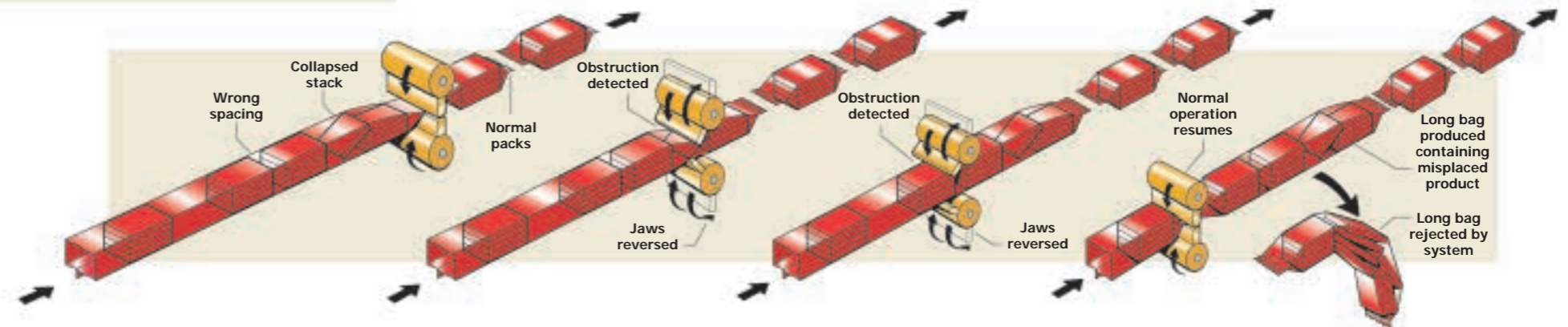
The soft jaw feature, which prevents misplaced products from jamming the end seal jaws, is unique to Autwrappers machinery. The drive load is constantly monitored and any increase above normal running level causes the jaws to reverse direction. This allows the misplaced product to pass through the jaws and produces a long pack that is rejected from the machine discharge. When the obstruction is clear of the jaws the machine automatically resumes normal operation.

### BOE Operation

The operation of the BOE machine is generally the same as a standard horizontal form fill and seal flow wrapper but the product feed system and handling during the wrapping process is adapted to suit the 'on edge' collation. The collation of biscuits is manually or automatically fed into a cross feed conveyor, which is at right angles to the main machine infeed. Whilst on the cross feed conveyor the collation is in wide edge leading configuration but its orientation is changed to narrow edge leading at the right angle transfer into the wrapping machine infeed. As the biscuits transfer along the infeed they are supported at the rear by the infeed carrier and at the front by a spring loaded finger. The wrapping material is fed from a reel mounted above the machine infeed and the web is taken over guide rollers to the folding box where it is formed into a tube around the product. As the product passes through the folding box and into the tube of material the front

product support finger and the rear infeed carrier drop away and control of the collation transfers to the side supports. These maintain control of the collation as it transfers from the folding box to the end seal jaws ensuring that the biscuits remain on edge until the pack is completely sealed. In addition to controlling the product the side supports automatically gusset the end seals which reduces the overall width of the end fin.

Two types of side supports are available on Autwrappers machines. Fixed collation length supports with modular size parts for different size products are pictured lower left on page 8. Infinitely variable supports with semi-automatic size changing as illustrated above. The most suitable type of support is selected to suit the application.





The **Autowrappers** brand is synonymous with innovation and high quality packaging machinery developed over half a century of unparalleled experience in handling a wide variety of products. From our UK factory we supply a wide variety of horizontal form fill and seal flow wrapping machines to suit all requirements from a hand fed stand alone machine up to high speed machines integrated into fully automatic production and packaging lines.

Our project engineering team manage every order and project managers are frequently involved at initial enquiry stage to ensure that the equipment meets the requirements of the most complex and demanding applications. In depth product testing, material analysis, operator/engineer training and worldwide after sales support complete the package of services offered by the Autowrappers brand.



**Biscuit & Bakery**

Many different shapes of biscuits, cookies, crackers and baked products including crumpets, cakes, scones, pizza and pies can be wrapped on Autowrappers machines. An extensive range of automatic product handling, feeding and storage systems is available and we can offer completely automatic systems from the cooling tunnel through to collating the finished packs for case packing.



**Chocolate & Confectionery**

The Flowtronic range of machines can handle a wide variety of moulded, enrobed or deposited chocolate and confectionery products. Products the wrapping machine at speeds up to 1000ppm. Products may be wrapped individually or collated and multipacked in various configurations as naked or primary wrapped products.

**Food (fresh & frozen)**

This category comprises a wide range of food products including frozen items such as burgers, ice cream and pizza and fresh produce including fruit and vegetables, cheese, tea and coffee bags. Steel-It paint or full stainless steel construction with IP65 (Nema 4) protection is available to suit the environmental conditions in which the machinery is often required to operate.

**Pharmaceutical, Household & Personal**

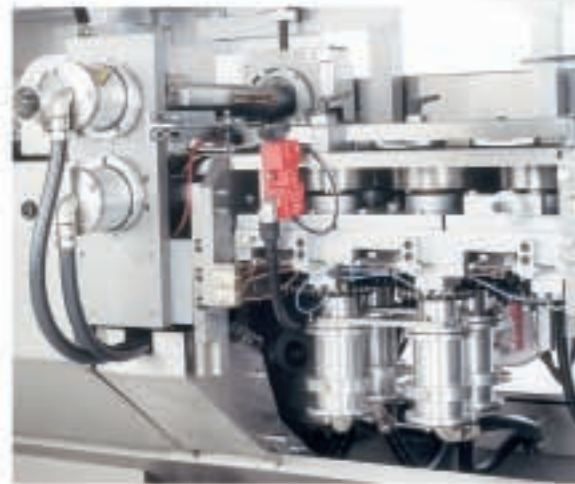
Typical pharmaceutical products include surgical gloves, dressings, pregnancy test kits and surgical instruments. Packs can be sterilised by gas or radiation processes. For household use our machines wrap firelighters, detergent tablets, household gloves, cleaning cloths and scourers whilst personal products include soap, razors and tissues.







Interior view of Flowtronic 120 electrical cabinet



End seal jaws and bottom seam rollers of a Flowtronic 120 protected to IP65



Interior of a Flowtronic 120 showing individual servo motors on each axis

All Autowrappers machines are constructed to the highest engineering standards with robust construction to ensure a long working life under the most arduous operating conditions. Many of our machines are still operating thirty years and more after they were first installed.

#### Flowtronic 110

The Flowtronic 110 is our 'entry level' electronic flow wrapping machine. It is particularly favoured for low speed, hand fed applications or where only a simple form of automatic feeding is required. Value engineering principles were rigorously applied when the Flowtronic 110 was designed to ensure that it would meet the requirements of the tightest budget whilst maintaining Autowrappers tradition for building reliable, robust packaging equipment. The Flowtronic 110 will handle products up to 230mm wide and at speeds up to 300 packs per minute.

#### Flowtronic 120

The Flowtronic 120 is the result of over fifty years of experience in the design and manufacture of packaging systems and it is the mainstay of our range of electronic flow wrapping machines. The machine incorporates an Allen Bradley PLC control system with three axis servo drive and motor package. The Flowtronic 120 is suitable for all applications and is used with equal success as a simple stand-alone, hand fed machine and in fully integrated automatic systems. In its standard form the Flowtronic 120 will handle products up to 150mm wide and larger products can be wrapped on the semi-wide and wide versions. Depending on the end seal jaw configuration the Flowtronic 120 is capable of cycling at speeds up to 1,000 packs per minute.

continued



Operating parameters for up to 32 different products can be stored in the memory of the Flowtronic 120 and instantly recovered making size changing fast and efficient.

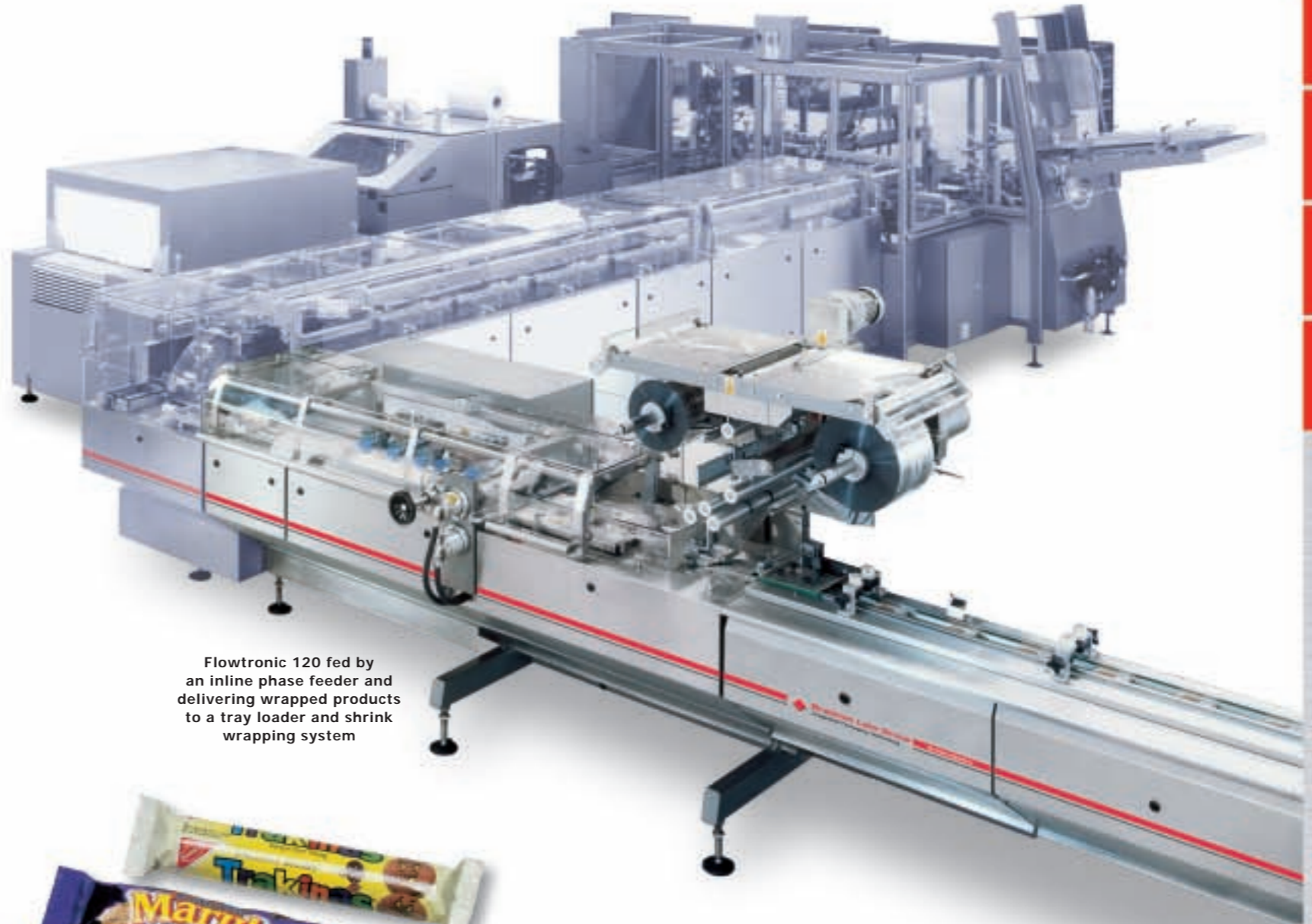
Advanced features including no product/no bag no gap/noseal and the 'soft jaws' feature, which is unique to Autowrappers machines, are available on the Flowtronic 120. These features enhance operating efficiency and minimise product and material wastage.

A wide range of optional features is available for the Flowtronic 120. These enable the machine to be readily adapted to meet the customer's specific requirements. The Flowtronic 120 can also be used in conjunction with a variety of feeding systems for semi or fully automatic operation.

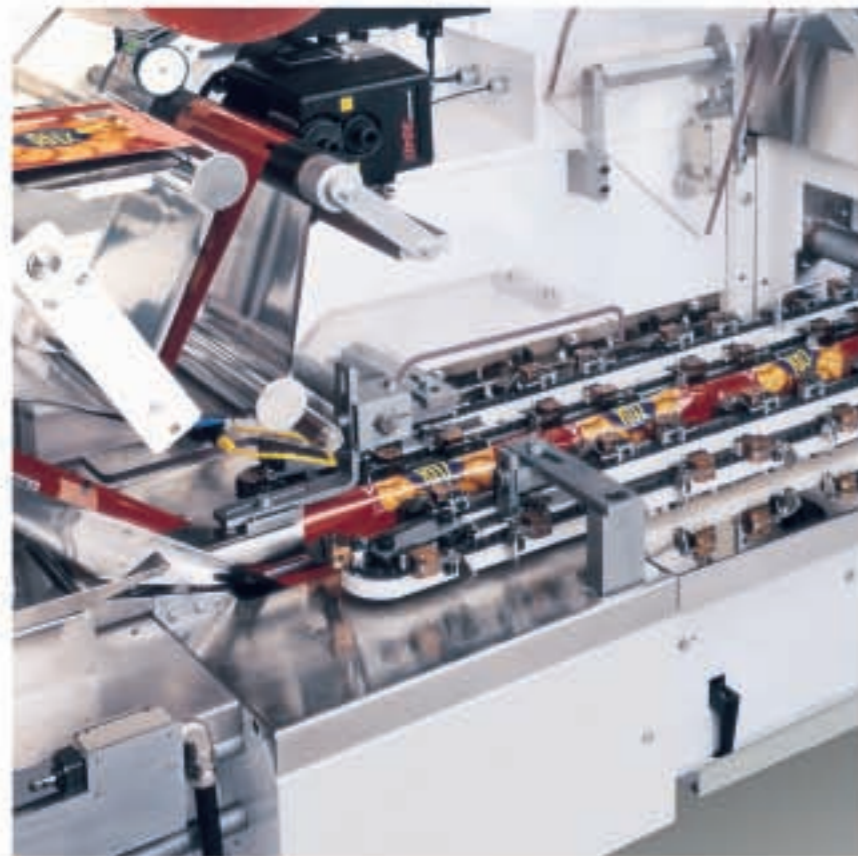
### Flowtronic 130 BOE

The Flowtronic 130 BOE flow wrapping machine is a derivative of the Flowtronic 120 and incorporates the same Allen Bradley PLC control and three axis servo drive. It is fitted with a right angle cross feed unit, front and rear supports on the infeed and special side mounted product support units control the product through the end seal jaws and create the distinctive gusseted style pack. Products can be manually or automatically loaded into the cross feed unit and wrapping speeds up to 200 packs per minute can be achieved.

Data sheets giving further details of all our Flowtronic machines are available on request.



Flowtronic 120 fed by an inline phase feeder and delivering wrapped products to a tray loader and shrink wrapping system



Product side supports on a Flowtronic 130BOE



### Integrated Packaging Systems

Autowrappers flow wrapping machines are frequently incorporated into fully integrated packaging systems and supplied as a turnkey solution. Feeding systems are manufactured in house and we work closely with companies within the Bradman Lake Group and other OEM's. We also offer project management services where the customer prefers to purchase the system components directly from the manufacturer. The illustration shows a Flowtronic 120 flow wrapping machine and inline phase feeder over-wrapping canned fish. The system also includes a tray erector, collator, tray loader and shrink wrapper.





Verso-stor buffer storage system

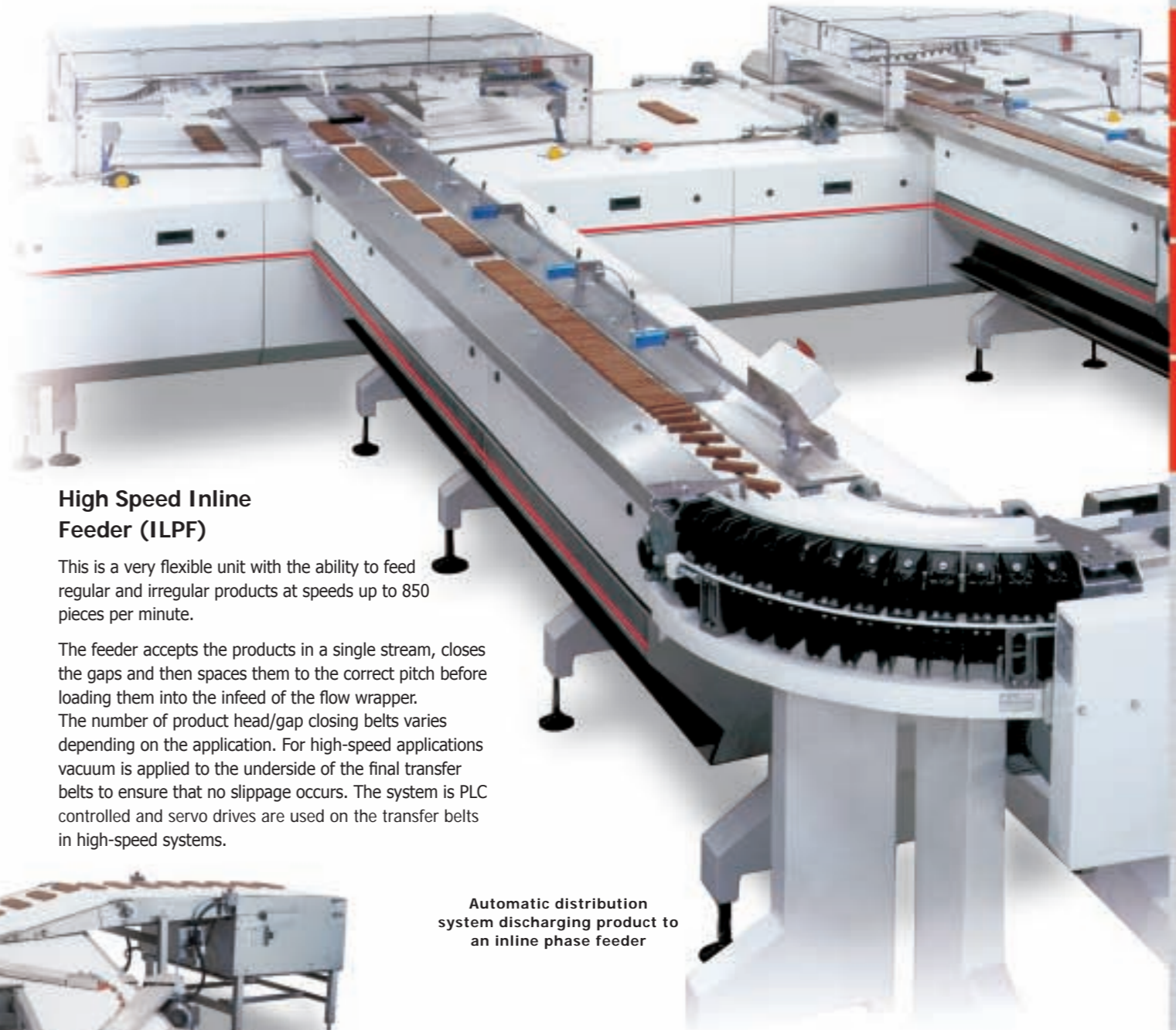
## Buffer Storage System

Autowrappers Verso-stor buffer storage system can be incorporated into any of our feeding systems. They are frequently used in conjunction with automatic distribution systems where a simple storage and re-feed belt would not provide sufficient capacity. Verso-stor buffers are individually designed to meet the customer's specific requirements with regard to storage and available space.

## Automatic Distribution System (ADS)

These systems were developed for use with bar type confectionery but they are suitable for any product which is delivered in regimented rows and we have successfully adapted ADS technology for use with other products such as frozen French bread pizza.

The system is modular in design and any number of feed stations can be incorporated to meet the requirements of the application.

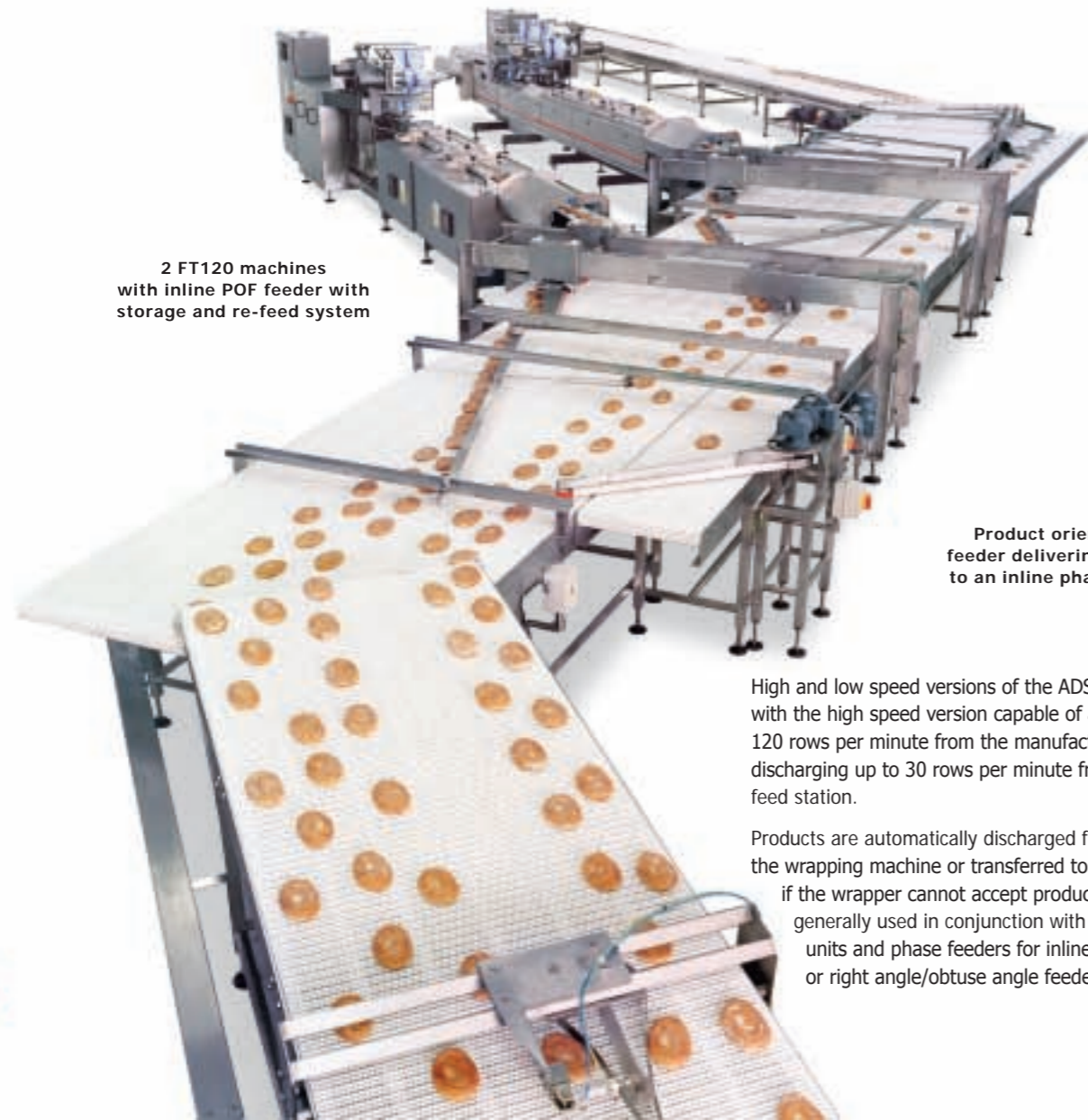


## High Speed Inline Feeder (ILPF)

This is a very flexible unit with the ability to feed regular and irregular products at speeds up to 850 pieces per minute.

The feeder accepts the products in a single stream, closes the gaps and then spaces them to the correct pitch before loading them into the infeed of the flow wrapper. The number of product head/gap closing belts varies depending on the application. For high-speed applications vacuum is applied to the underside of the final transfer belts to ensure that no slippage occurs. The system is PLC controlled and servo drives are used on the transfer belts in high-speed systems.

Automatic distribution system discharging product to an inline phase feeder

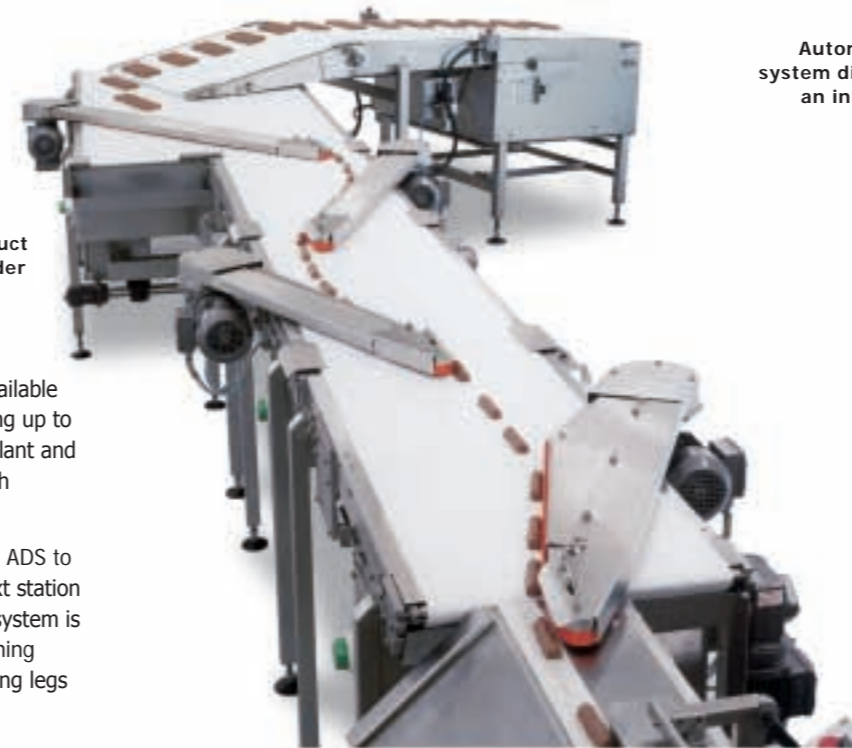


2 FT120 machines with inline POF feeder with storage and re-feed system

Product orientation feeder delivering product to an inline phase feeder

High and low speed versions of the ADS are available with the high speed version capable of accepting up to 120 rows per minute from the manufacturing plant and discharging up to 30 rows per minute from each feed station.

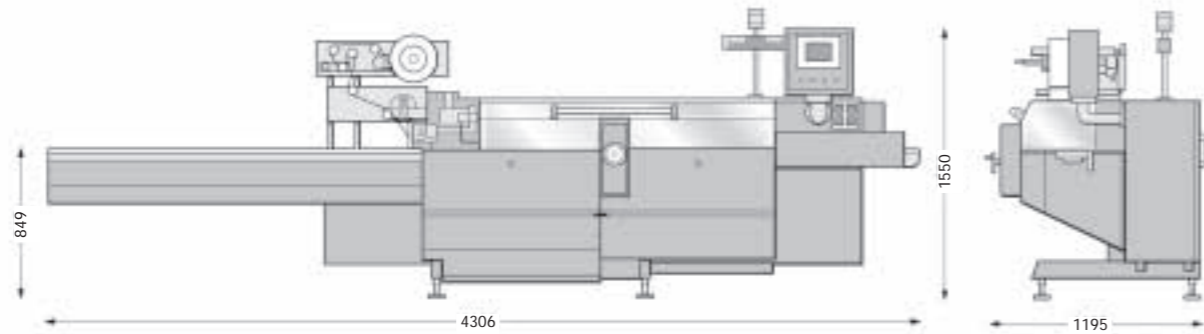
Products are automatically discharged from the ADS to the wrapping machine or transferred to the next station if the wrapper cannot accept product. The system is generally used in conjunction with bar turning units and phase feeders for inline wrapping legs or right angle/obtuse angle feeders.



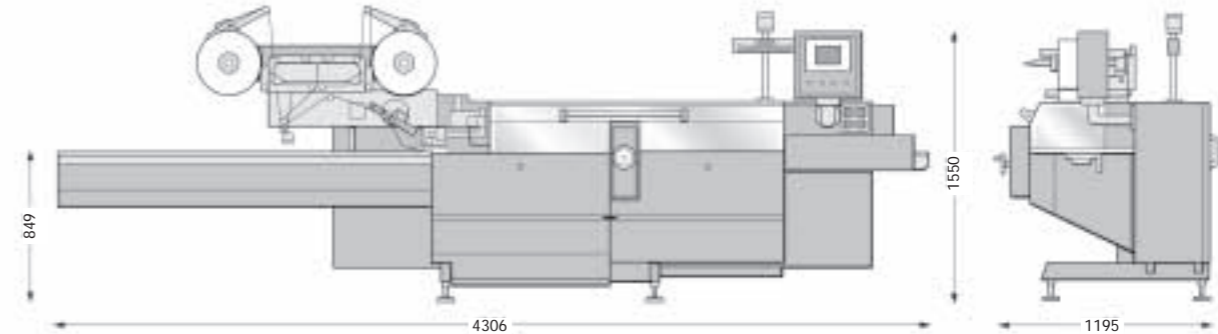
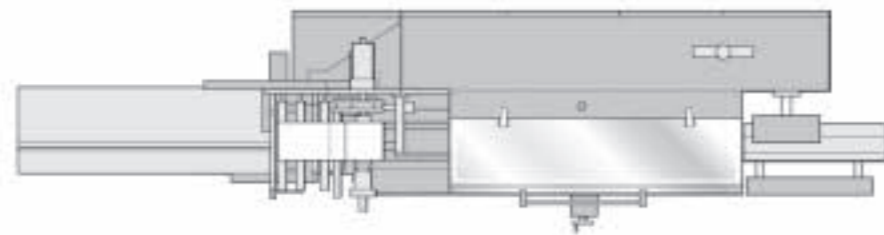
## Product Orientation Feeder (POF)

The product orientation feeder is available in a variety of widths and lengths and the number of base and side belts can be changed to suit the specific application. The POF is designed to accept the products either in regimented rows or randomly distributed on a delivery conveyor and to configure them as a single stream, narrow edge leading. Typical product sizes range between 40mm and 175mm in length with speeds up to 1000 products per minute. However, due to the flexibility of the design it may be possible to accommodate products and speeds outside these ranges.

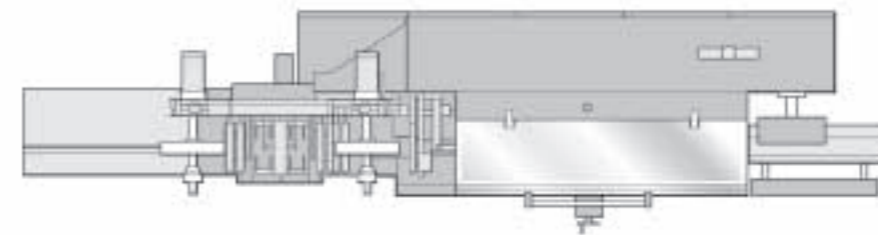




FLOWTRONIC 110



FLOWTRONIC 120

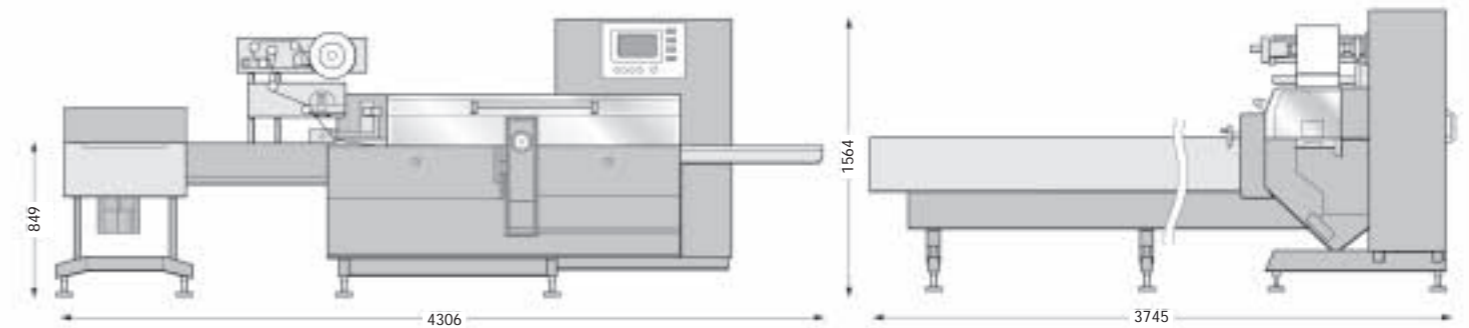


FLOW WRAPPING MACHINES

Machine model	Pack dimensions min/max (mm)			Speed max (packs/min)	Material width max (mm)
	Length	Width	Height		
FT110	45/490	20/230	1/105	300	650
FT120 Standard	45/600	12/150	1/110	1000	340
FT120 Semi-wide	45/600	12/280	1/110	600	600
FT120 Wide	55/600	40/350	1/135	250	800
FT130BOE	90/292	35/90	30/85	200	340
Round products up to 90m diameter can be wrapped on the FT130BOE					
Wrapping materials	Most commercially available wrapping materials, eg. coated cellulose film coated and co-extruded polypropylene, heat sealing laminates, cold seal coated materials. Maximum reel diameter 400mm. Reel core diameter 70mm or 76mm.				
Product dimensions	It may be possible to accommodate sizes and speeds outside the range indicated. Maximum sizes are not available in combinations.				
Maximum speeds	The speeds shown are the maximum speed for the machine. Actual operating speeds are subject to product and material characteristics				

UTILITIES/TECHNICAL DATA

Electricity supply	380/415V, 3ph, 50Hz with Neutral and Earth or 440/480V, 3ph, 60Hz Other supplies can be accommodated to suit local standards
Electrical protection	IP54 IP65/NEMA4 available on request
Compressed air	5 bar/80psi clean, dry, unlubricated.
Safety	Guarded to CE standards.
Machine finish	Low sheen metallic steel, two part epoxy paint. Full stainless steel construction or alternative paint finishes available on request.
Quality	ISO 9001 Accredited



FLOWTRONIC 130BOE

