

COSMETICS AND

THE SHEER DIVERSITY OF PERSONAL CARE PRODUCTS PRESENTS MACHINERY MAKERS WITH A CHALLENGING TASK. FROM MIXING THROUGH TO CARTONING, FLEXIBILITY IS THE KEY ATTRIBUTE.

MIXING EQUIPMENT

Flexibility and shorter batch times drive development

Pressure to maximise productivity in cosmetics and toiletries often means much greater use of equipment capable of running a number of different types of product, shorter processing periods and reduced downtime for cleaning between batches.

Mixing in particular has seen developments aimed at reducing the time to achieve a uniform product.

For example, the Dinx one-step vacuum processing unit, introduced by Romaco Fryma-Koruma last year, is said to be ideal for manufacturing "hi-tech" skincare and cosmetics products in either suspension, emulsion or gel formulations as it can accommodate the often complex processes involved in the manufacture of such products.

As a one-step processing system the machine is said to offer advantages such as short batch times, high containment and a compact footprint, but also includes a new homogeniser. This operates on the rotor-stator principle but with axial adjustment of the stator to match the shear force to the characteristics of the product.

When the stator is placed in the shearing zone, the machine provides dispersing with good pumping characteristics. When the stator is placed outside the dispersing zone, the machine offers good pumping characteristics at a lower shear force, particularly suitable for sensitive products.

The agitation system inside the main vessel is also new. It incorporates a helical ribbon agitator, which allows the direction of product flow against the vessel walls to be varied upwards or downwards, depending on the direction of rotation.

In this way, points out Romaco, the user is able to vary the parameters of the mixing process to maximise product quality.

The agitator also includes conical mixing

nozzles, which produce a horizontal and vertical macro mixing action. These, combined with the action of the helix, are said to produce optimum mixing – even for highly viscous products – with short batch times and rapid heating and cooling, for which a double-jacketed vessel is supplied.

The capability to recirculate product both internally and externally contributes further to process flexibility. Internal recirculation allows feeding of the product beneath the fill level in the main vessel, a particular advantage where batch sizes are small. External recirculation complements the internal vertical mixing action.

Finally, Romaco says a streamlined and cost-effective installation is ensured by the fact that no additional pumps are required for either the CIP or discharge functions.

Diluting surfactants

Meanwhile, diluting "high active" surfactants – now used to save transport and storage costs – and dispersing difficult-to-wet powders used as thickeners or gelling agents are two applications in which specialist equipment from Ytron-Quadro UK has been supplied to overcome the limitations of traditional methods.

Take, for example, the surfactant sodium lauryl sulphate (SLS), an anionic surfactant included as a foaming agent in a huge variety of products including shampoos and face and body washes.

These high active surfactants are supplied in concentrations up to 70 per cent to save transport and storage costs and so need diluting. However, as Ytron-Quadro points out, conventional agitators are unable to blend such products easily, since they tend to leave large globules fully or partially undiluted.

Long processing times are also often required to ensure a uniform product and, indeed, some formulations are also too viscous for a conventional mixer. Air incorporation is a further issue, since the surfactant foams easily.

In batch production the problem has been overcome with the Ytron Y directed jet mixer, together with the ByPass system.

Once the vessel has been filled with the appropriate amount of water, the surfactant is

pumped from the storage vessel to the ByPass assembly attached to the Ytron Y. The ByPass delivers subsurface, close to the rotor of the Ytron Y mixer which provides an axial flow pattern to ensure an instant homogeneous blend of the solution.

Ytron Quadro explains that, since the Ytron Y does not have a freely rotating shaft, there is no vortexing and therefore no foaming. The remaining ingredients such as perfume and colour can then be added to complete the process.

An inline production system involves the use of the Ytron Z mixer, which operates with a metered supply of water and surfactant coming together at the inlet for continuous, single pass blending of the solution.

Difficult-to-wet powders used as thickeners or gelling agents have generally been a problem for inline dispersing systems, which usually need to be stripped down and cleaned after a few batches. Products such as acrylic polymers, CMC and HPMC are typical of these powders.

However, the Ytron PID – powder-inject-dispersing – system has been shown to operate batch to batch with no need to strip the unit down for cleaning, says Ytron-Quadro.

In operation, the thickener or gelling agent is sucked out of a hopper, FIBC or silo into an injection chamber where it is pre-wetted by the liquid phase, without sticking. Forced passage through the rotor-stator system then ensures a perfectly wetted-out product. A pump installed downstream achieves a controlled discharge of the product.

Risk of powders sticking or lumps forming on the contact surfaces of the powder/liquid injection chamber are totally eliminated during either continuous or short process intervals, says Ytron Quadro, while concentrations of over 20 per cent can be achieved in one pass. ■

For further information:

Romaco

T: 01480 435050

E: gill.shackels@romaco.com

Ytron-Quadro (UK)

T: 01494 792898

E: sales@ytron-quadro.co.uk

TOILETRIES

REPORT



Automatic line: Masterfil 12-head filler has substantially reduced changeover times

FILLING, CAPPING AND SEALING

Variety and changeover times guide the choice

Given the variety of personal care products that frequently need to be filled on a common line, it's not surprising that flexibility, speed, and ease of changeover and cleaning have long been deciding factors in the choice of machine or combinations of machines.

For example, at contract manufacturer PB Beauty, Trowbridge, two lines supplied by Masterfil are handling a variety of products and containers, from pots and jars through to 500ml bottles.

One of the lines is based on a six-head filler, capable of 60 containers a minute and specifically chosen to cope quickly and efficiently with frequent product change, while the other line is based on a Masterfil servo driven S500-AS 12-head filler able to handle in excess of 120 containers a minute, and with fewer operators. This line also has an Omega 3D-PRP2-8 rotary plastic bottle unscrambler and a Mastercap three head rotary capping machine.

Masterfil originally developed the S500-AS for Boots to give fast and efficient filling of

unusually shaped or unstable containers. In place of the more conventional pneumatics, the machine's filling system is electrically driven, providing a more automated, touchpad controlled system, which needs no manual adjustment during product changeovers. Using this system, filling speeds can be accurately pre-programmed to suit the viscosity of the liquid and the container shape.

This flexibility and accuracy were key reasons that Mellor Beauty, which produces some 450 personal care product ranges for the UK and abroad, also specified the S500-AS.

The machine employs bottom up filling – to avoid introducing air and give a cleaner fill – and has eight variable fill speeds to handle any product consistency or container.

Rise while filling

To minimise foaming of products such as low viscosity skin tonics or fresheners, the nozzle can also be programmed to rise while filling, starting slowly until the nozzle is covered by the liquid. The fill speed is then accelerated for the majority of the fill, slowing down near the top of the container to ensure the nozzle and liquid reach the fill level in unison.

For thick viscous creams the rise-while-filling programme ensures that nozzles stay just above the liquid during filling to maintain a clean fill.

Boots identified the use of pucks as an efficient method of handling a wide variety of con-

tainer shapes and sizes without requiring time-consuming adjustments. Whatever the shape and size of container being handled, the guide rails on the conveyor remain in a fixed position, the heights of bottles are regulated and the nozzle centres are the same.

High bottle sensor

An external sensing system in the filler identifies pucks with no bottle and those in which a bottle is incorrectly positioned and too high for filling. This no bottle, high bottle sensor ensures that the system automatically pauses the filler gating system so that an empty puck can be given a bottle or a high container adjusted before it enters the filling zone.

A special cleaning system was also incorporated in the Boots filler to ensure minimum product changeover time. For most detergent based products, such as shampoos or shower gels, Boots washes the system through with warm water and sterilising agent after each product run. However, for water-resistant products such as the Boots Soltan range of suntan creams, strip-down and cleaning can be carried out quickly, without tools, by the operators.

Contract manufacturer Highland Manufacturing has invested in a Masterfil S1000-A Multifil volumetric filler, which can dispense all kinds of liquids, gels and creams. The line is fully automated and, explains Masterfil, changeover times have been dramatically reduced.

The touch-screen interface allows users to program container fill profiles into the memory for easy, quick on-line recall. The operator can then change or fine-tune data such as the fill speed, volume and conveyor speed to suit each individual application, ensuring optimum performance. For added security, each of the pre-set profiles can be password protected.

Flexibility is also at the heart of the Servopak systems developed by KP Aerofill and Dawson, two leading UK companies within the IWKA group, supported by sister businesses, IWK Verpackungstechnik and Kuka Robots. Servopak filling and closing systems are said to be capable of CIP changeover without skilled operators or changeparts in less than 5 minutes.

Rather than employ fixed displacement pistons, the Servopak uses peristaltic and gear

pumps with easy-clean nozzles to handle all liquids.

Banks of filling systems, positioned over a conventional conveyor, can be employed to achieve constant production while parallel systems are locked in a closed loop CIP circuit without operator involvement. When cleaned, the pumps can be automatically primed and set from a menu – still in the CIP position – ready for instant changeover.

Raising its profile

Perhaps best known as a supplier of processing and packaging machinery to the pharmaceutical industry, IMA is now concentrating on raising its profile in the toiletries and cosmetics markets and has established a dedicated marketing division to address these sectors.

Some of the equipment manufactured by the company, such as tube filling, cartoning and end-of-line machinery, is of equal interest to both pharmaceutical and cosmetics manufacturers.

However, the new cosmetics marketing division will also handle a range of machines specially developed for cosmetics and toiletries, including liquid fillers and labellers.

The recently introduced IMA Electrofill rotary, net weight, monobloc liquid filling-closing machine is said to be particularly suitable for toiletry products. A compact unit equipped with an electronic control system, it can fill containers up to 1 litre and handle a wide range of products including liquids and creams.

IMA says any shape of bottle, in plastic or glass, can be accommodated as well as virtually any type of closure system including screw caps, droppers, reducers and dispensers.

In standard form the machine can be equipped with 16, 20, 24, 32 or 36 filling heads plus 6, 8 or 12 capping heads and can reach a speed of 300 containers a minute, although customised configurations are available for higher outputs. The Electrofill also features automatic adjustment of the turret height via servo motor and can be equipped for CIP.

French manufacturer PKB specialises in perfumery and cosmetics fillers, ranging from the medium speed in-line DOL capable of 80 containers a minute through to the Cosmo rotary filler-capper able to handle some 200 containers a minute. This bottom-up filling machine has ceramic filling pumps with membrane valves for seal free operation.

In particular, PKB has developed machines to handle a broad range of containers – up to

70 different formats in one case – and to run an equally large range of products, aimed very much at the contract manufacturing business.

For example, the Robo multi-function turntable machine can be converted from semi-automatic to fully automatic, for short and long runs respectively, and can be equipped with a wide range of dosing devices to handle virtually all types of liquid and semi-liquid products including aqueous, oil-based, viscous, foaming and alcohol based. All types of closure can also be accommodated – push fit, crimp on, screw on and so forth – by exchanging a simple change part.

The Robo is also available in a special version for filling vials and testers of perfume at speeds up to 120 a minute for glass bottles and 140 a minute for plastic bottles. Several types of automatic infeed and outfeed can be chosen.

Most recently, PKB has introduced the Flexo, said to be the first flowmeter filler with multi-format capability for the cosmetics industry.

Rotary machines are the speciality of French manufacturer Sidel Filling Systems which makes a series of compact monobloc filler-cappers for the personal care industry.

As UK representative F Jahn points out, the major advantage of a monobloc arrangement is that transfer of the container through the system is controlled at all times. Empty containers arrive at random and are indexed into the filler turret by means of an infeed scroll and then starwheel. Custom-designed tooling retains the containers under the dosing assemblies and, once filled, these are transferred smoothly by a further starwheel into the capping turret. Where the containers are unstable, a puck system can be employed to transfer the containers through the starwheel arrangement.

Choice of dosing systems

Sidel fillers are available with a choice of dosing system to suit the product being handled, from mechanical volumetric for viscous products to electronic, servo-controlled systems for more liquid products with a tendency to foam.

However, short run liquid filling applications are often carried out on tabletop size machines, both semi-automatic and fully automatic.

One example is the T1 machine from RCS



Distinctive branding: Shaped sachets produced on Bossar machinery



Servopak filler: Uses peristaltic and gear pumps for quick changeover

Filling Machines, which is able to handle a variety of products such as oils, gels, lotions and creams. Features include two speed filling, tool free stripdown and nozzle change and a clean-through cycle, while the timer is variable and so can be set to fill a large number of container sizes at a range of speeds.

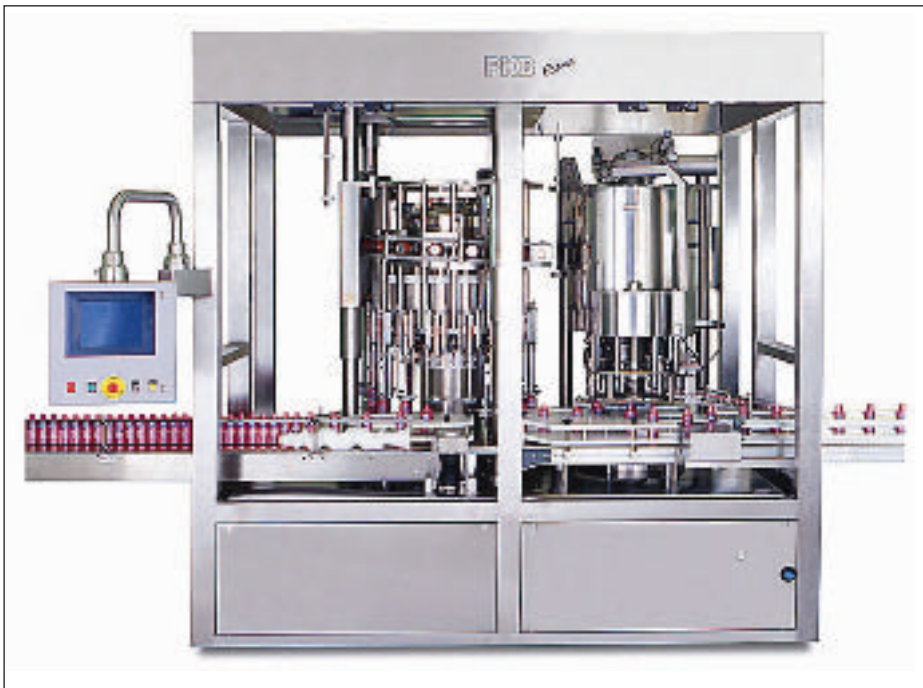
Valuable experience

Adelphi Manufacturing also includes tabletop machines in its portfolio of machinery for filling tubes, bottles and jars. In particular, the company says its experience in the pharmaceutical industry has proved valuable, given increasing demands from personal care and cosmetics companies for GMP standards.

The most recent introduction is the Adelphi Response filler. Nine of these tabletop machines have been sold to a major UK manufacturer of premium skincare, perfumery and cosmetics.

The growth in recent years of products containing a variety of high value active ingredients – particularly in the “anti-ageing” product sector – has prompted demand for unit dose presentations of liquid topical serums, such as customised, shaped sachets and plastic vials.

For the latter, Romaco Macofar has just



Rotary filler-capper: *Cosmo machine from PKB can reach speeds of 200 a minute*

introduced a 6000 vial an hour LVI automatic monobloc filling machine to complement the existing 4000 and 8000-an-hour models.

The machine is designed for filling liquids into vials of varying shapes and subsequent closure with plugs, stoppers, dropper and pilfer-proof or screw caps.

The dosing system comes with a choice of either ball or rotating valve and CIP or SIP systems are available as an option. The LVI incorporates features such as individual adjustment of the pumps, height adjustment on all machine groups and the ability to carry out all adjustments from the operator's side.

Glass vials can also be filled for applications in the fragrance-sampling field.

Single dose creams, shampoos and gels in sachets are particularly demanding in terms of pouch quality and seal integrity according to Springvale Equipment which represents Spanish sachet machine manufacturer Bossar in the UK. Optional pressure control of the sealing system on the company's machines is said to allow sachets to be made to resist pressures up to 2000kg.

In fact, Bossar has designed two horizontal sachet machines specifically for cosmetics, one to produce shaped pouches and the other to pack wet wipes at speeds up to 190 packs a minute.

Meanwhile, a low cost tube-filling machine – said to cost 40 per cent less than comparable machinery – has been launched on the UK market by IWKA PacSystems.

Aimed at cosmetics, food and healthcare industries, the new IWKA model TFS10 provides speeds up to 60 tubes a minute and can be

equipped with either hot air sealing for plastic and laminate tubes or a folding assembly to handle aluminium tubes. Its volumetric doser operates over the range 2-400ml.

The price, including print registration system, end-seal coding equipment and one set of tube size parts, based on the current exchange rate, is £57,500 ex-works.

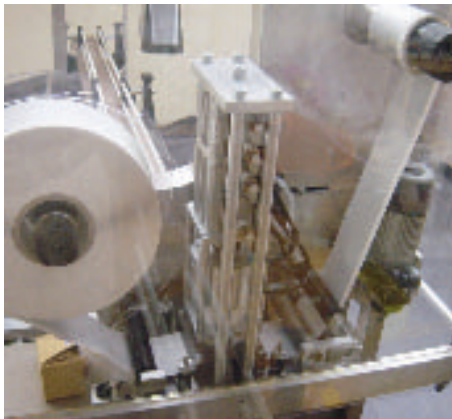
Value engineering programme

"This is 40 per cent less than comparable tube filling equipment available on the UK market," says IWKA PacSystems sales and marketing director Mike Nicol. "An extensive programme of value engineering, the use of parts common to other IWKA machines and production in much larger batches than usual, have meant substantially reduced costs."

Tube filling machines built by Costruzioni Meccaniche Tonazzi, Italy, are now marketed in the UK by Soudal and extend from bench top sealers for laboratory/pilot plant operation through to fully automatic production machines capable of outputs up to 200 tubes a minute.

Soudal points out that the automatic machines employ a novel vertical construction for the main drive mechanism, which allows easy access for maintenance and adjustment. All models feature tool-free exchange of size parts and can handle metal, plastic and laminate tubes.

Auger filling equipment specialist All-Fill International is delivering one of its Series 100 single head automatic machines to Spanish talc producer Laboratorios Korott to dose 200g and 250g plastic pots. The machine features neck location and lift for neck-entry filling which



Induction sealing: Relco system is reel-fed, giving savings in material cost

minimises dust, and bottom-up filling which prevents aeration and permits compaction where necessary to fit the full fill weight into the container.

Change of container size is undertaken quickly without change parts or tools by adjusting the conveyor guide rails, indexing stop cylinders and head height. The filling head features all-stainless powder contact parts and tool-free removal of funnel, auger and hopper.

All-Fill's Series 100, 200 and 400 machines – with one, two and four heads respectively – now feature Siemens PLCs and large format full colour touch screen controls with production statistics such as containers per minute and auger revolutions displayed on screen, as well as photographs of machine assemblies such as container lift and vibration units.

Capping equipment supplier Cap Coder has recently supplied a cosmetics company with a CC1160 triple torque head machine tightening 90mm diameter highly polished lids onto cream tubs at 45 a minute. Rubber-lined cap gripping jaws prevent damage to the closure.

The starwheel-based machine can be customised to fill, plug and cap and in another application is performing all three functions for small glass aromatherapy bottles where the set-up includes bottle feed and collating rotary tables to provide a self-contained unit.

Finally, an induction heat sealing system able to operate without a closure in place – allowing it to run from a reel of material for cost savings – is now being used by a number of companies including L'Oréal in Paris, Mexico and Poland.

Built by Relco UK, the FCS system uses a bulk reel of foil, cutting and sealing the material onto the container. Advantages are said to include cost effective use of foil, no melting or distortion of the foam re-seal and the ability to

seal containers that have closures that cannot be sealed with standard induction methods.

As the induction process is an electromagnetic process, compared with conduction heat systems, the sealing head is cold to the touch and, says Relco, more energy efficient. This also means that there is no meltdown of the neck should the foil be misaligned and product will not burn and stick to the head.

"Induction foil is ideally suited for the cosmetics market as it is available as a polished white finish, peels off in one piece cleanly and gives product integrity," says Relco. ■

For further information:

Adelphi Manufacturing
T: 01444 472300
E: sales@adelphi.uk.com

All-Fill International
T: 01767 691100
E: info@allfill.co.uk

Cap Coder
T: 01865 891466
E: capping@capcoder.co.uk

IMA UK
T: 01189 772323
E: hotdesk@imauk.co.uk

IWKA PacSystems
T: 01420 22742
E: info@iwkapacsystems.co.uk

F Jahn & Co
T: 020 8977 8822
E: sales@f-jahn.co.uk

Masterfil
T: 01296 425001
E: sales@masterfil.com

PKB
T: 0033 2 32 37 82 54
E: pkb@wanadoo.fr

RCS Filling Machines
T: 0115 985 1717
E: info@rcsfilling.com

Relco UK
T: 01923 241231
E: sales@relco.co.uk

Romaco
T: 01480 435050
E: gill.shackels@romaco.com

Servopak
T: 01842 753505
E: info@dawson-uk.com

Soudal
T: 01530 510502
E: sales@soudal.co.uk

Springvale Equipment
T: 01420 542505
E: springvale@springequip.co.uk

LABELLING

Maintaining the image on much smaller pack sizes

Since image is sometimes crucial, and almost always of high importance in cosmetics and toiletries, labelling has a big role to play. However, it can also raise problems since many products come in small, difficult to handle packs and there are also a wide variety of container shapes and materials used.

With toiletries, there is also the added consideration that there is a better than average chance the products will get wet.

To handle the size problem with lipsticks and mascara, Pags has extended its range of specialist cosmetic labelling machines with the new

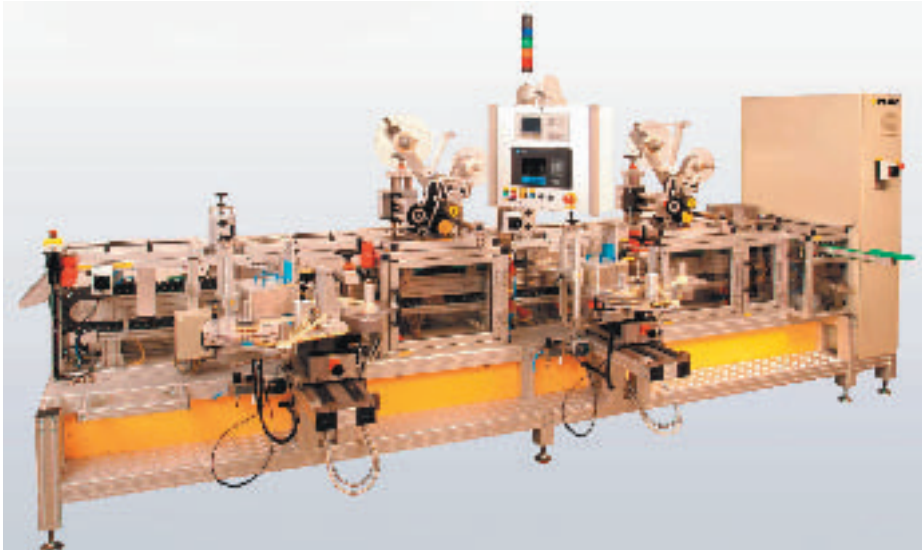


Front and back labeller: Pals 70FBL machine now has a colour touch screen control

Pagosystem 131, able to label up to 120 round or oval containers a minute with both barcode body labels and end cap shade labels. Products are automatically loaded into pockets, on an intermittent servo motor driven roller conveyor.

New label application attachments have been fitted to the Pagomat label heads in order to accurately apply the small shade labels and to apply the bar code label in register to the print on the product. The machine is also able to accept product for re-work, using a re-work station that automatically drops product into empty pockets on the conveyor.

Pals Labelling has launched a new version of its 70FBL front and back labeller incorporating



Lipsticks and mascara: Pagosystem 131 handles body and end labels for up to 120 containers a minute

a dedicated, colour touch screen control unit. This new touch screen provides a clear, central control facility, enabling all machine functions easily to be set, monitored and adjusted. Perhaps just as important, says Pals, the control technology has been developed to enable each system to be understood and managed by unskilled operators.

The 70FBL labelling system can be combined with a wide range of Pals servo-driven single, twin and multiple labelling heads and also be configured for wraparound labelling on round containers.

Speed up to 240 metres a minute

Sovereign Labelling Systems has recently installed a high-speed Monarch labeller at Principle Healthcare in Skipton. The all stainless-steel machine features a single servo-driven labelling head capable of dispensing speeds up to 240 metres a minute and, as standard, can use 400mm diameter reels. There is also independent waste rewind.

The system is configured to apply a single label around all four sides of rectangular containers and employs a label wipe-down device that eliminates the need to rotate the containers, even at throughput speeds of 150 a minute.

Coding specialist Rotech Machines has recently supplied a major cosmetics producer with a carton feeder to overcome problems of scratching on high gloss cartons during off-line coding.

The Rotech 150-60 feeder employs a PTFE impregnated hardened top plate and Tufnol feed plate designed in such a way that no marks are made on the cartons as they pass through the system. Rotech also supplied alternative

type to produce a sharper printed image.

Finally, LogicPak, Germany, has developed a range of horizontal sleeving machines specifically for decoration or tamper evidence on small diameter products that cannot usually be handled by vertically operating machines. Products currently being sleeved on the machines include cosmetic pencils, lipsticks, mascara and powder compacts, reports UK agent Soudal.

Speeds up to 250 a minute are possible – depending on product profile, size, and sleeve material used – while the machines are also capable of handling symmetrical or asymmetrical items and applying the sleeve over part of the product or its full length, including over both ends.

Soudal says that the design of the sleeve applicator station allows smaller sized sleeves to be used compared with other machines of this type, so saving 10 per cent or more on material costs. ■

For further information:

Pago
T: 01206 755206
E: sales@pago.co.uk

Pals Labelling
T: 0161 620 0236
E: sales@palsprecision.co.uk

Rotech Machines
T: 01707 393700
E: info@rotechmachines.com

Soudal
T: 01530 510502
E: sales@soudal.co.uk

Sovereign Labelling Systems
T: 01206 304182
E: sovereign@sovereignlabellingsystems.co.uk

CARTONING

Delicate and irregular shape products set the challenge

Because many personal care products are delicate, irregular shaped and light weight – notably contact lenses, tissues and feminine hygiene – cartoning can present the machinery maker with a particular challenge.

For example, Molins Packaging Machinery (MPM) has recently completed a high-speed tampon cartoning system for a major manufacturer meeting the challenge of handling the fragile paper and film-wrapped products at speeds of 600 a minute.

The tampons are individually quality checked and then collated in a variety of configurations and counts before being cartoned.

Standard machines from MPM include the servo driven Langenpac Chinook cartoner, which operates at speeds of up to 550 cartons a minute, while the HCC machine range forms a base from which the company is able to develop customised equipment.

Typically these machines carry out complex product handling tasks – such as nesting blisters – at high speeds and have full production verification, such as bar code matching, leaflet presence validation, and date coding.

MPM has also developed one-off machines for specific customers, for example to micro-dose powders and liquids, to fabricate cotton products and to wrap baby or feminine hygiene products.

IWK's latest range of end-load cartoning machines has been designed on a modular basis that allows a variety of optional equipment to be readily included initially, while also taking care of possible future needs for upgrades with retrofits and further add-ons.

Share common parts

Indeed, this modular approach also means that the IWK Cartopac machines share a high proportion of common parts – over 80 per cent – despite being available in a number of versions covering intermittent and continuous motion, as well as 100 or 150mm pitch.

Key features of the range, which is built in balcony style for ease of cGMP compliance, include a new patented rotary carton pick-up

and erecting system, fed by a motorised conveyor in place of the conventional gravity hopper. Here, points out UK representative IWKA PacSystems, the modular approach is immediately apparent.

On the intermittent motion machines, the rotary drum is equipped with just one pick up head to provide speeds up to 120 cartons a minute. But the same drum can carry up to three pick-up heads, allowing the 100mm pitch continuous motion Cartopac SC4 to reach speeds of 450 cartons a minute.

The carton erection system employs the over-break principle to open the cartons and avoid problems with poor quality creasing or internal glue spots, but also incorporates an arm that moves into place to hold the carton square as the transfer is made into the carton chain.

Polymer carton supports

Here, to prevent risk of scuffing, IWK has departed from the conventional arrangement in which the carton is carried between flights and supported either end on steel guide rails. Instead, each carton is carried by the chain in a pair of facing L-shaped polymer supports that adjust for pitch in the same way as the flights on a traditional four-chain system.

For ease of operation and changeover, the leaflet feeder on the Cartopac is placed to the operator side of the machine, and also includes a new system to improve security and leaflet reconciliation.

Once a leaflet is withdrawn and placed in the clip chain that carries it to the loading point, its presence is sensed and compared with the availability of a carton and product. If no product or no carton is signalled, the leaflet is retained in the chain and delivered to a reject box via a counter. Any rejects can then be retrieved and taken into the count to ensure no rogue leaflets remain in the machine.

Controls on the Cartopac range are PC based, which allows a Windows style operating system to be employed for operator familiarity and ease of use. However, the PC also carries the machine's operating manual, maintenance manual and parts lists and identification, providing a ready reference source for both operator and maintenance staff.

The latest addition to Romaco Promatic's range of intermittent motion horizontal cartoners is the P91, said to be particularly suited to cosmetics because of its flexibility and balcony design. The machine is also said to be a significant addition to the Romaco portfolio, in that it



Continuous motion cartoner: IWK Cartopac SC4 gives speeds up to 450 cartons a minute

is engineered for straightforward integration with the company's tube or liquid lines.

The P91 has an output of up to 90 cartons a minute, with dimensions of 15-120mm, 12-80mm and 55-200mm (A-B-C). Its modular design allows use of a wide range of simple and reliable automatic feed systems, suitable for such diverse products as bottles, jars, sachets, tubes, lipsticks and mascaras. The design also accommodates ancillary equipment, such as leaflet and liner feeders.

In fact, the machine was developed in conjunction with one of the leading European producers of cosmetics and personal care products to fulfil a requirement to insert three lipsticks into a single carton.

A recently completed application for a hair colorant product proved even more complex with two bottles – one round, one square – plus a tube, leaflet and sachet needing to be fed into each carton. Orders have also already been taken for applications involving cartoning of tubes and jars.

Similar in concept to the Promatic P100 and P150 cartoners, the key features of the P91 are a newly designed carton belt and positive carton opening system, which the company says combine to provide highly reliable feeding and real tolerance of variations in carton quality.

Ergonomic aspects

Attention to the ergonomic aspects of the machine has provided good visibility while areas where stray product or packaging debris might collect have been eliminated.

Italian manufacturer CAM, represented in the UK by Campak, supplies both vertical and horizontal cartoners capable of handling many different types of containers and carton styles, starting with the AV low cost vertical machine of which over 9000 have been supplied. For

more complex or higher speed applications there is the AVC continuous motion vertical machine.

CAM's HV/HG continuous motion horizontal cartoners have positive mechanical carton skillet opening devices and come with a complete range of automatic feeding systems for products, leaflets, spoons, gloves and other associated products.

Floorspace of 1 x 1 metre

The Compact range of rotary vertical cartoners built by German manufacturer UET take up a floorspace of about 1 x 1 metre and so, says UK agent Soudal, are ideal if space is at a premium or portability is required. Aimed primarily at low to medium production output applications the machines can be set up for either manual or fully automatic product infeed.

All models are optionally available with UET's centrally adjustable carton carrying disc, which largely eliminates any need for change-parts to handle different size containers. ■

For further information:

Campak

T: 01536 261501

E: sales@campak.freereserve.co.uk

IWKA PacSystems

T: 01420 22742

E: info@iwkapacsystems.co.uk

Molins Packaging Machinery

T: 01908 219000

E: molins.ho@molins.com

Romaco

T: 01480 435050

E: gill.shackels@romaco.com

Soudal

T: 01530 510502

E: sales@soudal.co.uk