BVM

BRUNNER GMBH u. Co. KG
Verpackungsmaschinen

Made in Germany by BVM

Perfection in packaging

Sleeve Sealer
Stretch Bander

BVM-Assembly

Customers are the centre of all our business activities. Customers' requirements and demands guide us and each idea is seen as an opportunity. This openness to customers' wishes shapes our business; shared objectives merge our employees into a team.

BVM Brunner is a privately-owned medium-sized company that started designing and building packaging machines in 1985. Today the company supplies high quality, innovative machines to the global packaging industry, and BVM Brunner's network of sales partners provides advice and support to companies worldwide.

Our employees are the company, whether it is their academic expertise or practical experience, the mix provides outstanding capabilities. We foster creativity and co-operation among our employees; this enables our employees to excel at their work.

We like to take advantage of opportunities arising from advances in engineering and manufacturing; the use of precision aluminium profiles, laser technology, state-of-the-art electronics, and a modular machine design is German engineering at its best. Designing, building and testing of our machines are done under our control on our premises in Reutlingen to ensure that a high build quality matches the high engineering design quality.

A BVM machine keeps you ahead of the competition. BVM machines are built to last. Machines that were delivered more than 20 years ago are still working and continue to meet the requirements of our customers.

An unrivalled price-benefit ratio, high product quality and short delivery times made us, in many areas, a market leader in wrapping machines. For us, today's success is a commitment for the future.

BVM-Final Assembly and Start-Up

BVM-Compacta Assembly

Our Service Offering:

- Maintenance, repair, and refurbishment of used machines
- Training on customers' sites or in our factory in Reutlingen
- Telephone support, provided by specifically trained technicians with years of experience in resolving mechanical and electrical issues
- Advice on spares and consumables, sale of spares and consumables
- Quick-response, global service team of in-depth trained service personnel
- High spare parts availability, guaranteed availability of BVM spares for a minimum of ten years

Combo-Sleeve-Sealer

The BVM **Combo-Sleeve-Sealer** is designed for production rates of up to 17 cycles/minute*. A sleeve sealer and a shrink tunnel are mounted onto a single frame. Single wound film is used to wrap a loose sleeve around the product, the sleeve is then shrunk tight to the product on its way through the shrink tunnel.

Possible configuration

BMS 6030 L

*depending on product and machine configuration

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Sleeve Sealer

A BVM **Sleeve Sealer** uses single wound film to wrap a loose sleeve around a collation of products. Production rate is up to 45 cycles/minute*.
A sleeve sealer can be configured to meet the requirements of a wide variety of packaging applications, for example, as a semi-automatic machine, as an automatic machine with right-angle pusher feeding, or as an automatic machine with in line product flow and infeed and outfeed conveyors. Special draw-off grippers are an option; they draw film off the reels when stacked products of different heights are randomly fed into a sleeve sealer and some products are not strong enough to pull the film.

The heated, constant-temperature sealing system is maintenance free and can reliably seal 20 - 100 my Polyethylene film.

Possible configuration

BM 6030 L

*depending on product and machine configuration

Stretch Bander

A BVM **Stretch Bander** is designed for production rates of up to 30 cycles/minute*.

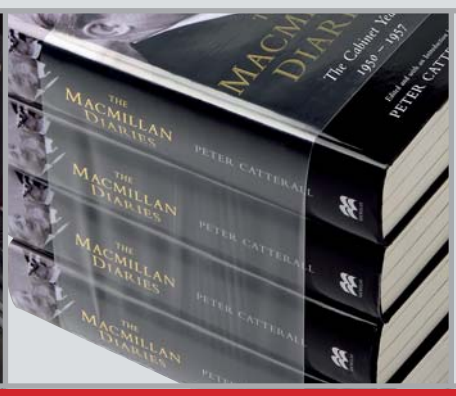
A stretch bander seals a top and bottom film together to form a web. A collation is pushed against the web and the film is stretched tightly around the collation. A rubberised tension roller tensions the film, the level of tension is stepless adjustable.

This enables the tight wrapping of stacked products and collations such as books, bottles or tins. In many applications the film of a tight wrapped product does not need shrinking, but - if required - the product can be moved through a shrink tunnel to shrink the edges of the film to the product.

Possible configuration

BM 6030 W

*depending on product and machine configuration



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Shrink Tunnel

BVM Shrink Tunnels are fitted with rod conveyors; the rods are coated with heat-resistant silicon rubber. A wire-mesh conveyor, a heat-resistant plastic conveyor, and a rod conveyor with live rollers for use with Polyolefin or PVC films are available as options.

The conveyor speed is infinitely variable and can be set at the operator station.

Possible Configuration

Infinitely variable adjustment of the lower air flow ensures optimised shrinking.

Possible Configuration

Air flow inside the insulated heat chamber is finely controlled by four dampers - top and bottom on two sides; the dampers are independently adjustable from outside the tunnel.

The set temperature is maintained accurately by a closed loop, digital temperature controller; the heating can be set at a temperature of up to a maximum of 250 °C.

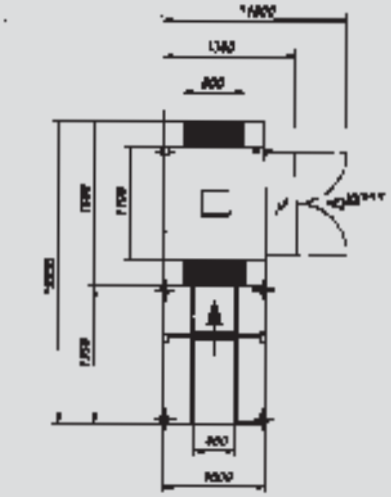
Technical Data

	BM/SP 4030 H	BM 4030 L	BM/SP 4030 W	BM/SP 4030 LE	BM 4030 LG
Version	Semi-automatic with manual loading	Fully-automatic, product flow in-line, infeed and outfeed conveyor	Loading at right angle, mechanical pusher, collating through several pushes	Loading in-line, product flow in-line, top pusher for moving stacked products	Product flow in-line, with film draw-off grippers
Sealing width and film width	400 – 1600 mm①	400 – 1600 mm①	400 – 1600 mm①	400 – 1600 mm①	400 – 1600 mm①
Seal bar, clearance	300 – 600 mm①	300 – 1000 mm①	300 – 1000 mm①	300 – 1000 mm①	300 – 1000 mm①
Production rate, depending on options fitted, product and product format	up to 20 cycles/min,	up to 45 cycles/min,	up to 30 cycles/min,	up to 25 cycles/min,	up to 25 cycles/min,

	BMS 6030 H	BMS 6030 L	BMS 6030 W
Version	Semi-automatic with manual loading	Fully-automatic, product flow in-line, infeed and outfeed conveyor	Loading at right angle, mechanical pusher, collating through several pushes
Sealing width and film width	600 – 800 mm①	600 – 800 mm①	600 – 800 mm①
Seal bar, clearance	300 – 400 mm①	300 – 400 mm①	300 – 400 mm①
Production rate, depending on options fitted, product and product format	up to 17 cycles/min,	up to 17 cycles/min,	up to 17 cycles/min,

① depending on options fitted
* servo-based seal bar drive

Layout-Example:
Sleeve Sealer
BMS 6030 L



Machine Designation:

BMS 60 30 W / L → in-line
- W → right angle
- 30 → 300 mm clearance
- 60 → 600 mm sealing width
- BMS → shrink tunnel
- BMS → sleeve sealer

Shrink Tunnel Designation:

SC 65 30 SD
- SD → dual heating zones
- SD → enhanced heating power
- 30 → 300 mm clearance
- 65 → 650 mm width
- SC → shrink tunnel

Technical Data – Shrink Tunnel

	SC 45…	SC 65…	SC 80…	SC 100…	SC 120…	SC 140…	SC 160…
Tunnel opening, width	450 mm	650 mm	800 mm	1000 mm	1200 mm	1400 mm	1600 mm
Tunnel opening, height:	from 300 – 400 mm①	from 300 – 500 mm①	from 300 – 500 mm①	400 mm*	400 mm*	400 mm*	400 mm*
Heat chamber, length	from 800 – 2800 mm①	from 1100 – 4200 mm①	from 1500 – 2800 mm①	2000 mm*	2000 mm*	2000 mm*	2000 mm*
Heating power	from 8,4 – 25,2 kW	from 12,6 – 50,4 kW	from 16,8 – 37,8 kW	33,6 kW	42 kW	42 kW	50,4 kW

① depending on options fitted

Electrical requirements: 3L, NPE 400 V/50 Hz
Insulation between heat chamber and outer housing is 100 mm© thick to prevent heat loss
Heat resistant silicon curtains at tunnel entry and exit
Whisper quiet blower motor
Working height: 850 ± 50 mm
*Bespoke dimensions on request

BVM Standard Colours:
RAL 1013 - Pearl White
RAL 5007- Brilliant Blue
RAL 6011 - Reseda Green

Operation

Product feeding is either in-line with or at right angle to the product flow through a machine. Products can be collated in a machine or collated products can be fed to a machine. Both machines, stretch bander and sleeve sealer, seal a top and bottom film together to form a web.
In a stretch bander, the front end of a product collation is pushed into the web to stretch the film before top and bottom film are sealed at the tail end of the collation to form a tight wrap. In a sleeve sealer, the film is not stretched, but wrapped loosely around the collation, while the collation is being moved forward, then a sleeve is formed by sealing the top and bottom film at the tail end of the collation.
The collation then moves through a shrink tunnel where the film is shrunk tightly around the product. The degree of shrinkage of the film can be controlled by adjusting the temperature and by directing the hot air flow in the tunnel.

Features

Versions:	BMS 6030 H/W/L combined with shrink tunnel on one machine frame, or as BM 6030 H/W/L or SP 6030 H/W/L with separate shrink tunnel; the shrink tunnel type depends on the required production rate.
Product feeding:	manually or automatically, one of two optical sensors can be selected to establish - either horizontally or vertically - correct product spacing
Product conveying:	depending on product - belt conveyor, zero pressure conveyor, slat conveyor*; inverter drives provide infinitely variable conveyor speeds*
Film:	PE- / PVC - / and other sealable, single wound films, film thickness of up to 100 micron*
Film feed:	film cradle with motorised roller, infinitely variable feed, dancer tension control
Sealing system:	constant-temperature, maintenance-free sealing jaw, a closed loop digital temperature controller keeps the sealing temperature costant and ensures continuous high seal quality
Seal bar drive**:	electro-mechanical drive*, pack protection
Film tensioning:	rubberised tension roller, film tension is adjustable and infinitely variable
Shrink tunnel: system	closed loop temperature controls, energy-saving air recirculation-BMS)
Guards:	CE compliant, built from aluminium profiles and Makrolon®
Control system:	powerful Siemens S7 PLC, operator panel with colour touch screen that provides a graphical user interface with intuitive user guidance, job storage
Sensors:	cable connections of either plugs and sockets or screw terminals, touch free sensing, 'product present' indication
Air requirements:	6 bar, oil-free, customer supplied
Optional extras:	fully automatic, motorised machine pre-setting, data recall from job setting memory; feeding, collating and stacking stations depeding on the products

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* excluding BMS 6030 H/W/L

** servo-based sealing system is standard for a stretch bander (SP), optional extra for a sleeve sealer (BM)