



# SIAT

M. J. MAILLIS GROUP

Automatic Strapping

PS-Range  
VR-Range  
OR-Range  
Side Sealing  
Strapping Head  
Special Solutions



PS-range



VR-range



OR-range

CE

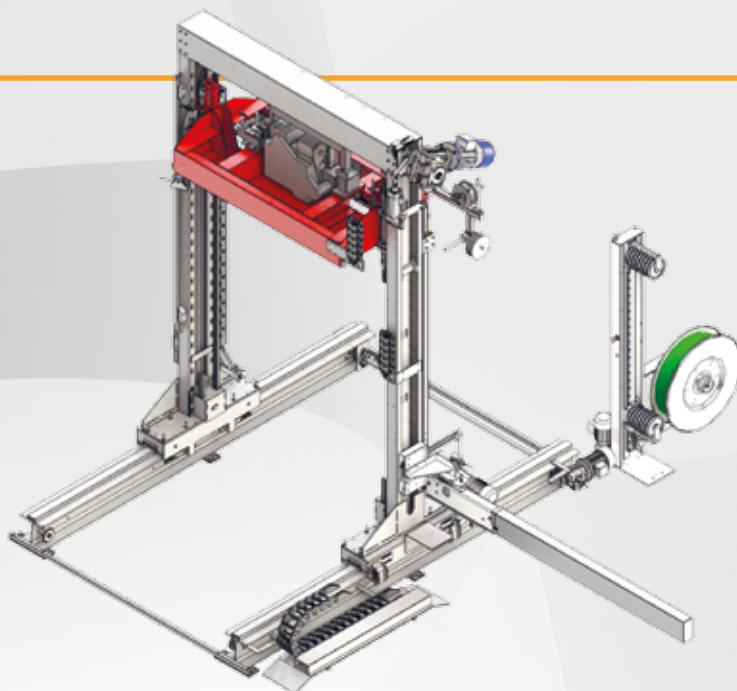
# VR-Range

The VR4 model is a strapping machine that has been developed to create fully automatic strapping and packaging lines. The machine carries out the vertical strapping either of goods or loads on pallets of different heights. This can be possible due to the strapping head that is automatically positioned on top of pallet by means of a device that controls also the strapping cycle at the same time.

If several parallel straps are needed on steady pallets, the VR4-INDEX model can be equipped with independent driven motors that move the machine sideways on rails along the conveyor line.

In this way the load/pallet will be correctly strapped in all positions according to pre-set strapping patterns on control PLC.

Moreover, the machine can be equipped with special telescopic chutes and retractable sword-bayonet (VR4 INDEX-1TL) that passes through the bottom of the pallet allowing the "strapping ring" to be closed and the load to be secured on the pallet.



## Key Features

Strap type	PP - PET
Strap dimensions	from 9x0,60 to 16x1,00
Strap feed speed	up to 4,00 m/sec
Strap take-up speed	up to 4,00 m/sec
Tensioning speed	0,11 m/sec
Friction welding time	from 0,5 to 2,2 sec
Power	about 5 kW
PLC	SIEMENS® S7 1200



for more details:



# PS-Range

Available in various models:

**PS84-1T / PS84-1TL**

**PS84-2T / PS84-2TL / PS84-2T3L**

The main strapping machines with 1 or 2 strapping heads are especially designed for corrugated industry. These machines can be used also in the glass industry.

The dimensions of PS range machines can be customized according to customers' needs (5 different widths & 4 heights).

## Key Features

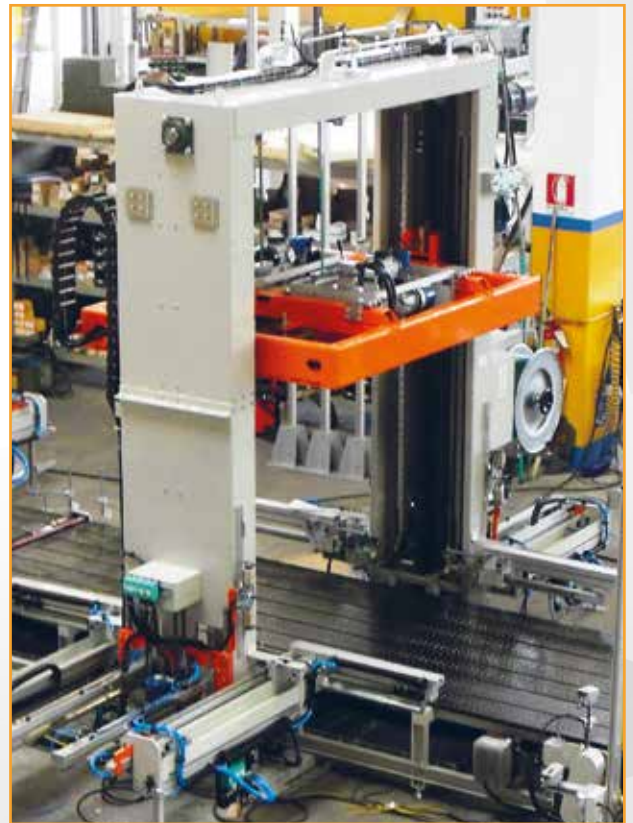
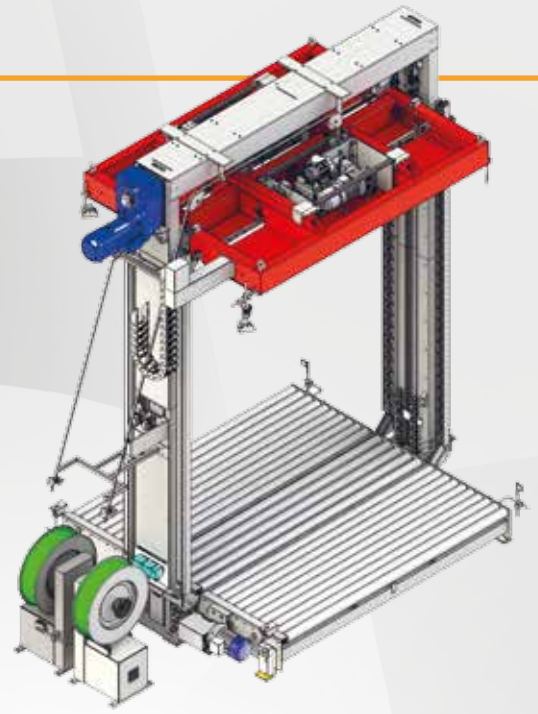
Strap type	PP - PET
Strap dimensions	from 9x0,57 to 16x1,00
Strap feed speed	up to 4,00 m/sec
Strap take-up speed	up to 4,00 m/sec
Tensioning speed	0,3 m/sec
Friction welding time	from 1,5 to 2,5 sec
Power	from 5 kW to 12kW
PLC	SIEMENS® S7 1200

The PS range machines are especially designed to strap either flat corrugated sheet cardboard, boxes or even palletized special loads that, before being strapped, are compressed through a special motorized pressing platen moved along the frame of the machine through triple chains.

The pressure is controlled by a loading cell (up to 5 tons) that, according to a special movement, allows the pressing platen to act and compensate pressure on the load against strength that the same opposes. This system can be set according to the type of load to be compressed and strapped.

In order to apply two parallel straps at the center line of each pallet, this model is equipped with two strapping heads that allow the complete strapping cycle to be carried out in the shortest cycle time.

The double head model can also be provided with special spears to fix the load to the wooden pallet.



for more details:



# OR-Range

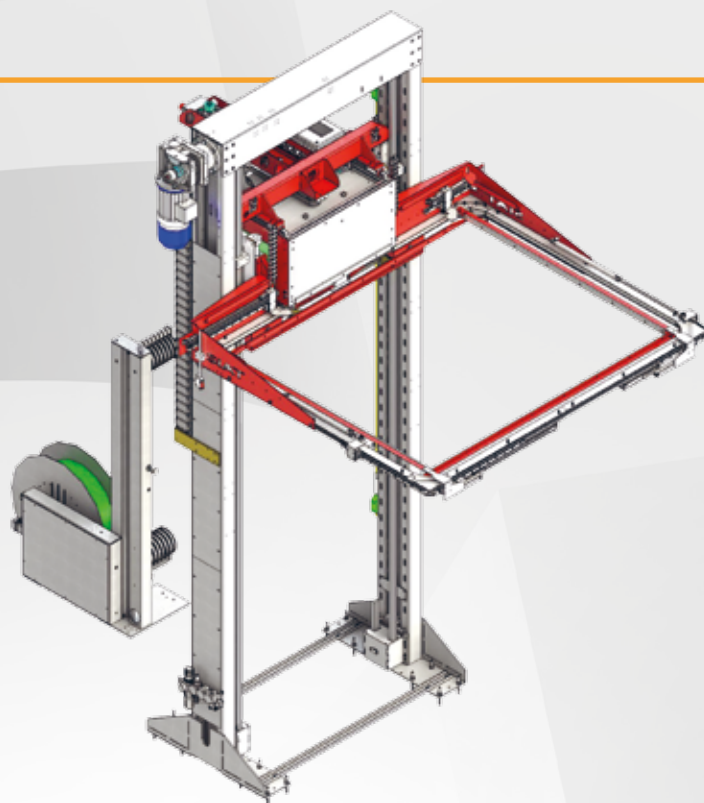
OR4 is a strapping machine especially conceived to enable a complete automation in packaging lines.

It can make the horizontal strapping of palletized loads by making one or more strapping cycles at different heights according to the program set-up.

The tensioning efficiency is granted by the “floating” strapping head with a special aligner located on the opposite side of the strapping arch, in order to perfectly fix the strap on pallet.

## Key Features

Strap type	PP - PET
Strap dimensions	from 9x0,60 to 16x1,00
Strap feed speed	up to 4,00 m/sec
Strap take-up speed	up to 4,00 m/sec
Tensioning speed	0,11 m/sec
Friction welding time	from 0,5 to 2,2 sec
Power	about 5 kW
PLC	SIEMENS® S7 1200



for more details:



# Toroidal Model

The OR4-T model is a toroidal strapping machine designed to be integrated in fully automatic packaging lines.

It passes the strap through the core of the coil allowing several strapping patterns (e.g. one or two straps through the coil). The system has been designed for both manual and automatic functions that are indicated by different light signals.

The machine is equipped with two retractable swords with automatic positioning to the coil center and an approaching system of the strapping head to improve the strap tension. The electric control panel and the keyboard operator are both with IP protection: all connections are clearly identified and numbered according to the CE rules.

## Key Features

Strap type	PP-PET
Strap dimensions	from 9x0,60 to 16x1,00
Strap feed speed	up to 4,00 m/sec
Strap take-up speed	up to 4,00 m/sec
Tensioning speed	0,11 m/sec
Friction welding time	from 0,5 to 2,2 sec
Power supply	about 5 kW
PLC	SIEMENS® S7 1200



for more details:



# Bottom Sealing

LOGISTIC MASTER 9400 is a high performance automatic strapping machine to strap boxes.

LM 9400 stands out for its excellent operational reliability and easy maintenance.

The high performance automatic strapping machine can be integrated in automatic packing lines. Strapping unit consists of head and strapping arch.

## Key Features

Strap type	PP - PET
Strap dimensions	from 9x0,60 to 16x1,00
Strap feed speed	up to 4,00 m/sec
Strap take-up speed	up to 4,00 m/sec
Tensioning speed	0,11 m/sec
Friction welding time	from 0,5 to 2,2 sec
Power	about 5 kW

- Strap frame with aluminium guide
- Strap dispenser type: K/R (right) - up to 9 m strap feed length / 405 mm core diameter
- Pulley block and storage for strap take-up
- Electric brake
- Tension: 100 - 4000 N
- Table top: length 310 mm / width 735 mm (non-driven rollers)
- Potential free signal exchange for automatic operation
- Foot switch for starting signal
- Potentiometer for strap tension selection
- Electrical cabinet built on strap frame with PLC Siemens S7 1200 and touch panel Siemens® KTP 600 COLOR
- Red-yellow-green alarm lamp. It is connected to the frame (strap end-fault alarm)



for more details:



# Side Sealing

## VM 9410 - VM 9420 - VM 9440

VM 9410 model is a strapping machine for the side sealing of boxes.

This high performance automatic strapping machine can be integrated with driven and non-driven conveyor systems.

This model has a compact design with sealing unit integrated in work bench, automatic strap insert, precise strap guidance and positioning, all designed for easy operation.

### Key Features

Strap type	PP - PET
Strap dimensions	from 9x0,50 to 16x1,00
Strap feed speed	up to 4,00 m/sec
Strap take-up speed	up to 4,00 m/sec
Tensioning speed	0,11 m/sec
Friction welding time	from 0,5 to 2,2 sec
Power	about 5 kW
PLC	SIEMENS® S7 1200

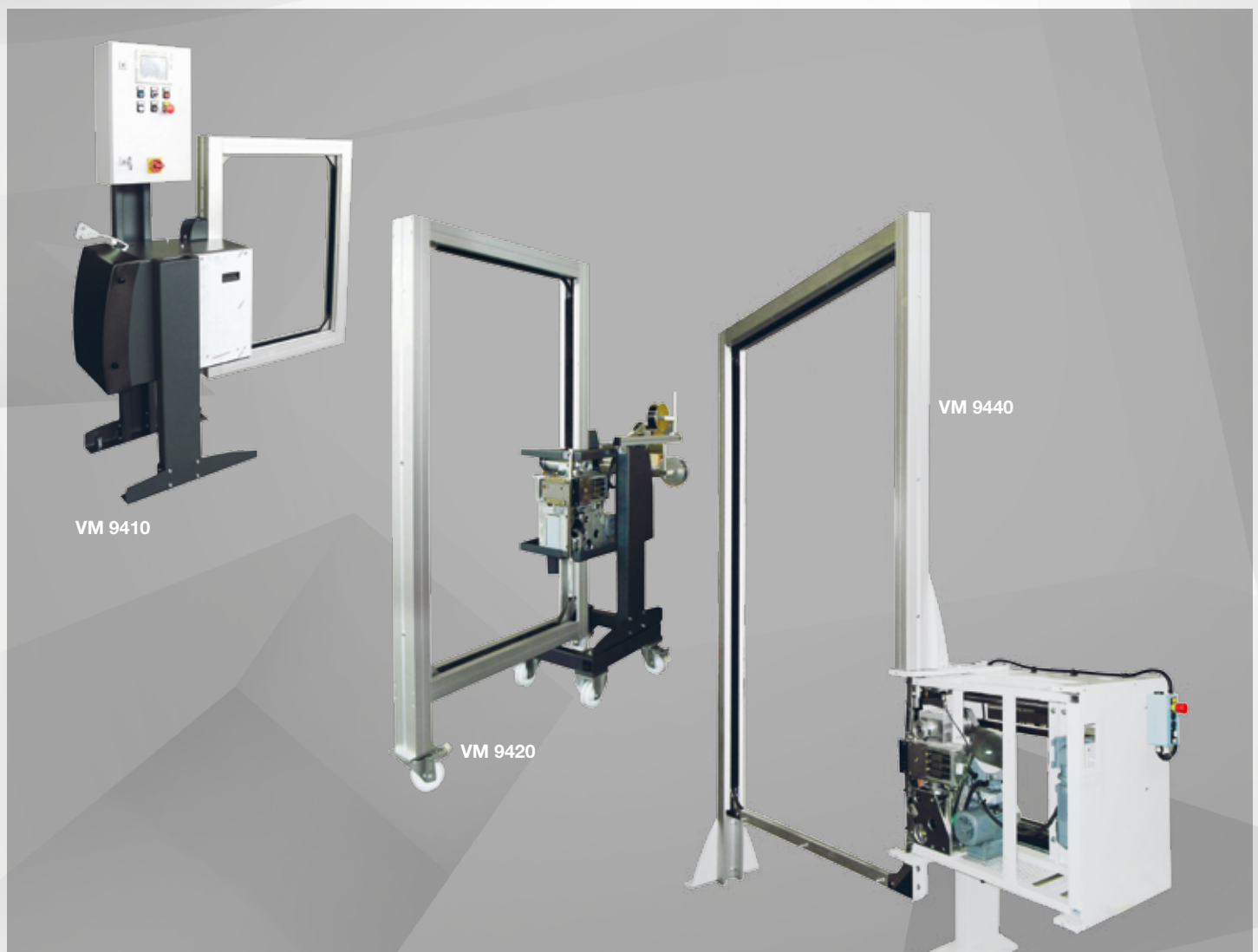
The VM 9420 model is a strapping machine for the side sealing of boxes.


Vario Master 9420 stands out for its excellent operational reliability and easy maintenance. The high performance automatic strapping machine can be integrated in automatic packing lines. Strapping unit consists of head and strapping arch.

The VM 9440 model is a strapping machine for the side sealing of boxes.

Vario Master 9440 stands out for its excellent operational reliability and easy maintenance. The high performance automatic strapping machine can be integrated in automatic packing lines. Strapping unit consists of head and strapping arch.

It is an automatic side strapping machine for large boxes. It can be integrated with driven or non-driven conveying systems. This model has a compact design with side mounted and movable strapping head, optionally with pallet bayonet for 9440 L, automatic strap insert, precise strap guidance and positioning, all designed for easy operation.



for more details: 

# Strapping Head

The strapping heads **GT41** and **GS41** are designed for fully automatic strapping machines with PP or PET plastic strap and vibro welding seals.

Our offering includes 2 different strapping heads (N or HT) for all needs.

Constant sealing strength of different types of PP and PET plastic straps is therefore ensured.

The optimal gear ratio can be chosen according to the specific needs of the customers to maximize the performance of the strapping heads. This results in the optimization of the strap feed, the take-up and tensioning speed, ensuring the best strap tension level needed in each single application. A maximum strap tension reserve guarantees a high lifetime and reliability of strapping head. The accurate two-dimensional guidance of the oscillating crank unit in conjunction with the precision roller bearings guarantees a permanent low-noise operation with almost no wear.

**GT41 N**



**GS41 N**



**GS41 HT**




	<b>GT41 N</b>	<b>GS41 N</b>	<b>GS41 HT</b>
Dimension (LxWxH) mm	519 x 280 (290) x 462	519 x 280 (290) x 462	519 x 280 (290) x 462
Weight	78 Kg	78 Kg	78 Kg
Electrical supply	400 V / 3 Ph / 50 Hz	400 V / 3 Ph / 50 Hz	400 V / 3 Ph / 50 Hz
Control voltage	24 V DC	24 V DC	24 V DC
Power input	1.0 kW	1.0 kW	1.0 kW
Type of welding	Vibro (Friction) Welding	Vibro (Friction) Welding	Vibro (Friction) Welding
Friction time	approx. 0,5 bis 1,8 sec.	approx. 0,5 bis 1,8 sec.	approx. 0,5 bis 1,8 sec.
Tensioning time	approx. 0,5 sec. to max. unlimited adjustable	approx. 0,5 sec. to max. unlimited adjustable	approx. 0,5 sec. to max. unlimited adjustable
Strap types	PP / PET Strap (machine grade)	PP / PET Strap (machine grade)	PP / PET Strap (machine grade)
Strap width	10, 12 and 16 mm	10, 12 and 16 mm	10, 12, 16 and 19 mm
Strap thickness	0,5 - 1,0 mm	0,5 - 1,0 mm	0,5 - 1,27 mm
Strap feed/take-up speed	up to 7 m/sec. (adjustable via inverter)	up to 4 m/sec.	up to 3 m/sec.
Strap tensioning control	through inverter	through powder clutch	through powder clutch
Tensioning speed	0,04-0,14 m/sec	about 0,11 m/sec.	about 0,08 m/sec.
Strap tension	50 - 4400 N	50 - 4400 N	50 - 5500 N

## 25/32 mm VIBRATION STRAPPING HEAD

PET strap tensioning up to 8000 N.  
High levels of tension for PET straps.  
Strap dimensions: width of 25/32 mm & thickness of 1,2 mm.



Electromechanical functioning.  
Strap tensioning 1000-8000 N.  
Strap feed speed 3 m/sec. Adjustable through inverter  
Power supply 400V triphase + n 50 Hz auxiliaries 24V

for more details: 

# Corner / Skids / Slats / Top Applicators

All automatic strapping machines can be equipped with Corners Applicator Device and related store especially conceived to enable a complete automation in the packaging lines. It can make multiple straps on palletized loads.

If the load is either fragile or unstable, this machine can be equipped with a special system to fit corrugated edgeboards in the corners.

These edgeboards are made of rigid corrugated paper and they are available in different dimensions.

The corner applicators can be positioned on top and/or bottom of the load.

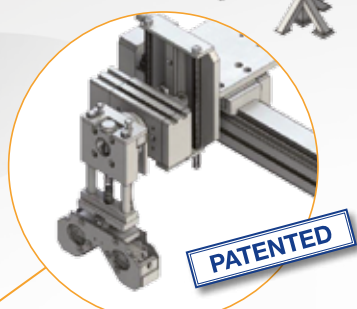


Slats applicator

Top applicator

Based on our experience, during the last two years we developed a new concept of corner applicator without suction cups.

The system works by means of metallic nails with a special angle corner gripping.



Corner applicator horizontal version



Corner applicator vertical version

## Automatic lines

