

PACKAGING MACHINES




metral

STRETCH-HOOD

High production machine



The stretch-hood system for protecting and holding the load in position on the pallet is an innovative procedure developed by **Metral®** some ten years ago.

Among its advantages the elimination of heat shrinkage with the consequent saving in energy and improvement of safety is noteworthy.

Metral® stretch-hood machines are the result of a process of technical enhancements included in the

machine, where mechanisms have been developed to an optimum level of quality.

The strength of the machine has been designed to withstand heavy working conditions, but with minimum maintenance.

Furthermore, the development of the plastic used enables smaller thicknesses to be used, with the consequent savings in costs.



The process begins (fig.1) with the preparation of a hood from the plastic roll. The machine measures the programmed length, welds and cuts the plastic tube and positions it on the four arms.

Then (fig.2), it stretches the hood in such a way that it can enter through the outside of the pallet.

Next (fig.3), it moves downwards to wrap the pallet. As the plastic leaves the arms, its elastic property tightens it over the load, so that it is firmly held in position.

When the cycle is complete (fig.4), the pallet is conveyed out of the machine, which is then ready for another pallet.

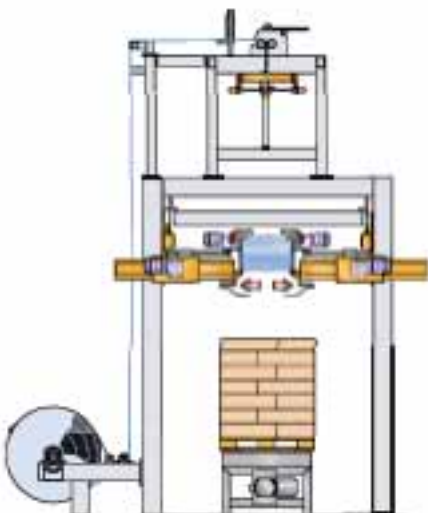


Fig. 1

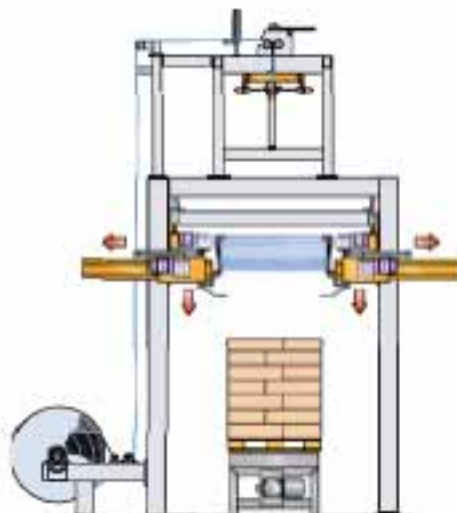


Fig. 2

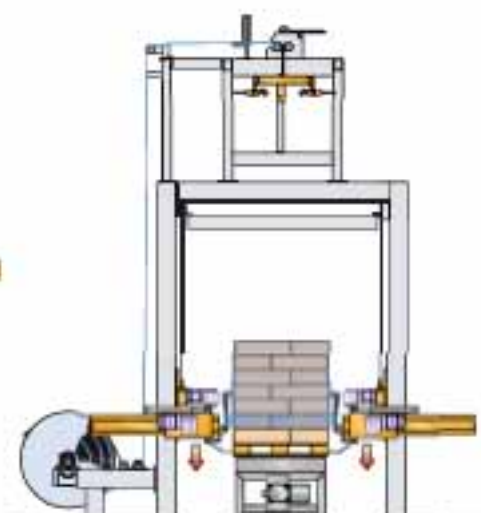


Fig. 3



The photo reveals the power of the motorised arm with its safety device, which is activated when anything blocks its path.

The diagrams are of a high-production, 150 pallets per hour machine and the stated dimensions are for a 1000 x 1200 pallet, with a height of 1400 mm.

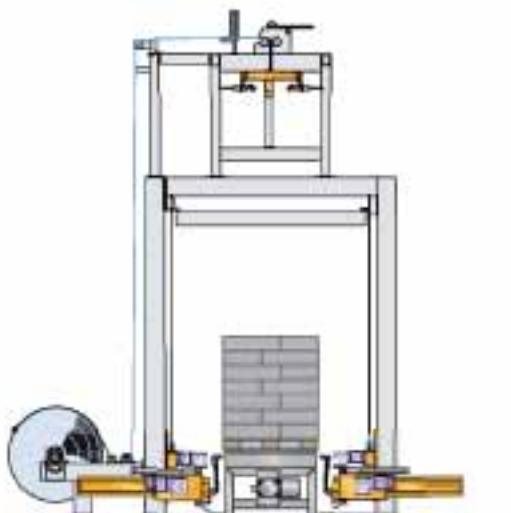
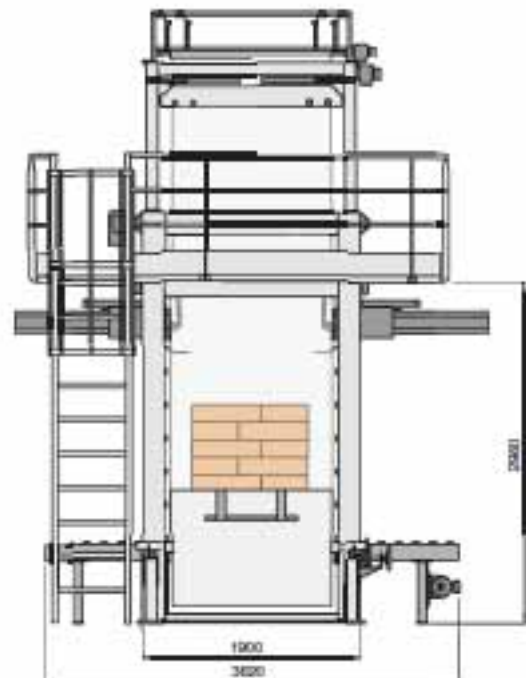
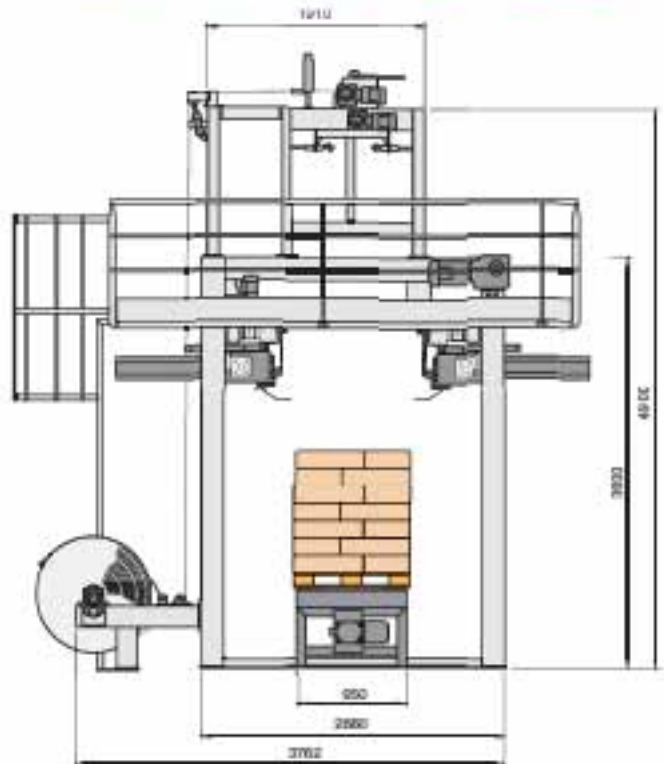


Fig. 4

Machine **STRETCH-HOOD**



The M6000VS stretch-hood machine has been designed for a maximum production of up to 75 pallets per hour.

The machine's concept is identical to that of the high production version, but without the prior hood-preparation device. It is very strong and it is manufactured using high-quality components.

Optimum machine operation does not require any special operator attention. When the plastic roll is empty, the machine stops automatically and warns the operator by means of lights or acoustic signals.

Various film thicknesses may be employed, which would depend on the final level of tension and the level of protection required.

The overall wrapped pallet shape is smooth and provides protection against rain on all five sides.

The machine can be automatically adjusted with respect to the various pallet sizes. The pallet under the load can also be protected by the application of a flat film layer over the empty pallet before the load is added, which will result in all sides of the pallet being protected.



Metral[®] hood stretchers can work with rectangular or square-shaped pallets. We have models available where the necessary adjustments are motorised and which automatically adapt to rectangular or square-shaped pallets.

The safety systems for **Metral**[®] installations are given priority consideration. They comply with all current EC standards and all the machines in this range are part of the all-round safety system.

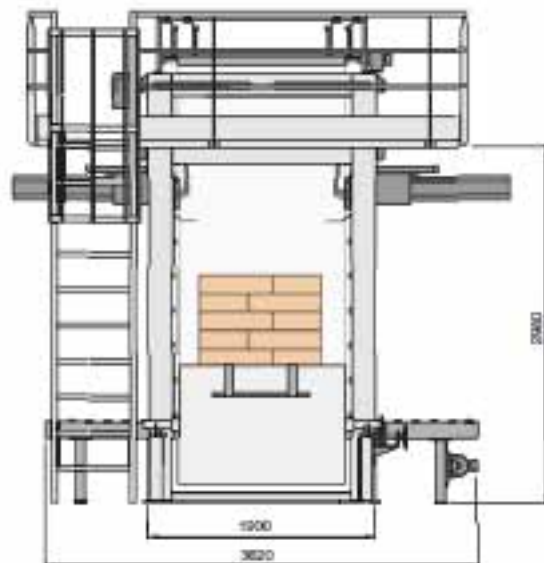
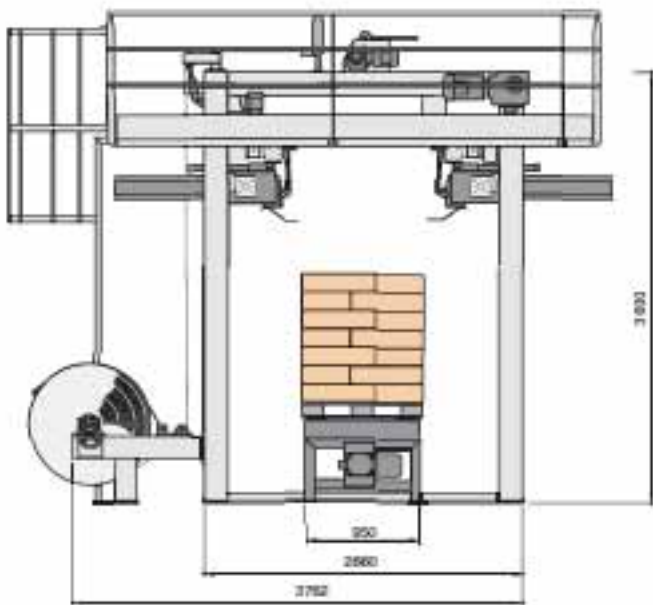
Spare plastic roll holders can be installed providing a reserve that can reduce the roll change time.

Another optional mechanism is automatic roll change, which is used when the pallets are of different sizes, and with significant perimeter variations.





The excellent finish of the final pallet protected with a stretch-hood holds the load in place so that it can easily withstand factory handling, transport on trucks and outside storage.



Machine **SHRINK PACKAGING**



The ranges for shrink wrapping machines are part of **Metral®**'s traditional programme.

We offer hot air or direct flame models that are able to provide production levels of up to 100 pallets per hour. We also offer space-saving combined shrink wrapping machines with reduced operating space requirements. The thickness of the film used varies from 80 to 200 microns. As an example, consumption is 200 gm for a 1 m3 pallet using a propane gas retraction frame with a 120-micron hood.

The **Metral®** programme comprises the full production

line, from the shrink wrapping machine to the final extraction of the finished pallet, including the feeding into the packing machines, palletisers with a full range of models and production levels, weight-checkers, bag rejection and destruction, product-paper separation, recovery and recycling materials, complete cleaning and dedusting systems, different elements for handling the pallet, turning tables, transfers with or without rotation etc.

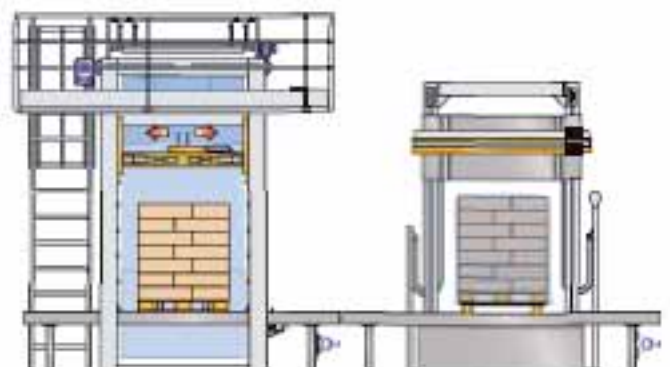
We also construct and install telescopic lorry loading conveyors, together with articulated and telescopic train loading conveyors, etc.

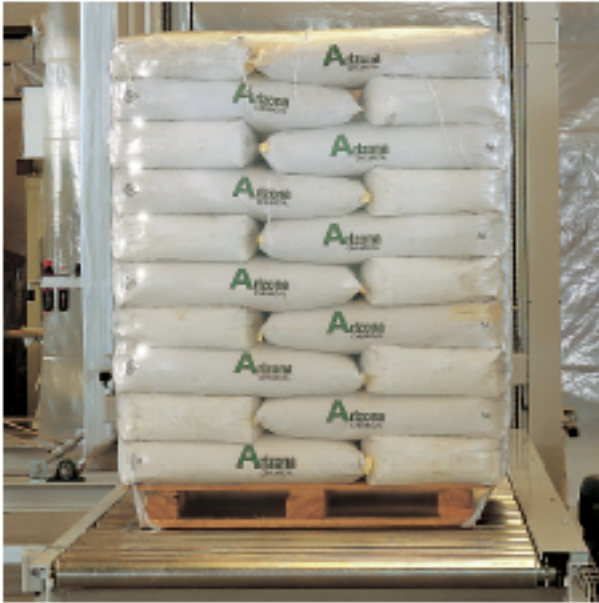


Metral[®] shrink wrapping machines work automatically using the following procedure:

The pallet enters the machine and stops in a centred position. The arms are moved upwards to receive the hood and at the same time, they measure the height of the load. Simultaneously, the hood descends and it is opened and ready for the entry of the fingers that will hold it. The arms close and the fingers are inserted. Then, after holding the hood, they descend until they match the height of the pallet. The welder closes and cuts the hood, which then descends and covers the load, ready to be conveyed to the shrinking frame.

Metral[®] shrink wrapping machines include an end of roll detection system as a standard fitting for joining the next roll without having to thread it through the entire film circuit.



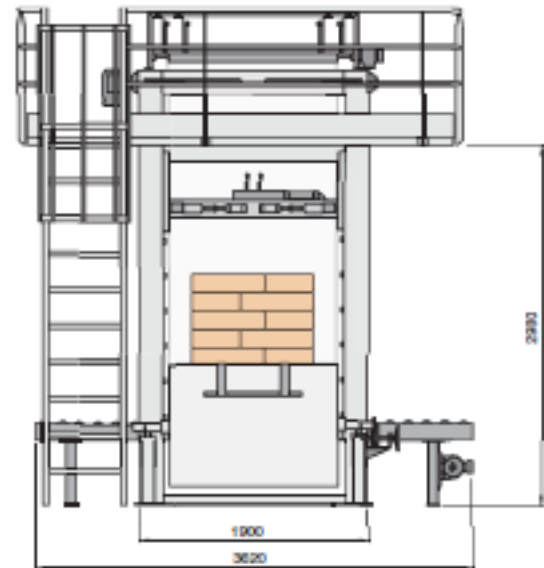
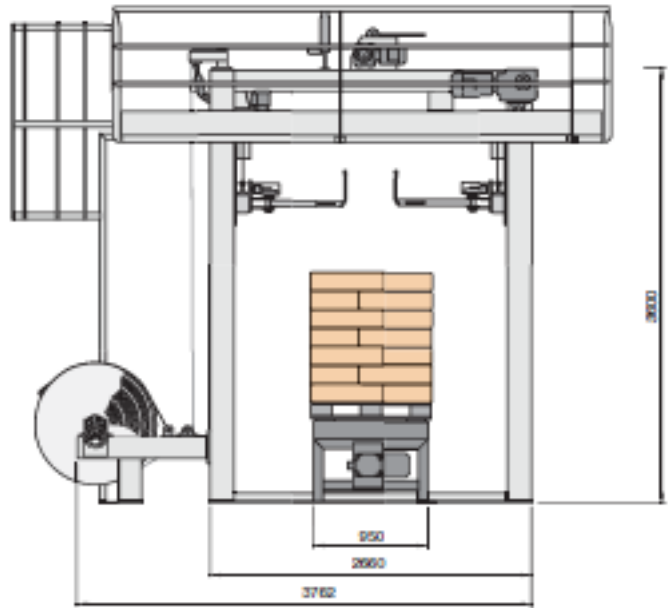


Shrink-wrap protected pallets are able to withstand the various types of handling to which they are subjected by forklifts and other means of transport.

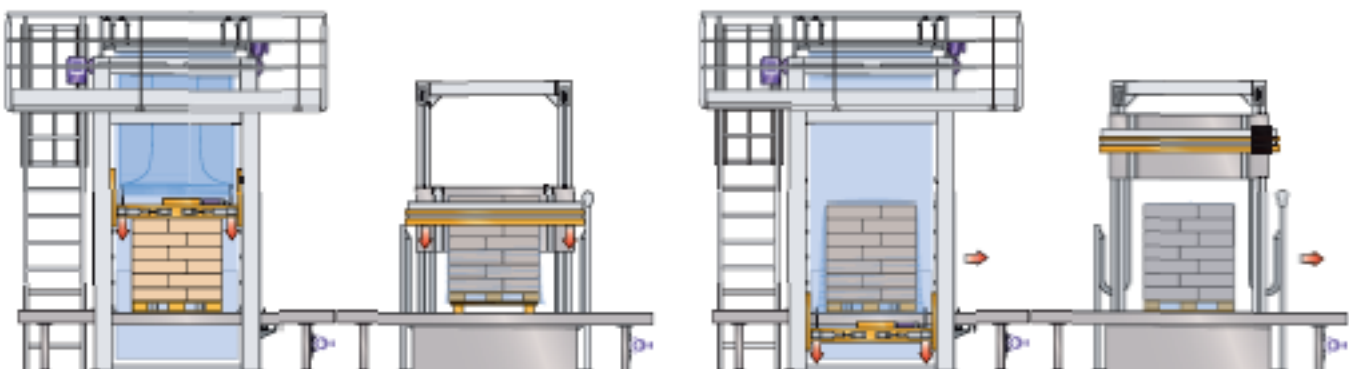
The tension exerted by the plastic on the load guarantees pallet consistency and provides excellent protection against impacts or chafing against other pallets.

The shrink frame is a complementary component to the wrapping machine, which heats the polyethylene hood, causing it to retract over the pallet and its load.

The energy source employed for heating purposes is either propane or natural gas.



Shrink wrapping unit





Metral[®] rotating-arm or rotating-table stretch wrapping machines can be integrated in the palletisation lines, and include the possibility of incorporating an upper film applicator for completely enclosing the load, providing maximum production levels of up to 80 pallets per hour.

Rotating arm machine. With this system, the load is maintained in a fixed position while the roll-holder arm rotates around it. At the end of the operation, the clip firmly holds the film so that a heater element is able to cut it. Following this, the welder attaches the film end to the pallet wrapping.

The machines are equipped with mechanical pre-stretching systems, that have been designed to stretch the film up to three times its original length.

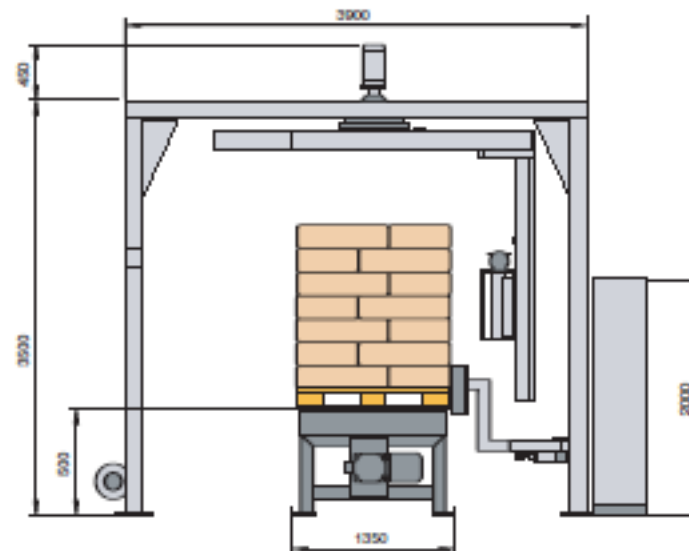
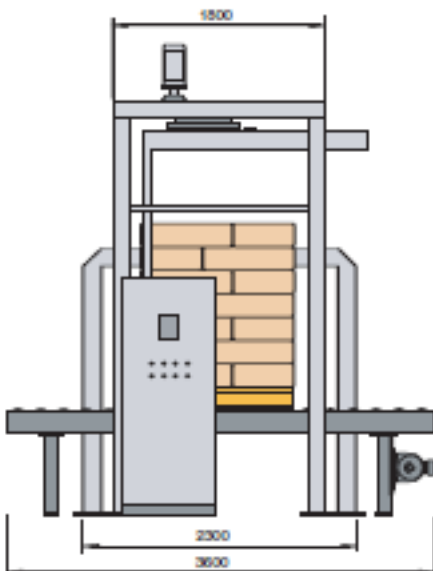
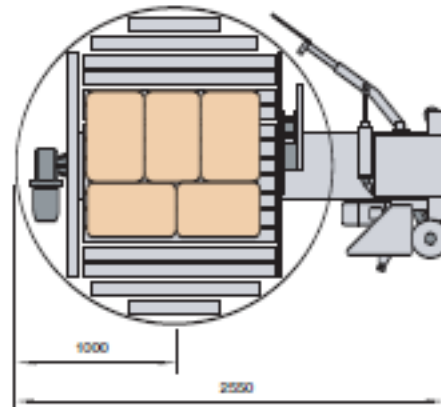
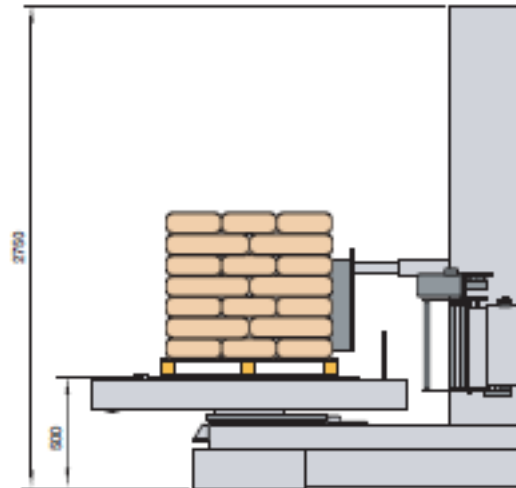




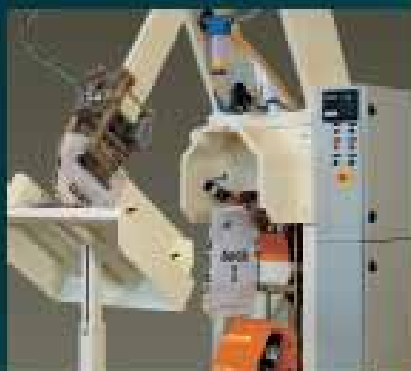
Rotating table machine. All the machines are prepared to be fitted with upper devices for top covering, together with a press that holds the load in place during the wrapping operation etc.



Rotating table machine



Rotating arm machine



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