

# PAL/ DEPAL

Automatic Depalletiser-Palletiser for cheese forms







#### FULL AUTOMATION

Pal/Depal is the machine that, inserted in the aisle together with the C.S.R. (Loading-Unloading and turning Machine) machine, automates the processes of loading/unloading forms of cheese from the ladder. It can process forms of cheese with a diameter of between 34 and 49-50 cm, a height of between 22 and 26 cm and a maximum weight of 50 kg, working perfectly with Parmigiano Reggiano®, Grana Padano®, Trentingrana® or similar cheeses.

The operator just has to load with forklift (or pallet truck) a pallet of forms (when loading the ladder) or unload it (when unloading the ladder).

All transport operations from pallet to ladder (or vice versa) are handled automatically by the two machines: **Pal/Depal** by means of a mechanical pick-up unit installed on Siemens electric axles, picks up the cheeses from the pallet and deposits them on a conveyor belt to C.S.R. and vice versa.

Pallets can consist of up to 25 forms, in a 5x5 configuration with a central form in relation to the pallet.

## ADVANCED TECHNOLOGY

Pal/Depal is an extremely advanced machine that, thanks to the solutions designed and patented by Ing. Ferretti, is able to solve the problems related to the management of interlayers and shapes that can "stick" to each other.

Pal/Depal is in fact the only machine equipped with an "inter-layer management" system that includes mechanisms for the removal, positioning and imaging of the interlayers themselves, as well as a fully automated, cheese-sensitive "removal" system. Work programs are managed by an easy and intuitive



HMI operator panel, which can also interact with the C.S.R. machine so that the operator can manage both machines with a single HMI.

# **CONSTRUCTION MATERIALS**

The machinery is made entirely of AISI304 stainless steel (with the exception of some mechanical parts) to ensure durability and ease of cleaning, even when handling fresh cheeses that have just come out of the brine bath.

### SAFETY

Pal/Depal complies with safety regulations in accordance with Legislative Decree 81/2008. Pal/Depal is equipped with a safety laser-scanner that stops the machine's movements when the operator gets too close to it. During pallet loading/unloading, once the operator has performed the operation, the machine automatically resumes the work cycle.

| PAL/DEPAL                           |   |  |
|-------------------------------------|---|--|
| DESCRIPTION                         | MEASURE   | NOTES  |
| Power supply                        | 400V  |  |
| Electrical socket required          | 3 poles + earth 16 A  |  |
| Overall dimensions                  | Length 132 x L. 355 cm x H 475 cm                               | minimum  |
|                                     | Length 132 x L. 355 cm x H 705 cm                               | in working conditions  |
| Minimum aisle (shelf-shelf)         | 135 cm  |  |
| Aisle at the beginning of warehouse | 700 cm  | Minimum  |
|                                     | 900 cm  | Recommended  |
| Performance                         | Performance: 200 form/hour during palletising or depalletising* | * Performance calculated without pitch management and without the use of the "detachment" system |