

# C.S.F.

## Traditional

Loading-Unloading  
forms of cheese  
automatically







#### ○ GENTLE ACTION ON THE PRODUCT

The **C.S.F.** is the automatic machine that allows the loading and unloading of cheese forms, from the steps with a maximum height of 22 shelves, with a diameter of between 34 and 49-50 cm and a height of between 22 and 26 cm, working perfectly with Parmigiano Reggiano®, Grana Padano®, Trentingrana® or similar cheeses. Although it is particularly suitable for processing fresh forms, it can machine forms of any hardness.

#### ○ VERSATILE

The **C.S.F.** is a machine particularly suitable for loading fresh cheeses just out of brine as it is made entirely of stainless steel and therefore has no rusting problems due to brine dripping on painted parts. The machine allows the loading or unloading of the forms from the scales in a fully automatic manner. The operator only has to introduce the form into the machine when loading, or take the form out when exiting the unloading operation. The forms enter and exit the rib machine by rolling on the heel, so the operator only has to accompany it as it enters and exits the hopper without having to lift it, thus complying with the new occupational health and safety directives.

The machine works with the aid of a single operator, who is able to load or unload the forms from the ladder effortlessly. In the loading phase, production can reach 320 forms/hour and in any case the machine loads the forms fed to it by the operator. In the unloading phase, the output reaches 300 forms/hour and can be reduced with a suitable device in order to align the rhythm of the machine with that of the operator. The machine uses the same guides as those used for the Automatic Cleaners, so the latter will find the forms exactly in the required position with the consequent elimination of processing blockages due to manual positioning of the forms.

#### ○ MANOEUVRABLE WHILE MOVING

It is easy to move within warehouses due to its compact and functional design.

#### ○ OPTIONAL

- REMOTE CAMERA WITH MONITOR for the control of the cheeses to be picked up and PHOTOCCELL for detecting the presence of the cheeses on the steps.
- MAKING OF THE MACHINE STRUCTURE IN VARNISHED CARBON steel instead of stainless steel (standard).
- STAINLESS STEEL GRIPPER (only for painted steel machine).
- The **C.S.F.** AVAILABLE IN DIFFERENT HEIGHTS up to a maximum operating height of 22 shelves, to meet the specific requirements of the customer's warehouse height.

**The C.S.F. complies with safety regulations in accordance with Legislative Decree 81/2008.**

#### ○ C.S.F. LOAD-UNLOAD FORMS AUTOMATICALLY 022

The **C.S.F. 022** operates both in the presence of existing ladders and on ladders designed according to their operational characteristics, where it shows its full potential. The **C.S.F. 022** can work in warehouses of 13 to 22 shelves of any pitch, adapting automatically, through settable program, to the various warehouses. The **C.S.F. 022** allows the automatic processing of all ladder shapes, even the lowest ones, thanks to a system patented by ING. FERRETTI that allows the head to pass up to a minimum distance between the first shelf and the floor of 470 mm. The **C.S.F. 022**, thanks to a system patented by ING. FERRETTI, automatically adapts to floor conditions, it is the first machine to do so.



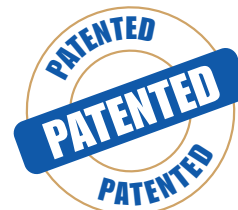




# C.S.F.

## 022

Loading-Unloading  
forms of cheese  
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with an automatic self-levelling device that corrects any unevenness in the floor, ensuring the safety of operators by preventing forms from falling accidentally.

- A completely redesigned machine, a more rigid structure to guarantee maximum machining precision, main movements mounted on innovative rotation systems to ensure maximum reliability over time.
- Rope wheels (lifting and guarding) made of composite material.
- New-generation hydraulic power unit.
- Travelling movement inverter-controlled forward-reverse.
- Hopper with photocells to ensure maximum operator safety and working efficiency.

#### ○ **MODES OF OPERATION**

All operations, with the exception of loading and unloading the forms from the hopper, are performed automatically once the operating cycle has started; at the end of the row of forms, the machine stops and waits for the next column to be moved by the operator's direct command via the touch screen control panel.

#### ○ **USE PROGRAMS:**

loading, unloading with selection via camera and monitor (optional), exclusion of the first three forms etc. The machine works across vertical rows.

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\* The C.S.F. performances refer to data that take into account manual positioning on the first 3 shelves. The data are taken from a 22-shelf warehouse.

<b>C.S.F.</b>			<b>C.S.F. 022</b>	
DESCRIPTION	MEASURE	NOTES	MEASURE	NOTES
Power supply	400V		400V	
Electrical socket required	3 poles + earth 16 A		3 poles + earth 16 A	
Overall dimensions	Length 120 cm x L. 140 cm	standard	Length 120 cm x L. 200 cm	
Minimum aisle (shelf-shelf)	142 cm	Minimum	152 cm	Minimum
	160 cm	Recommended	160 cm	Recommended
Warehouse end aisle	60 cm	Minimum	60 cm	Minimum
	90 cm	Recommended	90 cm	Recommended
Aisle at the beginning of warehouse	200 cm	Minimum	260 cm	Minimum
	300 cm	Recommended	300 cm	Recommended
Performance	320 forms/hour*	loading (max)	220 forms/hour	loading (max) working all rows
	300 forms/hour*	unloading (max)	200 forms/hour	unloading (max) working all rows