

pola e massa

Design and manufacture equipment for wet surface treatment and handling systems since 1978

- ⦿ Vertical axis rotating and oscillating brushes
- ⦿ No holes ovalization
- ⦿ Control by PLC complete with touch screen
- ⦿ Settable brush abrasion
- ⦿ Automatic autozero procedure
- ⦿ Adjustable brush speed
- ⦿ Adjustable belt conveyor speed
- ⦿ Different brush grits combinations are possible to perform different surface treatments



PeM PLANARIZER 650

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TECHNICAL DATA:

Overall length	:900 mm (35,4")
width	:2100 mm (82,7")
height	:1645 mm (64,8")
Working width	:640 mm (25")
Working height	:900 mm (35,4") +/-20 mm (0,8")
Conveyor speed	:0,3-3 m/min (1' to 10'/min)
Max board sizes	:W. 640 mm x L. 640 mm. (25" x 25")
Min board sizes	:L. 350 mm x W. 250 mm. (13,7" x 9,8")
Max board thickness	:8 mm (0,3") -higher thickness on request
Min board thickness	:0,5 mm (0.020") -lower thickness on request
Installed power	:kw 9 (400 Volt -3ph -50Hz) kw 11 (480 Volt -3ph -60Hz)
Water consumption	:0,4 -0,8 m3/h

Features

The machine is an evolution of the patented Pola e Massa Multiroll machine for deburring and cleaning boards without holes ovalization and it has been successfully sold in the market for more than 10 years. Our consolidated experience has allowed us to build the PEM Planarizer with all the necessary technical devices required to obtain a perfectly flat surface. The panels are conveyed on a rubber belt and pinch rollers ensure steady and reliable transfer through the machine where 10 cup brushes work to get expected results.

Base machine description

The machine includes an entry conveyor 1005 mm long with thickness detector, consisting of stainless steel transport rollers (\varnothing 40 mm) supported by ball bearings perfectly protected from water and dust by means of labyrinth seals. At the end of the conveyor is placed a thickness detector for the automatic brush adjustment according to the entering board thickness.

In the machine a total of 10 grinding rotating brushes oscillate and move uniformly across the board so that the complete surface is evenly processed.

The brushes work against a very flat precise surface (the conveyor belt is fitted against a perfectly flat support) to allow for precision grinding/sanding of the excess hole filler.

The double series of rotating brushes mounted on a transversal carrier allow for even brushing and also to some extent compensate for unevenness in the board itself because of the multiple brush approach across the surface of the boards.

The special brushes, manufactured by Pola e Massa, after years of experience in surface preparation and tests, guarantee the surface roughness required and a flat even surface. No holes ovalization takes place in this process. The module is built mainly out of stainless steel with a solid frame support and it is "vibration-free". Brush rotation speed can be adjusted by means of an inverter and the pressure is also adjustable. Replacement of the brushes is a fast and easy operation to be done by the operator himself in very few minutes. The machine can be used in any other process where clean flat surfaces are required and the desired surface roughness can be obtained by means of the different brushes available.

The PeM Planarizer is a single sided processing module and a panel turn over module is available for double sided processing with 2 modules fitted in-line.



As option, the following solutions can be considered:

The unit can be combined with additional Pola e Massa modules to optimize manufacturing processes.

Centering device

Available on request and useful for small boards and to guarantee same brushes length.

Special guiding system for thin material

Installed on the conveyor system and in the brushing area. They are suggested to treat thin material (down to 0,1 mm).

Washing module with connection conveyor 875 mm long

It includes a connection conveyor for inspection and an additional module for final rinsing and drying.

Flip-over module

It provides the 180° overturning of the panel. This operation allows the treatment of the panel lower surface in the following module. It can also be used as a conveyor.

AWS System with conveyor 405 mm long

The function of AWS is to straighten the material after the first brush action. As consequence of the brushes pressure the material can have different forms. Usually the boards coming out like a hill. It is strongly suggested to use this module when thin material must be treated.

Centrifugal filtering system

Useful to separate copper from water, this system also includes an additional pump and recirculation tank. This system is able to guarantee high level filtration.

Gravity filtering system

Useful to clean water used during process separating the contaminated coolant coming from the machine. The system includes a dedicated tank and guarantee a good level filtration.

Filtering system

It includes n. 2 stainless steel canister with filtering cartridges and a dedicated tank with cooling coil. It offers a basic filtration system.

Additional accessories and solution are available on request.

POLA e MASSA s.r.l.

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