

## CUTTING LINE N. 2990/2200-5+7C



## 1. TECHNICAL DESCRIPTION

Our cutting line **N.2990/2200-5+7C** has been designed aiming maximum production capacity with minimum labour force, as well as the absolute reliability of all its parts.

The production line overall dimensions have been adjusted to the customer needs, following his criteria about the produced pieces dimensions and the final products obtained.

The whole line features better robustness and reliability in all its subassemblies, being them all designed to support the hardest working conditions. This is one of the most relevant aspects where we can offer our long time experience in designing and manufacturing stone processing machines for this sector.

One of the great advantages of the machines integrating this production line is that all the designs are already tested solutions. They only differ from our standard machines in their overall dimensions, but not in all incorporated components.

With the automatic loading trolley **NDF-1289-P/V** (optional), the longitudinal cutter is fed with material from a stacker. Panels are removed using suction cups connected to a vacuum pump that tilt and place them in a horizontal position, ready to move to the cutting unit. Panels from the horizontal stacker are placed waiting to enter in the production line in such a way that the following panels maintain the alignment being unnecessary to adjust the cutter starting point.

The intermediate rollers table not only joins the feeding trolley and the longitudinal cutter but also acts as an intermediate storage so that the cutting unit stop times are very low.

The 5 heads longitudinal cutter **N.8000-L-5C** over rolling bridge and the 7 heads transverse cutter **N.8000-T-7C** are equipped with the latest technology, both in their mechanical design and in their electronics. It is worth mentioning the use of a high precision and stiffness linear guide system with linear recirculating ball bearing unit by the gripper cutting head bridge during the cutting works. The bridge is supported by two beams, being parallel to the cutting table the first and perpendicular, the second.

The sliding disc holder cutting heads also move vertically guided by a linear recirculating ball bearing unit and operated by a laminated ball screw with recirculating ball screw nut in order to achieve a quick and precise positioning and being all perfectly protected by PVC bellows. The gripper cutting heads have translation movement thanks to a gear motor controlled by a frequency inverter and positioning magnetic scale in the X axis and cutting head operated by a ball screw and an electric gear motor for vertical positioning in the Z axis. The cutting heads positioning is simultaneous thanks to their independent inverters.

The **N.2304** cutting tables consist of a steel structure with a machined top plane where the motorized transport band lies. The band is rubber covered to avoid slab slipping during the cutting process. A stone blocking device, placed in the second transverse cutter table, allows reducing times during the transverse cut process considerably.

The table **N. 2590**, placed just after the longitudinal cutter, counts with a stop system, pneumatically driven, that allows the selection of the previously cut stone strips according to the width for their further processing in the longitudinal cutter.

The second table **N.2585** counts with a towing device to join and align the strips before their processing in the transverse cutter, and to remove waste from the longitudinal cut.

The unloading table with band **N. 2426** count with a steel profiles frame with a transport band to unload the cutting table while the transverse cutter receives and starts cutting the next panel.

The palletising robot **N-3530** (optional) with vacuum suction cup is specially design to do automatic palletising tasks on the basis of the same operation principles applied in the *Nodosafér* standard palletising. It also offers many advantages such as work process optimisation, shorter cycle times and efficient use of the down times. The reception suction cup, with a special design, counts with a rectangular plate, able to support horizontal loads of up to 120 kilograms.

All dangerous working areas are isolated from personnel access by means of protection fences and optical barriers.

All machines and cutting heads count with a centralized greasing system for an easy and quick maintenance.

As for electricity and control, it is worth mentioning the use of last generation automatons with programs specifically designed by our technicians, so that the machine programming is as easy as possible, avoiding unnecessary loss of time. The operation cycle programming and the visualization of this sequence is made over two screen operator terminals where all the cutting parameters are displayed.

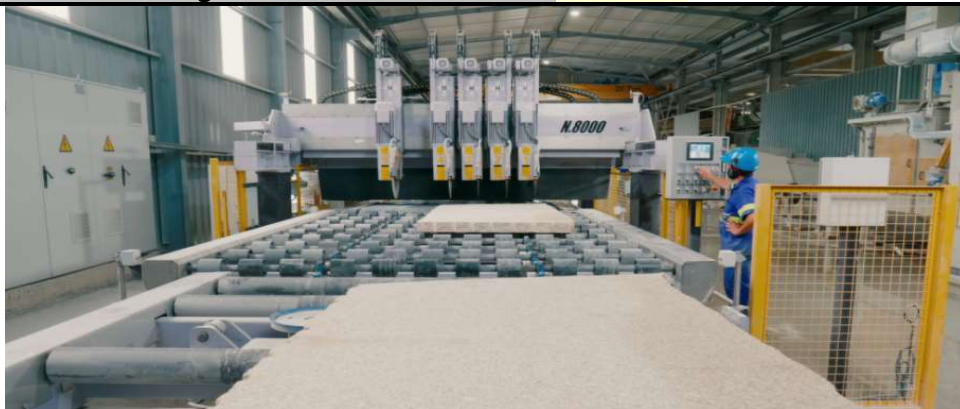
The cutting line **N.2990/2200-5+7C** counts with:

- 1 Intermediate motorized plastic rollers table, model **N.2274**.
- 1 longitudinal cutter with 5 cutting heads  $\varnothing$  600 and mobile bridge, model **N.8000-L-5C**.
- 1 transverse cutter with 7 cutting heads  $\varnothing$  600 and mobile bridge, model **N.8000-L-7C**.
- 2 motorized band cutting tables, model **N.2304**.
- 1 table with stone sheet selection stops, **N. 2590**.
- 1 double displacement table with motorized rollers, model **N.2585**.
- 1 motorized band table for material output, model **N.2426**.

## 2. - TECHNICAL DATA

### LOADING TROLLEY N.1289-P/V FEATURES

Table dimensions	1880x3200 mm
Frame dimensions	2560x1140 mm
Central vacuum	30 m3/h / 1.35 CV
Hydraulic control unit	5,5 CV
Trolley advance engine power	3 CV
Table engine power	1,5 CV
Trolley displacement speed	5 m/min
Stone sheet displacement speed	11.5 m/min
Maximum working width	2200 mm



### MOTORIZED ROLLER TABLE N.2274/2200 FEATURES

Table width	2930 mm
Maximum table length	3500 mm
Maximum working width	2200 mm
Forward speed	11.5 m/min

Drive engine power	1.5 HP
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**BRIDGE CUTTER N.8000-L-600-5C FEATURES**

Machine width	4220 mm
Rolling ways length	6000 mm
Maximum disks distance 1-5	2200mm (inside)
Minimum disks distance 1-2-3-4-5	300 mm
Cutting disks diameter	600 mm
Maximum height of the cutting pieces	150 mm
Disk engine power	15HP (5)
Total power installed	82 HP
Water consumption per disk	15-20 l/min



**BRIDGE CUTTER N.8000-T-600-7C FEATURES**

Machine width	5370mm
Rolling ways length	5500 mm
Maximum disks distance 1-3	3500mm (inside)
Minimum disks distance 1-2-3-4-5-6-7	300 mm
Cutting disks diameter	600 mm
Maximum height of the cutting pieces	150 mm
Disk engine power	15HP (7)
Total power installed	132 HP
Water consumption per disk	15-20 l/min



### BAND CUTTING TABLE N.2304/2200 FEATURES

Table width	2960 mm
Max. Table length	4044 mm
Max. Band width	2200 mm
Band displacement speed	11.5 m/min
Drive engine power	3 HP

### DOUBLE DISPLACEMENT MOTORIZED ROLLER TABLE N.2585/2200 FEATURES

Table width	2930 mm
Max. table length	3900 mm
Max. working width	2200 mm
Rollers forward speed	11.5 m/ min
Roller drive engine power	1.5 CV
Centring displacement speed	5 m/min
Transversal displacement engine power	2.5 HP





**ROLLER TABLE WITH SELECTION STOPS N.2590/2200 FEATURES**

Table width	2930 mm
Max. table length	3700 mm
Max. working width	2200 mm
Rollers forward speed	11.5 m/min
Roller drive engine power	1.5 HP



**MOTORIZED BAND TABLE N.2426/2200 FEATURES**

Table width	2930 mm
Max. table length	4300 mm
Max. working width	2200 mm
Roller forward speed	11.5 m/min
Roller drive engine power	3 KW



**PALLETISING ROBOT N-3530 FEATURES**

Max. load	120 kgs.
Mínimum piece size	300 x 300 mm
Central vacuum	100 m3/h
Installed power	25 CV
Minimum cycle time.	10" sec

