For further information please visit: www.penta-automazioni.it www.pentaus.us Caleidos rumbling plant Rumbling plant with drum for concrete and natural stones Penta Automazioni Industriali S.r.l. Via Aldo Moro, 32 40062 Molinella (BO) Italy Phone +39 051 880 550 +39 051 881 386 www.penta-automazioni.it Industrial automation since 1991 sales@penta-automazioni.it

Caleidos rumbling plant

The Caleidos rumbling plant is designed to tumble and repack concrete and natural blocks and pavers with different shape and size.

The whole rumbling and repackaging processes are completely automatic and it is possible to handle both single and multi size stones.

For introducing the stones to process in the plant, Penta can provide several solutions (i.e. hoppers, tippers, de-stacking grippers, etc) depending on the products requirements and customer's needs.

All these solutions allow to control and limit the automatic upload of the drum.

Once the stones have been rumbled by the drum, they are introduced onto a rotating table called centrifuge that

aligns the stones in one straight line for transferring them toward the sorting and selecting area.

Here, an extremely precise scanner equipped with laser sensors can detect all the products even those with special shapes. In just 2 seconds the scanner can detect:

- **01.** the size of the products
- **02.** the position of each stone in the line
- **03.** possible breakages
- **04.** possible broken edges both on the upper and on the lower surface
- **05.** the face mix (visible face or textured surfaces)









Indeed, apart from the analysis of the dimensions, this scanning system is also able to carry out a quality control of the rumbled stones, automatically ejecting the broken pieces.

The quality control function can be activated or not by the customers according to the production needs.

The stones are now picked up by our sorting gripper provided with independent gripping fingers that puts the pavers in the different lanes of the programming bench according to their dimensions. The rows are moved toward the stacking area where a controlled axis cuber operates; it picks up and stacks them building a pack.

The packs can be built on a pallet or not according to the production needs and to the market requests. Once we have reached the set height for the pack, it moves along the out-feed line where it is possible to install packaging machines.

Penta can provide different solutions to move and stack the ready packs, but also several machines to protect the treated surfaces such as sheet, correx and web placers, and can also integrate its systems with packing machines like strapping or hooding machines.

Like all Penta-designed systems, the Caleidos plant is characterized by great versatility, so it can be adapted to the available space and each component can be designed to meet your production needs.