

NEWS

Rotary injection moulding machines

Recycling of PVC from electric cables

The multi-station Roto PVC model was developed by Presma for the processing of PVC recovered from simply ground electrical cable after its separation from copper and other metal components. This range of injection moulding machines allows to process this "ground material" in a direct way, without the need to separate it from the other thermoplastics and rubbers often present in this kind of products.

These units are particularly used to manufacture PVC products for road construction and road safety, as an alternative to cement and cured rubber, with excellent results

in terms of strength, durability, recyclability, safety and, of course, with a good economic return.

This technology has successfully replaced the previous one based on compression moulding, ensuring higher productivity and better quality products, less waste and a reduction in labour costs; in this regard, the simplicity of the machine, which facilitates the introduction of automation, has made it possible to obtain, in some cases, a completely automatic process.

PVC parts of this kind usually require very long cooling times and high plasticizing capacity. Depend-

ing on the required productivity, the carousel, equipped with modular clamping units, is offered with configurations of 4, 6, 8, 12, 16 and (starting from 2021) also 20 stations, with clamping forces from 100 to 300 tons.

The use of special and complex rotary joints allows the clamping units to be connected to all the utilities required for the moulding process (cooling, hydraulic and pneumatic jack movements, hot runners and sensors). Each station is controlled independently with the possibility to run different products.

The increasingly current demand for higher productivity led to develop plants with extruders combined with particular injection units that allow to fully exploit the plasticizing capacity as well as higher outputs (up to 30,000 + 30,000 cm³ and 1000/1200 kg/h). This was the reason why, in order to take advantage of this possibility, machines with a

greater number of mould-holder stations are offered.

The possibility of applying a degassing system also allows the partial elimination of humidity and gases, present in some compounds. The plasticizing unit is electrically driven with vector asynchronous motor and frequency converter. The double accumulation piston allows to carry out the injection phase with constant volumes for each station. Thanks to this, the whole hydraulic system has been completely redesigned, eliminating accumulators.

Adoption of drives with variable speed pumps has also made it possible to further reduce both energy consumption and maintenance of the hydraulic system. This range of "rotary injection moulding machines" is controlled by a new dedicated software that makes the process easier, more flexible and more efficient. ■

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The Roto PVC 16 injection moulding machine