



Piovan

Customers. The core of our innovation

Products&Solutions

Piovan's strength is based on a heritage of experience and skills established over time, and on the capability to offer a complete range of auxiliary equipment able to satisfy all requirements in the various industry sectors: Packaging, Automotive, Industrial & Electronics, Building & Construction, Textile, Furniture, Toys, Housewares, Medical and others. With high engineering skills, Piovan develops customised plant solutions, with enhanced and innovative features.

Drying

For the treatment of hygroscopic polymers, including those with particular drying requirements, Piovan provides a wide range of **desiccant dryers**. These dryers are available in the versions with desiccant beds or with rotor technology. All the models keep the moisture and temperature values constant, thus allowing an utmost constancy of characteristics and a highest quality of the final product. The new generation of Piovan dryers ensures optimised functioning in the various processing phases and high energy efficiency. In addition, Piovan offers **hot air dryers**, also available for high throughputs to remove surface moisture from non-hygroscopic thermoplastic materials. Piovan also provides the ideal solution for **mould drying**. A series of dedicated dryers to avoid any risk of condensation on the mould surface, above all in the injection and blow moulding applications characterised by fast cycles and in PET Preform systems.



Feeding and Conveying



Piovan provides a complete range of **single and three phase hopper loaders**, for flexible and quick handling of polymers, with no risk of mistake, contamination or material wastage. They can work as single units or be part of a centralised system with a group of vacuum pumps, and various feeding and conveying devices for raw materials: indoor or outdoor silos, big bag unloading stations, manual or automatic coupling stations, de-dusting systems. All the storage and conveying units and the related components have specific features according to the typology of material treated and the configuration of the plant.



Crystallisation

For those production processes which use amorphous PET both of virgin granules and of regrind from bottles, containers, fibres, thermoforming sheets and strapping, Piovani provides a complete range of **crystallisers**, to carry out the material preparation process before the injection moulding phase or extrusion. Good crystallisation allows optimisation and simplification of the drying phase, with no risk of material degradation and the possibility of recovering high percentages of regrind.



Volumetric and gravimetric dosing

With a complete and versatile range of volumetric **dosers**, **gravimetric batch blenders** and **loss-in-weight units**, all designed for injection and extrusion processes, Piovani is able to give the appropriate answer for all the requirements of dosing and mixing of components. The technology adopted ensures high precision and dosing repeatability, independently from the vibrations of the processing machine, and constant adjustment to the set value. All the models are developed to comply with the highest standards of accuracy, also in the case of very low percentages to be dosed, variations in granule dimensions or bulk density, critical or dusty materials.



All Piovani blenders guarantee homogeneous mixture with no wastage of ingredients, minimisation of production rejects and recovery materials at every production job shift.



Granulation

The recovery of rejects and sprues, both in the injection and blow moulding sectors, allows important savings in materials management and contains environmental problems. With a versatile range of **granulators**, Piovani offers the solution for the immediate recovery of rejects beside the machine or in a centralised position.

The standard solution foresees the closed loop functioning mode, to keep the material properties unaltered, with no contamination or humidity absorption. The regrind is uniform, with no dust content, and can be re-inserted in the process also at high percentages.



Software

To integrate, monitor and program all the auxiliary units from a remote PC, Piovan develops **software systems**, both with standardised platform and in customised version according to the specific features of the plant and the control and supervisory requirements of the customer.

The operator can control the functioning of the system from remote positions, modify and automate the settings of some parameters, diagnose potential problems and plan the production jobs. Piovan's software systems allow to carry out complete elaboration of the production data and to analyse in a complete and detailed way the plastics transformation process.



Temperature control

For a repeatable and highly qualitative production, with no rejects, it is necessary to keep at constant temperature the mould, the extruder screw, the calibration heads or the cylinders and thermoforming calenders. With a complete range of **temperature controllers**, in versions with water, pressurised water or oil, Piovan guarantees precise and accurate temperature control to achieve the highest efficiency of the transformation process. Also, the constancy of operation of the Piovan units ensures reduced energy consumptions, with optimised direct (heaters) and indirect (cooled water) usage of energy.



Refrigeration

For precise cooling of moulds, hydraulic oil of injection moulding and blow moulding machines, extruders, thermoforming lines etc, Piovani offers a complete range of **water chillers**. Those can be dedicated to a single machine or used for centralised solutions for the production department or the entire plant. The whole range ensures consumption optimisation, first of all thanks to the scroll hermetic compressors. Moreover, the portable models allow the recovery of the condensation heat by re-ducting the air into the plant during the winter period, while those of higher capacity can be combined with a free-cooling system, which exploits the cold ambient air thus allowing for considerable energy savings.



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