

Piovan UnaDyn Product & Solutions



Piovan
UnaDyn

Piovan Unadyn, Your North American Partner for Plastic Processing

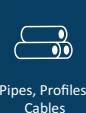
Over 60 years of innovation, expertise, and product excellence have positioned us, Piovan UnaDyn, at the forefront of plastics processing since 1957. The advanced development and manufacturing of superior material handling, drying, crystallizing, and reprocessing systems, coupled with their Integrated Systems Group, have solidified our position at the forefront of the industry. All our products are engineered for high performing, energy efficient and ease of operation. We strive to be wherever our customers are and wherever they are looking to grow.

With a focus on innovation, sustainability, and customer-centric solutions, we aim to set the standard for excellence in PET preforms, bottles, and recycling technologies. By leveraging our decades of experience and cutting-edge research, we strive to develop industry-leading solutions that address the evolving needs of the PET and recycling sectors. Our dedication to continuous improvement drives us to push boundaries and deliver solutions that contribute to a more sustainable future.

Piovan UnaDyn's strength lies in its rich heritage of experience and skills cultivated over time. We have the capability to provide a comprehensive range of complete automation systems designed to meet the diverse requirements of various industry sectors, including:

- ET Preforms & Bottles
- Rigid Packaging
- Automotive Components
- Technical Parts
- Medical Solutions
- lexible Film
- Thermoforming & Technical Sheets
- Recycling & Compounds
- Pipes, Profiles, Cables
- Fibers & Strapping

With our advanced engineering expertise, Piovan UnaDyn specializes in developing customized plant solutions that incorporate enhanced and innovative features tailored to our clients' specific needs. In 2008, Piovan UnaDyn continued to build on its legacy of expertise and joined the PiovanGroup, based out of Italy.



Loading and Conveying

Piovan UnaDyn provides a complete range of loaders, for flexible and quick handling of polymers, which provides an extremely low risk of contamination or material waste. They can work as single units or be part of a centralized system with a group of vacuum pumps, and various feeding and conveying devices for raw materials: indoor or outdoor silos, super sack unloading stations, manual or automatic coupling stations and de-dusting systems. All the storage and conveying units and the related components have specific features according to the material being handled and the configuration of the plant.

Loading & Conveying Options:

- **Ryng** – production monitoring
- **Easylink+** – automatic coupling stations
- **PureFlo** – filterless receivers
- **LS** – self-contained loaders
- **LS** – vacuum chambers
- **GT** and **GTC** glass tube chambers & loaders
- **Cyclone Prefilters & Dustmaster** floor filters
- **PowerMax** HP & PD Pumps
- **Maxi-Vac** Pumps
- **Valves** – Dual Ratio, Positive Shutoff and Purge
- **Rail Car Unloaders**



Drying and Dehumidifying

For the treatment of hygroscopic polymers, including those with particular drying requirements, Piovan UnaDyn provides a wide range of desiccant dryers. These dryers are available with desiccant beds, with wheel or compressed air technology. All the models maintain constant moisture and temperature values, thus allowing an utmost consistency of characteristics and the highest quality final product. The new generation of Piovan UnaDyn dryers ensures optimized functioning in the various processing phases and high energy efficiency. In addition, Piovan UnaDyn offers hot air dryers, also available for high throughputs to remove surface moisture from non-hygroscopic thermoplastic materials.

Drying and Crystalizing Options:

- **Vantage Series** – Low throughput, portable dryers
- **Vantage Ready Series** – standard Vantage dryer packages with quick-ship program
- **Automate** – Central, adaptive multiple hopper drying system
- **DHD/2B series** – dual desiccant dryers with open frame design for high throughput drying to 5,000 lbs/hr
- **PCT** – Pulse Cooling Technology dryers – high throughput with flatline heat and dewpoint profile
- **GenesysNext MVP** – High Efficiency Dryers
- **HD Series** – self-contained, fully automatic hot air hopper-dryer
- **Drying Hoppers** – EasyFlow, USC, SHC, T1
- **XTLR** – crystallizers- for amorphous PET or PLA virgin and regrind material
- **GasPack** – initial supply and retrofit conversions for process air dryers



GenesysNext MVP



PCT Series – Dual Hopper



XTLR Crystallizer



PET Preforms
& Bottles



Rigid
Packaging



Automotive
Components



Technical
Parts



Medical
Solutions



Thermoforming
& Technical Sheets



Flexible Film



Pipes, Profiles,
Cables



Fibers &
Strapping



Recycling



Compounds

Additive Feeding and Blending

With a complete and versatile range of volumetric dosers, gravimetric batch blenders and loss-in-weight units, all designed for injection and extrusion processes, Piovan UnaDyn is able to provide the appropriate solution for any blending or dosing requirement. 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 exceptionally low percentages to be dosed, variations in granule dimensions or bulk density, hard-to-handle or dusty materials.

Additive Feeding & Blending Options:

- **Lybra LG Series** – Gravimetric feeders
- **Lybra LV Series** – Volumetric feeders
- **PAF Series Feeder** – precision additive feeders
- **HCWB Central Gravimetric Blenders** – high throughput, regrind handling
- **MDW** – batch gravimetric blenders with 2-8 dosing stations
- **Quantum+** – gravimetric blenders, precision, all stainless steel



PAF Series Additive Feeder



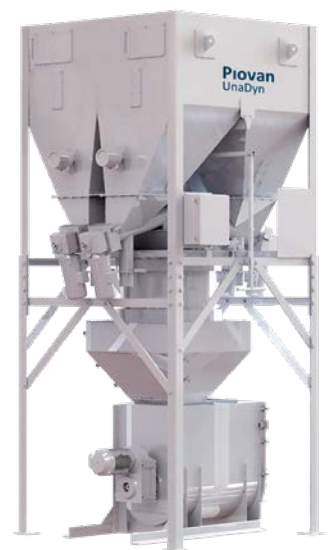
Lybra Gravimetric Feeder



MDW Gravimetric Blender



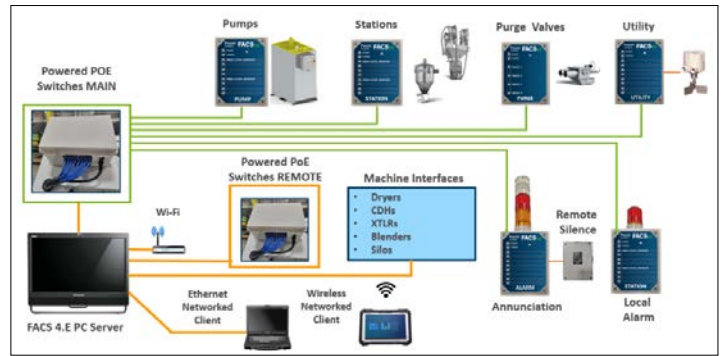
Quantum High Precision Gravimetric Blender



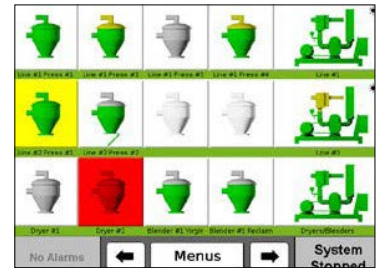
HighCap Gravimetric Weigh Blender

Controls

For control of Vacuum Conveying Systems, **FACS 4.E** is a Distributed Control/Distributed I/O Control System using “Power Over Ethernet” technology for communication and powered device operation. HMI is accomplished using Windows PCs Server workstation, with available 16 client computers or tablets for remote monitoring and access. POE Switch Panels are provided to comprise the FACS Machinery Network, configured with the necessary POE Ethernet Ports to connect to remote device panels to operate the system components.



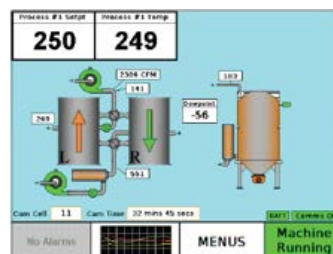
For direct control of smaller scale Vacuum Conveying Systems, the **24/7** Microprocessor Controller is available. Complete with LCD Touch Screen Display Interface, handling up to (9) Pumps/(36) Stations with multiple Accessories/Purge Valves. Featuring a VIOS Versatile I/O System for maximum flexibility in station configuration with Advanced Loading Control Functions such as Station Queuing Menu and Pump Utilization display.



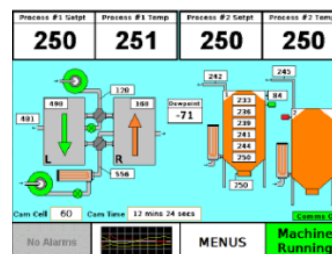
For drying systems, a complete family of controllers are available, all with datalogging and vacuum conveying system control as a standard. The FocusV operates Vantage Dryers with Dual Vacuum Closed Loop Conveying (DVCL) operation. The FocusPro operates Single and Dual PCT Drying Systems. A FocusMax is available as an upgrade with enhanced optimization features and up to 16 points of data logging. The FocusProComm provides control of multiple central drying hoppers from central dryer location.



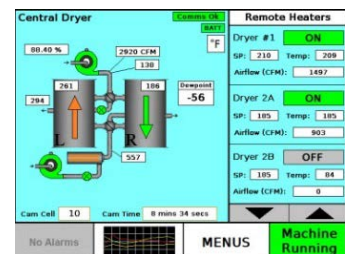
FocusV - Vantage



FocusPro



FocusMax



FocusProComm

Size Reduction

The recovery of rejects and sprues, both in the injection and blow molding sectors, allows important savings in materials management and improves the environment. With a versatile range of granulators, Piovan offers the solution for the immediate recovery of rejects beside the machine or in a centralized position. The standard solution foresees the closed-loop functioning mode for full recovery of all internal rejects and processing byproducts. The regrind is uniform, with minimal dust content, providing a high percentage to be reentered into the process.

Granulator Options:

- **Press-side and Central Granulators**
- **Film and Edge Trim Granulators**
- **Thermoforming Web Scrap Granulators**
- **Edge Trim Series Granulators**
- **Single Shaft shredders**
- **Evacuation Systems**



Edge Trim Granulator



Central Granulator



Single Shaft Shredder



Negative Pressure Evacuation

Process Water Cooling

For precise cooling of molds, hydraulic oil of injection molding and blow molding machines, extruders, thermoforming lines and other industrial heat exchange. We offer a complete range of water chillers. These can be dedicated to a single machine or used for centralized solutions within the production department or the entire plant. The entire range ensures optimization of energy consumption, largely due 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, for higher capacity models, they can be combined with a free-cooling system, which utilized the cold ambient air thus enabling considerable energy savings.

Process Water Cooling Options:

- **Portable Air-cooled Chillers**
- **Chillers** – 30 – 275 Ton, air and water-cooled
- **High efficiency** mold temperature controllers
- **Water cooled** thermochillers
- **Free cooling** dry coolers
- **Integrated** solutions

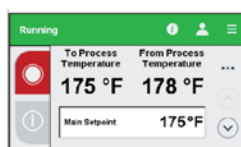


Temperature Control

For a repeatable and highly qualitative production, with zero rejects, in some environments, it is necessary to keep a constant temperature of the mold, the extruder screw, the calibration heads or the cylinders and thermoforming calendars. With a complete range of temperature controllers, in versions with water or pressurized water or oil, these units guarantee precise and accurate temperature control to achieve the highest efficiency of the transformation process. In addition, the constancy of operation of the units ensures reduced energy consumption.



OMW Water Temp
Control to 300 ° F



Premium Control
OTW Model



OTO Oil Temp
Control to 575 ° F

Integrated Systems Group



Universal Dynamic's Integrated Systems Group is one of the plastics processing industry's most experienced and trusted names when it comes to designing, delivering and installing the right auxiliary system for the application. The Integrated Systems Group will assist you whether you're building a new production facility, or expanding an existing one. With over 40 years experience in the plastics processing industry, ISG is ready to assist you with all your design, building and installation needs or with equipment integration to optimize an existing plant system. From initial planning through start-up, with a commitment to follow-up support and service, we provide advanced engineering, design expertise, components and controls that are energy efficient, technically superior and perform to meet the many challenging needs of plastics processors today.

Material Handling Systems

- Railcar unloading Silos
- Material conveying Blending & feeding Drying systems
- Controls, monitoring & datalogging Mezzanines



Equipment & System Layout & Design

- System master plan
- Individual machine group layouts
- Accessibility/clearance audits
- Multi level mezzanine layouts
- Utilities drawings
- System field wiring diagrams



Project Documentation

- Master utilities schedule
- Project bill of material
- Project schedules
- Installation work-scope checklist
- System maintenance schedule



Experienced Installation Crews

- Optimize layouts & piping runs
- Manage on-site installation operation
- Field-to-factory interface

Heavy Rigging Services

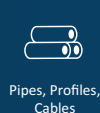
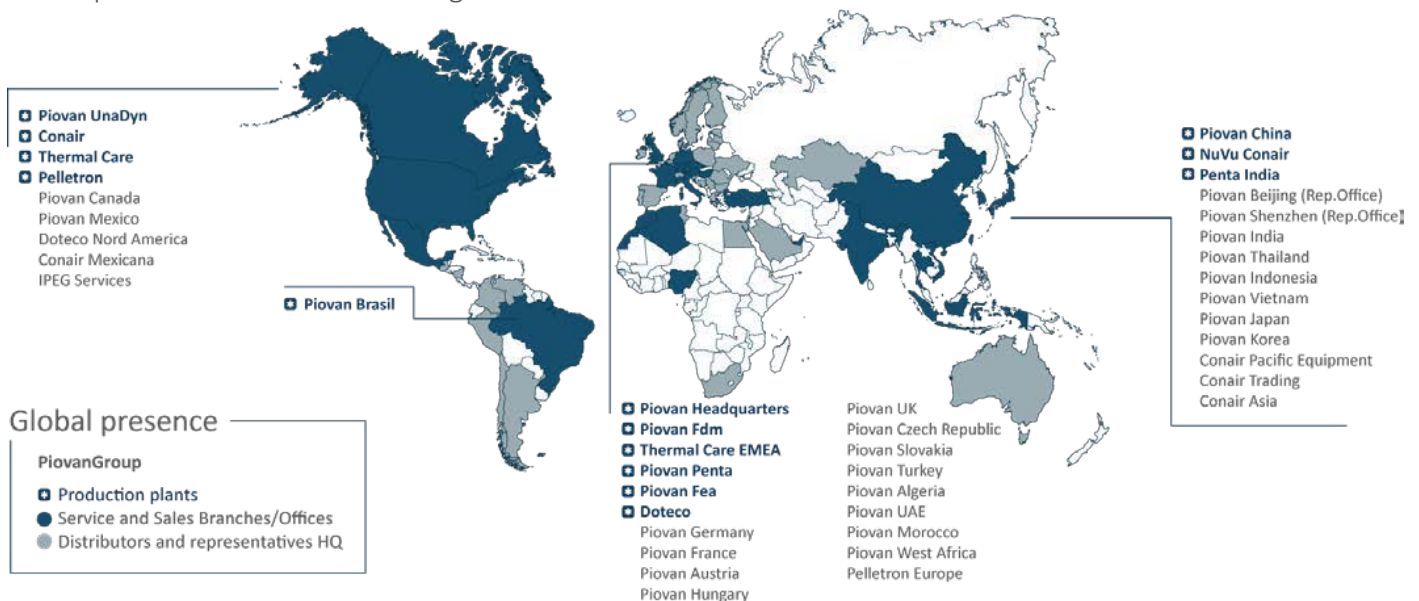
- Crane & rigging equipment selection & rental
- Site preparation
- OSHA guideline compliant

Training Technical Support Customer Service

- On and off-site systems and equipment training
- Technical assistance
- (by phone or in the field)
- Customized preventative maintenance programs
- Advanced control and monitoring software

Part of a Globally Present Group

PiovanUnaDyn is part of PiovanGroup, a world leader in the design, manufacture and installation of systems that automate the storage, transport and processing of polymers, plastic powders and food ingredients. Based in Santa Maria di Sala – Venice, Piovan Headquarters was founded in 1934 as a workshop specialising in precision mechanics and entered the polymer industry in 1964, focusing on the production of automation systems. Thanks to its continuous growth, PiovanGroup has also extended its presence to the food and industrial refrigeration industries, thus also supplying systems for industrial process cooling and heating and temperature control. Passion, tenacity and constant determination have enabled PiovanGroup to strengthen its presence worldwide and become a multinational company: with 14 production plants and 40+ service and sales branches, the Group is currently present in more than 70 countries, thanks also to an extensive network of distributors and representatives. For a new plant, Piovan and Piovan UnaDyn can develop the most suitable local or global solution.





Discover our
full range of products

Piovan UnaDyn

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