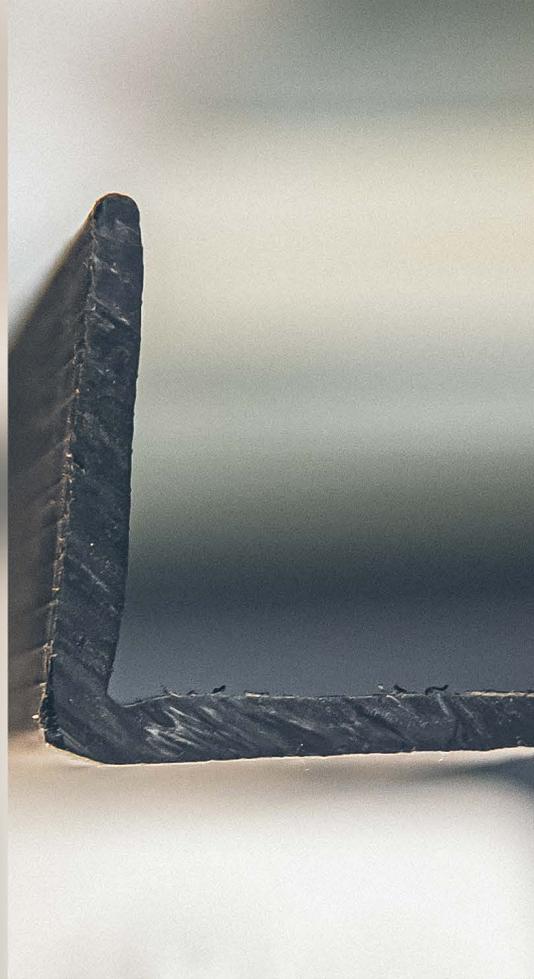


periplast
extrusion expertise



PROFILE EXTRUSION
LINE



ECO FRIENDLY
SUSTAINABLE
CIRCULAR ECONOMY

WWW.PERIPLAST.PT

Multiple Materials and Applications



PE | PP | PVC | PA | PMMA | PC | ABS



PROFILES FOR FURNISHING



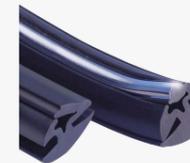
PVC PROFILES



ROLLING SHUTTERS



TECHNICAL PROFILES FOR INDUSTRY



WINDOWS AND GASKETS

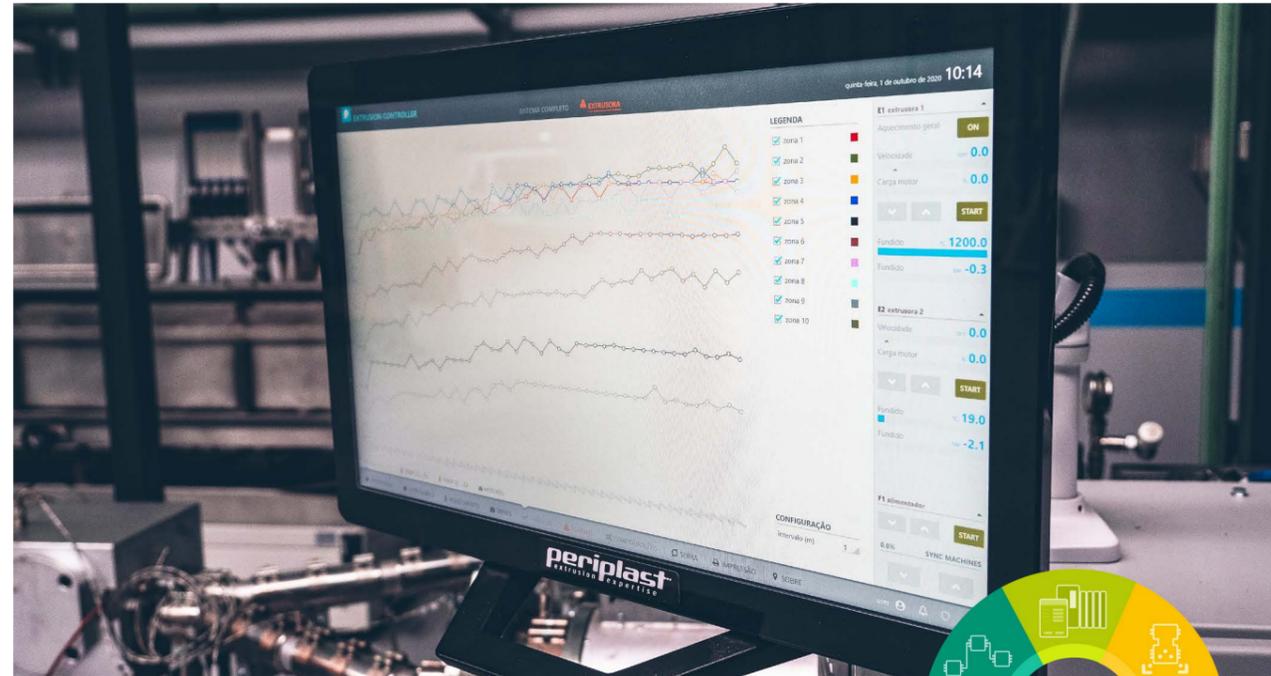


GUTTERS

Periplast Line Controller

Adopting the TOP-NOTCH technology available in the market, using one Industrial PC running Windows 11 IoT running and OPC-UA HMI with two or more 22" FULL HD (1080p) multipoint Touch screen panels, fitting the machine's base frames along the line.

It's possible to control all the functions of all the machines installed in line on the same touchscreen, with the main page designed specifically for each line including all the machines, sensors, and controls.



Main Functions:

- Product recipes include information regarding each article to produce including: product name and ID, temperature, speed of all drives, and two different setpoints in % for startup and production
- Graphic trends, and values to display and control the line variables (temperatures, speeds, pressures, etc.)
- Display, recording and printing of the alarms
- Program for the maintenance management of the machine.
- The same menus and screens available from any PC or laptop to be installed on the production control room, monitoring the process at any moment
- OPC-UA connection to External Scada System
- SQL Database recording alarms, process variables: temperature, speed, pressure
- Can run over Beckhoff or Siemens PLC



Software Controls:

Upstream Equipment: Feeder/Force feeder, Volumetric/Gravimetric feeder (INOEX, IBE)

Extruder:

- Control and supervision of all thermo zones. A very simple software controls, at any moment, the power consumption distributing the power from the available phases and reducing the total power of the equipment
- Screw rotation, melt: temperature and pressure on the breaker plate – pressure loop as option
- Display of temperature parameters, set point, and heating power (bar graph).
- Upward/downward function on synchronized ramp of the line motors speeds.
- Pre-heating timer with the daily or weekly program, adjustable according to the hour the machine with 2 different Setpoints
- User management of min., max. or deviation of the temperature



Downstream Equipment

- Melt-Pump (speed and pressure)
- Screen changer (temperature and pressure control, and screen pack cleaning)
- Die-Head/tooling (temperature and airflow control)
- Calibration: Automatic vacuum control (PID) – with energy and noise reduction and possible to define recipes
- Cooling: Closed loop water circulation/temperature controls.
- Diameter and Thickness control (Zumbach and Sikora)
- Take-off: pulling speed, open/closing of the conveyors/belts in pneumatic version or belt thickness sensor on wheel version.
- Saw: Cutting cycle (length, number of parts cut, safety)
- Discharge of collecting table/packing system



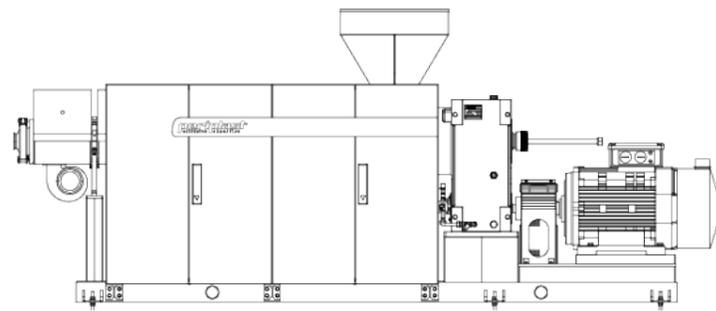
Single Screw Extruder

Different models available. Different types of plasticising units:

- Bimetallic barrel with conventional or grooved feeding section with or without degassing
- Different screw geometries for processing a greater variety of polymers

Fans to control the temperature of the chamber. AC motor and vector frequency inverter

Robust chassis built to eliminate vibrations. Thermal insulation of plasticizing unit.



Calibration Table

Designed for easy and efficiently extruding a wide range of profiles ensuring precise calibration and fast cooling of the profiles.

Table prepared for dry calibration (stainless steel support plate for calibrators) or through immersion (stainless steel water tank) in the same system

Adjustment:

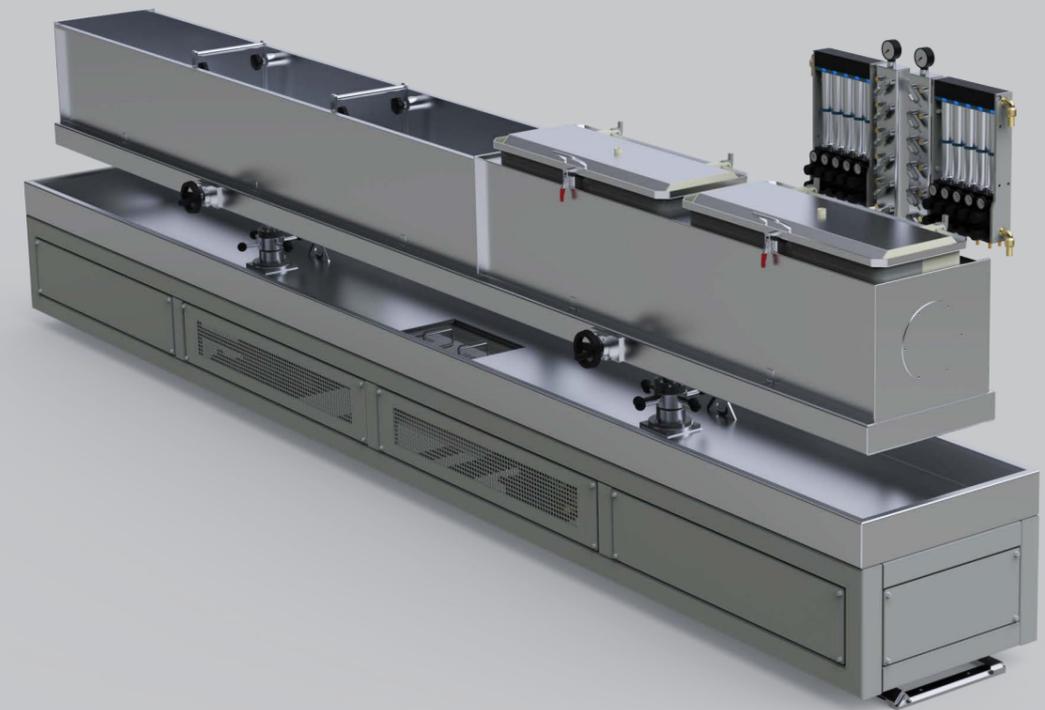
Manual: tabletop (sideways and up/down) and water collection tray (backward and forward) with vacuum pumps mounted on bases with easy access

Motorised: tabletop and water collecting tray with vacuum pumps supported on sliding bases for easy access and maintenance

Table dimensions to suit the calibrators and water tank

A vast number of water and vacuum connections each with its own control valve

Heavy duty fabricated steel base frame (stainless steel on request) mounted on rails with motorised longitudinal movement



Haul-off

Two conveyors haul-off profile gripping and pulling by:

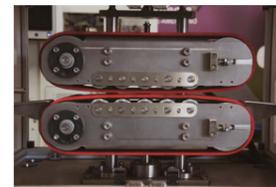
- Chains with rubber pads (PP models)
- Rubber coated Poly-V belts (PT models)

Conveyors driven by:

- Single motor and shaft transmission
- Independent motor on each conveyor

Conveyor adjustment by:

- Static lower conveyor and pneumatically gripping upper conveyor
- Manually driven steering wheel opening and closing simultaneously or independently
- Manually driven steering wheel opening and closing of lower conveyor and pneumatically gripping upper conveyor
- Motor driven lower conveyor and pneumatically gripping upper conveyor



PT models



PP models

Adjustment to the extrusion axis on the base-frame supporting legs. Motor attached counting Encoder.



Cutters



Circular Saws, SC and SCP models

AC motor-driven circular saw

Cutting blade with teeth (with or without insert) or diamond

Adjustable blade strike speed

Pneumatically operated clamping system, before and after the cutting blade

Dust extraction in close system with a very easy one-person operated discharge method by opening a zipper and discharging

Output signal to the collecting table command or other equipment

Carriage movement:

At extrusion speed without need for operator adjustments (SC models)

By servomotor and belt transmission requiring synchronism with the haul-off (SCP models)



Guillotine, SG model

Guillotine cutting blade made of high-quality tool steel

Cutting assembly provided with heating elements and temperature control

Hydraulic displacement of the blade

Cutting unit carriage displacement servomotor driven and tooth belt transmission synchronised with the haul-off speed resulting on a very narrow accuracy of cut of $\pm 0,25\text{mm}/\text{length}$ and causing no defect on the profile

Guiding of the profile inside of an aluminium die-system (shaped into the appropriate geometry of the profile to be produced) holding the profile on its shape before and after the cutting blade, allowing the most perfect cut without deformation

Haul-off with integrated cutter

Pulling and cutting integrated in the same chassis in painted, welded steel structure.



Collecting tables

EC Model

Table in stainless steel, pivoting, with stainless steel accumulation rack for profiles

Profile collection by stainless steel tray

Unloading of the reception tray by pneumatic cylinder

Heavy duty base frame fix to the ground by levelling and anti-vibration rubber blocks



EPC Model

Conveyor belt table with stainless steel accumulation rack for flexible profiles

Reception of the profile by a flexible belt

Variable speed conveyor belt synchronized with the line speed

Air Blower to take off the belt the profiles of the short length productions

Chassis made of welded painted steel construction

All parts in contact with the product in stainless steel



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MORE INFO