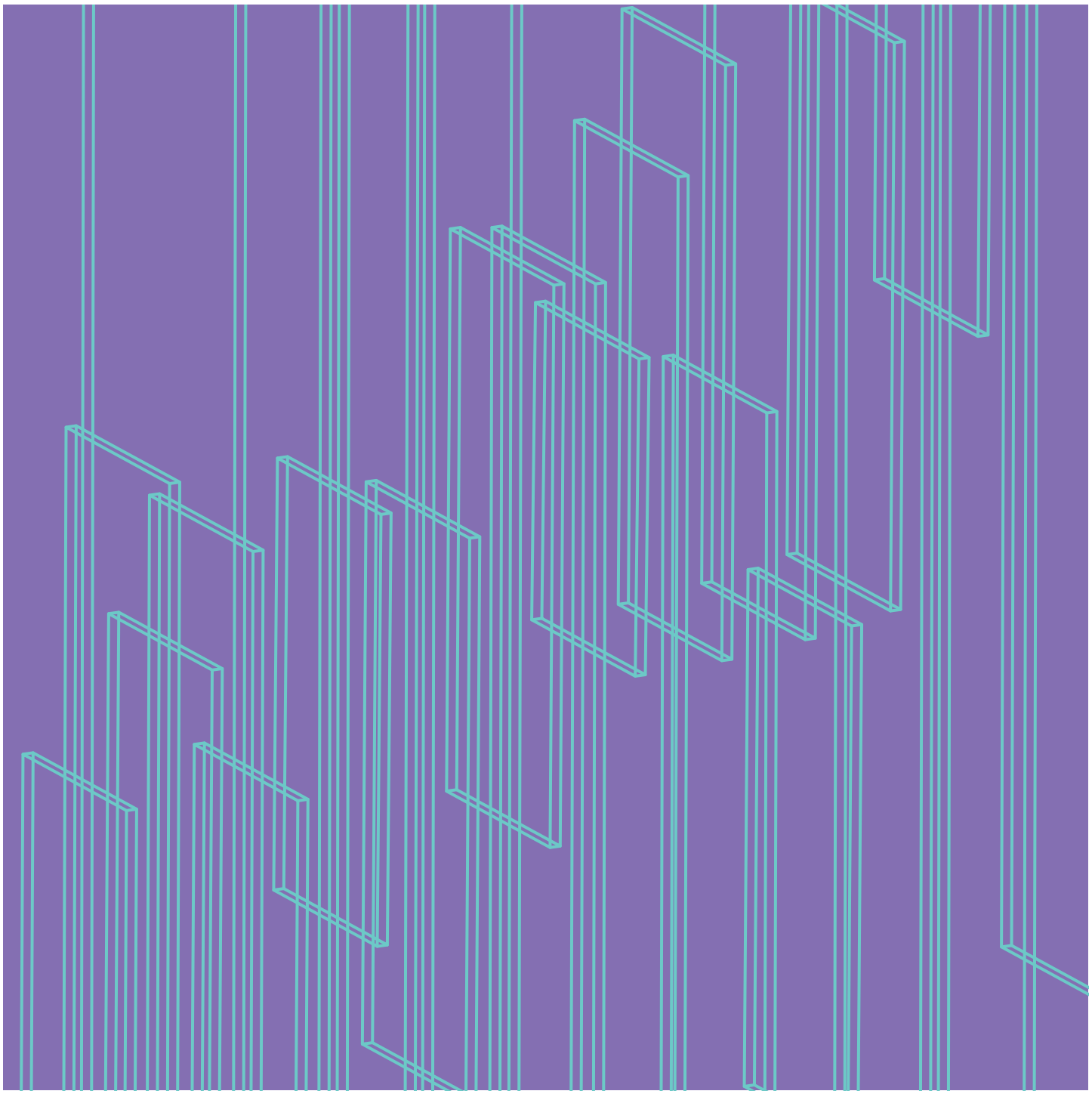
Bausano

Profile
extrusion lines

Bausano designs profile extrusion lines for precise, high-quality output across diverse geometries.
Each system enables custom shaping with efficient cooling and calibration, ideal for construction, automotive and furniture applications.

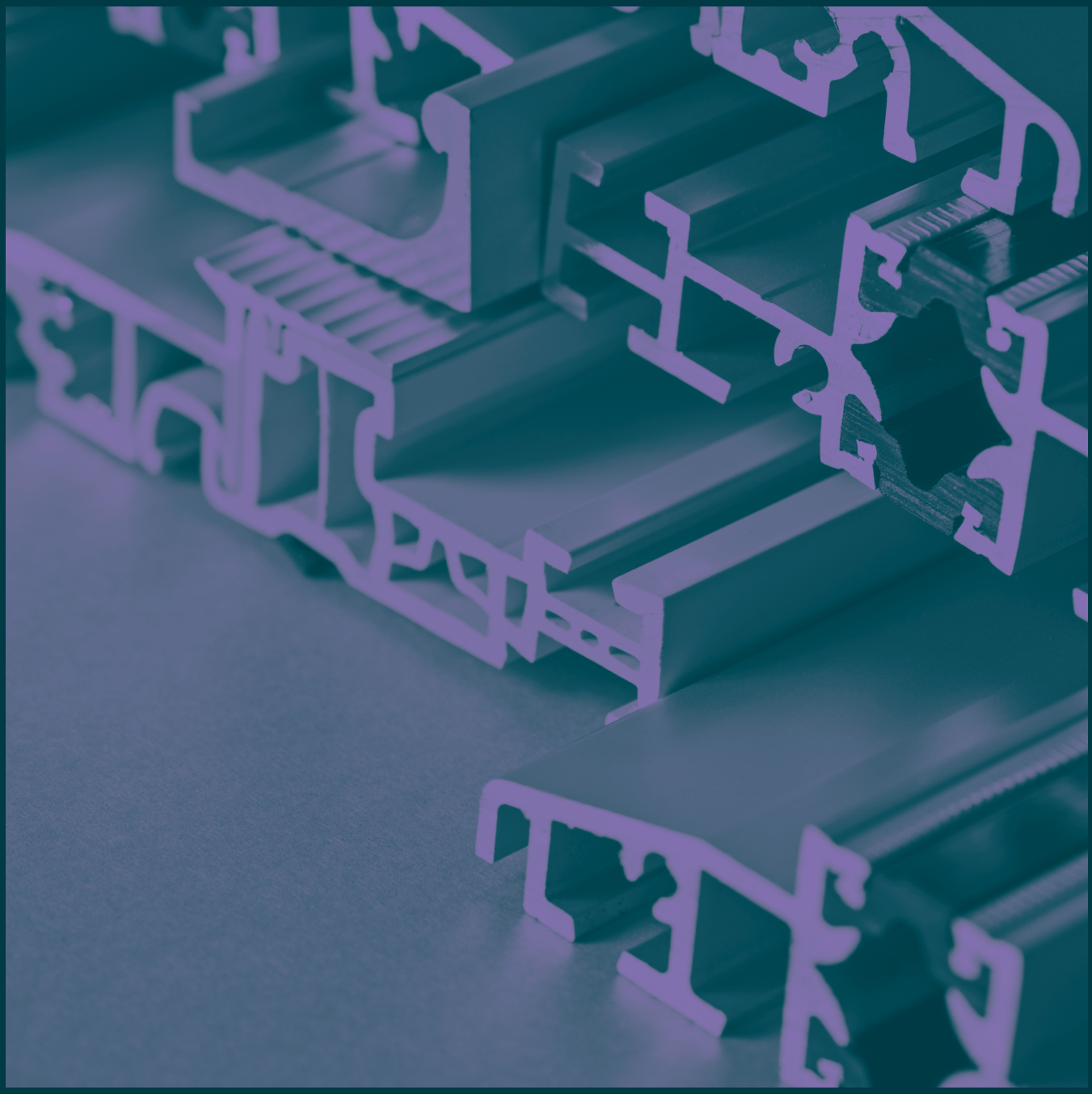


Profile
extrusion lines

Bausano
Extrusion instinct

Efficient. Customizable. Ahead.

Each Bausano extrusion line for technical and window profiles is a modular system, engineered to ensure precise shaping, dimensional stability and production flexibility. A solution designed to meet complex profile requirements with reliable performance and consistent output.



Extrusion lines for technical and window profiles

The widespread use of plastic profiles in construction and industrial manufacturing is due to their proven functionality and structural reliability. Window and door profiles, cable ducts, technical trims and custom-engineered elements are just a few examples of their versatile application.

Their success derives from the adaptability of thermoplastic materials, which can be formulated to meet specific mechanical, thermal and aesthetic requirements. By combining polymers with dedicated additives, it is possible to produce profiles that offer dimensional precision, impact resistance, UV stability and surface finish tailored to the final use.

Bausano designs complete extrusion lines for technical profiles and window systems, ensuring a high level of process integration. Each line includes coordinated units for material feeding, extrusion, shaping, cooling, pulling and cutting. The technology behind every system is developed to deliver repeatable results, optimised energy consumption and full control over production parameters.

The process starts with the extrusion of the molten material through a die designed for the desired profile geometry. As the profile exits the die, it passes through a series of forming and calibration stations, followed by cooling tanks that stabilise the structure. The continuous extrusion is then accurately cut to length by automated systems.

Bausano's solutions are tailored to meet diverse market demands – from architectural to industrial applications – offering flexibility in line configuration and long-term reliability. Each line is built with the understanding that precision in every component directly enhances the quality and consistency of the final profile.

Made in Italy quality
Choosing Bausano means pick out a strategic partner that can help you to process plastics. The company designs and builds customised extrusion lines completely Made in Italy for the production of pipes, granules, profiles, medical tubes and pockets in thermoplastic materials. The quality of the extruders and the products is unquestionable: the best technology at the service of the plastic industry, to improve productivity and reduce energy consumption.

Parallel twin-screw extruder series

The extrusion process enables the production of plastic profiles for a wide range of technical and architectural uses. Bausano offers complete extrusion lines tailored to every profile geometry and processing requirement.

Bausano offers quality and performance from the feasibility study to the design, manufacturing, commissioning and after-sales support – each phase is managed in-house for full process control. This internal management enables the production of fully customisable parallel twin-screw extrusion lines for window profiles. Bausano systems are highly adaptable and ideal for materials like PVC, which require flexibility in formulation and precision in shaping. The company's solution for window profile extrusion is based on parallel twin-screw technology, optimised for stable plasticising and efficient output. Each configuration is available in different lengths and motor options to suit specific production demands.

MD Series: parallel twin-screw technology

Parallel twin-screw technology with high specific output for gentle plasticization.

Optimized material feeding system for stable production of PVC-U powder.

Optimized screw design and tailored to customer needs.

Patented Multidrive system reduces stress on motor shafts, gears, and screws, with a positive impact on both precision and energy savings.

AC motors for low energy consumption.

Induction barrel heating system for more efficient heating and reduced heat loss.

IoT technologies enable full monitoring and analysis of production parameters, with a special focus on improving energy efficiency across the entire extrusion process.



TECHNICAL DATA						
Models	**MD 52**	**MD 66**	**MD 75**	**MD 92**	**MD 118**	**MD 130**
Screw diameter (mm)	52	66	75	92	118	130
L/D ratio	23	19 / 30	24 / 30	25 / 30	26 / 30	25 / 30
Heating zone	4	4 / 6	5 / 6	6 / 7	7 / 8	7 / 9
Cooling zone	3	3 / 4	3 / 4	4	4	5 / 6
Total power (kW)	40	45 / 55	85 / 108	127 / 165	205 / 210	240 / 260

Data contained in this catalogue are purely indicative and may change.

For specific needs in PVC extrusion, Bausano offers compact single-screw co-extruders designed for low-output applications: models E-GO 25 and E-GO 30 ensure reliable performance in small-scale PVC production. Output reaches up to 17 kg/h for PVC, depending on the configuration.

Conical twin-screw extruder series

The E-ON conical twin-screw series by Bausano is designed for reliable PVC-U extrusion with high melt quality and stable output. Its modular frame, energy-saving motors, and IoT monitoring features make it ideal for profiles using virgin or recycled compounds in daily production.

Bausano guarantees full control and efficiency from the feasibility study to machine design, equipment production, commissioning, and after-sales service – every step is managed in-house.
Thanks to this integrated process, Bausano offers fully customisable conical twin-screw extruders for the extrusion of window and technical profiles.
The E-ON series is engineered to handle a wide range of materials and geometries, offering flexibility, precision, and excellent compound processing – even with recycled or mineral-filled formulations.
E-ON lines are modular and versatile, ideal for both new plants and modernisation projects, ensuring consistent performance over time.

E-ON Series: conical twin-screw technology

Optimized output range from 50 to 400 kg/h for stable processing of PVC-U materials.

Dedicated screw and barrel designs for profiles.

High-quality melt with minimal section defects for excellent product surface finish.

Modular machine frame for quick configuration and easy integration into any production setup.

Energy-efficient AC motors for reduced costs.

Induction heating for fast response and heat uniformity across the barrel.

IoT-ready system for real-time monitoring and performance optimization with a focus on energy savings and process repeatability.



TECHNICAL DATA			
Models	**E-ON 53**	**E-ON 63**	**E-ON 80**
Screw diameter (mm)	53	63	80
L/D ratio	23	23	23
Total power (kW)	37	51	83
Degassing zone	1	1	2
Cooling zone	4	4	4
Heating zone	4	4	4
Guaranteed output for PVC-U profiles (kg/h)	50-120	50-220	120-300

Data contained in this catalogue are purely indicative and may change.

For specific needs in PVC extrusion, Bausano offers compact single-screw co-extruders designed for low-output applications: models E-GO 25 and E-GO 30 ensure reliable performance in small-scale PVC production. Output reaches up to 17 kg/h for PVC, depending on the configuration.

Single-screw extruder series

Reliability, precision and flexibility: Bausano's single-screw extruder is designed to ensure high performance in plastic profile production, even on complex lines.

Profile extrusion: high precision for diverse applications
Bausano stands out in the market thanks to its strategic choice to pursue vertical integration – both in design and in in-house manufacturing of extrusion equipment. This ensures greater efficiency across internal processes, high quality standards, and strong positioning through full control of the production chain. In this framework, the company actively supports its partners with pre-sales consulting, aiming to define the most effective solution for achieving the required profile geometry and delivering a reliable, ready-to-use extrusion line. Bausano's single-screw extrusion technology is the result of this evolution.

This technology is suitable for the production of:
- Technical and structural profiles for building and furnishing.
- Cable management ducts for electrical and telecom systems.
- Window sills, roller shutters, gutters, trims and skirting boards.
- Profiles made from a wide range of thermoplastic materials.

Screw design that drives performance
A distinctive strength of Bausano's single-screw systems lies in the screw geometry, developed with a customised profile and differentiated pitch. This optimises torque, increases output and enables stable low-temperature processing – especially beneficial for heat-sensitive compounds. Advanced configurations also include barrier screw options to enhance material melting, mixing and homogenisation.

Main features
- Long service life of grooved bushings and mechanical components.
- Constant throughput across a wide speed range.
- Optimised melt temperature for improved product quality.
- Energy-efficient operation through optional induction barrel heating.
- IoT technologies enable complete production monitoring, enhancing energy efficiency throughout the extrusion process.
- Reduced cooling requirements and improved drive dynamics for smoother performance.



TECHNICAL DATA					
Models	**E-GO 45**	**E-GO 60**	**E-GO 70**	**E-GO 75**	**E-GO 90**
Screw diameter (mm)	45	60	70	75	90
L/D ratio	25 / 30	25 / 30	25 / 30	25 / 28	30
Heating zone	4	4 / 5	4 / 5	4	4
Cooling zone	4	4 / 5	4 / 5	4	4
Total power (kW)	25 / 35	41 / 80	45 / 65	85 / 108	135

Data contained in this catalogue are purely indicative and may change.

For specific needs or co-extrusion requirements, Bausano also offers a range of compact single-screw extruders: models E-GO 25, E-GO 30 and E-GO 35 ensure reliable performance even in low-output contexts. With screw diameters from 25 to 35 mm and L/D ratios up to 30, these machines are ideal for small-scale production or laboratory use. Output ranges from 4 to 80 kg/h.

Co-extrusion in profile extrusion



Co-extrusion heads allow the integration of different materials within a single profile, based on the project requirements and selected polymers.

Co-extrusion unit
To combine or layer multiple materials, one or more co-extrusion units are installed before the shaping zone. These units are positioned either on the left or right side of the main head. Designed with radial flow distribution, they ensure an even melt flow and low operating pressure. Depending on the configuration, they allow the creation of two-layer profiles with varied hardness, colors or functional properties. The system offers high adaptability to complex profile geometries and supports quick material changeover. This ensures efficient production while maintaining quality and consistency across different extrusion batches.

Thermoplastic material compatibility

1
Flow control for precise multilayer geometry.

2
Synchronised melt channels for complex profiles.

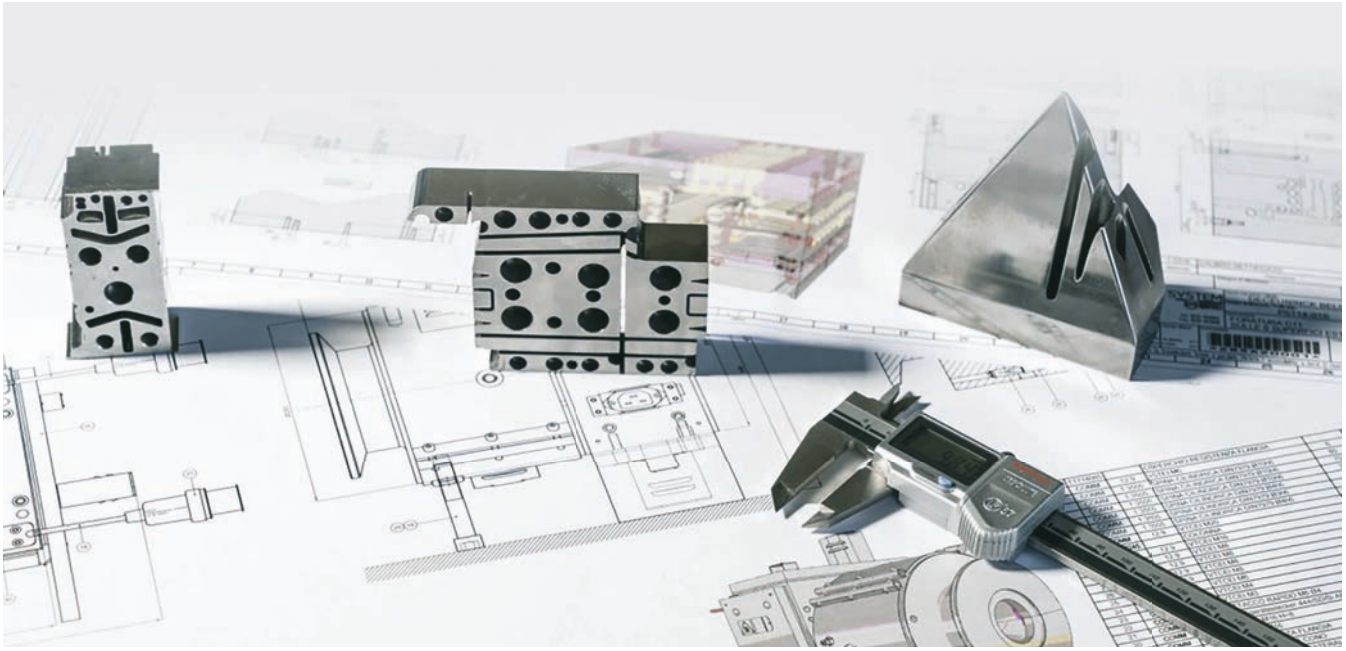
3
Special adapter for the use of existing die sets.

4
Flexible for small, large or customised profiles.

5
Use of recycled compounds in core layers.

6
Low material waste and energy-efficient design.

Die heads and calibration units

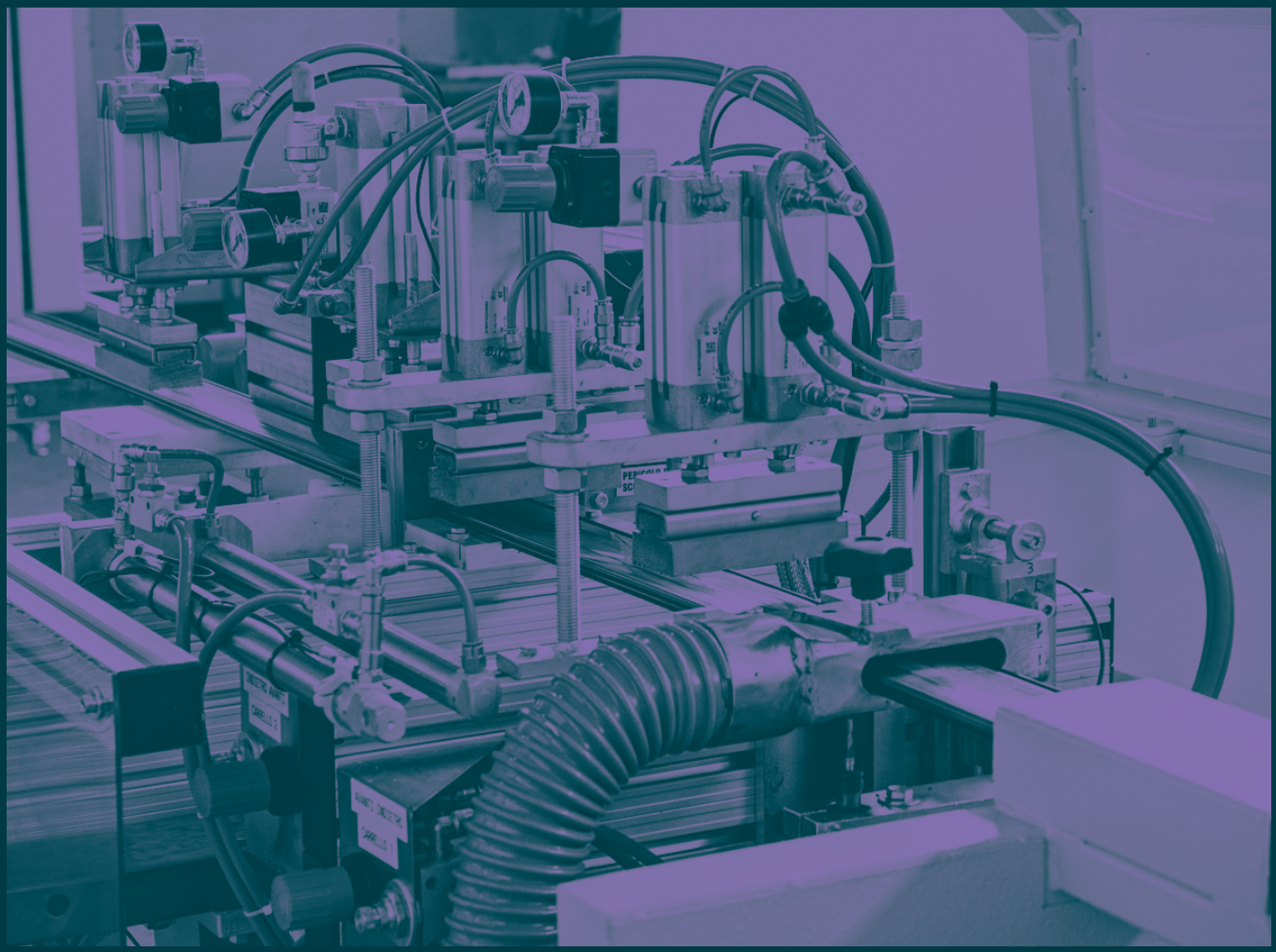


Profile die head
Tooling design is essential for producing precision profiles with maximum efficiency. Bausano profile die heads are developed in collaboration with specialised partners and matched with dedicated cooling systems.
Made from high-chromium stainless steel, they are suitable for materials like rigid, foam or soft PVC, ABS, PC and WPC. Each die can be single or multi-output and is based on customer drawings or co-developed concepts, ensuring technical accuracy and production reliability.

Calibration tool
Calibration tools are machined from stainless steel to ensure durability, especially when processing filled materials with abrasive properties.
The internal cavity is shaped to match the final profile and is highly polished to reduce drag.
Integrated cooling channels provide a controlled flow of water, which is essential to stabilize the profile during extrusion. Vacuum lines within the tool ensure the extruded material makes optimal contact with the calibrator surface, allowing precise cooling and accurate dimensions.

Downstream systems for precision handling

Downstream systems complete the profile extrusion process with controlled traction and clean cutting. Designed for precision and reliability, they maintain line speed, safeguard quality standards and adapt to a wide range of shapes, thicknesses and production needs.



Precision handling in profile extrusion

Calibration, haul-off and cutting systems are essential in maintaining process stability throughout the extrusion line. Calibration benches ensure the correct shaping of the profile right after extrusion. Using water-cooled molds and vacuum chambers, they stabilise the section geometry while optimising heat dissipation. These systems are engineered for different shapes and materials, supporting precise sizing without compromising surface quality. Combined with the haul-off, they maintain constant pulling force and line speed, preserving dimensional accuracy and ensuring a uniform extrusion flow across the entire process. The coordination between components reduces stress on the material and supports accurate calibration, even with complex profiles. Synchronized automation enables high efficiency and consistent results under all production conditions.

Precision cutting for reliable results
Cutting units complete the profile extrusion process, ensuring clean separation without affecting structure or aesthetics.
Depending on the profile type, the system may use orbital blades or planetary saws, both designed for sharp, burr-free cuts. Each unit is fully synchronised with the haul-off, reducing vibration and waste while increasing process stability. This setup allows for continuous or multi-shift operation with minimal maintenance and optimal productivity.

Integrated systems for uninterrupted performance
Bausano integrates calibration benches, haul-off units and cutting stations into a single control architecture. Operators can set vacuum levels, cooling parameters, pull speed and cutting intervals directly from the main interface, ensuring complete line coordination. All components are built with industrial-grade materials, ensuring durability and reduced energy consumption. Whether for construction profiles, window frames, automotive trims or custom applications, Bausano's downstream solutions guarantee precision, flexibility and long-term performance with every meter produced.

Profile cooling bench

Cooling is a critical phase in profile extrusion, especially with wide sections or at high speeds. Vacuum stability and water efficiency are essential to ensure consistent output, precise shaping and surface quality. Bausano's modular cooling benches support quick setup, fast profile changeover and highly efficient thermal control. The integration of cyclone units and closed-loop circuits for water recycling and discharge optimizes the process and reduces energy waste. The system is designed to allow replacement of preset calibration modules without full disassembly, minimizing downtime during profile transitions.

Vacuum levels are stabilized through upstream particle filters and inverter-controlled pumps, preventing surface defects and pressure loss. A centralized control panel near the extrusion die gives operators complete visibility and control over cooling parameters, improving responsiveness, efficiency and overall production quality – across every run and every profile type.

TECHNICAL DATA								
Models	**BPN3/2P4**	**BPN4,5/2P4**	**BPN6/2P4**	**BPN6/3P7,5**	**BPN6/4P9**	**BPN9/2P4**	**BPN9/3P7.5**	**BPN9/4P9**
Lenght of calibrator holder beam (mm)	3500	4500	5600	5600	5600	8700	8700	8700
Longitudinal transverse of calibrator holder beam (mm)	1000	1000	1000	1000	1000	1000	1000	1000
Transversal displacement (mm)	40	40	40	40	40	40	40	40
Vacuum pump (nxkW)	2x4	2x4	2x4	3x7,5	4x9	2x4	3x7,5	4x9

Data contained in this catalogue are purely indicative and may change.



Closed-loop water systems for energy savings
The use of recycled cooling water through collection and return tanks ensures constant flow without thermal accumulation. This system prevents excessive heat absorption and minimizes resource consumption. The closed loop also protects the pump units from wear and contamination, reducing maintenance.
Water discharge takes place by gravity via stainless steel tanks, while vacuum is ensured by liquid ring electropumps with 3-phase motors.
The system architecture integrates polyamide guide rails, mechanical jacks for adjustment and longitudinal motion driven by motor reducers.
Each module is designed to enable accurate calibrator positioning and stable vacuum levels.

Modular cooling benches with integrated circuits
- Electro-welded structure with quick-lock inspection panels.
- Stainless steel tanks with open gravity discharge.
- 3-phase motor-driven liquid ring vacuum pumps.
- Cooling water and vacuum distribution in stainless steel with multiple sockets.
- Calibrator beam in hardened, corrosion-resistant aluminium.
- Motorized longitudinal adjustment on self-lubricating guides.
- Mechanical vertical and lateral displacement with jacks and screws.
- Integrated control panel near the extrusion head.

The image shows a Bausano profile calibration bench, engineered to ensure precise shaping before intensive cooling.
It enables accurate cross-section definition and efficient thermal exchange, supporting stable and high-quality profile extrusion.

Haul-off unit



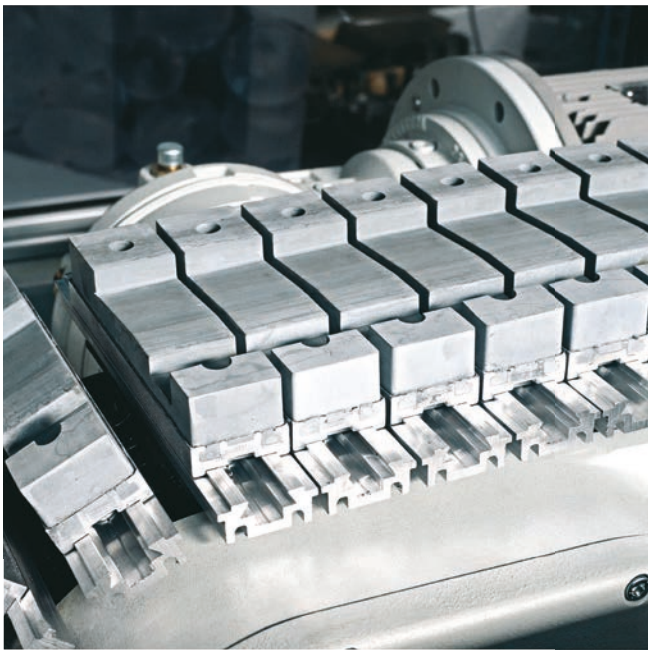
Bausano's profile haul-off units feature two independent epicyclic gear motors with variable frequency inverters for precise, continuous speed control. Sectional traction pads allow quick, customizable replacement. These units ensure strong, mark-free traction for both small profiles and high-power applications.

Efficient operation and easy access
The chassis is precision-welded to ensure maximum stability, minimizing vibrations during operation and extending equipment lifespan. The design also facilitates maintenance, while pad replacement is fast, tool-free, and requires minimal downtime.

TECHNICAL DATA						
Models	**TN10-50N / 10-70N**	**TNP15-110ML**	**TNP15-150MB**	**TNP20-150MB**	**TNP30-150MB**	**TNP15-250MB**
Track length (mm)	Belt 500 / 700	1100	1500	1500	1500	2500
Track width (mm)	100	150	150	200	300	150
Hauling speed (m/1')	0,25-120	0,2-10 1-25	0,2-6 0,8-24	0,2-6 0,8-24	0,2-6 0,8-26	0,2-6 0,8-27
Models	**TNP20-250MB**	**TNP30-250MB**	**TNP50-250MB**	**TNP80-250MB**	**TNP120-250MB**	
Track length (mm)	2500	2500	2500	2500	2500	
Track width (mm)	200	300	500	800	1200	
Hauling speed (m/1')	0,2-6 0,8-27	0,2-6 0,8-29	0,2-2,7 0,8-10	0,2-2,7 0,8-10	0,2-2,7 0,8-10	

Data contained in this catalogue are purely indicative and may change.

Pad haul-offs for constant and stable pulling





To complete its extrusion lines, Bausano provides haul-off units with 2, 3 or 4 tracks, featuring flat or profiled rubber pads. Special versions include adjustable pick-up systems to suit specific production needs. Each unit is powered by dual independent epicyclic gear reducers with frequency inverters for accurate, continuous speed control. The upper track features pneumatic tilting with micrometric adjustment, while the lower track includes a vertical mechanical system.
Bausano haul-off units are designed to ensure precise handling, regardless of profile size. Strong and stable in structure, they guarantee uniform traction without marks or deformation.

Caterpillar haul-off
Bausano pad haul-offs are designed for durability, flexibility and ease of maintenance. Compact and robust, they allow quick access to tracks for cleat replacement. Key features include:

- Different dowel sizes to remove profiles gently without affecting shape or surface.
- Cleats customised to fit the profile geometry.
- Quick-change system for fast cleat replacement.
- Full front access to both chain carriages for easy maintenance.

For both configurations, a wide selection of contact lengths, widths, speeds and pulling forces is available. All chassis are precision-welded to ensure maximum structural stability.

Belt haul-off
Bausano supplies a wide range of haul-off belts which ensure high resistance to abrasion, excellent grip properties and a precise finishing that guarantee an homogeneous coating, for a perfect adherence to the extruded material.
The Bausano belt haul-offs are used for continuous extrusion of profiles. They are known for especially consistent performance even at high production speeds. The belts are driven by brushless AC servo drives. Both belts can be mechanically or pneumatically adjusted in height. The belts can also be supplied with a cellular vulcanised or rubber layer.

Vertical and horizontal cutters

Bausano has internally developed a cutting system designed to combine high safety standards with reliable performance.
The vertical profile cutter allows full electronic control of feed speed, cutting length and carriage return, ensuring accurate and repeatable results.
For wider profiles, a dedicated horizontal cutter is available. Both systems are optimized to guarantee clean, precise cuts across a variety of profile types, including complex co-extruded materials.

Accuracy and reliability
The cutter unit plays a key role in the final quality of the profile. With electronic controls and stable mechanics, Bausano systems ensure safe, precise operation. Designed for easy integration and flexibility, they adapt to various production needs while maintaining performance and safety over time.

Main features

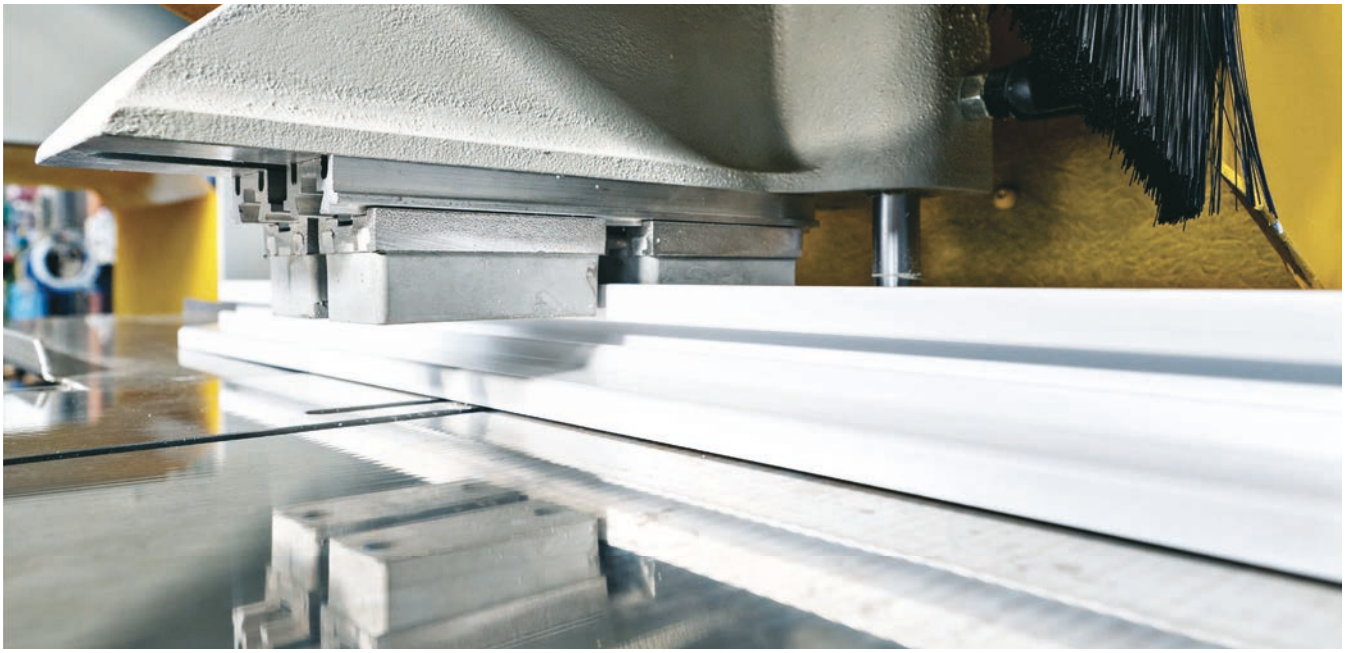
1
Variable cutting speeds for greater flexibility.

2
Encoder-based control for presetting the cutting length.

3
Carriage on ball bearings sliding over hardened, chrome-plated guides.

4
Robust milling cutter-holder carriage.

5
Optional brushless motor for enhanced precision.



VERTICAL CUTTER		
Models	**TAV/90**	**TAV/160**
Cutting system	miller	miller
Cutting movement	vertical	vertical
Max cutting stroke (mm)	95	160
Min cutting length (mm)	300	500
Cutter power (kW)	1,5	1,5
Power of suction motor (kW)	2,2	2,2
Air consumption per cycle (Nl/cy)	1,5	1,5

HORIZONTAL CUTTER			
Models	**TAO/500**	**TAO/800**	**TAO/1200**
Cutting system	miller	miller	miller
Cutting movement	horizontal	horizontal	horizontal
Max cutting stroke (mm)	600	850	1250
Min cutting length (mm)	200	200	200
Cutter power (kW)	1,5	1,5	1,5
Power of suction motor (kW)	2,2	2,2	2,2
Air consumption per cycle (Nl/cy)	2	2	2

Data contained in this catalogue are purely indicative and may change.

Bausano
Profile extrusion lines

Bausano S.p.A.
Corso Indipendenza 111
10086 Rivarolo Canavese (TO) - Italy
Tel. +39 0124 26 326
www.bausano.com

All rights reserved

Printed in Italy
on FSC® certified paper

Extrusion instinct

Bausano, international company founded in Italy in 1946, is a leader in developing high-tech industrial solutions for plastic processing.

Bausano

Bausano S.p.A.
Corso Indipendenza 111
10086 Rivarolo Canavese (TO) - Italy
Tel. +39 0124 26 326
www.bausano.com