

iNTELLIGENT
EXTRUSION
SYSTEMS

PIPE EXTRUSION
TECHNOLOGY
FOR PE-Xa
2026

www.i-extrusion.com



ABOUT US

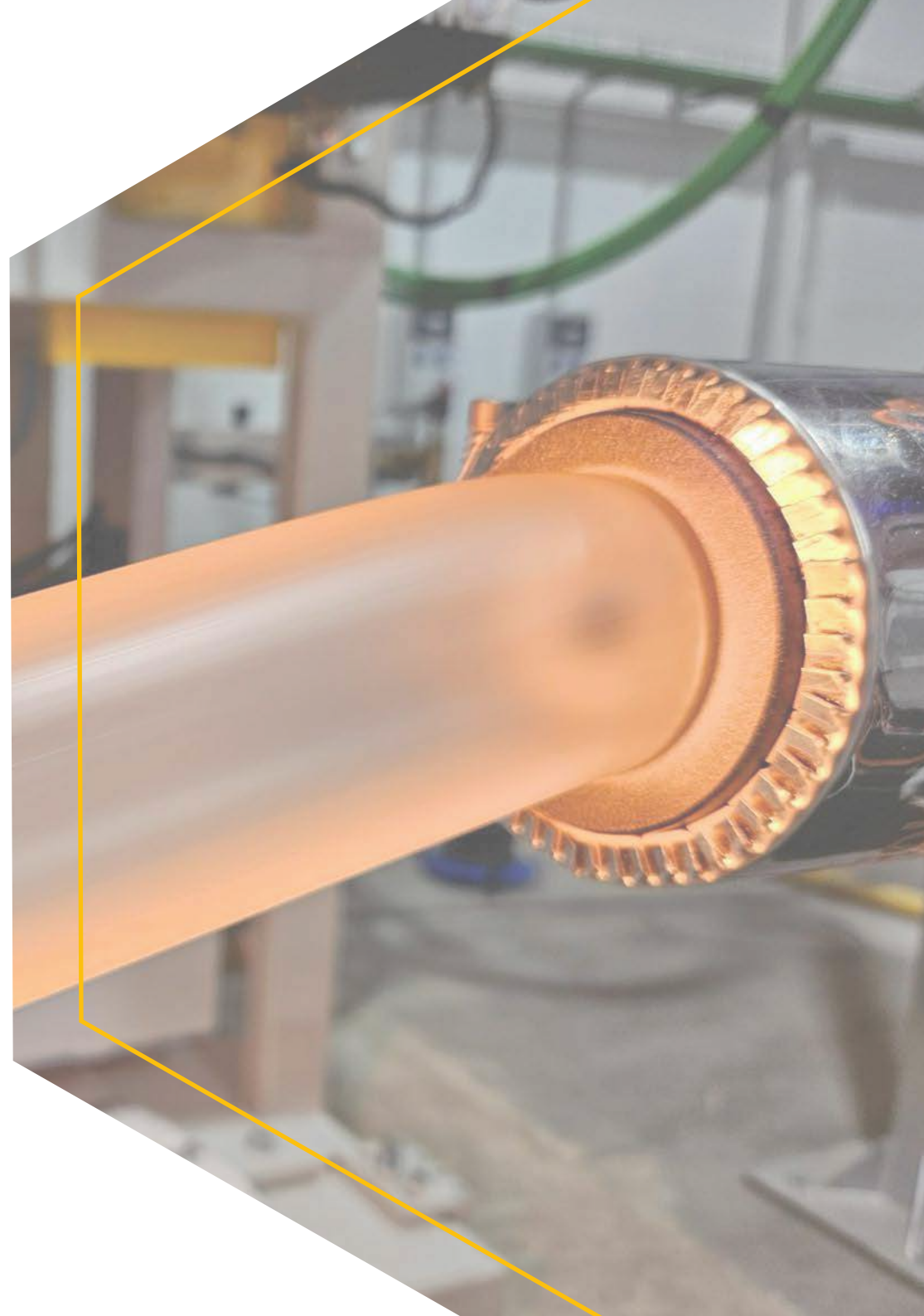
iES is a Spanish company with more than 25 years' experience in the production of PEXa pipes.

We are leaders in the technology for manufacturing extrusion lines for PEXa pipes.

Three facilities in Spain for production, integration and testing.

A life linked to PE-Xa pipe manufacturing.

A great team of professionals in the different areas of production processes, development of tools, development of control software, process optimisation, PE-Xa certification in different countries and development of process raw materials, makes the company position itself as the undisputed leader in the PE-Xa pipe manufacturing sector and at the forefront of developments facing the future.



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OUR PRODUCT PORTFOLIO

Turnkey PE-Xa pipe extrusion lines

From Ø 12 to Ø 140 mm

Die Heads PE-Xa

1 or 2 layers from Ø 12 to Ø 140 mm

Cross-Heads

1,2,3 or 4 additional layers from Ø 12 to Ø 140 mm

Infrared cross-linking ovens for PEXa pipes

2 or 3 chambers from Ø 12 to Ø 140 mm

Mixing Plants for PE-Xa

From 1000 litres (400 kg) to 5000 litres (2000 kg)

Extrusion Tooling

Pin/Die's for PE-Xa

Pin/Die's for Co-extrusion

Calibrators disk for PEXa pipes





TURNKEY PE-Xa PIPE EXTRUSION LINES

Model - PEXA1232 from Ø 12 to Ø 32 mm

- > Line designed for the production of small diameter PE-Xa pipes.
- > Range from Ø 12 to Ø 32 mm.
- > Maximum output 180 kg/hour.
- > Ideal for the production of PE-Xa pipes for plumbing and heating applications.
- > Fully automated with process synoptic, OPC UA monitoring, gravimetric system integration, quality control included for process monitoring.

Configurations:

- > **PE-Xa monolayer**
- > **1 additional layer of PE**
- > **2 additional layers of adhesive + EVOH**
- > **3 additional layers of adhesive + EVOH + adhesive**
- > **4 additional layers of adhesive + EVOH + adhesive + PE**
- > Co-extrusion integration.
- > Energy savings of up to 40% compared to our competitors.





TURNKEY PE-Xa PIPE EXTRUSION LINES

Model - PEXA1663 from Ø 12 to Ø 63 mm

- > Flexible line designed for the production of small and medium diameter PE-Xa pipes.
- > Range from Ø 16 to Ø 63 mm.
- > Maximum output 200 kg/hour.
- > Ideal for the production of PE-Xa pipes for plumbing, heating, industrial and district heating/cooling applications.
- > Fully automated with process synoptic, OPC UA monitoring, gravimetric system integration, quality control included for process monitoring.

Configurations:

- > **PE-Xa monolayer**
- > **1 additional layer of PE**
- > **2 additional layers of adhesive + EVOH**
- > **3 additional layers of adhesive + EVOH + adhesive**
- > **4 additional layers of adhesive + EVOH + adhesive + PE**
- > Co-extrusion integration.
- > Energy savings of up to 40% compared to our competitors.





TURNKEY PE-Xa PIPE EXTRUSION LINES

Model - PEXA75140 from Ø 75 to Ø 140 mm

- > Line designed for the production of large diameter PE-Xa pipes.
- > Range from Ø 75 to Ø 140 mm.
- > Maximum output 450 kg/hour.
- > Ideal for the production of PE-Xa pipes for industrial applications, geothermal energy, district heating/cooling, mining and oil applications.
- > Fully automated with process synoptic, OPC UA monitoring, gravimetric system integration, quality control included for process monitoring.

Configurations:

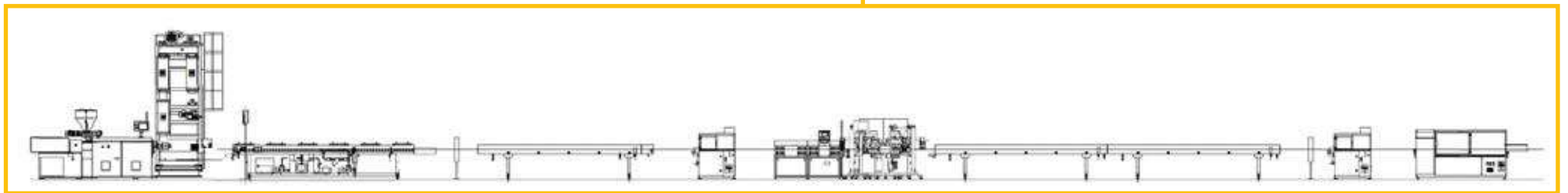
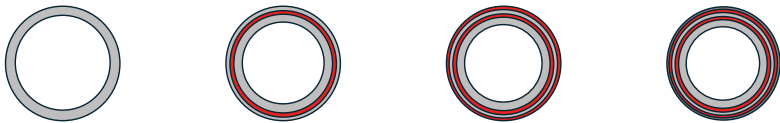
- > **PE-Xa monolayer**
- > **1 additional layer of PE**
- > **2 additional layers of adhesive + EVOH**
- > Co-extrusion integration.
- > Energy savings of up to 40% compared to our competitors.





TURNKEY PE-Xa PIPE EXTRUSION LINES

- > Single-layer PE-Xa production lines.
- > 3- or 5-layer PE-Xa EVOH production lines.
- > PE-Xa PE production lines.





DIE HEADS PE-Xa

Die heads for the main extrusion of PE-Xa pipes

Model	Range	Layers
1DH1232	Ø 12 to Ø 32 mm	1 layer
2DH1232	Ø 12 to Ø 32 mm	2 layers
1DH1663	Ø 16 to Ø 63 mm	1 layer
2DH1663	Ø 16 to Ø 63 mm	2 layers
1DH74140	Ø 75 to Ø 140 mm	1 layer

> For the production of the main layer of PE-Xa pipe.

> Specially designed for this application after more than 25 years of experience and knowledge.





CROSS HEADS / CO-EXTRUSION

Cross-heads for additional layers over PE-Xa pipes

Model	Range	Layers
1CH1232	Ø 12 to Ø 32 mm	1 layer
2CH1232	Ø 12 to Ø 32 mm	2 layers
3CH1232	Ø 12 to Ø 32 mm	3 layers
4CH1232	Ø 12 to Ø 32 mm	4 layers
1CH1663	Ø 16 to Ø 63 mm	1 layer
2CH1663	Ø 16 to Ø 63 mm	2 layers
3CH1663	Ø 16 to Ø 63 mm	3 layers
4CH1663	Ø 16 to Ø 63 mm	4 layers
1CH75140	Ø 75 to Ø 140 mm	1 layer
2CH75140	Ø 75 to Ø 140 mm	2 layers

> For the application of PE, Adhesives and EVOH layers.





INFRARED CROSS-LINKING OVENS FOR PE-Xa PIPES

Vertical PE-Xa pipe cross-linking/curing ovens

Model	Range	Chambers
2IR1232	Ø 12 to Ø 32 mm	2 chambers
3IR1232	Ø 12 to Ø 32 mm	3 chambers

- > Water cooling technology for energy savings of up to 40% compared to our competitors.
- > Hal-off incorporated in the oven for perfect dimensional control of the process.
- > Diameter measurement incorporated in the oven.
- > Various temperature controls built into the oven for controlling the cross-linking process.
- > Automatic synchronisation with the haul-offs of the extrusion line.
- > Recipe control and start-up.
- > PLC communication via OPC UA.
- > Remote VPN service included in the oven.
- > 21.5" Full-HD TFT touch screen.





INFRARED CROSS-LINKING OVENS FOR PE-Xa PIPES

Vertical PE-Xa pipe cross-linking/curing ovens

Model	Range	Chambers
3IR1663	Ø 16 to Ø 63 mm	3 chambers

- > Water cooling technology for energy savings of up to 40% compared to our competitors.
- > Hal-off incorporated in the oven for perfect dimensional control of the process.
- > Diameter measurement incorporated in the oven.
- > Various temperature controls built into the oven for controlling the cross-linking process.
- > Automatic synchronisation with the haul-offs of the extrusion line.
- > Recipe control and start-up.
- > PLC communication via OPC UA.
- > Remote VPN service included in the oven.
- > 21.5" Full-HD TFT touch screen.





INFRARED CROSS-LINKING OVENS FOR PE-Xa PIPES

Vertical PE-Xa pipe cross-linking/curing ovens

Model	Range	Chambers
2IR75140	Ø 75 to Ø 140 mm	2 chambers

- > Water cooling technology for energy savings of up to 40% compared to our competitors.
- > Hal-off incorporated in the oven for perfect dimensional control of the process.
- > Diameter measurement incorporated in the oven.
- > Various temperature controls built into the oven for controlling the cross-linking process.
- > Automatic synchronisation with the haul-offs of the extrusion line.
- > Recipe control and start-up.
- > PLC communication via OPC UA.
- > Remote VPN service included in the oven.
- > 21.5" Full-HD TFT touch screen.



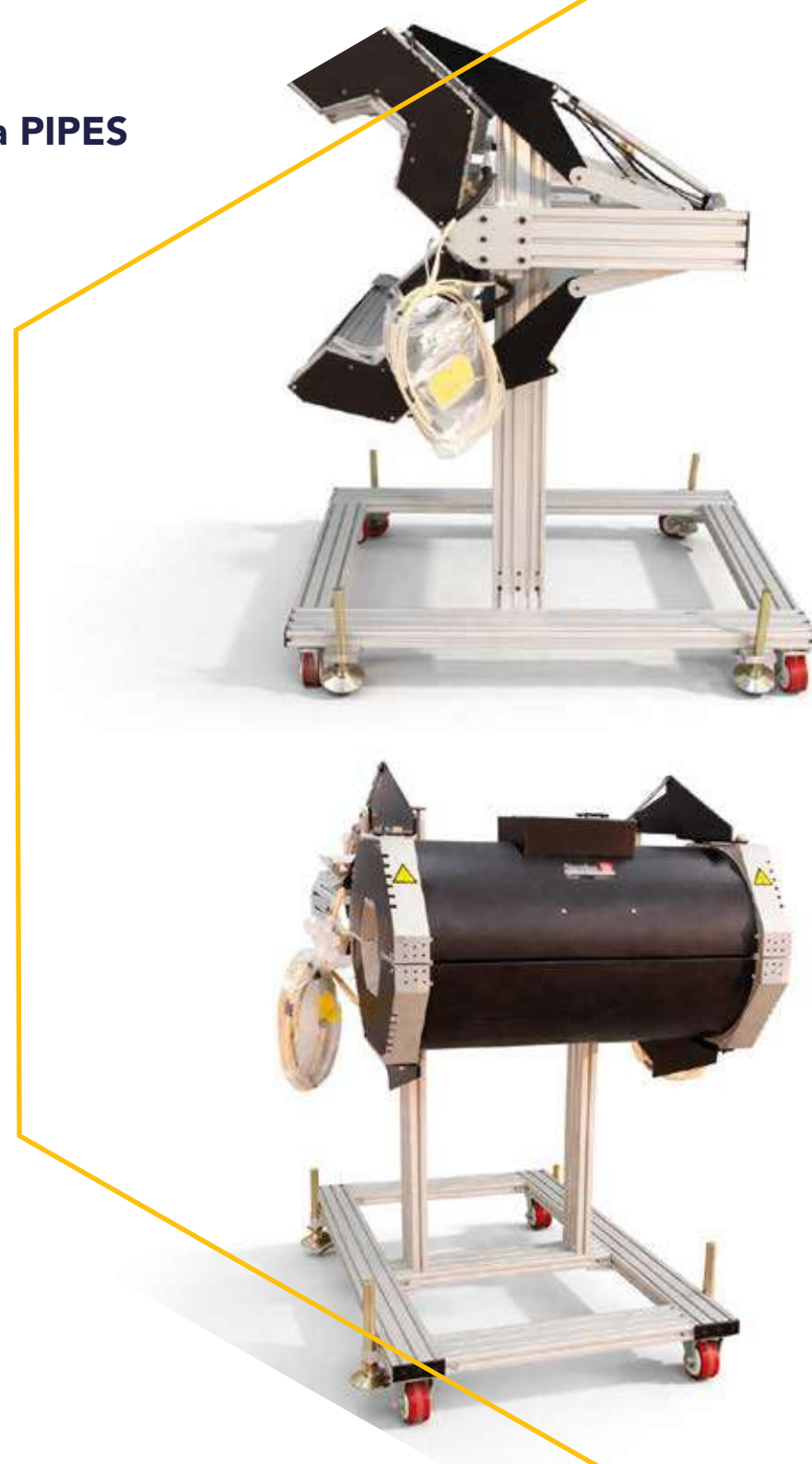


INFRARED CROSS-LINKING OVENS FOR PE-Xa PIPES

Horizontal oven for co-extrusion

Model	Range	Chambers
1IRH1263	Ø 12 to Ø 63 mm	1 chamber
1IRH75140	Ø 75 to Ø 140 mm	1 chamber

- > Horizontal oven for co-extrusion of additional layers.
- > Integrated into main control panel.
- > Infrared energy.
- > Automatic opening in case of process interruption.
- > Automatic power control according to PE-Xa pipe diameter and process temperature target.





MIXING PLANTS FOR PE-Xa

Mixers for PE-Xa recipes

Model	Range	Kg
MP1000	1000	400
MP3000	3000	1200
MP5000	5000	2000

- > Mixer for base HDPE material with liquid peroxide.
- > Recipe book by product or raw materials.
- > Fully automated.
- > ATEX protection.
- > Automatic loading of peroxide and/or HDPE.
- > Perfect product homogenisation.
- > Peroxide spraying system that guarantees the quality of the mixture.
- > Different sizes depending on the manufacturer's production capacity.





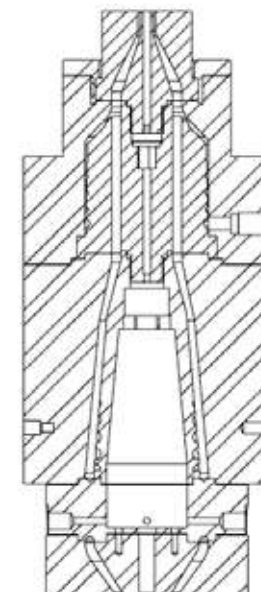
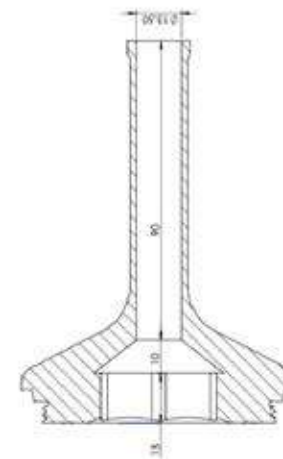
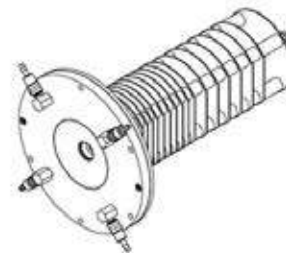
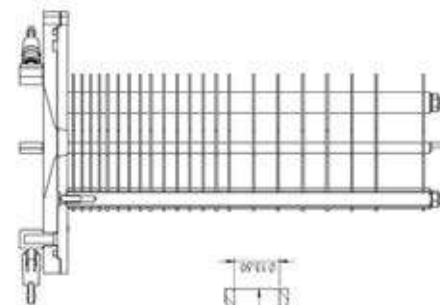
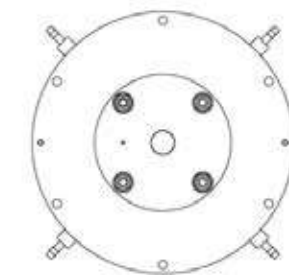
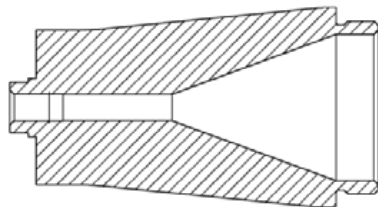
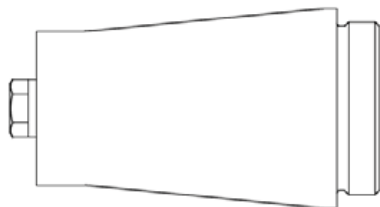
EXTRUSION TOOLING

Pin/Die's for PE-Xa

Pin/Die's for Co-extrusion

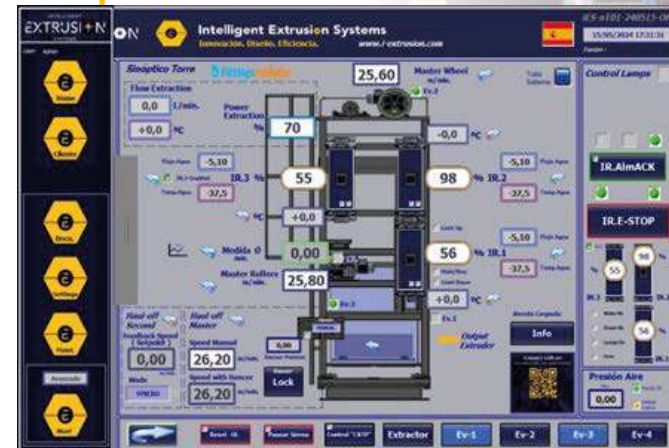
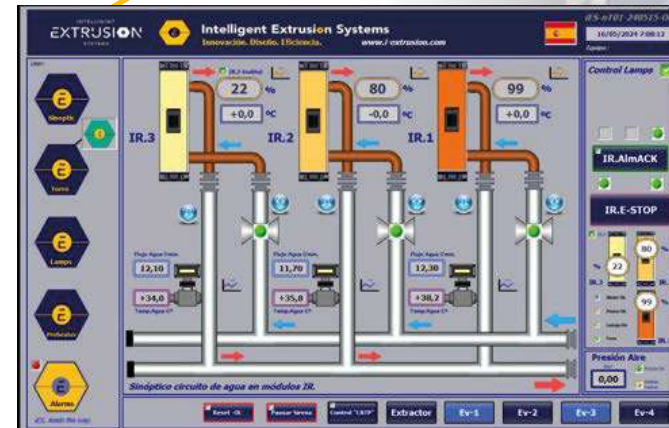
Calibrators disk for PEXa pipes

- > We produce all the tools necessary for PE-Xa extrusion in main extrusion, co-extrusion and calibrators.
- > Special design for PE-Xa.
- > We integrate any component that the customer needs to customise.
- > Adaptation to any type of co-extruder to our cross-heads.
- > Manufacture of raw material storage hoppers.



CONTROL SYSTEMS

- > Made in Spain.
- > 25 years experience in PEXa Extrusion.
- > Excellent control of dimensional stability of the process.
- > 40% energy saving compared to traditional ovens.
- > Compatible with 400V/50Hz and 480V/60Hz.
- > 12 or 18 lamp units per chamber for perfect homogenisation of the cross-linking.
- > Process control software and speed integration with the haul-offs.
- > Temperature control of the cross-liking process.
- > Diameter control system included into the oven.
- > Synchronisation system.
- > Fully centralised.
- > Process recipes.
- > Integrated manuals.
- > Data recording via OPC UA.





THE BEST EXTRUSION TECHNOLOGY

- > Made in Germany.
- > 25 years experience in PEXa Extrusion.
- > More than 200 Extruder in the field for PE-Xa extrusion.
- > Patented screw technology. IF-screw - geometry.
- > Big range in output 30-350 kg/h and diameters Ø.
- > Complete Line control based on SIEMENS.
- > Excellent worldwide after-sales service.
- > Highest level of automation of all line components.
- > Individual customized solutions.
- > Own gearbox design and gearbox-manufacturing as the only extruder manufacturers worldwide.
- > High production depth.

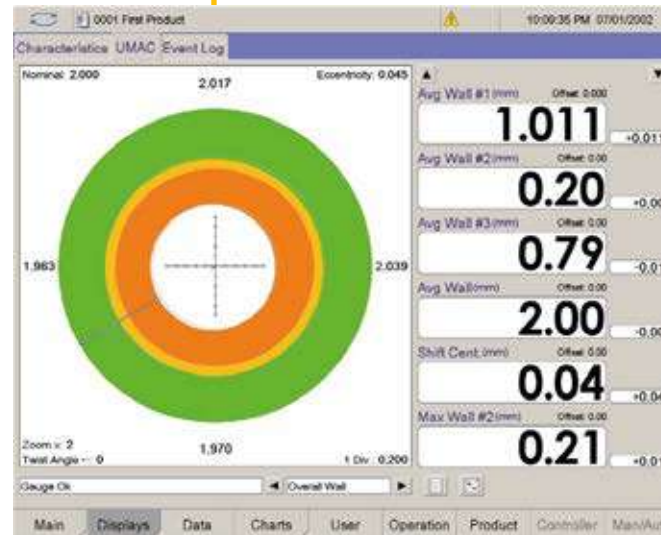




THE BEST QUALITY CONTROL AND PROCESS EQUIPMENT

- > Made in Switzerland.
- > 70 years experience in Measurement.
- > Full integration of quality control systems and processes.
- > Outer diameter (OD) control.
- > Inner diameter (ID) control.
- > Ovality control.
- > Wall thickness control.

Zumbach
SWISS PRIME MEASURING SINCE 1957





ECOLOGY AND ENERGY EFFICIENCY

Energy efficiency and environmental commitment are our priorities.

Our PE-Xa production lines are designed with state-of-the-art energy optimization technology, enabling us to save up to 40% more energy compared to conventional solutions.

This significant saving not only reduces our customer's operating costs but also directly contributes to lowering the carbon footprint and protecting the environment.

With our machines, innovation and sustainability go hand in hand:

"We achieve more with fewer resources, supporting a more efficient and responsible future".



APPLICATIONS

If you want **QUALITY** and **SERVICE**, only **INTELLIGENT EXTRUSION SYSTEM** can offer a stable, high-quality process.

We are the only ones with the experience to guarantee a stable PE-Xa pipes manufacturing process with the highest quality on the market.

We are a manufacturer of extrusion production lines PE-Xa pipe.

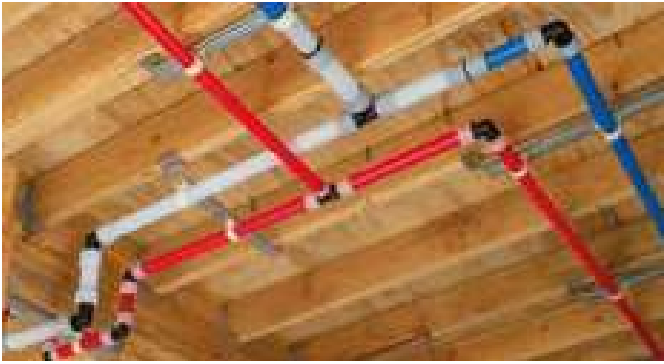
Leaders in innovation: We are known as the experts in the manufacturing of PE-Xa pipe production lines thanks to our experience and more than 25 years of know-how.

Welcome to intelligent PE-Xa solutions!



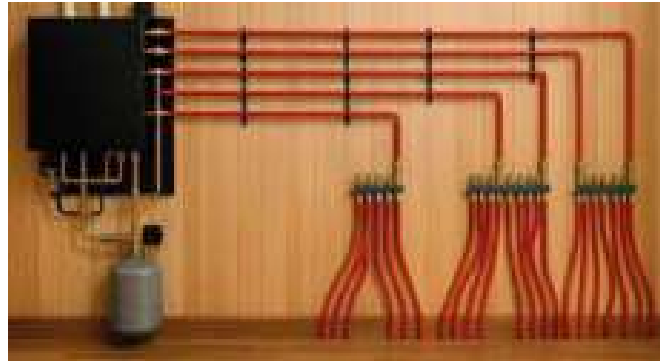


PE-Xa pipes manufactured with our extrusion lines are used in the **world's most demanding sectors:**



Plumbing

Hot and cold water installations in residential and commercial buildings.



Heating

High-temperature heating systems, fan coils, and air conditioning.



District Heating & Cooling

Urban district heating and cooling networks. Pre-insulated pipes.



Geothermal

Closed circuits (loops) for heat exchange with the ground for geothermal heat pumps.



PE-Xa pipes manufactured with our extrusion lines are used in the **world's most demanding sectors:**



Industrial

Transport of process fluids, thermal circuits, and industrial water networks.



Mining

Transportation of slurry, tailings, and process water in mining operations.



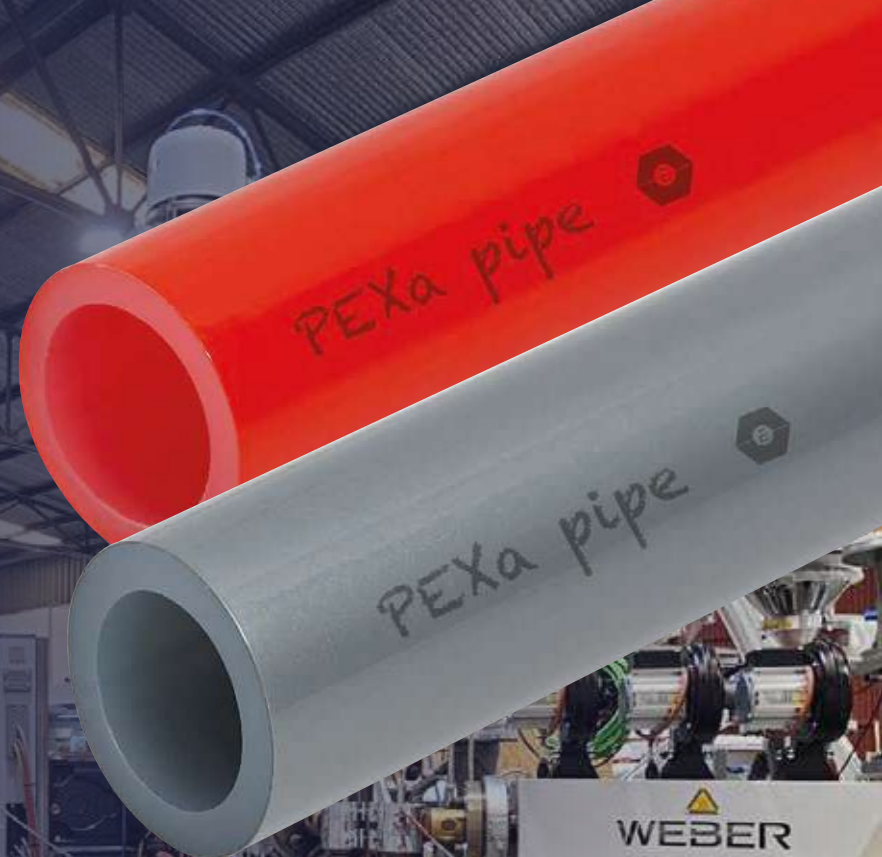
Oil & Gas

Flow lines, hydrocarbon collection, and chemical injection.



Underfloor Heating

Residential and industrial underfloor heating and cooling systems.



INTELLIGENT EXTRUSION SYSTEMS S.L.



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