

**TECNOMATIC**  
TECHNOLOGIES FOR PLASTIC  
MATERIALS PROCESSING



# EXTRUSION LINES

QUALITY & PERFORMANCE ALL ALONG THE LINE

*“Technological innovation is at the heart of our projects”*

Made in Italy



# EXTRUSION LINES

QUALITY & PERFORMANCE ALL ALONG THE LINE



For traditional production lines for PVC, PE, PP (mono or multilayer), or special custom made solutions, Tecnomatic provides a specialized project management unit, equipped to deal with a wide range of requests. Always keeping in mind the economic optimization of the plant and production, the company can give assistance at any step of the project; from the feasibility study and machinery planning to the start-up and after sales support.

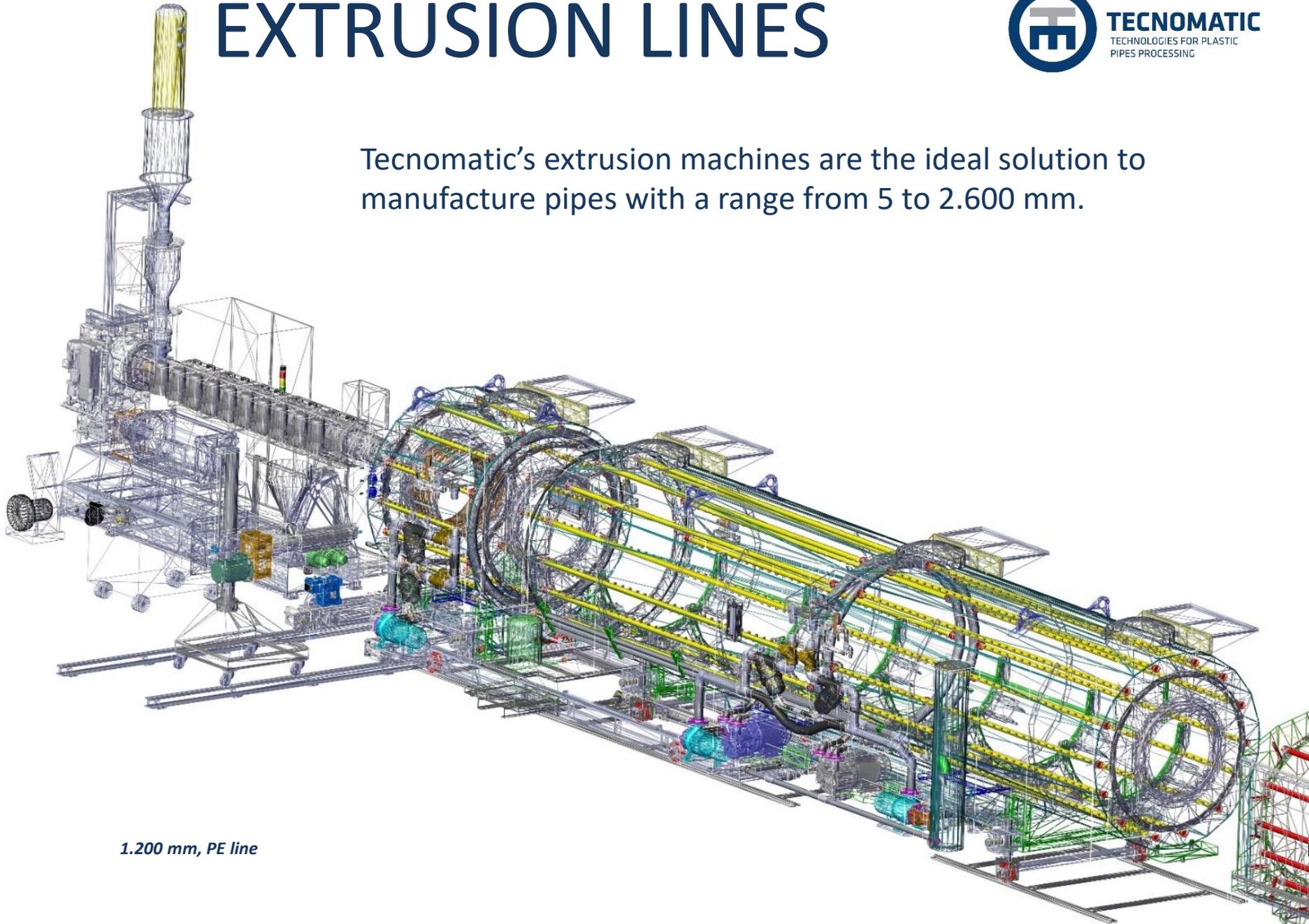


*1.200 mm, PE line*

# EXTRUSION LINES



Tecnomatic's extrusion machines are the ideal solution to manufacture pipes with a range from 5 to 2.600 mm.



*1.200 mm, PE line*

# PE PIPES

## POLYETHYLENE LINES UP TO 2.600 mm

Tecnomatic's polyethylene lines are designed keeping in mind the customer's need for high output production, quality and stability. The lines, offered with a range up to 2.600 mm, are characterised by the adoption of latest innovative solution for the extrusion and with a high grade of automation and control. Mainly used in manufacturing water and gas pipes, all the lines can embed an additional pipe air cooling system (PAC), to enhance the pipe quality and to improve the output performance. Custom-made turnkey projects are designed for the market of plastic jacketed pipes for district heating, for mining with special layers or wall thickness and irrigation.



*Solid wall PE100 pipes*

# PE PIPES

**POLYETHYLENE LINES UP TO 2.600 mm**



*PE100 pipes, and 1.200mm PE line*

# PE PIPES

## MULTILAYER LINES FOR COMPLEX PIPES WITH FUNCTIONAL LAYERS

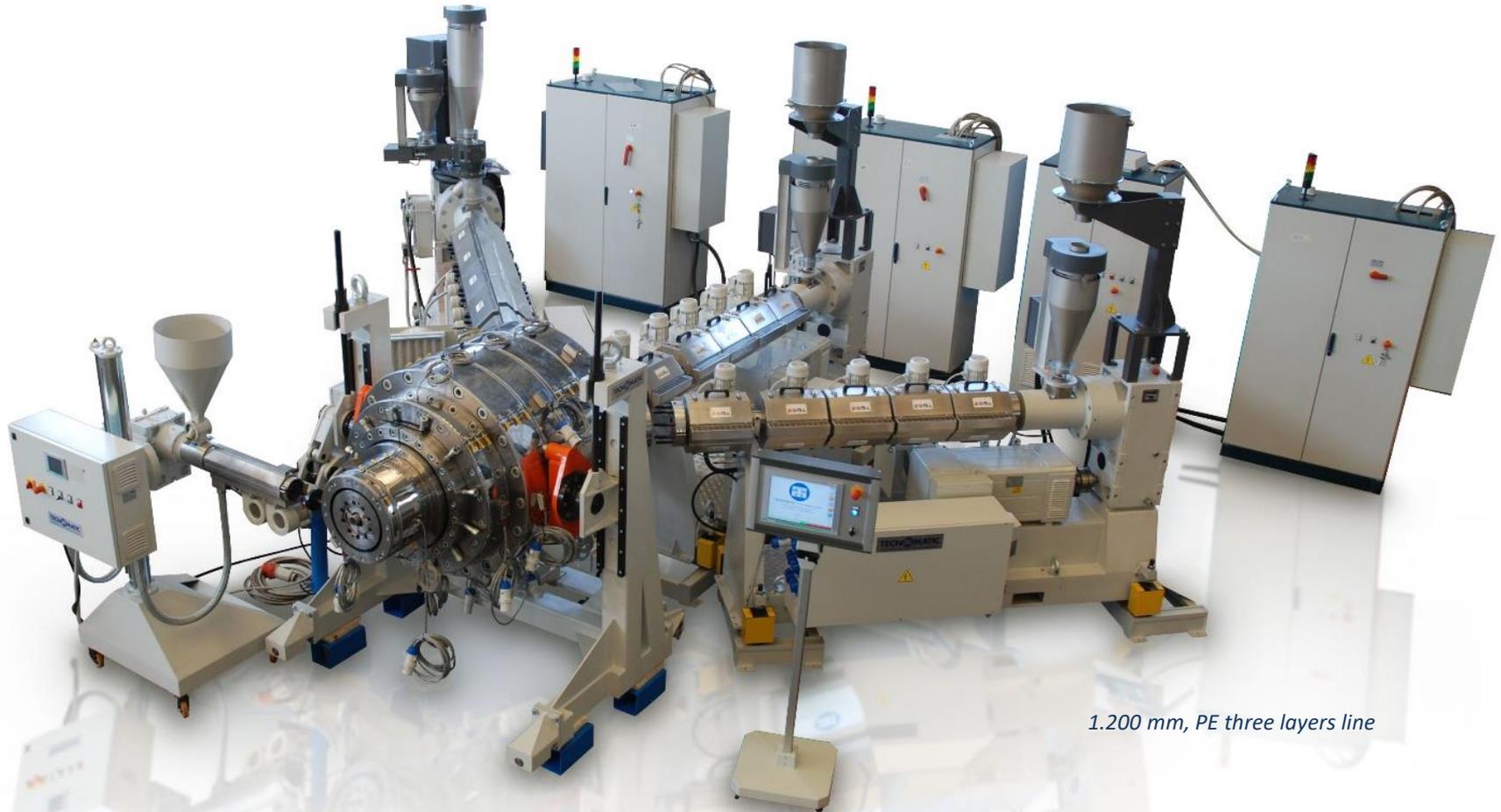
In a market, which is always more and more looking for highly innovative development, with respect to the growing improvement of material properties, single-layer pipes are not always able to fulfil the necessary requirements. These multilayer pipes are used extensively in Europe for installations using trenchless techniques or where no imported backfill is used. By using the material dug from the trench the installers are able to reduce the costs and the environmental impact of materials to the site.



*Wall structure with blue HSCR PE100, and standard PE100 for the core*

# PE PIPES

Tecnomatic has well interpreted these customer needs and has developed, based on the VENUS die-head concept, complete lines, for the production of two, three or four layers pipes, even in large diameter size. A project in 1.200 mm three layers is the milestone of the multilayer production made by Tecnomatic.



*1.200 mm, PE three layers line*

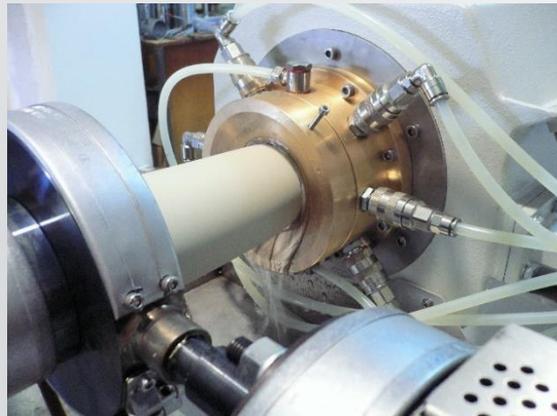
# PP PIPES

## MONO AND MULTILAYER LINES FOR PP-R, PP-RCT, PP-H

Polypropylene pipe has excellent chemical and abrasion resistance properties making it ideal for a range of application as hot & cold water, waste & drainage and industrial for transporting aggressive media. The competence and experience of Tecnomatic extend to this entire sector and cover the production of PP-R, PP-RCT monolayer pipes, with glass reinforcement (to bring additional benefits), or up to seven layers with innovative protection properties.



Photo courtesy of Raktherm UAE.



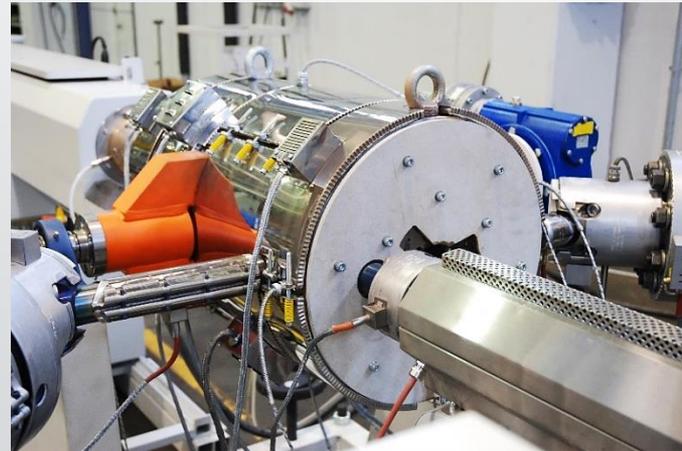
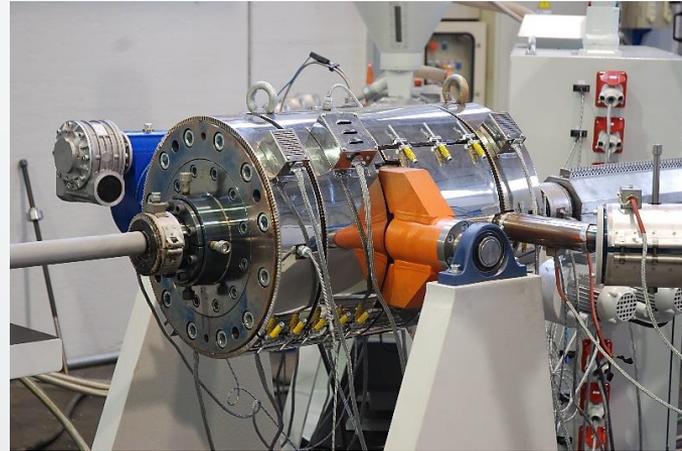
Three layers PP pipe with fiberglass



Solid wall PP pipes

# PP PIPES

The growing market of PP waste & soil pipes has also seen the company very active with the design of high output lines, especially as multilayer solution with mineral fillers. The top and bottom layers of these pipes are made of polypropylene and middle layer made of mineral filler polypropylene compounds which guarantees high mechanical resistance, excellent acoustic performance and resistance to the agents.

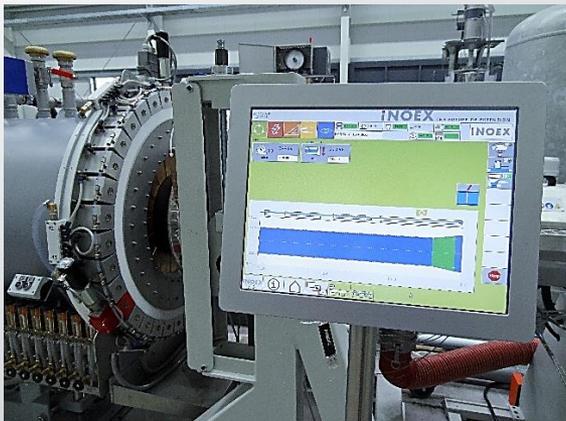


*Venus Multi 160, for PP-HM multilayer lines*

# PP PIPES

## FAST DIMENSIONAL CHANGE LINES

The automation of dimensional changes belongs to the challenges in pipe extrusion. If this challenge is successfully met, the highest return is promised which goes side by side with a maximum flexibility and an excellent profitability. The production of medium or large-size pipes requires maximum outputs and a maximum line flexibility to meet today's demands on short delivery times. The technical solution for this challenge lies in the reduction of start-up scrap. Furthermore, line conversion and start-up after dimensional changes are potential sources for savings.



*Advantage control system*



*Fast dimensional change*



*Advantage calibration sleeve*

# PE PIPES

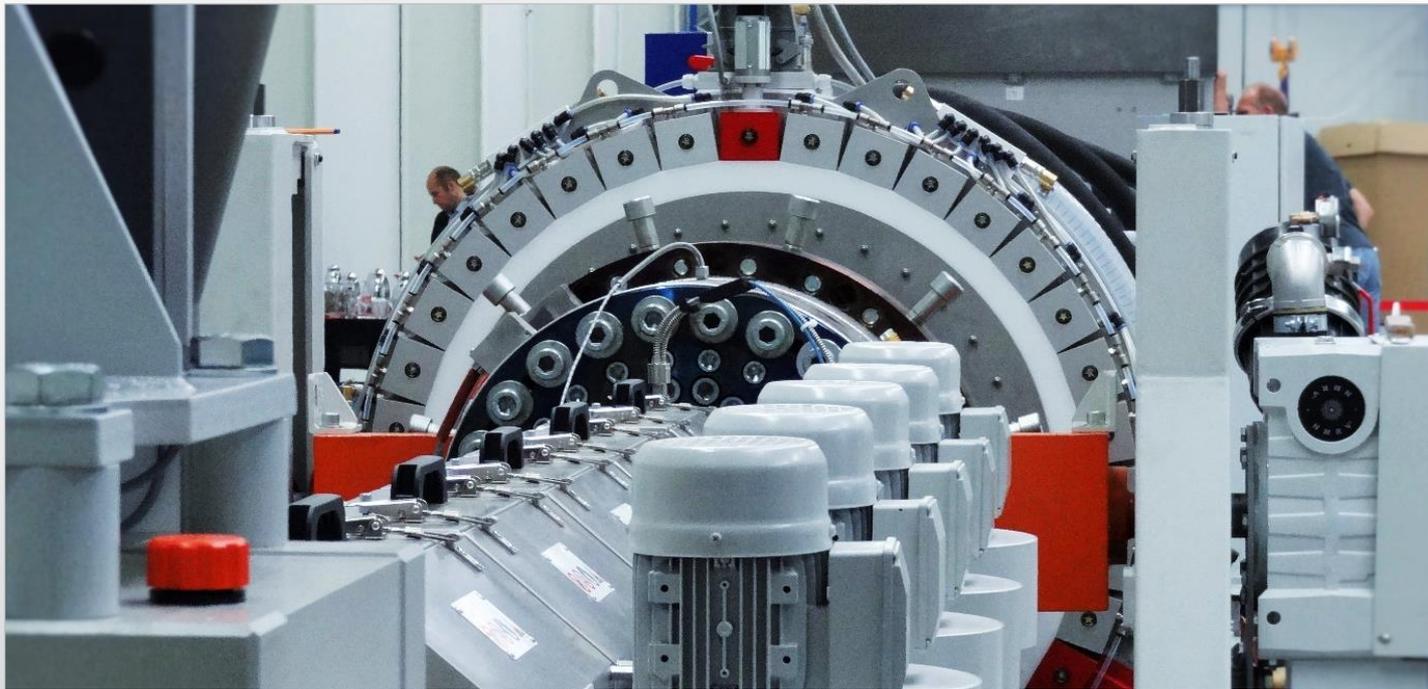
**ADVANTAGE systems** are able to change pipe dimensions within minutes at the push of a button. The line is neither stopped nor converted and dimensioned accessories are no longer needed. Thus, **ADVANTAGE** efficiently increases output capacities and line flexibility. It substantially contributes to an extrusion line's economic efficiency.



*Advantage Pe line*

# PE PIPES

During a dynamic change of dimensions, all component parts related to the dimensional adaptation such as the vacuum tank, the calibration sleeve, the pipe support and the sealing are flexibly and automatically adjusted. Adaptation is based on set values which have to be entered into the ADVANTAGE control unit.



*Advantage PE line*

# PE-X, PE-RT, PB, PA, ABS

## LINES FOR HEATING & PLUMBING PIPES AND TECHNICAL TUBES

Plastic pipe systems for heating and plumbing are available in a wide variety of materials. Crosslinked Polyethylene, commonly abbreviated PE-X is the most popular material for hot and cold water application. The success of this material is mainly related to its elevated temperature capabilities (up to 80°C), improved flexibility while resisting tensile deformation, resistance to abrasion and toughness. Heating pipes may come in multilayer solution, up to five, with EVOH oxygen barrier for protection from physical, chemical and UV damage or in Polybutylene (PB) and PE-RT materials.



*Technical tubes*



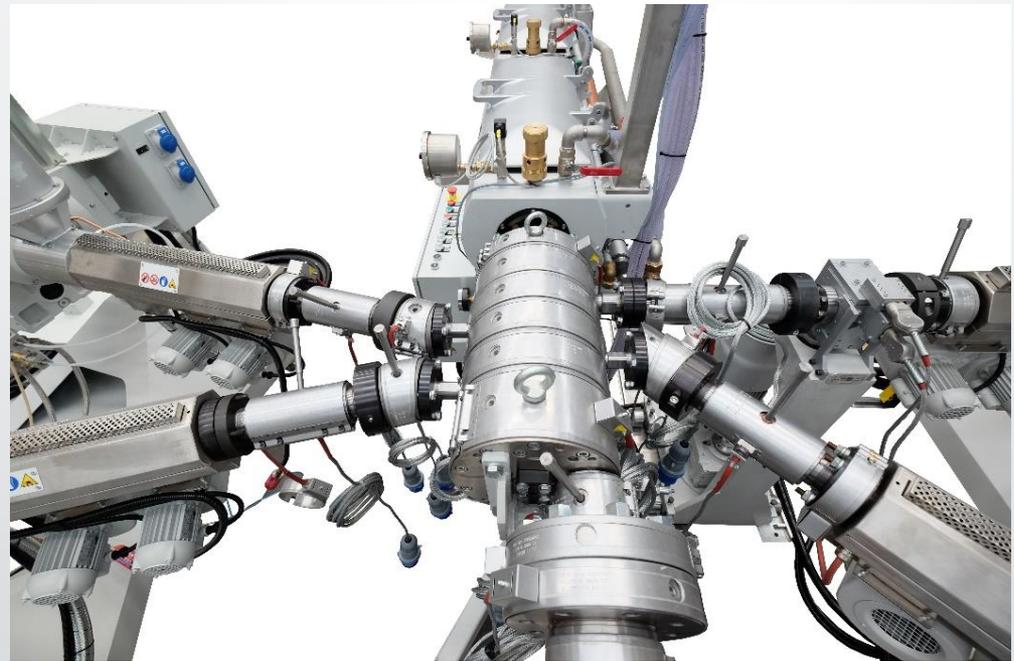
*PE-x pipes coiling (Photo courtesy of FB BALZANELLI PE-x pipes*



# PE-X, PE-RT, PB, PA, ABS



For this application Tecnomatic has specifically developed high speed lines based on the innovative die-heads Athena, made of radial spiral modules, which have great advantages: do not have any dead zones or edges where material could stop and grant an easy cleaning and rapid assembling/disassembling operation. Besides the manufacturing of heating plumbing system, the gained experience in small thermoplastic tubes has allowed the developments of tailor made solution for the market of technical tubes in **PA, ABS, PU, PTFE** for the industrial applications.

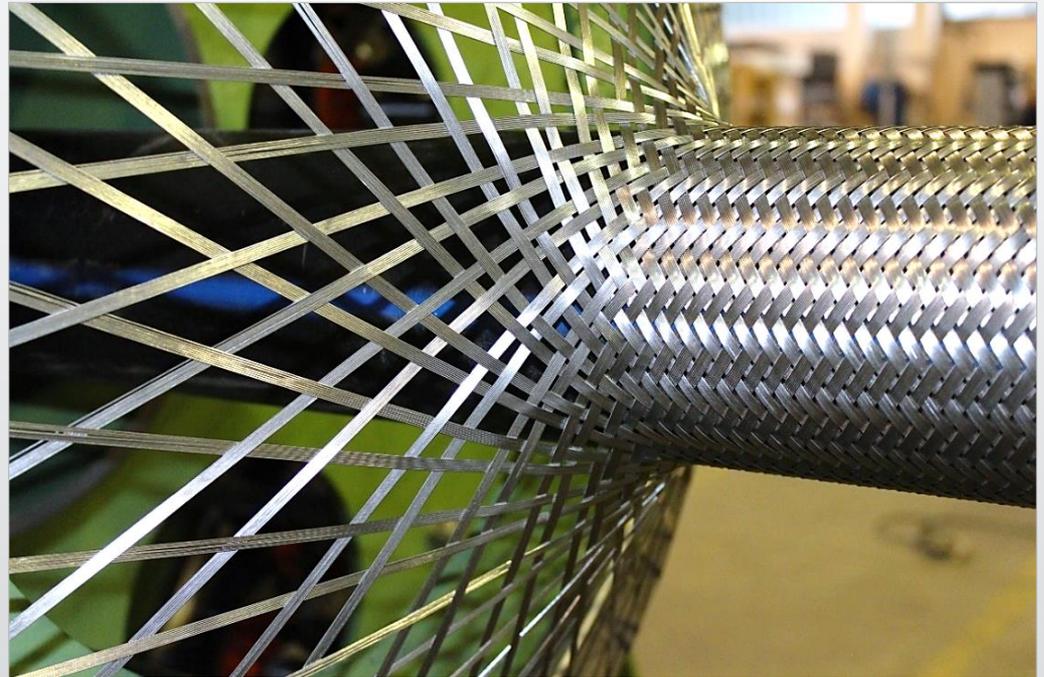


*Athena Multi 5 – 40 for PE-x and PE-rt pipes*

# RTP PIPES

## THE PIPES AND THE LINES OF THE FUTURE

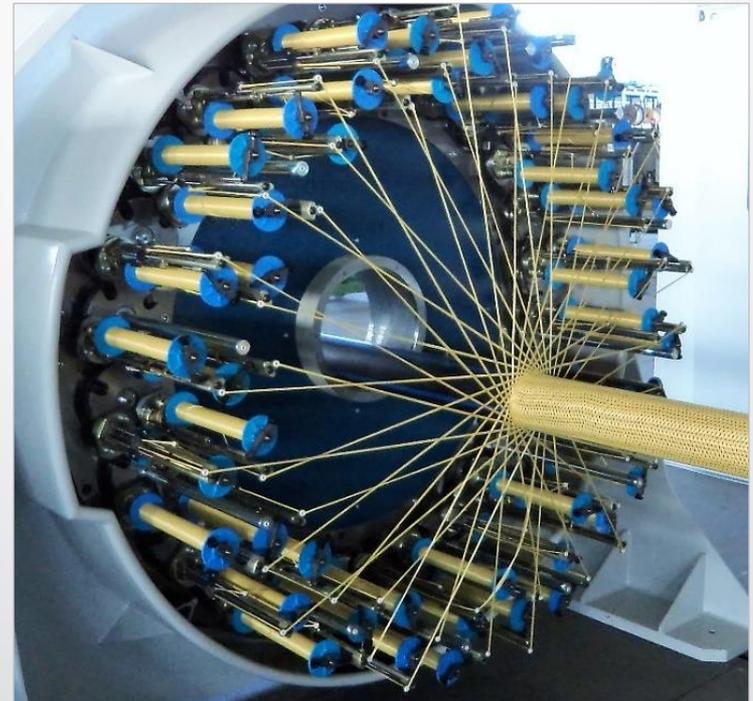
Plastic pipes systems have been used very successfully for gas distribution and pressure up to about 10 bar, solving the corrosion and reliability issues of steel and ductile iron systems. Significant increase in pressure rating can be obtained by the development of multilayer and composite pipe constructions, to satisfy specific application requirements. Reinforce Thermoplastic Pipes (RTP) pipes have great potential to do this by meeting requirements for medium and even high-pressure transmission lines.



*Steel Reinforced themoplastic pipe*

# RTP PIPES

The use of glass fibre, aramid tapes, Kevlar and even stainless steel chord reinforcement result in substantial advantages for the handling of corrosive fluids, for transport of oil & gas from deep sea fields and for the gas distribution system, replacing the use of steel pipes into the indoor and high pressure gas application up to 40 bar. Products are individually tailored to meet the specific requirements of the application and the production lines are designed in accordance to the number of layers and wrapping process; for different reinforcing materials or angles, selected in order to withstand internal or external pressure or longitudinal stress.



*Aramid fibre braiding*

# CORRUGATED PIPES

## THE DEFINITIVE SOLUTION FOR DRAINAGE AND MANY OTHER APPLICATIONS

Corrugated pipe have become the chosen pipe for many drainage applications. The use of double wall corrugated pipes is increasing thanks to factors such as the pipe's strength, durability, joint integrity, and long-term cost-effectiveness. Polyethylene and Polypropylene corrugated pipes are flexible in two directions, are chemical resistant, offer a good hydraulic flow and gain advantage over the rigid pipes made of traditional materials like clay stone or concrete. Light and material saving the pipes are easy handled for transport, installation cost and maintenance.



*PP Corrugated pipes*



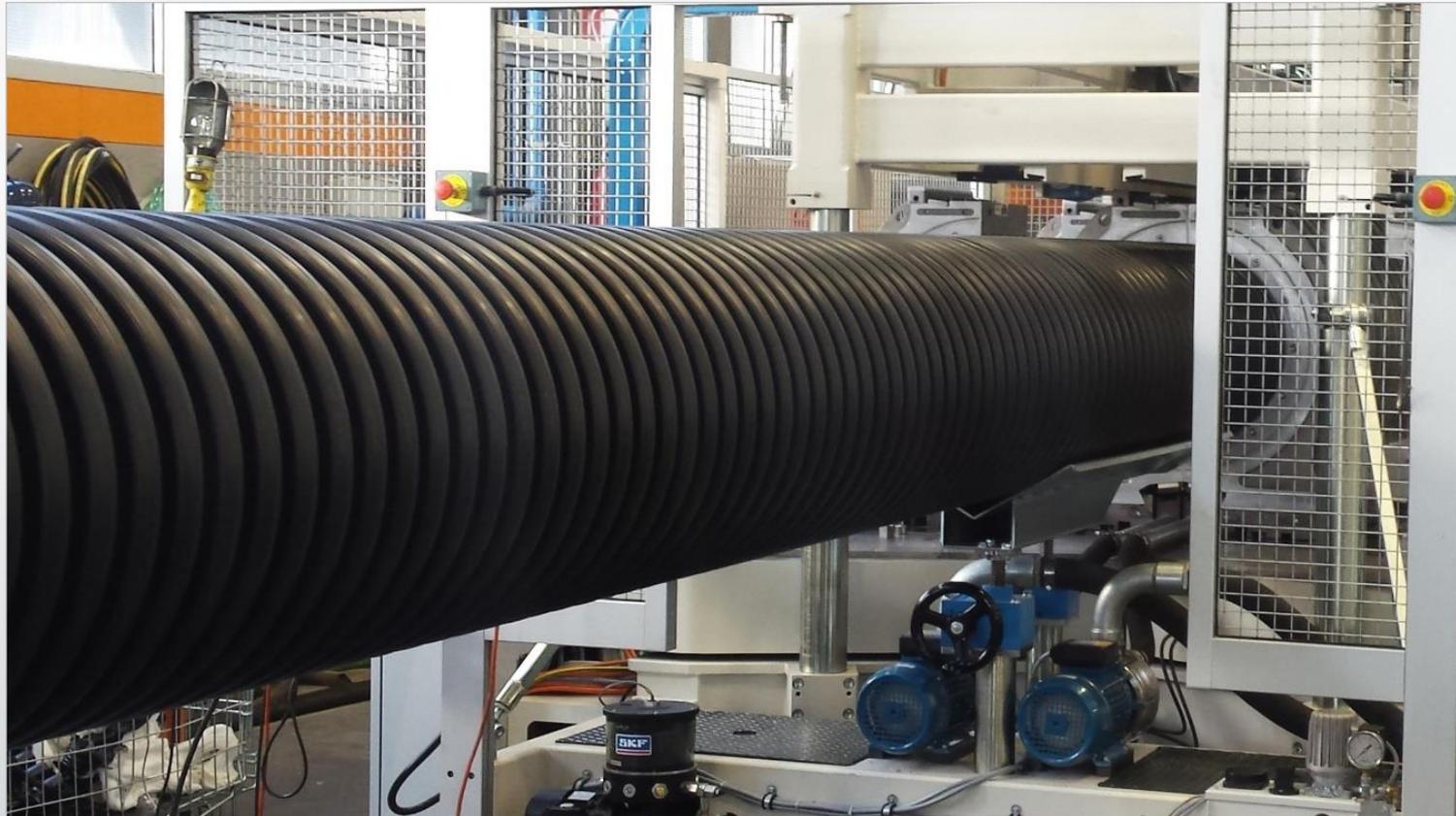
*800mm corrugated line*



*PE Corrugated pipes*

# CORRUGATED PIPES

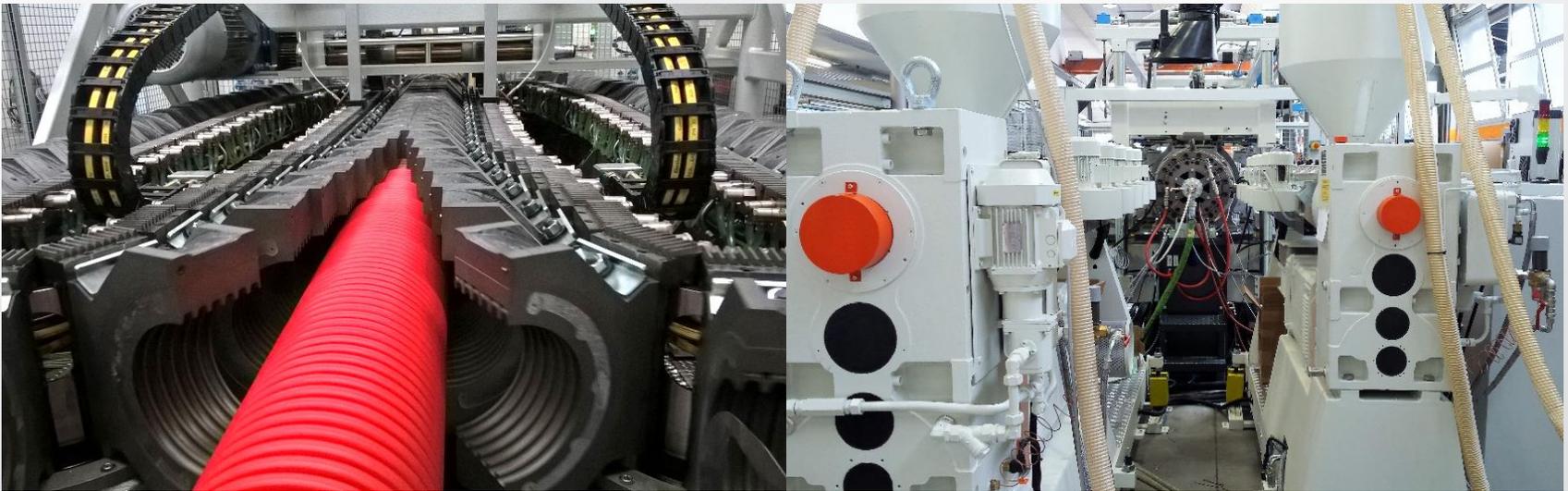
Corrugated pipes are used in a wide variety of other applications. In smaller sizes, single wall and from additional materials like PA, TPE, TPR, PTFE are commonly used for cable protection, telecommunication, medical, automotive and food industries.



*800mm Corrugated pipes line*

# CORRUGATED PIPES

Depending on which application and material, Tecnomatic offers a vast choice of extruders with processing length ranging from 24 L/D to 40 L/D to fit the customer's need with the most efficient solution. For bigger diameter size (drainage & sewage) the adoption of gearless extruders, which guarantees a constant and specific output over the speed range even at high pressure but with extremely lower power consumption, is particularly interest.



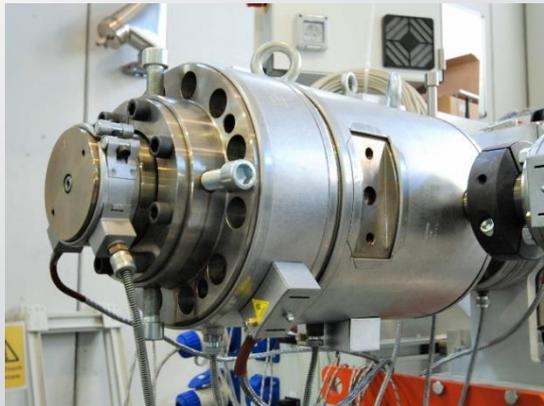
*Electrical conduit corrugated pipe*

*Double wall corrugated line*

# PE PIPES

## TURNKEY SOLUTIONS FOR MICRO-DUCT AND ELECTRICAL INDUSTRY PIPES

Advances in cable technologies, as well as the expense of repairing sensitive cable materials like fiber optic cable, have driven preferences for protective conduit instead of direct burial. PE conduit serves two primary industries: communications (telephone, CATV, data transmission) and electrical (power transmission). In the communications industry, the advent of fiber optic cable has had a tremendous impact due to its significantly higher data-carrying capacity, particularly due to the explosion of the Internet.



*Venus 200 for micro-duct pipes*



*Micro-duct pipes*



*Micro-duct solid bundles*

# PE PIPES

High-speed extrusion lines for the production of micro-duct pipes are designed at Tecnomatic to reach the most efficient production with precision control of the size, of the layers, and weight. An accurate manufacturing and selection of electronic and mechanical parts ensure a maximum automation and production at the best speed rate available. To group the micro-ducts in bundles, used in network application, a turn-key solution starting from the unwinding units to special coilers for drums can be offered, or engineered according to specific requirements.



*Coating die-head for fence microduct*



*Micro-duc high speed line, up to 200 m/min*

# MEETING THE CHALLENGE

**TECNOMATIC**  
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**Tecnomatic operates directly and through an extensive network of strategically located agents, offering turn-key and custom fit solutions.**

The wide range of products from its own manufacturing unit and from leading international suppliers includes:

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- Single screw extruders in L/D 24,30,37,40 and co-extruders.
  - Extrusion die-heads for polyolefin pipes (mono and multilayers up to 2600 mm).
  - PVC extrusion die-heads up to O.D. 1200 mm.
  - Special extrusion die-heads.
  - Vacuum, cooling tanks, calibration sleeves.
  - Dosing, downstream & accessories equipment.

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