

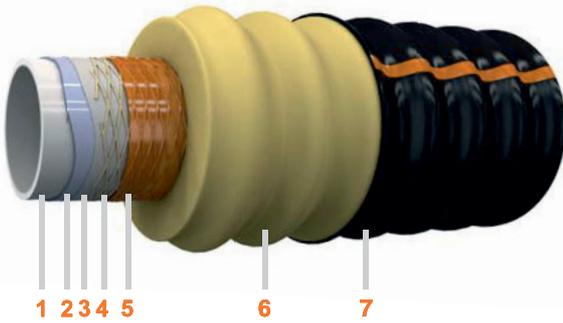
Equipment for production of flexible reinforced foam-polyurethane insulated pipes

Turnkey integrated solutions



Unique offer of Expert Engineering in partnership with worldwide leaders in extrusion, plastic processing and raw materials

Full-range equipment for continuous-process production of flexible reinforced foam-polyurethane pipes and turnkey engineering solutions



Design of reinforced foam-polyurethane pipe

New generation of encapsulated plastic pipes

- 1 Pressure pipe
- 2 Polymer oxygen barrier
- 3 Structural layer of high-temperature polymer
- 4 High-modulus fiber reinforcement
- 5 Structural layer of high-temperature blended polymer
- 6 Foam-polyurethane insulation
- 7 Protective polyethylene sheath

Full-range equipment

Ultimate machinery configuration - flawless interface

Stage 1 - Pressure pipe production



Extruder with special multilayer head for pressure pipe production:

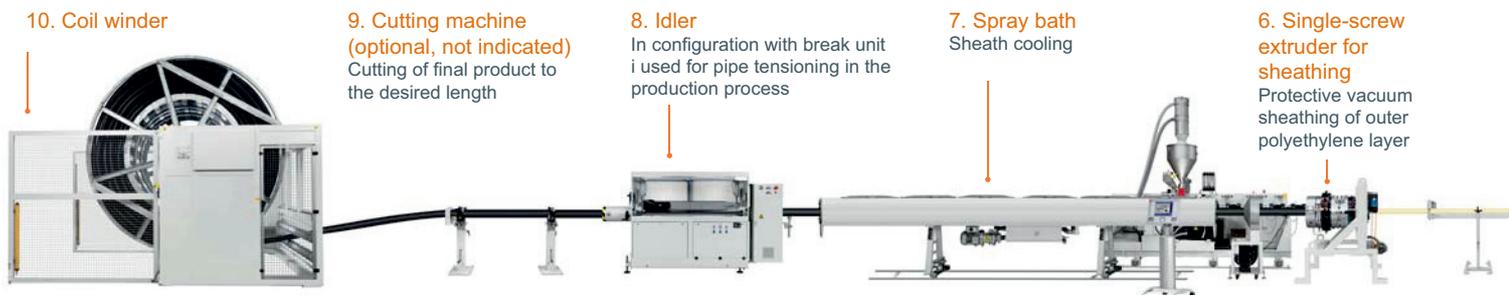
- pipe diameter: 20 -160 mm
- depending on application, pipes are produced of PE, PE-X, PE-RT or PB
- capacity up to 40 m/min

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Stage 3 - Thermal insulation coating and sheathing Pressure pipe

Polyethylene sheathing unit:

- sheathed pipe diameter ranges from 65 to 250 mm (depending on pipe internal diameter and sheath thickness)



○ polyethylene sheath to ensure product insulation durability.

Pipe application:

- submain hot water supply and heating lines
- nonfreezing water supply lines
- industrial pipelines

Operating temperature: 95°C, intermittently - up to 110°C

Operating pressure: 1,0 MPa

Pressure pipe diameters: 20 - 160 mm

Options: four-pipe, double-pipe, single-pipe systems



GLOBAL PIONEERING

INTEGRATED PLUG-AND-PLAY SOLUTION:

- Entire cycle equipment
- Process manuals (flow charts, specifications)
- Assembly supervision and commissioning
- Training
- Raw material supply
- Service center in RF

Stage 2 - High-modulus fiber reinforcement

Machine direction



High-modulus fiber reinforcement unit:

- processed fiber: p-aramid, polyamid, PET
- capacity up to 5 m/min

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PUR-layer coating unit:

- processed materials: bicomponent and tricomponent foam-polyurethane
- diameter of coated pipes: 20 -160 mm
- capacity up to 5 m/min

4. Polyurethane batcher KraussMaffei with mixing head and daily-consumption tanks
Intermediate storage, pre-processing, precise feeding and homogenization of polyol and isocyanate, and other components, if necessary

3. Retarding unit
In combination with haul-off used for pipe tensioning in the production process

2. Pipe pre-heater

1. Pipe unwinder



Rotating aluminum mould blocks synchronized to the production pace form the outer diameter of foam-polyurethane sheath in process of chemical reaction. Film unwinder is located upstream the rotating molder. Film is used as a parting layer between foam-polyurethane and rotating aluminium mould blocks. Molding shoulder forms the film as desired

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Machine direction

You benefit from:

- + Production of unlimited-length pipes
- + High level of automation of all machines

- + Energy-saving production process
- + High product profitability
- + Turnkey equipment delivery and service

= QUICK PAYBACK AND HIGH PROJECT PROFITABILITY EVEN 30%-LOADED

EXPERT ENGINEERING offers expertise in effective turnkey plastic product solutions

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