Extrusion Lines

For Waterproofing Membranes

Membrane Extrusion Lines offer advanced solutions for the production of high-performance waterproofing membranes, tailored for diverse civil engineering applications including roofing, tunnel sealing, and water basin linings. These systems can produce both single and multilayer membranes reinforced with materials like PP, PET, and fiberglass to ensure exceptional durability, flexibility, and weather resistance. The use of co-extrusion technology enables cost-effective production while maintaining high quality and performance standards.

Key Features

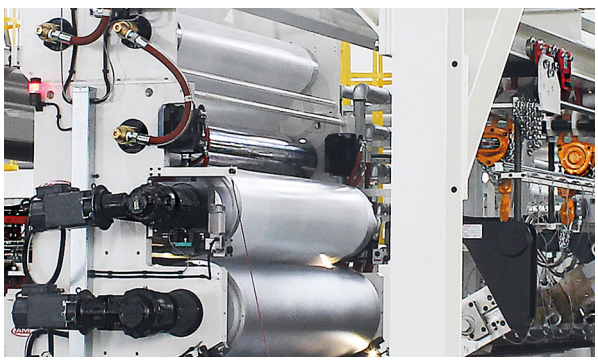
- Production of single and multilayer waterproofing membranes.
- Incorporates PP, PET, and fiberglass reinforcements for enhanced strength.
- Co-extrusion technology for efficient material use and cost savings.
- High dimensional stability with shrinkage below 0.5%.
- Systems capable of handling up to 4500 kg/hr throughput.
- Available in widths of 2300mm and 3600mm.
- Equipped with twin or single calendering systems for precise layering.
- Includes automatic or semi-automatic winding and cutting units.

Key Benefits

- Provides robust waterproofing solutions for varied applications.
- High resistance to severe weather conditions ensures long service life.
- Light weight and low material consumption enhance efficiency.
- Easy maintenance and repair extend product longevity.
- Environmentally friendly production with reduced material waste.
- Flexible design options suitable for complex roof structures.
- Cost-effective production through advanced co-extrusion technology.
- Ensures high-quality standards with stringent UEATC compliance.

Accessories

- **Automatic and Semi-Automatic Winding Units:** For efficient handling of "jumbo" rolls and contract rolls.
- **Edge Guide Devices:** For maintaining correct alignment during material lamination.
- **Pre-heating Units:** To ensure proper adhesion of layers.
- **Re-wind Units:** For creating commercially sized rolls from jumbo rolls.



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We solve the most technically advanced plastics automation problems across all industries.

June 2024

info@summitsystems.co.uk
+44 (0) 1827 265 800

Summit Systems Ltd est. in 1989.
Registered in England 2489937. VAT no: GB 549 5321 27

www.summitsystems.co.uk

Single & Twin Calendering Systems
Extrusion Lines for Waterproofing Membranes

Single Calendering Systems

Single Calendering Systems feature a streamlined approach to producing reinforced waterproofing membranes. They utilise a special 5-roll calender system that enables in-line production with all processing steps completed in a single pass. This system is particularly energy-efficient, leveraging the heat from the molten polymer to ensure robust adhesion of the inner reinforcement to the thermoplastic layers. It is capable of producing various membrane structures, including those with or without back fleece coatings, and can handle throughputs up to 2500 kg/h. The single calendering system is ideal for projects requiring moderate production capacities and simple membrane structures, offering the benefits of lower operational costs and straightforward setup.

Twin Calendering Systems

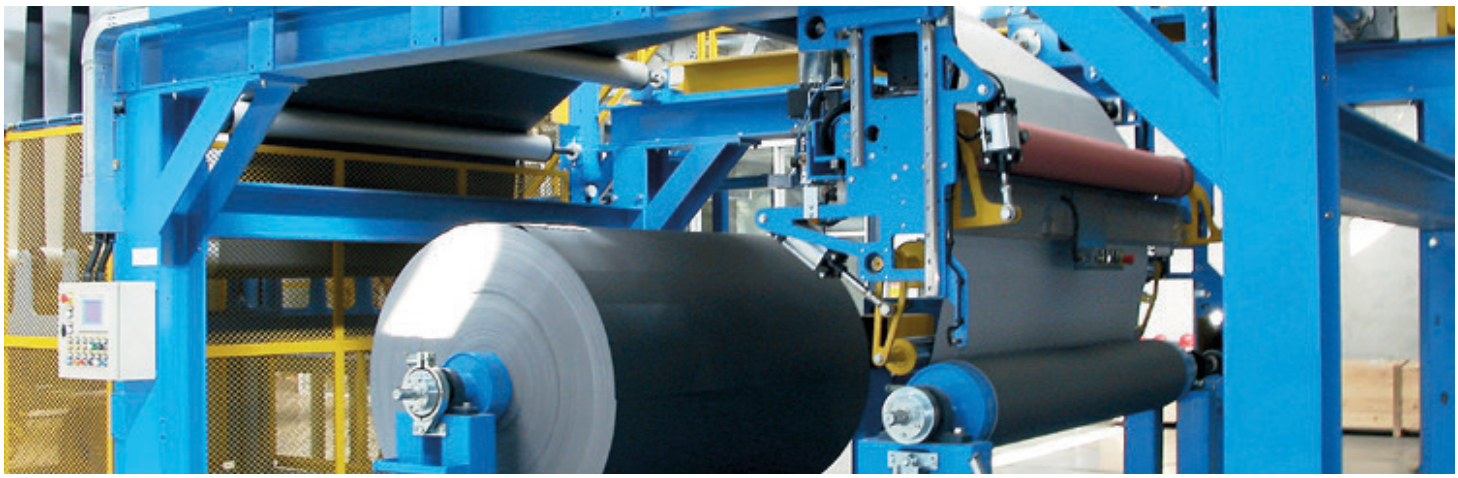
Twin Calendering Systems, on the other hand, are designed for high-volume production and complex membrane structures. They feature two sequential extrusion and calendering stations, which provide precise dimensional control and high-quality assurance at every production stage. This system is capable of handling a higher throughput of up to 4500 kg/h and can produce membranes with multiple layers and sophisticated reinforcements. Twin calendering systems allow for more flexibility in design and greater adaptability for producing membranes with varying thicknesses and reinforcement configurations. They are the preferred choice for large-scale projects and applications demanding high-performance membranes with extensive durability and versatility, such as roofing systems and tunnel sealing.

Choosing between these systems depends on your specific needs, production capacity, complexity of the membrane design, and the scale of your project.

Technical Data	Specification
Layer Type	Single, Double, Multilayer (up to 4)
Reinforcement Options	PP, PET scrims, Fiberglass mats
Throughput	Up to 4500 kg/hr
Width Options	2300mm, 3600mm
Calendering Systems	Twin or Single
Layer Thickness	15-20% thin skin via co-extrusion
Max Shrinkage	< 0.5%
Winding Options	Jumbo rolls (> 7 tons), Contract Rolls

Key Differences and Selection Criteria:

- **Production Capacity:** Twin calendering systems support higher throughput (up to 4500 kg/h) compared to single calendering systems (up to 2500 kg/h).
- **Complexity of Membrane Structures:** Twin systems are better suited for complex, multilayer membranes, while single systems are more appropriate for simpler, less intricate structures.
- **Energy Efficiency:** Single calendering systems are more energy-efficient, making them ideal for cost-conscious operations with lower production needs.
- **Flexibility and Versatility:** Twin calendering systems offer greater flexibility in design and adaptability for varied applications, whereas single systems are more straightforward and easier to operate.
- **Project Scale:** For large-scale projects requiring robust, multi-layered membranes, twin calendering systems are the optimal choice. For smaller-scale operations with simpler requirements, single calendering systems are sufficient.



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