

Find Out Your Solution



Walk The Talk

Polyolefin Pelletizing
Jumbo Extruder
Underwater Pelletizer

Polymer Compounding
Color/filler and functional MB
Engineering plastic reinforcement
TPE/TPR/TPV
Cable compounding

Under-water Pelletizing System
Huge capacity: 1–50 tons/hr
Micro-beads
Elastomer and hot melt pelletizing
Foam beads: EPS/EPLA/XPET

Polymer Foam Extrusion
CO2 foam XPS board
Graphite EPS beads pelletizing
PET Foam Core
PLA Foam Beads pelletizing
XPE Foam Sheet

Direct Extrusion
EVA/POE solar film
UHMWPE battery separator film
BOPET/BOPA/BOPP film extrusion
Steel pipe coating

PET Recycling & Extrusion
Bottle flakes recycling (BTB)
PET fiber/film recycling
Undried PET sheet extrusion
PSF/POY direct extrusion



foam extrusion technology

More Than Machinery



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ECOFEL™ Foam Extrusion Lines for

XPS Board
XPET Foam Core
Graphite EPS Beads
PLA Foam Beads
PET Foam Beads
XLPE/IXPE Sheets
Microfoam Sheets

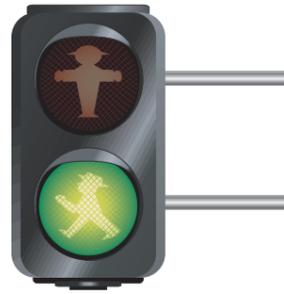
Higher Productivity
Better Quality
Lower Cost
More Eco-friendly
More Intelligent



ECOFEL™ Foam Extrusion Lines

Making plastic products in a more sustainable way

The ECOFEL™ series extrusion lines were developed to meet the growing demand for foam plastic products while addressing environmental challenges. Over the past decades, ECOFEL™ has made significant contributions to global environmental efforts. With a focus on achieving carbon neutrality and peak emissions, ECOFEL™ is committed to doing even more to make our world a better place.



Leading Innovation

Innovation creates cutting-edge

Useon is dedicated to providing innovative solutions for polymer foam extrusion products. Our advancements include optimized screw profiles, highly efficient cooling barrel structures, steam density reduction, and intelligent control systems. We believe that innovation drives cutting-edge performance. Beyond being a quality machine supplier, Useon is your reliable strategic partner.

Excellent Quality And Reliability

Recognized by fortune 500 groups and organizations of united nations

The quality and reliability of ECOFEL™ have been recognized by Fortune 500 companies and leading XPS manufacturers across various regions worldwide, as well as by the United Nations Industrial Development Organization (UNIDO). As a strategic partner of UNIDO in phasing out HCFCs in XPS production, Useon has collaborated with UNIDO to implement projects globally.



Features At A Glance

- Huge capacity---up to 3,000kg/hr
- High compressive strength---up to 1,500kpa
- Eco-friendly blowing agent
- Wealthy experiences from numerous successful cases
- Intelligent control system with big data access
- Professional service with talent pool
- Cross polymers, blowing agents and forms



Full Automatic Raw Material Handling System

A good start of production management

Pre-treatment is essential for certain materials to achieve the desired technical properties. Whether it's pre-drying, crystallization, grinding, or blending, we provide tailored solutions for each foam extrusion product. Continuous and even feeding is the first step toward producing high-quality products. Combined with a DCS intelligent control system, our approach ensures effective production management and cost containment.

TDS-E High Torque Twin Screw Extruder

A guarantee for excellent products

Unlike standard compounding twin-screw extruders, we use the TDS-E series super high-torque twin-screw extruder for foam extrusion, delivering a specific torque of up to 15 Nm/cm³. High-torque twin-screw extruders offer many advantages, such as maintaining a low melt temperature during processing. This helps minimize the use of flame retardants while maintaining the same level of flame resistance, and it keeps the product's color bright and fresh.

All CNC-manufactured barrels and screws ensure a precise fit, providing excellent mixing, dispersion, and optimal residence time distribution (RTD). This not only reduces additive usage but also enhances product quality.



Innovative Cooling Single Screw Extruder

Leading the efficiency

Temperature control is crucial in foam extrusion processing. The latest design of our cooling single-screw extruder boasts an 80% increase in cooling capacity compared to traditional designs. Along with the upgraded barrel design, the newest screw profile enhances the renewal rate of molten materials, ensuring efficient cooling and uniform material temperature. This innovation also reduces power consumption by 30%.



Blowing Agent System

Strike the balance between cost and quality

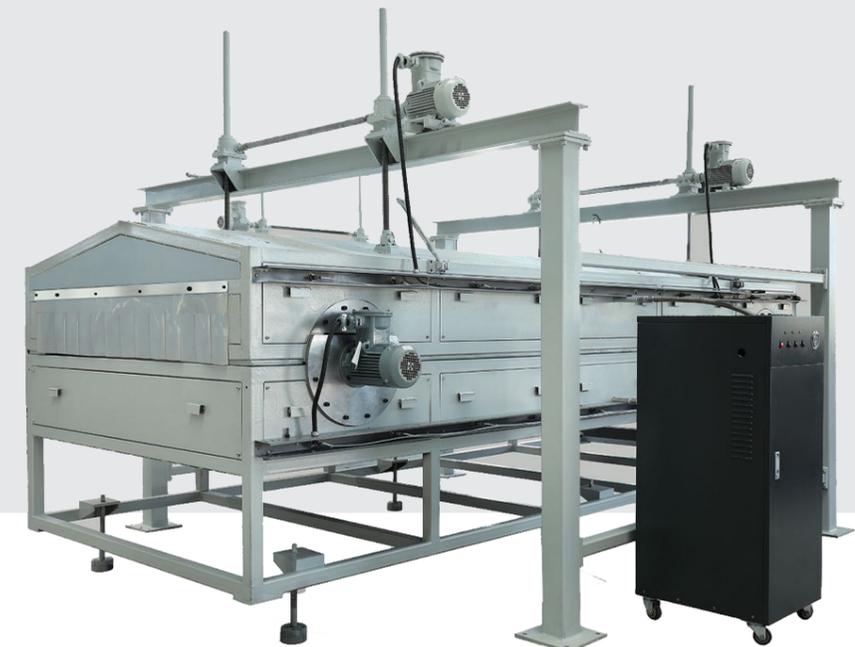
The variable physical properties of CO² make precise metering a challenge, requiring careful temperature, pressure, and mass flow rate control. Additionally, it demands a balance between various processing parameters. We have designed a CO² system that maintains its properties at a consistent state for precise metering. The multiple blowing agent injection system enables seamless shifts in product portfolios, allowing you to cater to different market positions with ease. This approach ensures both high quality and cost containment.



All Series Auxiliaries

One step for all

A fully automatic vacuum raw material handling system, loss-in-weight or gravimetric dosing system, surface planner and groover, double or triple knives cut-off, paternoster cooling tower, four-side fine milling, auto-stacker, auto-packaging, inline recycling, central dust collection, and laboratory facilities are available as options. We provide all facilities and peripherals as part of a complete turn-key project.



XPS Board Production Lines

The definition of cost effectiveness

When it comes to XPS board production lines, Useon has more experience than anyone else. As of 2024, we have successfully launched over 300 CO² foam XPS lines worldwide. We are proud to be the partner of numerous influential XPS manufacturers across the globe. From consulting to training, our team is dedicated to supporting you every step of the way.

Technical Datasheet

Model	Output	Transformer required
TDS75-TDD150	300-500kg/hr	300KVA
TDS75-TDD200	400-650kg/hr	400KVA
TDS95-TDD250	600-1,000kg/hr	500KVA
TDS110-TDD300	800-1,200kg/hr	600KVA
TDS135-TDD400	1,500-2,000kg/hr	800KVA
TDS135-TDD500	2,000-2,500kg/hr	1000KVA

PET Foam Core Lines

Compared to other plastic products, XPET foam core lines are more sophisticated. We provide turn-key solutions for XPET foam core production lines, eliminating any challenges you may face. Our training program includes recipe and know-how transfer for producing different types of panels. Additionally, our experts will collaborate with you to develop new applications.

Technical Datasheet

Model	Throughput	Transformer required
XPET-500	500-600KG/HR	800KVA
XPET-800	600-800KG/HR	1200KVA



More Than Machinery



We Make EPS Circular

By converting eps waste back into eps beads



XEPS Beads Production Lines

A new member of polystyrene insulation family

Graphite-enriched EPS can reduce thermal conductivity by 20-30%. With our own graphite EPS beads factory, equipped with 7 production lines, our extensive experience ensures the successful launch of your project.

We make EPS circular by converting EPS waste back into EPS beads. Our technology enables the use of **30% to 100% recycled EPS** to produce new, blowing agent-contained EPS beads.

Tired of white EPS packaging materials? ECOFEL™ can produce EPS beads in any color.

Technical Datasheet

Model	Output	Transformer required
TDS110-TDD200	800-1,000kg/hr	600KVA
TDS135-TDD250	1,500-2,000kg/hr	800KVA
TDS175-TDD400	3,000-4,000kg/hr	1,250KVA



EPLA Foam Beads Lines

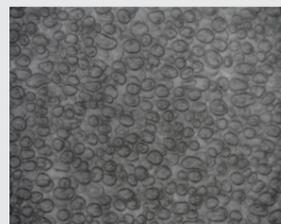
A revolutionary product for the packaging industry

Plastic packaging materials are one of the major contributors to environmental issues. The introduction of PLA foam beads offers hope for a sustainable solution. 100% biodegradable PLA foam beads present an excellent alternative to traditional EPS packaging materials.



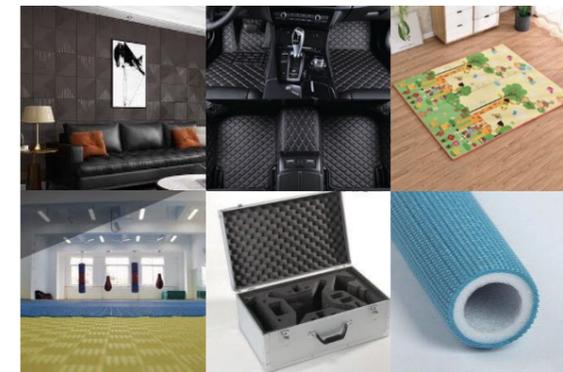
The Best Eco-friendly Alternative To EPS

- Bio-based biodegradable
- From nature to nature
- Leaving no footprint behind
- Where sustainability meets performance



XLPE Foam Sheet Production Lines

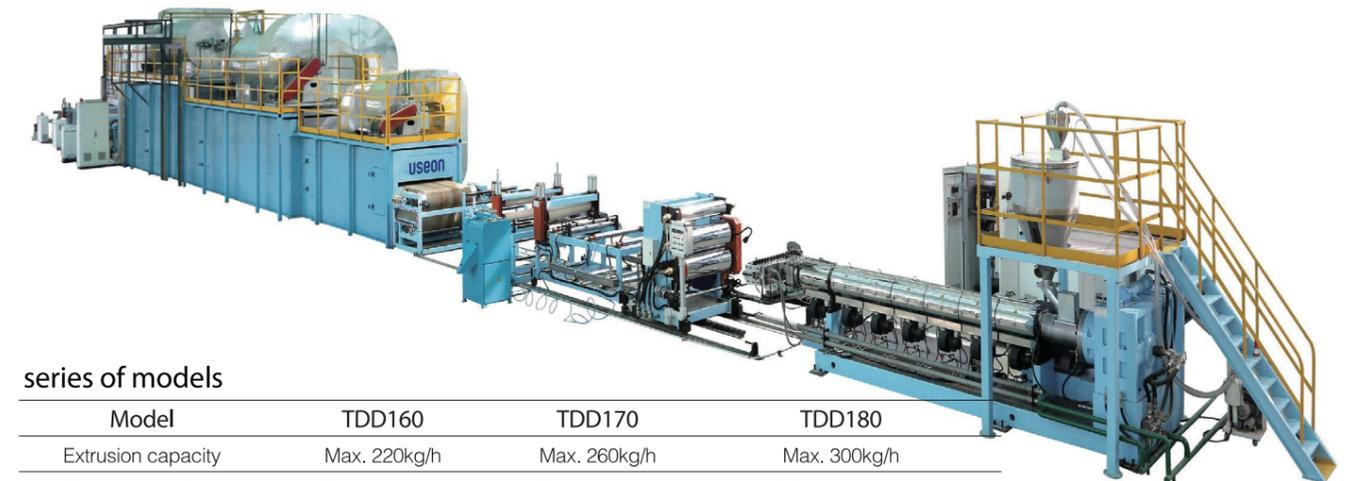
XLPE (also known as XPE) is a chemically cross-linked polyethylene foam material made from LDPE, AC, DCP, and other materials. It is non-toxic, odorless, lightweight, and offers excellent sound absorption and waterproof properties. With extensive expertise in XLPE foam sheets, Useon continuously upgrades its production lines with the latest technology to enhance productivity and improve quality.



Main Applications:

- 3D wallpaper sticker
- Car floor mat
- Thermal insulation
- Construction material
- Sports / entertainment
- Packaging material

Process flow: Kneading → Granulating → Master Sheet Extrusion → Foaming → Winding → Laminating



series of models

Model	TDD160	TDD170	TDD180
Extrusion capacity	Max. 220kg/h	Max. 260kg/h	Max. 300kg/h
Foam sheet width	Max. 1800mm	Max. 2200mm	Max. 2600mm
Foam sheet thickness	3-12mm	3-12mm	3-12mm
Density	25-125kg/m ³	25-125kg/m ³	25-125kg/m ³

IXPE Foam Sheet Production Lines

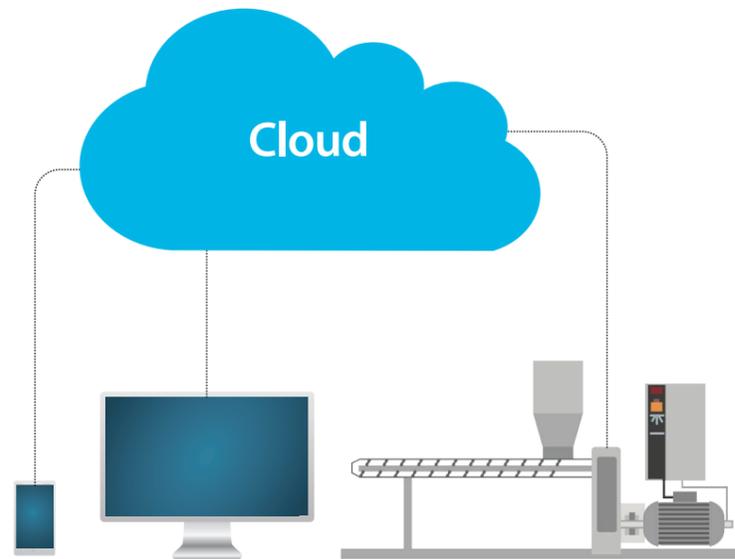
IXPE is the irradiated crosslinked polyethylene foam. The crosslinking of master sheet is achieved by irradiation in the electron generator. Then high temperature foaming is done in vertical / horizontal ovens.

As compared to XLPE foam sheet, IXPE has more uniform and denser cell with smoother surface. It is widely used as underlayment of flooring, gasket, etc.

DCS Intelligent Control System

A prelude to industry 4.0

By pulling data from recipe management and operation history, parameters can be optimized using big data analytics. Data from maintenance records and alarm histories can be extracted for remote analysis and technical support through notifications. The DCS intelligent control system enables more effective production management and equipment maintenance. Powerful industry insights lead your production lines into the Big Data era.



Expertise in international projects

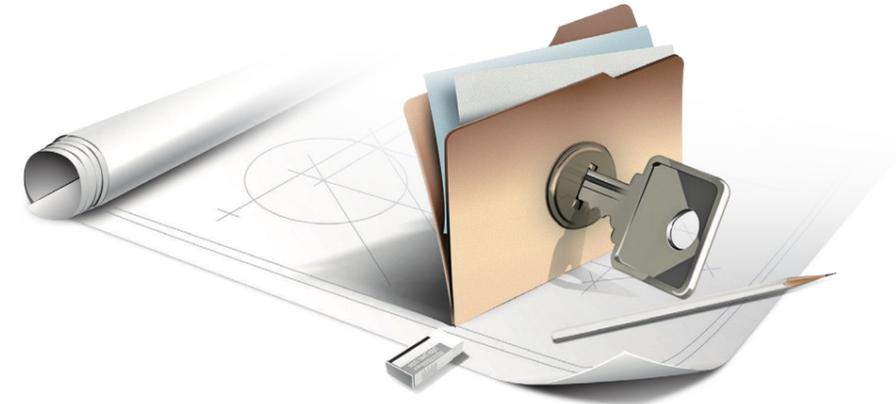
The confidence of success

From small to medium-sized enterprises to Fortune 500 companies, and from national environmental protection agencies (EPAs) to UNIDO (United Nations Industrial Development Organization), a vast number of projects have allowed us to gain a deep understanding of our clients' stringent demands for safety, reliability, and user-friendly design. We have collaborated with over 1,000 clients worldwide, and this expertise has become a critical factor in successfully implementing projects.

Turk-key Projects

You make decision we do the rest

For foam extrusion products, selecting high-quality equipment is just the first step toward success. Our professional team not only provides top-notch equipment but also offers a wide range of comprehensive services. These include workshop design consulting, warehouse logistics management, recipe management, as well as operation and maintenance training. With our own international talent pool, we are ready to support you at every stage. We specialize in turn-key projects.



Laboratory Facilities

They are yours too

To support research and development, and to trial new recipes and processing methods, our laboratory facilities are available to you. We invite you to explore all the possibilities of polymer foam products together. We provide a wide range of laboratory equipment and tailor-made foam extrusion solutions to universities, institutes, and enterprises.

USEON