Newly ECOFEL™ Polymer Foam Extrusion Lines

Blowing agent conversion technology
-Supercritical CO₂ and portfolio
Huge capacity polymer foam extrusion lines
Full-automatic intelligent production lines
Leading the way of innovation
Useon has been engaged in polymer extrusion processing equipment R&D and manufacturing. From the first high torque twin screw extruder to the fastest EVA solar cell encapsulating film, and then the biggest China-made XPS production line, Useon has been leading the way of innovation. Aspiring Useon team enhances your competitiveness with our initiatives. More than a quality machine supplier, Useon is your reliable partner for long-term development.

Green is the future
Everyone on this planet has suffered the negative effect from climate change. Green way is gaining ground worldwide. For some products, non-green products are not accepted any more. Being green is not only a business, it’s our responsibility too.

For XPS product, every change on portfolio of blowing agent has been approaching green further. The evolution history of blowing agent is a history of being green. Every change on portfolio created a new challenge against machines. We have witnessed it and been leading the technology.

The secret of high quality XPS board—ECOFEL™ XPS production line
The leader of the market is always the owner of the brand. There is no doubt that high quality is the base of the brand. The excellent performance of ECOFEL™ series production line will strengthen your competitiveness and confidence of marketing. We believe reliability creates productivity. ECOFEL’s reliability and quality has been proved by international groups for years.
Full automatic feeding system
Continuous and even feeding is a good beginning of excellent product. The recipe change can be done by digital setting screen. Raw material handling system can be customized according to individual factory circumstance. The whole feeding system is integrated so that the warehouse can be kept clean and tidy.

Advanced twin screw technology
Useon has introduced twin screw extruder into XPS production successfully. The introduction of a twin screw extruder into XPS production is a significant development. The excellent dispersion and compounding performance of twin screw extruder helps CO₂ disperse into polymers and distribute additives into molten polymers uniformly. Modular design makes the line more flexible against recipe change or blowing agent change.
Innovative high-efficiency single screw cooling extruder

It is well-known that the cooling is very critical for XPS production. We developed special cooling channel for the barrel of single screw cooling extruder which not only increase the cooling efficiency but also control the temperature more accurate and precise. Yet, it optimizes the cooling process and enough pressure gradients for CO2 foam extrusion. This combination is a result of USEON’s profound understanding of extruders and long-term research in this field.
**Supercritical CO\textsubscript{2} metering system**

Metering supercritical CO\textsubscript{2} continuously and evenly is one of the most challengeable works. It involves precise temperature control, pressure control, mass flow control and correlation with other processing parameters. The operation window of CO\textsubscript{2} foam is narrower than traditional HCFCs so that the CO\textsubscript{2} injection is very critical. Our CO\textsubscript{2} convey and metering system can provide constant quantity and stable pressure CO\textsubscript{2} injection.

**Full automatic downstream**

Vacuum raw material transport, loss-in-weight feeding, four-side edge trimming, online printer, online embossing, surface planner, surface groover, stacker, online packaging, central dust collection system and online margin recycling system, we provide world-class full automatic XPS production line.
Intelligent Control System
From data access to recipe management, from operation log to alarm annotation, from peripherals extend to Ethernet or internet diagnose, our control system provides you a full-automatic and intelligent production line, yet help you manage the production. Friendly HMI makes the operation easier than ever.

Rich experience in projection fulfillment
Useon has abundant experience in cooperation with international groups and institute which help us know the strict details of machines’ stability, safety and humanization setting. Especially in huge capacity XPS line, Useon has unparallel privilege. This is the key point to complete the whole project.

Turn-key project
For XPS production, having high quality machines is just a good beginning. We not only deliver good machines, but also provide technical support comprehensively, including various recipe for different products, start-up training and maintenance program etc. We present you a turn-key project.
Lab for foam extrusion
In order to cooperate with customers to develop new material and new recipe or new process, we launched our own polymer foam extrusion lab center. The lab center has one set of foam extrusion use twin screw extruder and some accessories. You don’t have to be bothered to find a foam extrusion lab machine; our well-equipped lab center is yours too. And our professionals would like to join you to develop new recipe and new process.

Useon has been engaged in polymer extrusion equipment and process. Today, Useon becomes a leading supplier of polymer extrusion equipment. Intimate cooperation with international group and institute make a lot of innovative idea come true and benefit our customers.

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ECOFELTM Series XPS Production Line
Result of professional

- High torque twin screw extruder
  - Masterbatch preparation/filling
  - Reaction/devolatilization extrusion
  - Engineering plastic modification

- Polymer foam extrusion
  - CO2 foam XPS production line
  - PP/PE foam extrusion
  - Other polymer foam extrusion

- Direct extrusion technology
  - Pre-dry-free direct extrusion (PET, PC, PA, PBT etc.)
  - Inline compounding direct extrusion (EVA, PVB, UHWPE, polyolefin etc.)
  - Degradable stuff plus starch direct extrusion (PLA, PBS etc.)

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