

Technical PVC profiles Best production concepts available by Theysohn

A wide range of production technologies for technical profiles for internal and external applications is available from Theysohn/Technoplast/Topf. The real advantage is the option to buy extruders, tooling and downstream from one manufacturer. Investors do not have to coordinate different suppliers.

Author: Harald Schweiger (harald.schweiger@technoplast.at)
Business Unit Manager technical profiles

In 2008 HTI AG (www.hti-ag.at) is merging the companies Theysohn (plants in Korneuburg and Salzgitter) and Technoplast (plant in Micheldorf) to one new company who is the only all-in-one producer for extruder, tooling and downstream with more than 30 years experience and sales activities worldwide. This new extrusion technology company within HTI Group will specialize in twin-screw extrusion for profiles, pipes, siding and sheets. From turn-key-projects, single extruders, tooling and downstream systems, mixers and material handling systems to screws and barrels, spare parts and after sales service – everything offered from one strong global player for our partners. Further on we offer a wide range of benefits like product management, process techniques, construction and tuning, project management, service and maintenance.

Because of our close cooperation we find tailor made solutions with real advantages for our customers. We are realizing high-tech concepts as an ideal combination of high capacity, low scrap rate and optimised lifetime of the equipment. Ambitious solutions are offered on a basis of real targets like comprehensive quality demands.

PVC as a highly impact resistant raw material is converted into a wide range of technical profiles by extrusion. Theysohn/Topf/Technoplast supply complete solutions for the production of rigid and foam PVC technical profiles, including co-extrusion options (e.g. ASA and PMMA), with various optical effects (e.g. inline printing) and film application. Addi-

tional features are direct and post co-extrusion of soft PVC elements like gaskets, lips and other components. Tooling concepts range from single to multiple strand solutions with line output up to 800 kg/h.

Production technologies

- Door and cover panels
- Rain gutter
- Foam profiles
- Wall panels
- Skirting profiles
- Cable ducts
- Window sills
- Curtain rail

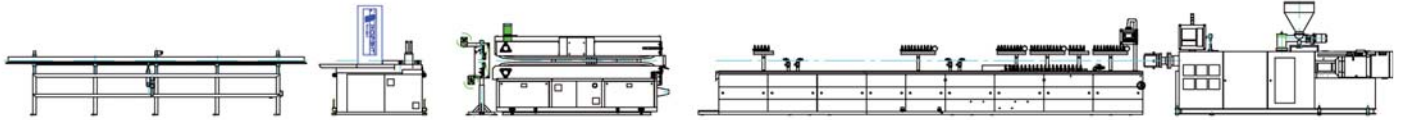


various profiles



Conical twin screw extruder with 4 dosing units

Standard components of a modern profile extrusion line



A EXTRUDER

A wide scale of models (conical and parallel) offering an output range from 10 - 1370 kg/h.

- high torque gearboxes allow back pressure up to 600 bar
- high quality wear protection for screws and barrels
- high safety factors for gearboxes
- special screw design allocated to material specification
- colour feed systems allow inline colour changes
- elliptic barrel shape and continuous temperature control of zone 5 ¹⁾²⁾
- water cooling or active screw core temperature control system ¹⁾
- ceramic screwshaft coating ¹⁾
- levelling pads for ideal setting ¹⁾

¹⁾ unique Theysohn technical solution
²⁾ patents registered

B EXTRUSION TOOLING

Profile tooling is a highly engineered piece of equipment giving the inner and outer shape to the profile.

- 1 - 6 calibrating systems
- PCE - post coextrusion for gasket applications
- COEX for colour skin and recycled material
- product specific tooling concepts
- several patents pending

C CALIBRATION TABLE

Constant and flexible management of process media such as cooling water

and vacuum distributed to all sections of the extrusion tooling including low energy consumption concepts.

- 3.5 - 20 m calibrating length
- single and double strand
- adjustment and tilting function
- additional options, e.g. PCE units

D HAUL-OFF

Caterpillars offering a force ranging from 1.2 to 3.0 kN for production speeds in excess of 10 m/min allowing a profile width up to 900 mm.

- single and double strand
- synchronisation to extruder control system
- free access at operator side for easy startup

E CUTTING UNIT

Synchronised cutting of profiles.

- up to a width of 900 mm
- single and double strand
- various saw blades
- saw and cutter blade solutions

F TILTING TABLE

Final component is a table to handle profiles for transport and packaging.

- 6 m standard
- special length available

Internal applications

Typical profiles for internal applications are skirting profiles, wall panels, cable channels, curtain rails and a wide range of technical profiles.

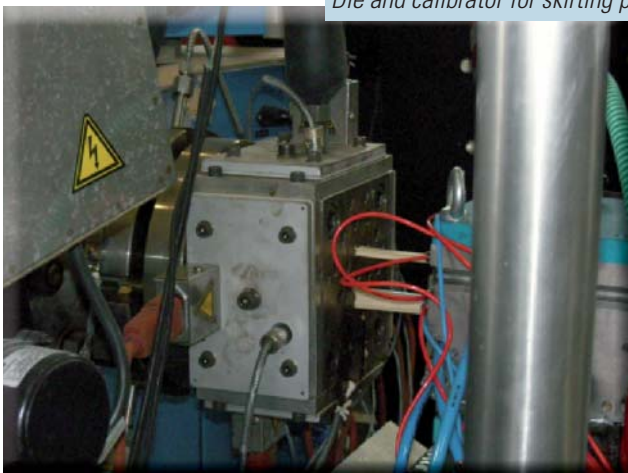
Skirting profiles

A rigid base profile with soft PVC lips has been realized with a line speed of up to 10m/min. Profile geometries with an integrated cable chamber, which can be closed with a lid, can be extruded with only one tool. Theysohn/Topf/Technoplast extrusion lines are prepared for the integration of inline printing equipment with highly cost effective imaging (e.g. approx. 8g colour/m²). More impressive colour and structure solutions can be achieved with inline film application.



Inline printing on skirting profiles

Die and calibrator for skirting profiles



Topf tool for skirting profiles

Cable channels

Electrical cable channels are worldwide widely used to allow flexible installations in buildings and service channels. The production concepts range from single to multiple strand applications, including punching and colouring. Our ability to control tolerances in a perfect way results in guaranteed clip functions between lid and base body of the cable channel. Therefore both profiles can be produced through one die in high speed of up to 8 m/min. (depending on profile design and size). The design range varies from simple rectangular shapes to highly complex multichamber designer channels. Injection molding parts and their function with the base profiles are fully incorporated in the product design.

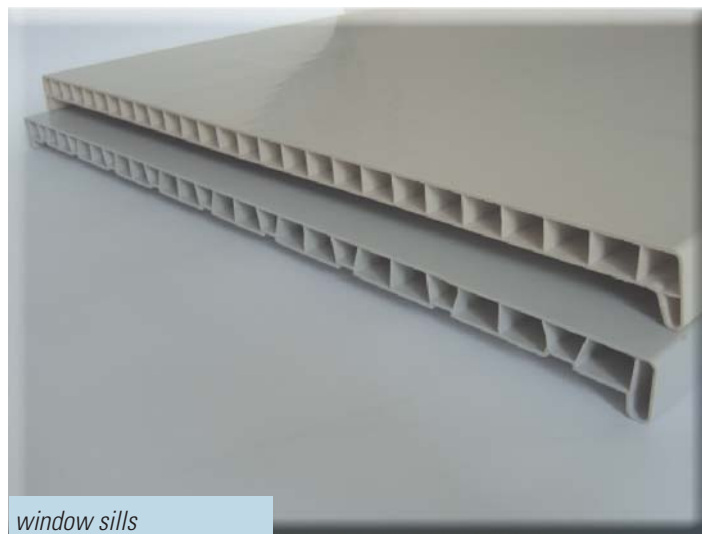


various cable channels

Wall panels, curtain rails, window sills, etc.

Based on the experience of more than 10.000 successfully operating tools worldwide there seems to be no limit to the technical concepts Theysohn/Technoplast/Topf can offer, including high speed wall panels, door paneele, curtain rail, window sills.

The calibration systems for high-speed wall panels are designed in a way that there is no water contact to the surface of the profile. This results in an excellent quality with higher gloss rate and is ideal for direct printing.



window sills

We are looking forward to transform your product ideas into highly performing production solutions.

<http://www.theysohn.at>
<http://www.technoplast.at>

A PARTNER TO LISTEN, WITH POWER TO SUPPLY

Theysohn Extrusionstechnik GmbH
Girakstrasse 2, Industriepark Nord
A-2100 Korneuburg, Austria

Mr. Harald Schweiger
Phone: +43 7582 692
Mobile: +43 676 83511 644

Fax: +43 7582 692 28
Email: harald.schweiger@technoplast.at