

HANS WEBER MASCHINENFABRIK GMBH

Foundation

- 1922

Employees

- Approx. 350

Branches

- Machine building for the plastic processing industry

Key materials

- All kinds of thermoplastic materials
- Wood polymer composites (WPC)

Key products

- Extrusion lines



Company

The family business WEBER was already established in 1922 and today it is led by the third generation. At the beginning gearboxes, especially continuously variable ones, as well as grinding/sanding machines were manufactured and sold with success. For more than five centuries extrusion lines have been developed and produced at WEBER that are successfully used for production of pipes and profiles. Numerous patents for equipments relevant in processing and especially for gearboxes are now standard in extrusion. WEBER takes the statement "Made in Germany" a step further and manufactures its extruders and their components (except electronics) in the Upper Franconian city of Kronach. Therefore an extremely high availability of spare parts, especially for older machines, is guaranteed.

Since the WPC-Extrusion has been taken on again in Europe in the middle of the 1990s, WEBER is significantly involved in the development of line concepts to extrude profiles of WPC. It was possible to come back to experiences of former decades. As WEBER Extruders were already used for production of wood fiber filled PVC profiles after the "oil crisis" of the 1970s.

Due to the nearly free formability of the material WPC during the extrusion process there are many application possibilities for the different products. WPC is mainly used for terrace boards and other profiles similar to wood. These new materials are also excellently suitable for inside decoration profiles and furniture as here the advantages specific for this material can be used optimally.

Today the applied extrusion processes to produce profiles of WPC are divided as follows:

Direct Extrusion, or the single-stage process, in which the several recipe components as shavings, plastics etc. are added separately on the extruder and out of that final products are produced directly

Processing of compound, the two-stage process. In a first step a compound is made of the several components that then is processed to a final profile in a further extrusion process. Due to the higher productivity as well as the better reproducibility this process is getting more and more accepted in practice.

So a wide range of special twin screw extruders has been developed during the last years that are permanently adapted to the latest state of the art. The results of this are for example a special wear protection of the processing unit with layer thicknesses of several millimeters as well as an optimized venting unit. Parallel as well as conical twin screw extruders with an output of up to 1,000 kg/h are used. The recent developments of WEBER in the area of WPC-Extrusion are:



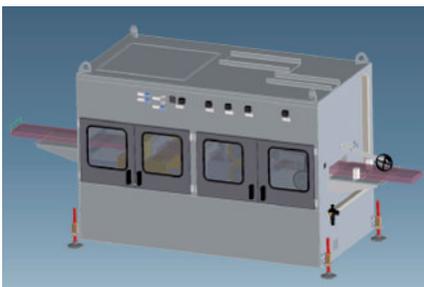
The **Co-Rotating Twin Screw Extruder** which is able to generate the necessary mass pressures for the profile extrusion without melt pump. By this the unfavourable wear behavior of the usually used counter-rotating twin screw extruders as well as their deficit in dispersion capacity can be improved. This alternative is available in three different sizes and covers the capacity range up to 400 kg/h.

The **complete profile downstream line** was optimized for the requirements of WPC-Extrusion. WEBER designed a special cutter with which besides cutting also the desired surface behaviour 'brushing' inline is possible in one working step. The respective calibration table was optimally adapted to the tooling also obtainable at WEBER. By this reasonably priced and compact downstream lines that can be combined with different WEBER Extruders without any interface problems are available for the customer.



With this WEBER created the necessary qualifications for the respectively optimum system solution. A team of experienced processing engineers accompany and advise the customer already starting with the idea of the

product. In a large and modern laboratory the individual components are available in order to work out the optimum solution during trials made together.



WEBER can offer the complete system solution from one source for the different ideas in the area of producing profiles which is perfectly made for the requirements of the customer. Everything from one source, everything in proverbial WEBER quality, everything „Made in Germany“ and everything with the legendary WEBER service.

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