



HF MIXING GROUP

Employees

- >1000

Branches

- Mixing room equipment for rubber and plastic applications

Key products/services

- Discontinuous internal mixers
- Continuous mixers
- Dump extruders
- Special machines
- Automation systems
- Complete mixing plants
- Customised Engineering
- Technical centre for mixing trials, recipe and process development



MIXING GROUP

Company

Since early 2010, the companies Harburg-Freudenberger, Farrel, Pomini Rubber & Plastics and Farrel Pomini Continuous Compounding Systems are operating together as HF MIXING GROUP. Each company offers both a long tradition and special strengths in building machines for the plastics and rubber industry. The HF MIXING GROUP uses its technical expertise to develop compounding facilities and systems while taking into account increasingly stringent safety and efficiency requirements.

In recent years, there has been a clear development towards more intense specialization with more complex recipes for the processing of plastics. Today the HF MIXING GROUP can offer both innovative discontinuous compounding facility solutions based on internal mixer technology for wood plastic composites (WPC) and natural fibre-reinforced plastics (NF-Ps) as well as continuous mixers especially for highly filled plastics.

Products

The HF MIXING GROUP offers the complete range starting from single machines up to compounding plant solutions automated by HF's ADVISE System. Compounding lines based on internal mixer technology with discontinuous operation show their strengths especially well in the fields of natural fibre-reinforced plastics. This can be particularly seen in the process variables such as residence time, rotation speed or tempering, all of which can be adjusted independently, unlike when continuous mixers are used.

This allows processes to be optimised for different material requirements quickly and easily. The internal mixer technology is capable of incorporating high contents of fillers (e.g. wood flour) and reinforcing fibres like technical wood fibres, flax, bamboo, kenaf, jute, hemp, cellulose etc. into various matrix materials resulting in 'ready-to-use' pellets for injection moulding or extrusion processes. Typical matrix materials to be processed are polyethylene (PE), polypropylene (PP), polyvinylchloride (PVC), but also bio-based and biodegradable plastics.

As an experienced technology partner, we have thereby set new performance benchmarks in this market segment.

More features of internal mixer technology:

- Direct feeding of fibres without costly pre-handling like cutting or pelletizing
- No pre-drying of raw materials required – even with moisture content far above 20 %
- High filler and reinforcing fibre contents are easily processable
- No thermal damage of temperature sensitive raw materials thanks to modern process controller
- Much lower moisture absorbance of the end product
- Significantly better material properties
- High degree of system flexibility and optimal process adaptability

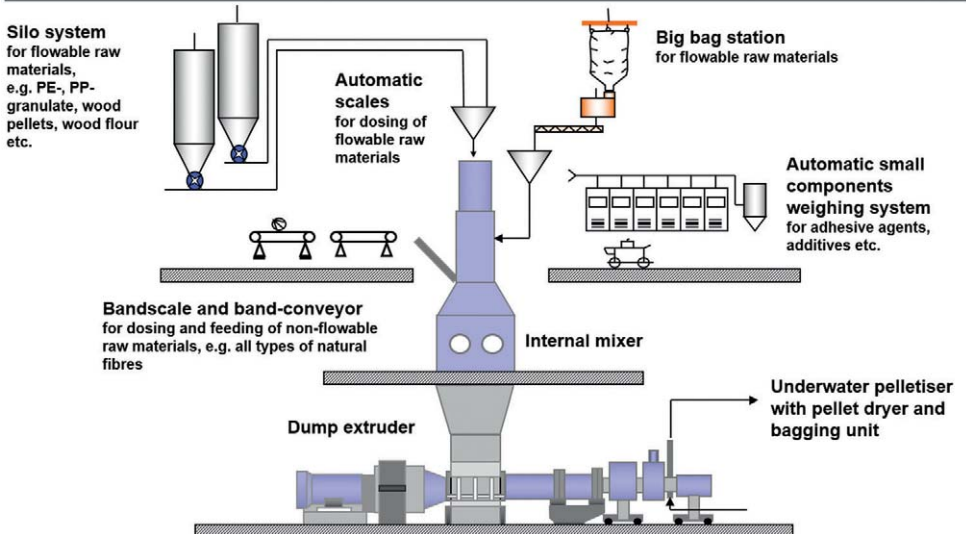


Internal mixer



MIXING GROUP

ADVISE CS and ADVISE ES



Plant solution for production of WPC and natural fibre reinforced plastic (NF-P)

Recycling – Internal Mixer Technology closes the loop

Sustainability and recyclability are indispensable for reaching ecological goals and the recycling of thermoplastics in particular is gaining in importance. The large feeding door of the internal mixer allows adding of large-volume plastic components directly to the recycling process without being shredded first. This method allows the production of plastic pellets from 100% recycled materials, polymer blends as well as WPC and NF-P pellets with varying proportions of recycled materials without any difficulty.

HF's Technical Centre – Experience mixing performance

All statements are based on intensive research and development work in our world-wide established technical centre in Freudenberg. Equipped with state-of-the-art mixing room technology we offer the opportunity to carry out mixing trials from laboratory to production scale.

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