maag
a DOVER company

automatik scheer
strand
pelletizers

LFT

Long fiber pellets as composites for high-strength structural parts

During production of LFT long-fiber pellets using the pultrusion method, fiber strands are drawn continuously through a polymer melt and the individual fibers are embedded in the polymer matrix. After cooling, the resulting fiber/polymer strands are chopped continuously to form pellets. Our LFT rotors fit our PRIMO^{PLUS} and M-ASG pelletizing systems.

Your benefits:

- Unique rotor design for maximum throughputs
- Wide strand inlet
- Variation of the pellet length and weight with Dual Drive
- Very high machine availability with wear-resistant cutting tools
- Sturdy cutting rotor bearings on both sides for maximum stability and consistency
- Tool-free access to the cutting chamber

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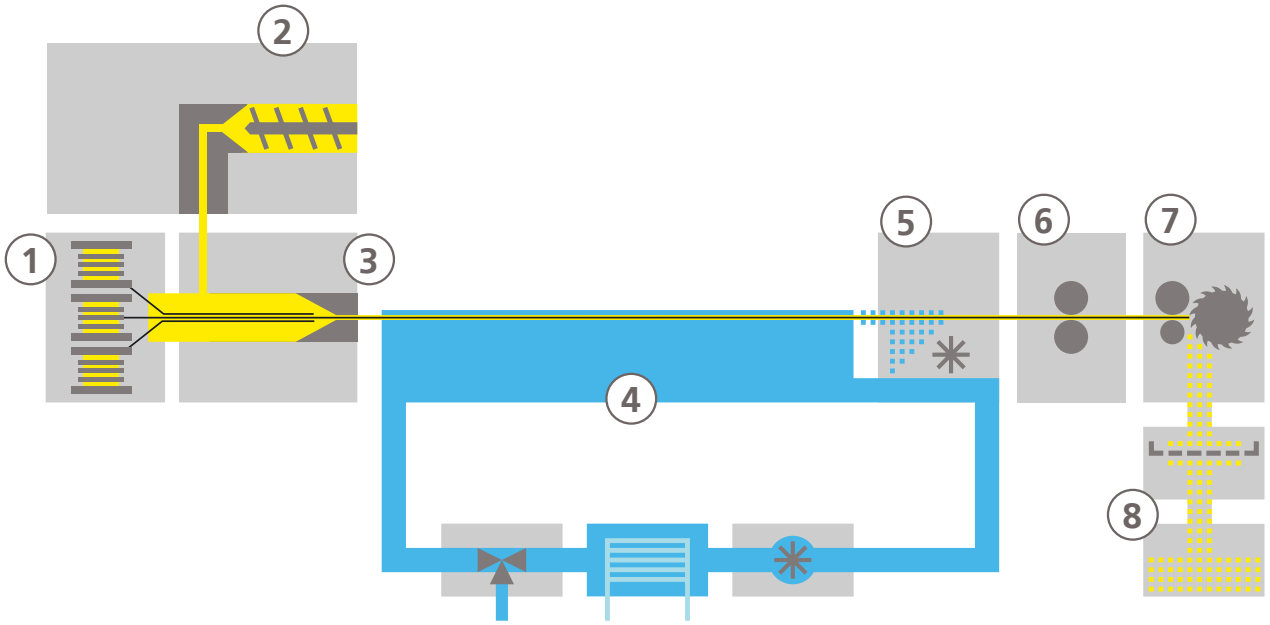
Process description

During the pultrusion process, the fiber strands **(1)** come into contact with the polymer melt **(2)** and are sheathed by the melt. The continuous drawing of the fiber strands causes them to become embedded in the polymer matrix **(3)**. The impregnated strands are cooled in a water bath **(4)** before the residual moisture is minimized by means of the strand dryer **(5)**. Before the fiber/polymer strands are chopped in the pelletizer **(7)**, a puller **(6)** provides the necessary take-off force. Screening **(8)** enhances the product quality.

Thanks to their polymer matrix produced by the pultrusion method, the long fiber-reinforced thermoplastics are characterized by extremely high strength and low weight.



The cutting chamber can be opened without using tools, allowing cleaning and service work and cutting head changes to be carried out quickly and without great effort.

Loose fibers contaminate the pellets, so they are removed from the cutting chamber via the extraction openings before the strands are cut.

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System components

Gentle product handling has the highest priority during the production of glass fiber-reinforced pellets using the pultrusion method. Our pelletizers are therefore equipped with a few features that support a smooth production process.

The precise cutting gap adjustment over the whole working width allows very small cutting gaps to be set for the highest quality.

At the cutting rotor, all bolted connections are well covered to prevent undesirable deposits and worn bolt heads. As a result, the life cycle of the cutting tools is significantly increased, and at the same time the scope of cleaning is minimized.

The wide strand inlet with comb guides prevents any overlapping of the strands and keeps the strands in position.

The pellet outlet is also accessible without the use of tools, allowing cleaning work at product changes to be carried out quickly and easily.

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Technical Data

Technical data:	PRIMO^{Plus} 100	PRIMO^{Plus} 200	PRIMO^{Plus} 300	PRIMO^{Plus} 400	M-ASG 600
Feed width [mm]:	100	200	300	400	600
Drive system:	AC motor with gear drive or belt drive				AC motor with belt drive
Drive power [kW]:	3 - 5.5	5.5 - 7.5	7.5 - 11	11 - 18.5	15 - 30
Feed speeds [m/min]:	5 - 50*				
No. of strands:	15	25	40	60	80
Pellet length [mm]:	5 - 15				

*process and product-dependent

Our strand pelletizers designed specially for long glass fiber pelletizing:

PRIMO^{Plus}

M-ASG

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