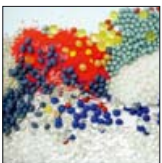


# APPLICATION EXAMPLES



**COMPOUNDING**  
Our pelletizing systems are suitable for products with high filler contents or low melt stability. Mineral and inorganic fillers, pigments and stabilizers are possible. Even sticky materials and materials with high MFI content can be processed.



**MASTERBATCH**  
Our special systems efficiently and cost-effectively meet the specific demands of masterbatch and color batch concentrate manufacturers. Masterbatch pellets are pourable and easily dispersible, and so very easy for end-users to process.



**MICRO-PELLETS**  
Being 0.5 mm in size, micro-pellets are a dust-free alternative to powders, have a higher bulk density and are more pourable. When working with large moldings, they enable cycle times and/or temperatures to be reduced. Masterbatches as micro-pellets permit very precise dosing even of small quantities.



**HOT-MELT ADHESIVES (HMAS)**  
Many Maag pelletizing systems are in use worldwide, pelletizing a wide variety of hot-melt adhesives. The variants range from EVA to PA, polyester, APAO, APP, PP, PE, TPE, phenol resin and rubber to TPU. We can process hot-melt and pressure-sensitive adhesives into pellets at viscosities of 4000 mPas and above.



**TPU REACTION**  
Whether simple compounds or highly specialized TPU grades for specific applications: we offer the necessary components and systems to assure end-users' success. In doing so, we are able to apply our sound specialist know-how in the processing of this unique material.



**RECYCLING**  
Our systems allow reusable wastes such as sprues from injection molding, film trimming wastes, flakes from shredded PET bottles or battery housings, etc. to be recycled. After being crushed, washed and dried, the used material is pelletized and so recycled as usable new material.



**GUM BASE**  
Adherence to the stringent hygiene requirements of the food industry means that gum bases can be produced by the underwater pelletizing method for example.



**BIOPOLYMERS**  
For raw material manufacturers and compounders who are focused on sustainability, we develop processes and products for the pelletizing and drying of organic raw materials, biodegradable materials, as well as matching fillers such as natural fibers.



**FOAMING PRODUCTS**  
Our special systems efficiently and cost-effectively meet the specific demands of manufacturers of light-weight products. Foamable or foamed pellets are produced in the gas-flushed state or are subsequently expanded. The results are pourable mini- or micro-pellets with the tightest distribution for example of E-PP, E-PS, E-PLA, E-PE, E-TPU, E-PET, etc.



**LFT**  
In the production of LFT (long fiber reinforced thermoplastic) pellets by the pultrusion method, fiber strands are continuously pulled through a polymer melt, during which the individual fibers are embedded in the polymer matrix (impregnated with the melt), and after cooling the shaped fiber-polymer strands are finally strand-pelletized as chips.

# SPECIAL APPLICATIONS

The range of pelletizing applications is extremely varied. We have long been continually developing new products and systems to meet the requirements of our customers in an optimal way.

We offer plant and machinery that meets the stringent hygiene standards for the production of medical-grade PVC or TPU for example. The moisture of the pellets is of crucial importance when pelletizing WPCs. In this field, too, we offer parameter customization to deliver optimal results. Compounds with high fiber-glass content are processed on our pultrusion strand pelletizers. We also have just the right systems to process bitumen or waxes. We support our customers with innovative, tailored solutions not just for these special applications. With our know-how and decades of experience, we will gladly be your partner in piloting your pelletizing projects.



For detailed information please find our datasheets and brochures on [www.maag.com/en/brochures](http://www.maag.com/en/brochures)



# SPECIFIC PELLETIZING

## Compounding & Masterbatch



**maag**  
pump & filtration  
systems

**automatik scheer**  
strand  
pelletizers

**gala automatik**  
underwater  
pelletizers

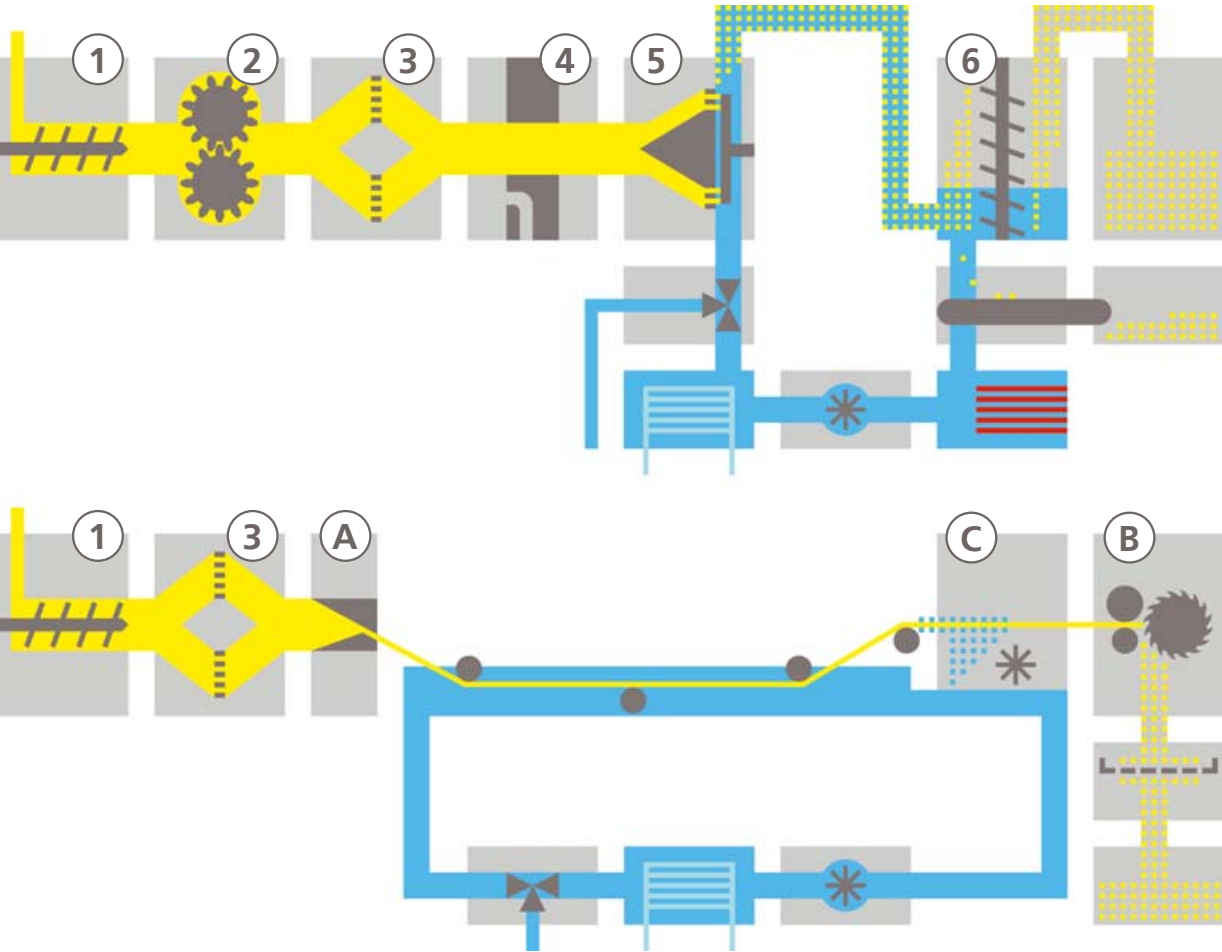
**reduction**  
pulverizing  
systems

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# PROCESS DESCRIPTION

Only if the pellet quality is uncompromisingly matched to the application and so to the requirements of the end-product can the quality of the downstream product be right. Processing techniques and systems must be attuned to each other and integrate seamlessly. Conveying, temperature control, filtration, pelletizing and drying processes must have as low an impact on the product as possible in order to attain optimal results.



To achieve fast start-up and shutdown cycles of shaping and processing extruders (1), and minimize the load on them, the pressure of the plastic melt is generated by a gear pump (2). Any impurities in the plastic melt are filtered out by a screen changer (3) in order to assure the appropriate product quality. In the underwater pelletizing process, the melt is guided via a hydraulically operated start-up valve (4) to the die plate (5), where it is pressed through die holes into the cutting chamber, through which process water flows. In the cutting chamber the polymer is cut into mostly spherical pellets, and is then carried by the process water in pipelines to the dryer (6). In the dryer, 95% of the water is removed by a preliminary dewatering stage before the rest is removed as the pellets pass through the dryer. The process water is then filtered and its temperature regulated in the water treatment unit before being returned to the cutting chamber. In strand pelletizing, the plastic melt is routed to the die head (A). Polymer strands are extruded through the die plate and conveyed toward the cutting rotor (B). Depending on the polymer, water bath cooling may also be integrated at this point. The air knife (C) provides effective drying prior to cutting. In the downstream process steps the cylindrical pellets are cooled further, then conveyed onward and screened.

Maag provides system-neutral advice on selecting the most suitable product alternative, utilizing its decades of experience and bundled know-how gained from over 20,000 installed pelletizing systems for a wide variety of different applications.

# LOCATIONS WORLDWIDE

You can rely on us:

- Offering strand pelletizing systems since 1957; manufacturing underwater pelletizers since 1977
- Five testing and development centers for our customers (2 in Germany, 1 in USA, 1 in Thailand, 1 in China)
- Combined process know-how of Gala, Automatik and Scheer, including for specialist applications
- Original replacement parts assuring long service life for your plant
- Over 20,000 machines installed in the field
- 20 locations providing local service
- 20 service centers worldwide

