



## ***ECON is setting new milestones in underwater granulation***

The increasingly tougher competition in the plastics industry means that the future requires flexible processing and production cost optimisation. A very wide application spectrum with optimised process costs (energy efficiency) can be ensured with the technology developed by ECON for thermal insulation and wear-resistant design of die plates.

Users familiar with Econ appreciate the advantages of Econ underwater granulation because, with normal underwater granulators, there is always the danger of individual holes "freezing" over during the granulation process due to the very high differences between the process water temperature and the die plate temperature (up to 250 K).

Production failures and the additional work and cleaning required are direct consequences of this. And, each new start-up leads to increased melt losses.

In addition, the running surfaces are usually made of hard metal (high thermal conductivity) and are attached to the supports of the die plate which leads to high heat energy losses and cooling of the die plate.

The heat engineering insulated design of the die plate, in combination with the new CECONID<sup>®</sup> material, leads to minimum energy losses to the process water and therefore reduces heating requirements for the supports by more than 90%. In addition, less energy is lost to the process water and therefore additional cooling energy is not required.

This lower energy requirement may not be immediately obvious, but when added up over the annual production output, it results in savings of several thousand Euro per year.

If you also take into account that even less energy is required for the granulator motor drive, because high cutting forces are no longer required (as the plastic is still soft when cut), and that the CECONID<sup>®</sup> die plates lead to longer blade service lives, this means that the ECON systems are even more efficiently operated and thus there is a faster RETURN ON INVESTMENT.

ECON granulators have already impressively demonstrated their flexible application options for numerous and often very different customer requirements.

Beginning with e.g.: very low viscosity materials (e.g. PET, PA 6.0, PA 6.6, etc.), via the simple processing of mass plastics such as PE and PP, and applications for glass-fibre reinforced plastics.

Even thermoplastic elastomers and urethanes, together with wood compounds, can be optimally processed.

The principle of thermal insulation means that the plastic melt is kept at the melt temperature until it is output through all the nozzles and is only cooled when it enters the process water.

This ensures a more stable granulation process and an extremely uniform, round, high quality granulate form with lower working temperatures at the supports (melt protection).

Another advantage due to the heat engineering insulated die plates are their insensitivity to throughput fluctuations. The possibility of e.g. having an output ranging from 3 to 50 kg per hole with one and the same die plate for compounds is another advantage that meets even the highest of customer requirements. This was formerly only possible by using several different die plates.

In addition, the start-up process can be implemented even at high production outputs with lower throughputs (approximately 10-20% of the nominal throughput), without freezing occurrences and with low melt losses.

The compact design (ECON pelletizers do not need a process water bypass) and the transparent layout of the control elements also contribute to the higher functionality of the systems. This means that start-up can be implemented very rapidly and easily so that the system availability can be better utilised.

For the user, this ECON technology means significantly less working outlay during production plus greater operating safety.

The simplicity of the construction, the flexible application options and the stable granulation process, even under continuous operation, all lead to increased productivity and significantly improved underwater granulation economic efficiency.

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