



Semi-submerged strand pelletising systems for low-viscosity thermoplastics.



ASP

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EREMA's semi-submerged strand pelletising systems are used to pelletise technical thermoplastics such as PET and PA. The straightforward operation and minimum labour requirements contribute to the very high degree of operational reliability. Easy startup, fast cleaning when changing over material and automatic self-feeding if strand breaks occur make these systems indispensable in practice. Integrated crystallisation is also possible for PET.



How it works

The melt strands coming through the boreholes of the **heated die head ()** are conveyed to a horizontally and vertically adjustable water chute 2. The strands are cooled by a laminar flowing film of water and manually adjustable spray nozzles. They are cooled down to such an extent that they do not lose their shape in the subsequent **strand pelletiser (a)**. The strands retain enough core heat to effectively support the later drying process on the vibration screen and enable crystallisation if required.

If there are any torn or interrupted strands the laminar water flow refeeds them to the strand pelletiser fully automatically and without any external operator intervention.



ASP system

After it passes through the cooling piping 4 the transport water and any fine particles which it may have are removed from the pellets on the **pellet water removal screen ⑤**. After filtration and cooling the water is returned to the process water circuit. The inner residual heat of the pellets continues the drying process on the pellet water removal screen. They then move on via a oversize screen 6 to the centrifuge 7 for the final drying process.



ASP-CIC system with integrated crystallisation

Immediately after the strand pelletiser the surface moisture is removed in the **centrifuge 4**. The amorphous pellets are crystallised in the **crystallisation unit (**) using the residual core energy and without needing any external energy. A vertical **conveyor screw 6** moves the major part of the crystalline pellets into the **post-crystallisation unit (**). A small portion of the crystalline pellets is returned to the crystallisation unit to prevent the still amorphous pellets from sticking. The system is controlled automatically via the integrated weighing cell. Nonconforming pellet sizes are removed at the **classification** screen. A transport blower then moves the pellets to the next step.



Technical benefits

- Easy start-up with no bypass valves and lowest possible material loss
- Fully automatic self-feeding if strand breaks occur

Economic benefits

- Cylindrical pellets on a par with virgin material
- Extremely reliable and operator-friendly

- Cooling water removes cutting dust
- Adjustable spray heads for the effective cooling of the polymer strands

• Minimum personnel costs

the complete system

thanks to easy operation and fast

cleaning and maintenance of the

easily accessible components of

- Optional CIC Compact Inline Crystallisation for the integrated, energy-efficient and compact crystallisation of PET
- **Reduced wear on tooling** thanks to wet cutting
- Avoiding downtime caused by strand breaks increases productivity



Improved downstream components for the ASP system

- **Optimised pellet water removal screen** with self-cleaning effect and easy-change filter cartridge
- **Pellet centrifuge for enhanced drying performance** featuring Direct Drive technology, integrated blower, noise protection and folding housing cover
- Easy to clean if there is a colour change and maintenance is straightforward
- Compact downstream components

Technical data ASP

| Туре | ASP 100 series | ASP 200 series | ASP 300 series | |
|---|--|----------------|----------------|--|
| Drive | Frequency-controlled 3-phase motors | | | |
| Transmission – cutting mechanism (kW) | 4,0 | 7,5 | 11,0 | |
| Intake speed (m/min) with a pellet length of 3 mm | up to 250 | up to 250 | up to 250 | |
| Max. number of strands with a strand diameter of 3 mm and head space of 10 mm | 13 | 26 | 36 | |
| Pellet length (mm) | 3 | 3 | 3 | |
| Height – strand supply (mm) approx. | PA, PETP=1650; PP=2170 | | | |
| Options | Moveable sub-frame, different pellet lengths | | | |
| | | | | |

| Throughput (kg/h) | ASP-CIC 100 | ASP-CIC 200 | ASP-CIC 300 |
|-----------------------------|-------------|-------------|-------------|
| PET (kg/h) up to approx. | 1000 | 1800 | 2600 |
| PA 6.6 (kg/h) up to approx. | 1000 | 1800 | 2600 |
| PP (kg/h) up to approx. | 250 | 500 | 1000 |



New pellet water removal screen and new pellet centrifuge

Headquarters & Production Facilities

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09/22

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