

# PRIMO S

WSG dry-cut strand pelletizing systems for best pellet quality



Successfully applied by hundreds of customers, the proven WSG dry-cut strand pelletizing systems with PRIMO S pelletizers produce the highest quality of cylindrical pellets or micro-granular compounds particularly suitable for further processing.

#### **Your benefits**

- Shortest possible unguided section from feeding unit to cutting unit
- Sturdy, double-sided bearing of the cutting rotor
- Very high system availability due to wear-resistant cutting tools
- Quick and easy access for cleaning and servicing; quick product changeover
- Consistent pellet quality

# PRIMO S

## WSG dry-cut strand pelletizing systems for utmost flexibility during production

Processes and machines and systems made by Maag Automatik stand for cost-effectiveness, flexibility, and reliability worldwide. With over six decades of experience and an installed base of currently more than 8,000 pelletizing systems, the company helps its customers to achieve the maximum level of profitability.

### Range of applications

With these conventional WSG systems, throughput rates of up to 3,000 kg/h can be achieved for all polymers extrudable to strands.

### Functioning of the WSG systems

Polymer strands extruded from a die head **01** pass through the cooling trough **02**.

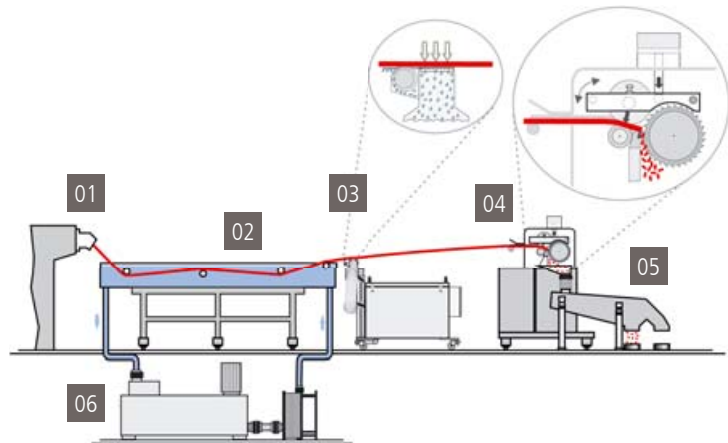
The air knife **03** ensures effective strand drying prior to cutting.

The residual moisture after strand drying evaporates in the evaporation section.

The feed tools of the strand pelletizer **04** catch the polymer strands and direct them to the cutting tools where the strands are cut into pellets.

The pellets are classified, cooled, and conveyed in subsequent operations **05**.

The cooling water is filtered and temperature controlled in a process water unit **06** and then returned to the cooling trough.



Looking into the cutting chamber

The »heart« of each WSG system is the strand pelletizer. Maag Automatik offers the PRIMO S systems for small and medium throughput rates, according to your specific requirements.

### Cutting tools

- Long service life of cutting tools depending on the selection of materials, e.g. cutting rotor for PA with 15-50 % glass fiber > 1,000 h
- Wide range of materials, e.g. stainless tool steel, tungsten carbide, ceramics, and diamond
- Wedged cutting rotor with positive interlock available (patented)



Pelletizer with classifier

### Strand pelletizer

- Double-sided bearing of the PRIMO S for higher cutting gap consistency and sturdiness
- Strand draw-in speeds of up to 100 m/min possible
- Shifting of operating range possible through selection of individual components
- No deposits within the cutting chamber
- Upper feed roll and cutting head cooling
- Start-up assistance for soft strands

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## WSG system components

As your most competent system supplier for WSG pelletizing machinery, Maag Automatik provides the perfect solutions to meet your individual requirements.

### Die head

- Electric heating, divided into several heating zones
- Absolutely uniform and homogeneous melt distribution
- Die plate with wear protection for abrasive products
- Swivel joint for fast access to the extruder screws
- Die head widths from 100 to 600 mm



SG-C 300 die head: A swivel joint ensures quick access to the extruder screw

### Cooling trough

- Longitudinal movement of cooling trough possible by using a crank handle
- Mobile due to track rollers for precise alignment and exchanging
- Supporting rollers stationary or swivelling, turnable, and slideable
- Widths from 300 to 1,100 mm, lengths from 2 to 10 m



KW 600 cooling trough

### Process water unit

- Specific cooling via plate heat exchanger
- Separation of process water from the central cooling water supply unit
- Optional water tank with filling level control as buffer for start-up
- In small WSG systems, treatment of process water integrated in the base frame of the cooling trough
- Cooling capacity of up to 525 kW, process water throughput of up to 30 m<sup>3</sup>/h



PWA 20 process water unit

### Air knife

- Required vacuum produced by blower with high suction capacity
- Dehumidification of air and refeed of water
- Space-saving positioning behind or alongside the cooling trough
- Efficient sound encapsulation
- Suction die moveable and adjustable in height
- Working widths: 100, 200, and 400 mm



SE 400-2 air knife

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## Technical data

Technical data:	PRIMO 100 S	PRIMO 200 S	PRIMO 300 S
Operating width:	100 mm	200 mm	300 mm
Drive system:	AC motor with belt drive		
Motor power of pelletizer:	3-7.5 kW	3-11 kW	3-15.0 kW
Line speed at pellet length of 3 mm:	30-70 m/min		
No. of strands at 75 % utilization rate and a pellet diameter of 3 mm:	25	50	75

Throughput rates [kg/h]*:		PRIMO 100 S	PRIMO 200 S	PRIMO 300 S
Product:	Density [g/cm <sup>3</sup> ]			
PP, PE:	0.91	700	1,350	2,000
GPPS, SAN:	1.04	800	1,600	2,400
ABS, HIPS:	1.04	800	1,600	2,400
PMMA:	1.18	900	1,750	2,600
PET, PBT:	1.31	1,000	2,000	3,000
PA 6, PA 6.6:	1.14	850	1,700	2,200 (65)
PET, PBT, PA, PP + 15-50 % glass fiber:	1.00	750	1,500	1,800 (60)
	1.55	1,000	2,000	2,400 (60)
Thermoplastic elastomers:	1.10	850	1,600	2,500
Masterbatch with > 40 % fillers:	1.30	1,000	2,000	3,000

\* Pellet length 3 mm, pellet diameter 3 mm, and maximum number of strands.