

PRIMO^{Plus}

WSG dry-cut strand pelletizing systems for all cases of application



The proven WSG dry-cut strand pelletizing systems with PRIMO^{Plus} pelletizers produce the highest quality of cylindrical pellets particularly suitable for further processing.

Variable system configurations allow for optimal matching with your specific production requirements and also provide utmost flexibility in terms of product changeover.

Your benefits

- Shortest possible unguided section from feeding unit to cutting unit
- Sturdy, double-sided bearing of the cutting rotor to meet highest stability and precision standards
- Upper feed roll driven available
- Changes on the pellet length and weight to be made with Dual Drive
- Integration into JSG system feasible
- Very high machine availability due to wear-resistant cutting tools
- Quick and easy access for cleaning and servicing; quick product changeover

PRIMO^{Plus}

WSG dry-cut strand pelletizing systems for high production capacities

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 5,000 kg/h can be achieved for all polymers extrudable to strands.

Functioning of the WSG systems

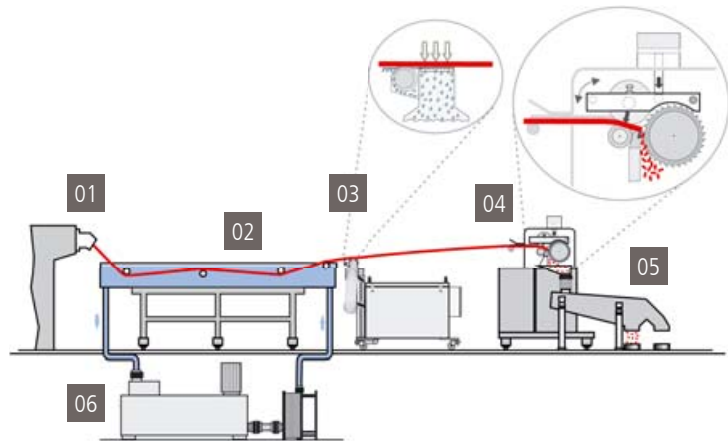
Polymer strands extruded from a die head **01** pass through the cooling trough **02**.

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.



The »heart« of each WSG system is the strand pelletizer. Maag Automatik offers the PRIMO^{Plus} systems for high throughput rates, according to your specific requirements.



PRIMO^{Plus} 200 U die head



Simple exchange of the cuttinghead

Strand pelletizer

- Strand draw-in speeds of up to 150 m/min possible
- Quick and easy access for cleaning and setting
- Lower feed roll driven by a separate motor and belt drive allowing a variable adjustment of the pellet length
- The design of the knife holder ensures minimum deformation of the cutting blade and highly consistent cutting gap
- Easy-exchange cutting head guarantees maximum machine availability
- No deposits within the cutting head
- Design drive U or S
- Can be integrated into automatic JSG system
- Individual strand guide and pivoting stripper ledge for PRIMO^{Plus}
- Driven upper feed roll with rubber coating, grooved or knurled steel roller
- Upper feed roll and cutting head cooling
- Start-up assistance for soft strands

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 hours
- Wide range of materials, e.g. stainless tool steel, tungsten carbide, ceramics, and diamond
- Wedged cutting rotor with positive interlock available (patented)

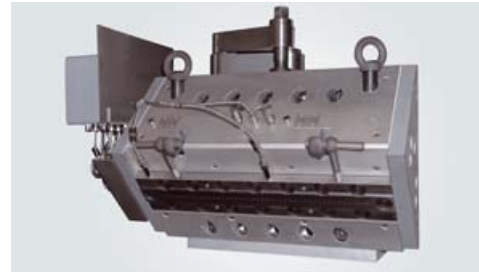
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WSG system components

As your most competent system supplier for WSG pelletizing machinery, Maag Automatik provides the perfect solutions for your production – all of them including multiple options.

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 900 mm



SG 450C die head

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 1,600 mm, lengths from 2 to 10 m



KW 600 cooling trough for up to 60 strands

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 m³/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 for dewatering

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Technical data

Technical data:	PRIMO ^{Plus} 100	PRIMO ^{Plus} 200	PRIMO ^{Plus} 300	PRIMO ^{Plus} 400
Operating width:	100 mm	200 mm	300 mm	400 mm
Drive system:	AC motor with belt drive			
Motor power of pelletizer:	3-15 kW	3-18.5 kW	3-22 kW	3-30 kW
Line speed at pellet length of 3 mm:	30-120 m/min			
No. of strands at 75 % utilization rate and a pellet diameter of 3 mm:	25	50	75	100

Throughput rates [kg/h]*:		PRIMO ^{Plus} 100	PRIMO ^{Plus} 200	PRIMO ^{Plus} 300	PRIMO ^{Plus} 400
Product:	Density [g/cm³]				
PP, PE:	0.91	1,000	2,000	3,000	4,000
GPPS, SAN:	1.04	1,200	2,400	3,600	4,800
ABS, HIPS:	1.04	1,150	2,300	3,450	4,600
PMMA:	1.18	1,250	2,500	3,750	5,000
PC:	1.20	1,300	2,400	3,450	4,600
PET, PBT:	1.31	1,250	2,500	3,750	5,000
PA 6, PA 6.6:	1.14	1,100	2,200	3,100	4,000
PET, PBT, PA, PP + 15-50 % glass fiber:	1.00	1,050	2,050	3,000	3,500
	1.55	1,250	2,500	3,750	5,000
Thermoplastic elastomers:	1.10	1,050	2,100	3,150	4,200
Masterbatch with > 40 % fillers:	1.30	1,250	2,500	3,750	5,000

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