



## WSG – PRIMO <sup>Plus</sup> & M-ASG

Dry cut strand pelletizing systems for high production capacity



Your systems supplier for all pellet shapes

## High production capacity

### WSG – strand pelletizing of compounds, blends and masterbatches

Machines from Automatik Plastics Machinery are well known for economical production, flexibility, and outstanding reliability. With over six decades of experience and an installed base of more than 8,000 pelletizing systems, the company helps its customers achieve the maximum level of profitability.

The proven dry cut strand pelletizing systems WSG with PRIMO<sup>Plus</sup> or M-ASG pelletizers produce the best quality of cylindrical pellets, particularly suitable for further processing.

#### APPLICATION AREA

With these conventional WSG systems, throughputs up to 12,500 kg/h can be achieved for all polymers extrudable to strands. The systems serve for the manufacture of compounds, blends and masterbatches based on:

- Polyolefins, e.g. PP, PE
- Styrene polymers, e.g. ABS
- Polycarbonates, e.g. PC
- Polyesters, e.g. PET, PBT, PEN
- Polyamides, e.g. PA 6, PA 6.6
- Thermoplastic elastomers, e.g. TPU, TPE

Other polymers available on request:  
[info@automatikgroup.com](mailto:info@automatikgroup.com)

#### FUNCTIONING OF WSG SYSTEMS

Polymer strands extruded from a die head **1** pass through the cooling trough **2**.

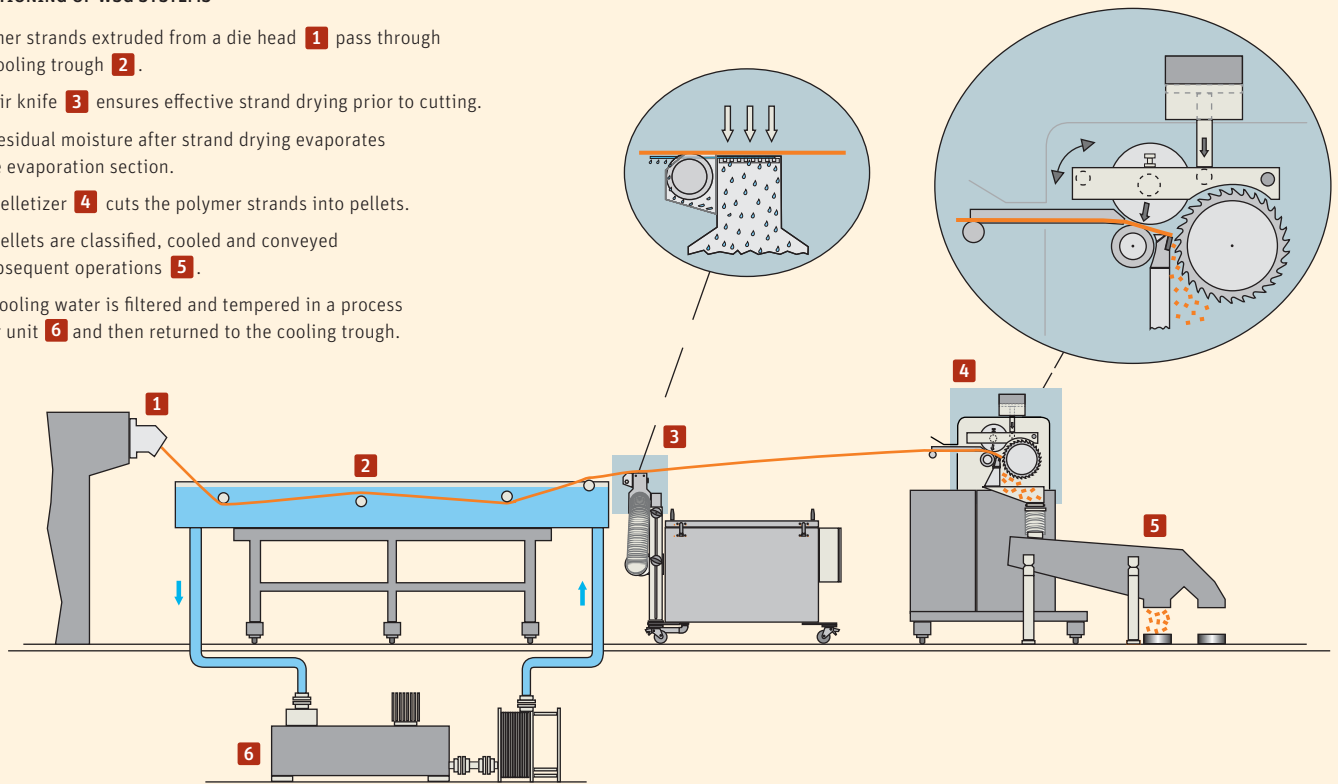
The air knife **3** ensures effective strand drying prior to cutting.

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

The pelletizer **4** cuts the polymer strands into pellets.

The pellets are classified, cooled and conveyed in subsequent operations **5**.

The cooling water is filtered and tempered in a process water unit **6** and then returned to the cooling trough.



View into cutting head PRIMO<sup>Plus</sup> 200

Compound pellets



#### YOUR BENEFITS WITH WSG

Maximum flexibility regarding:

- Positioning of system components
- Selection of materials
- Pellet diameter and length
- Process control
- System automation and upgrading

Profitable production due to:

- Very high machine availability with wear-resistant cutting tools
- Simple efficient cleaning and maintenance as well as fast product changeover
- Consistent pellet quality

## From die head to classifier – customized solutions for your requirements

### WSG system components

As your most competent system supplier for WSG pelletizing machinery, Automatik Plastics Machinery provides the sophisticated components for your production – all of them including multiple options.

#### DIE HEAD

- Electric heating, divided into several heating zones
- Absolutely uniform and homogeneous melt distribution
- For abrasive products, die plate with wear protection
- Swivel joint for fast access to the extruder screws
- Die head widths from 100 to 1,500 mm

#### COOLING TROUGH

- Longitudinal movement of cooling trough possible by using a crank handle
- Mobile by rollers for precise alignment
- Supporting rollers stationary or swivelling, turnable and slideable
- Widths from 160 to 1,600 mm, length from 2 to 10 m

#### PROCESS WATER UNIT

- Cooling via heat exchanger
- Process water conveyed with stainless steel pump
- 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 cooling trough
- Cooling capacity up to 525 kW, process water throughput up to 30 m<sup>3</sup>/h

#### 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 height adjustable
- Working widths: 100, 200, 400, 600 and 900 mm



Die head SG-C 400



Die head SG-C 400 in production



Cooling trough KW 600 for up to 60 strands



Process water unit PWA 20



Air knife SE 400-2



Suction box of SE 400-2

The »heart« of each WSG system is the strand pelletizer. Automatik Plastics Machinery offers PRIMO<sup>Plus</sup> for small to medium throughputs and M-ASG for high throughputs – each according to your specific requirements.

#### STRAND PELLETTIZER

- Strand draw-in speeds up to 150 m/min possible
- Little effort required for cleaning and adjustment
- Driving lower feed roll via a separate motor and belt drive permits variable 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

- Upper feed roll bearings outside of the cutting chamber and gap-free stripper at M-ASG
- Individual strand guide and pivoting stripper ledge for PRIMO<sup>Plus</sup>
- 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, diamond
- Wedged cutting rotor with positive interlock available (patented)



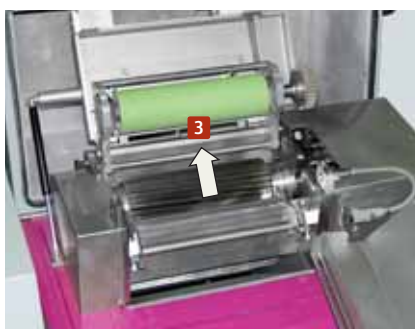
Strand pelletizer M-ASG 900



Easy exchange cutting head



Patented cutting rotor with positive interlock



Strand pelletizers PRIMO<sup>Plus</sup> and M-ASG: Quick access without tools to all cutting chamber components

## Everything from a single source

### WSG system components



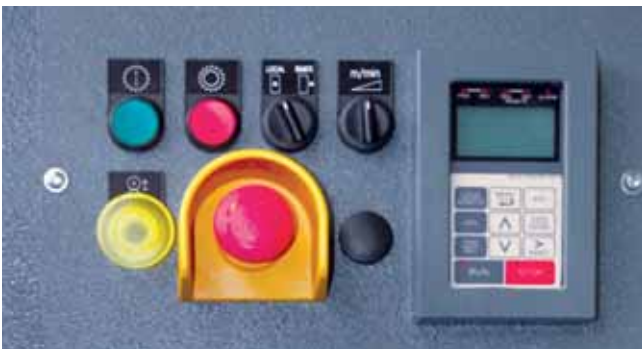
Classifier and spiral conveyor for final pellet treatment

#### CLASSIFIER

- Contributes to consistent product quality
- Single decker for screening out overlengths
- Double decker for separating fines and overlengths
- Reliable function with very low vertical acceleration – oversized particles slide smoothly on the deck surface
- Fast replacement of sieve insert

#### SPIRAL CONVEYOR

- For final cooling and drying of some special products
- Easy to clean
- Maintenance-free



Basic version of machine controls – easy to operate

#### MACHINE CONTROLS

- Pellet length adjustment via frequency inverter with special software
- Function of other system components integrated in control system of pelletizer (e.g. air knife, classifier, etc.)
- Data exchange with higher-level control systems
- Relay logic (basic) or PLC versions available



WSG system with cooling trough KW 300, air knife SE 200-2 and strand pelletizer PRIMO<sup>plus</sup> 200

## Technical data

### Dry cut strand pelletizing systems WSG with PRIMO<sup>Plus</sup> or M-ASG

	PRIMO <sup>Plus</sup> 100	PRIMO <sup>Plus</sup> 200	PRIMO <sup>Plus</sup> 300	PRIMO <sup>Plus</sup> 400	M-ASG 600	M-ASG 900
Operating width	100 mm	200 mm	300 mm	400 mm	600 mm	900 mm
Drive system	AC-motor with belt drive					
Motor power pelletizer	3 - 15 kW	3 - 18.5 kW	3 - 22 kW	3 - 30 kW	22 - 45 kW	30 - 75 kW
Line speed at pellet length 3 mm	30 - 120 m/min					
Number of strands at 75 % utilization and pellet diameter of 3 mm	25	50	75	100	150	225

#### Throughput rates [kg/h] at pellet length and -diameter of 3 mm and maximum number of strands

Product	Density [g/cm <sup>3</sup> ]						
PP, PE	0.91	1,000	2,000	3,000	4,000	6,000	9,000
GPPS, SAN	1.04	1,200	2,400	3,600	4,800	7,000	10,500
ABS, HIPS	1.04	1,150	2,300	3,450	4,600	7,000	10,500
PMMA	1.18	1,250	2,500	3,750	5,000	7,000	10,500
PC	1.20	1,300	2,400	3,450	4,600	7,000	10,500
PET, PBT	1.31	1,250	2,500	3,750	5,000	8,500	12,500
PA 6, PA 6.6	1.14	1,100	2,200	3,100	4,000	6,000	9,000
PET, PBT, PA, PP, PC + 15 to 50 % glass fiber	1.00	1,050	2,050	3,000	3,500	5,000	7,500
	1.55	1,250	2,500	3,750	5,000	6,300	9,500
Thermoplastic Elastomers	1.10	1,050	2,100	3,150	4,200	-	-
Masterbatch > 40 % fillers	1.30	1,250	2,500	3,750	5,000	-	-

#### LABORATORY FOR TRIALS AND DEVELOPMENTS AVAILABLE

Automatik Plastics Machinery has the largest and best-equipped pelletizing lab in the world. With four lines spread over 2,000 m<sup>2</sup>, we can replicate the production conditions specific to any compounding process and optimize the machine configuration. We even have the only drop pelletizer available in any laboratory environment. Let us take the guesswork out of your process.



Part of the laboratory with three extrusion lines



SPHERO® pellets



Cylinders



Droplets

## Your systems supplier for all pellet shapes

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