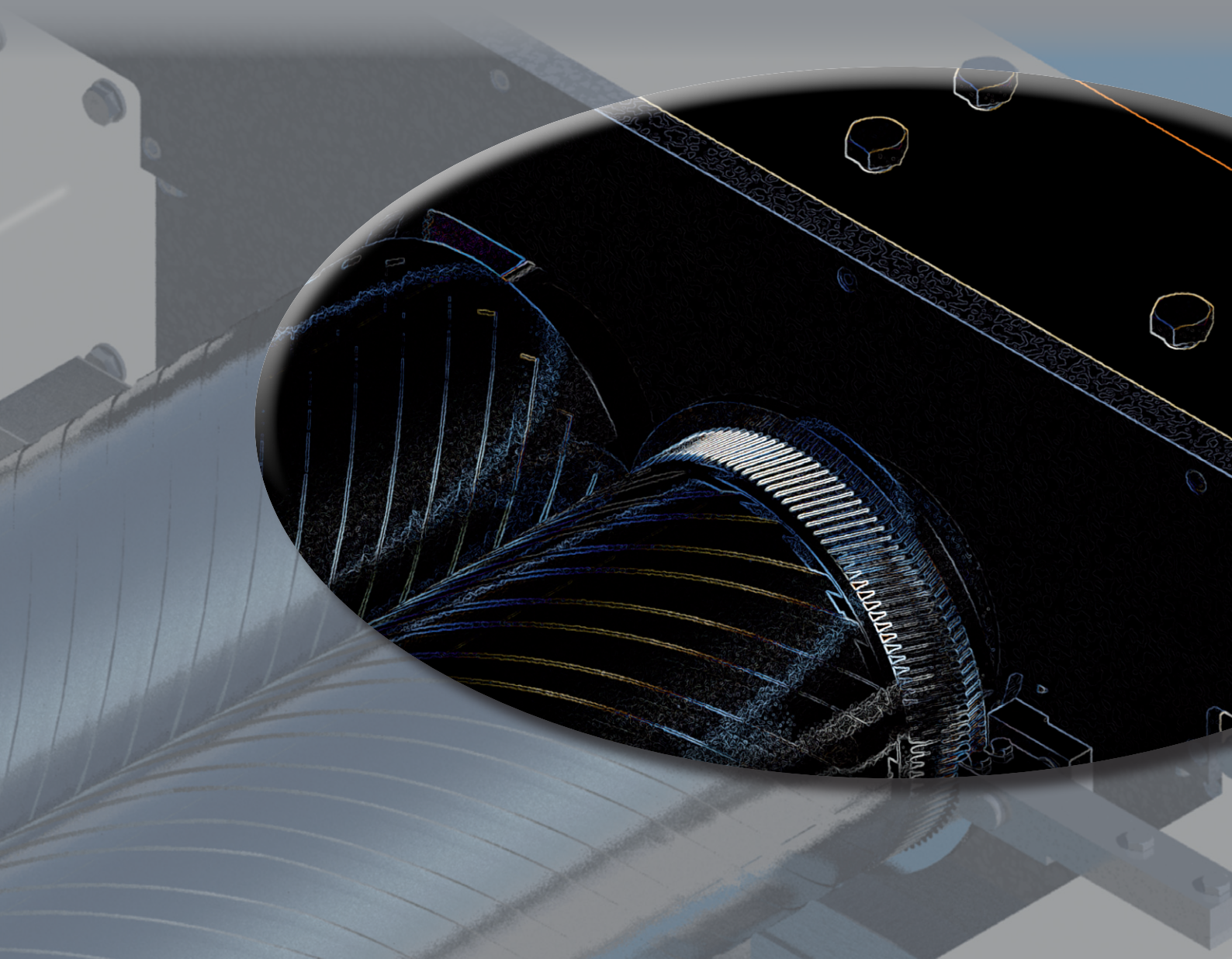


bowasag

SRM 200

SRM 300

SHEAR ROLL MILL



SRM 200 SRM 300 SHEAR ROLL MILL

■ Two horizontal rollers with spiral and – if required – longitudinal grooves operate in a counter rotational direction in order to transport the product continuously from the feeding side to the discharge side.

■ The transport of the product is effected by the helical shearing grooves in the rolls' surface. Both rolls are individually heatable, disposing of two heating zones, and the temperature is adjustable in all 4 heating zones from 5 °C to 120 °C. Only 2 - 5 kg of the product are in the continuous process at one time, depending upon the type of SRM.

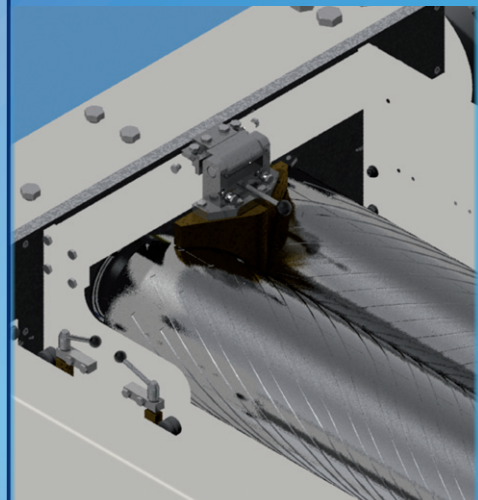
■ Gap pressure, friction, retention time and temperature are the variable parameters which are individually adjustable. These are the decisive factors that ensure an excellent homogenization and gelatinization of the product.

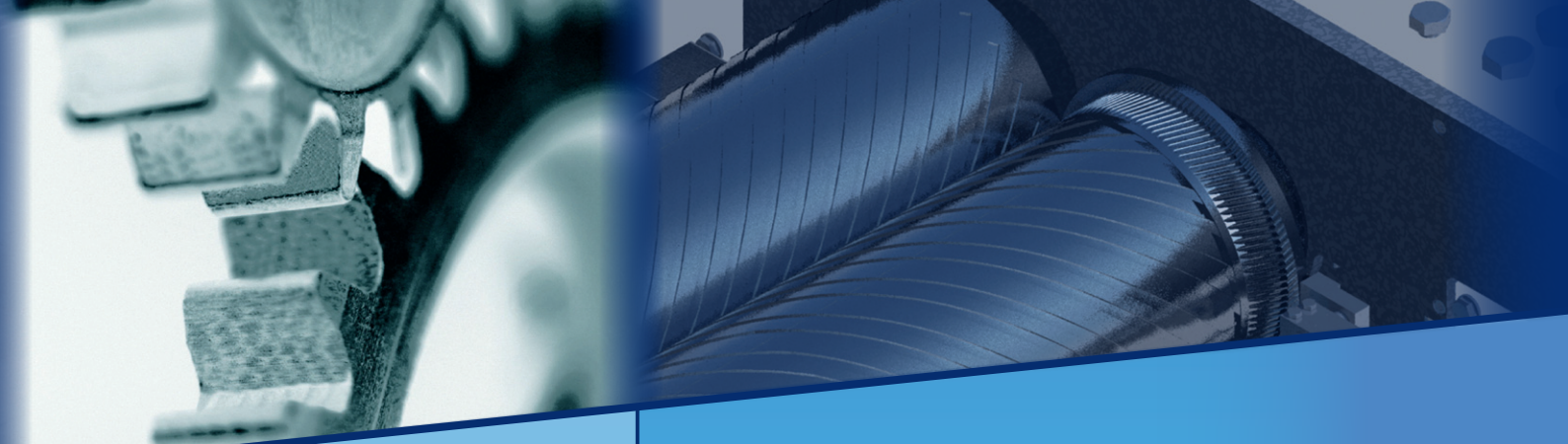
The shearing grooves with their specific geometry, finding it's expression in groove width, groove depth, angle of pitch and number of shearing grooves, permit a wide range of applications.

The BOWAS shear roll mill is easy to clean and permits a quick product change because of it's open construction. In case of an emergency and for the cleaning operation the back roll will be moved hydraulically for 100 mm plus.

The gap between the rollers can be adjusted hydraulically from 0.5 to 5 mm and more in 0.1 mm steps through the back roll.

It is possible to regulate and control the turning speed of the rollers independently from each other between 0 and 100 turns/min.



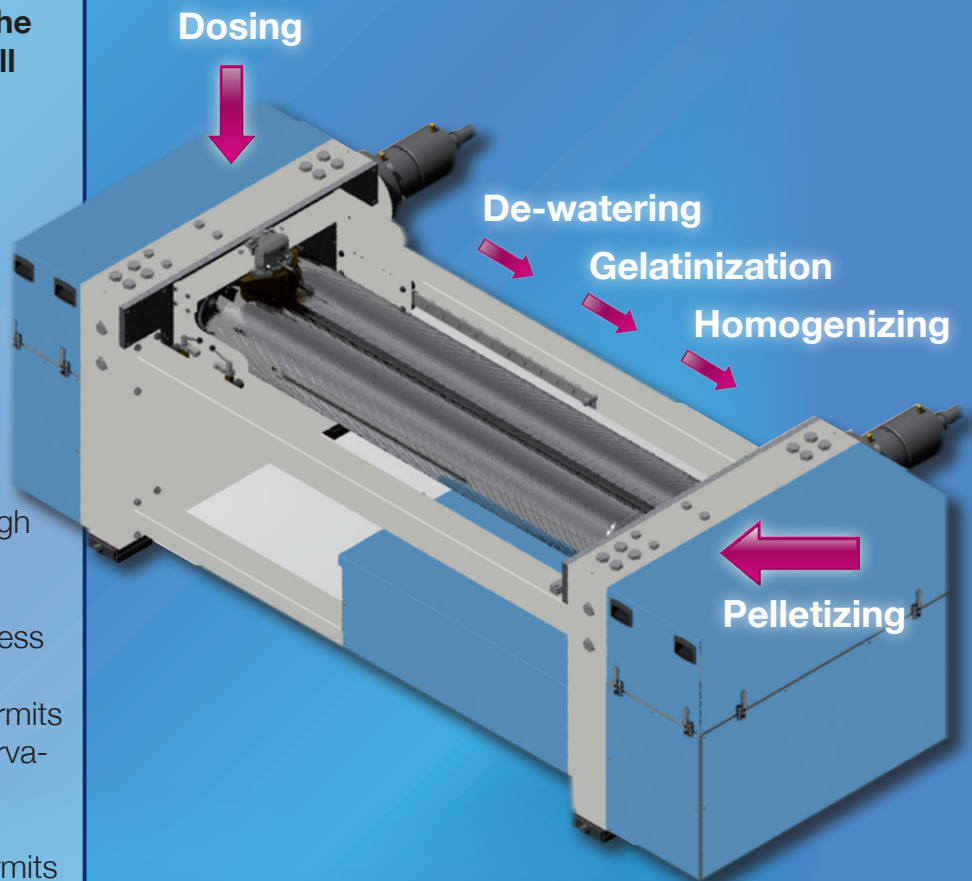


The continuous shear roll mill SRM is an open twin-screw extruder originating from the plastic industry for continuous mixing and homogenization. It has been redesigned and most suitably adopted for the processing of solventless multibase propellants. Other applications in the propellant and explosives industry are presently under intensive development.

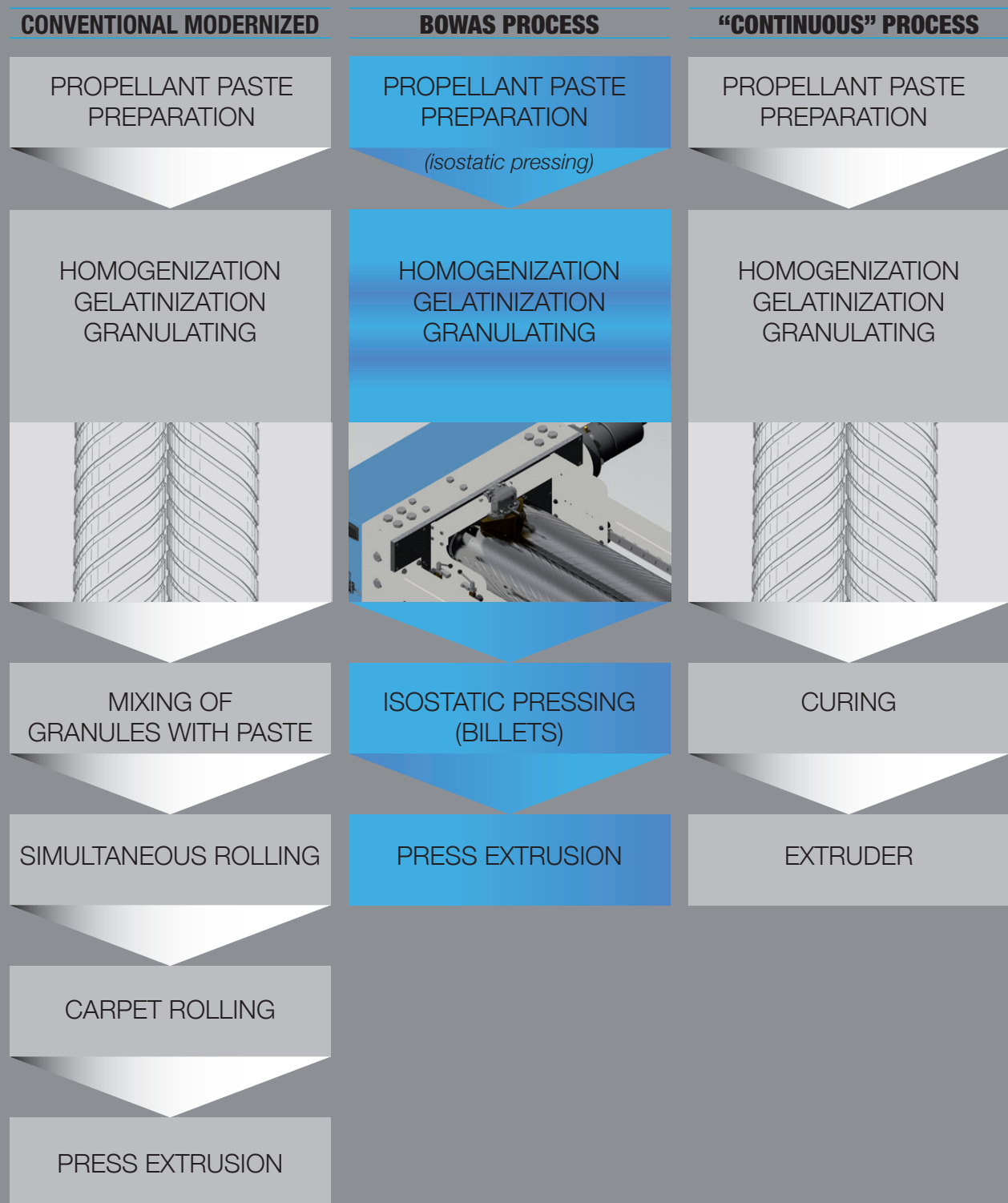
Type	SRM 200/1500	SRM300/2250
Roll diameter	200 mm	300 mm
Roll length	1.500 mm	2.250 mm
Speed	5 – 100 x 1/min.	5 – 100 x 1/min.
Motor	2 x 25 kW	2 x 36 kW
Processing gap	0.5 – 5 mm	0.5 – 5 mm
Pellet diameter	3 – 6 mm	3 – 6 mm
Throughput	max. 45 kg/h	max. 120 kg/h
Center height	1.000 mm	1.000 mm
Weight	9.000 kg	12.000 kg
L x B x H approx.	2.460 x 2100 x 1.350 mm	3.214 x 2.100 x 1.350 mm

The main advantages of the continuous open shear roll mill are:

- Continuous production
- High production flexibility
- Remote control
- Only small quantities of intermediate products in one room, resulting in a high degree of safety
- High effectiveness of process
- The open construction permits a continuous optical observation of the process
- The operation method permits at any time to control and change the parameters



Comparison of processes for solventless propellants



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