

# PLUSMILL

Achieving PLUS with LESS



**iec+**  
Engineering Values

mixing | grinding | dispensing | Plant Engineering

# PLUSMILL



## *Achieving PLUS...*

### **FLEXIBILITY'**

**The grinding drum covering is replaceable and available in different materials**

### **GRINDING DRUM PRESERVATION**

**New grinding components concept with high abrasion resistance**

### **EFFICIENCY**

**New product recirculation system inside the grinding drum**

**New dynamic filtering system**

**Faster change of color, with reduced waste of solvent up to 50%**

### **PRODUCTIVITY**

**High grinding performance by increase of energy density**

### **GRINDING CONTROL**

**Thanks to the cooled grinding chamber and the integrated temperature probe, grinding temperature is constantly under control**

### **PATENTED SYSTEM**

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## **GRINDING DRUM DIMENSION**

**Grinding drum volume reduced and spheres quantity reduced up to 90% compared to traditional immersion mills**

## **MAINTENANCE & CLEANING**

**The interchangeability and cleaning of the grinding parts is simple and fast**

## **ENERGY CONSUMPTION**

**Use of energy resources reduced up to 50%**

## **SET UP TIME**

**The grinding drum can easily be changed and quickly converted into a disperser**

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## Technical details



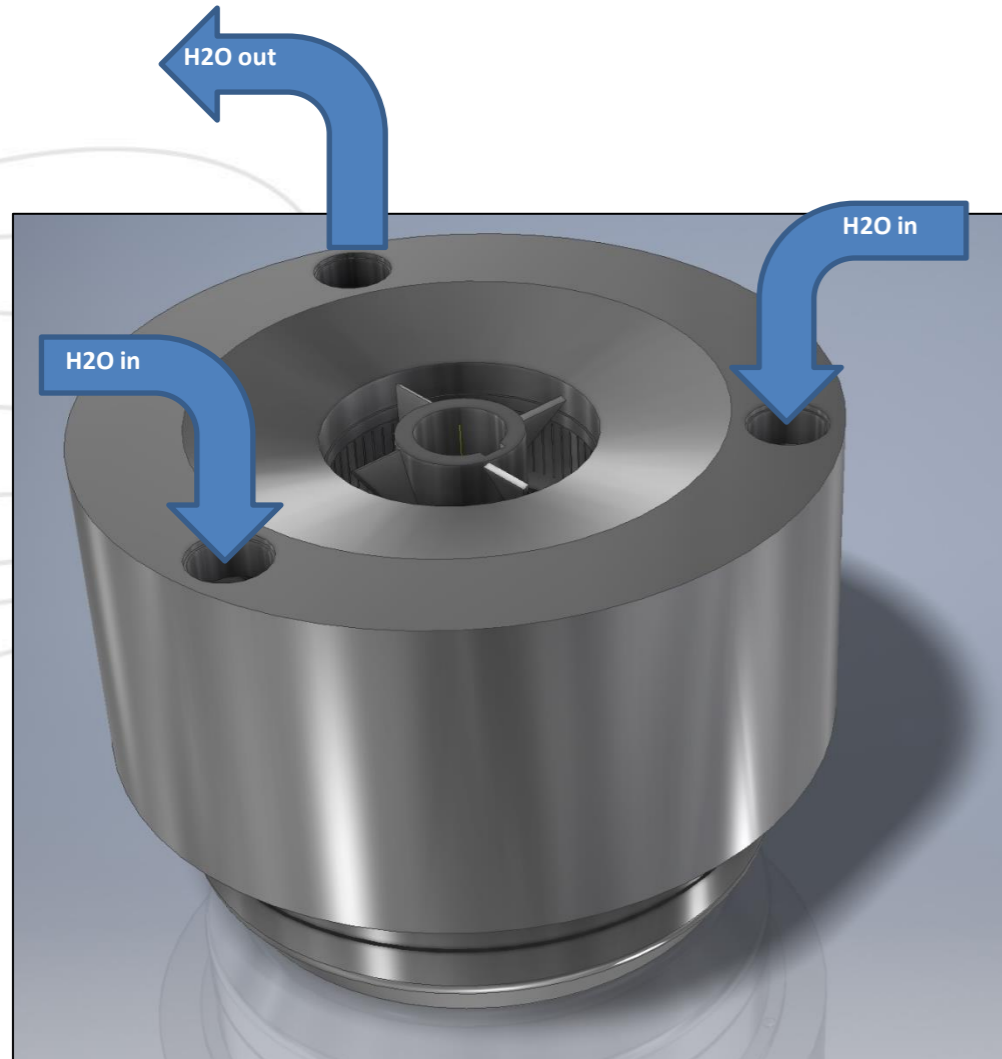
**PLUSMILL** Is the vertical immersion mill designed for discontinuous, fine and superfine grinding and the dispersion of low, medium and high viscosity products. .

**The standard model is made up of :**

- **Coated carbon steel frame**
- **Hydraulic lifting by an electric pump**
- **Digital control panel**
- **Steam protection cover with inspection hopper**
- **Stainless steel grinding shaft**
- **Adjustable locking with safety micro-switch**
- **Specially treated stainless steel grinding unit**
- **Temperature control probe**
- **Electronic speed variation by an inverter**
- **Safety devices in compliance with the Machinery Directive (EC)**

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## Grinding chamber



The grinding basket rotates together with the grinding shaft, while the cooling collar remains fixed

The PLUSMILL lid is made up of an internal grinding chamber and an external cooling collar.

The outer collar, has two outlets and one input for the circulation of the cooling fluid.



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## Grinding chamber

The grinding chamber contains spheres as grinding elements by using the action and the frictional efforts.

The effects of dispersion come from the turbulent motion of the spheres as a result of their impact with the other spheres and with the walls of the grinding chamber.

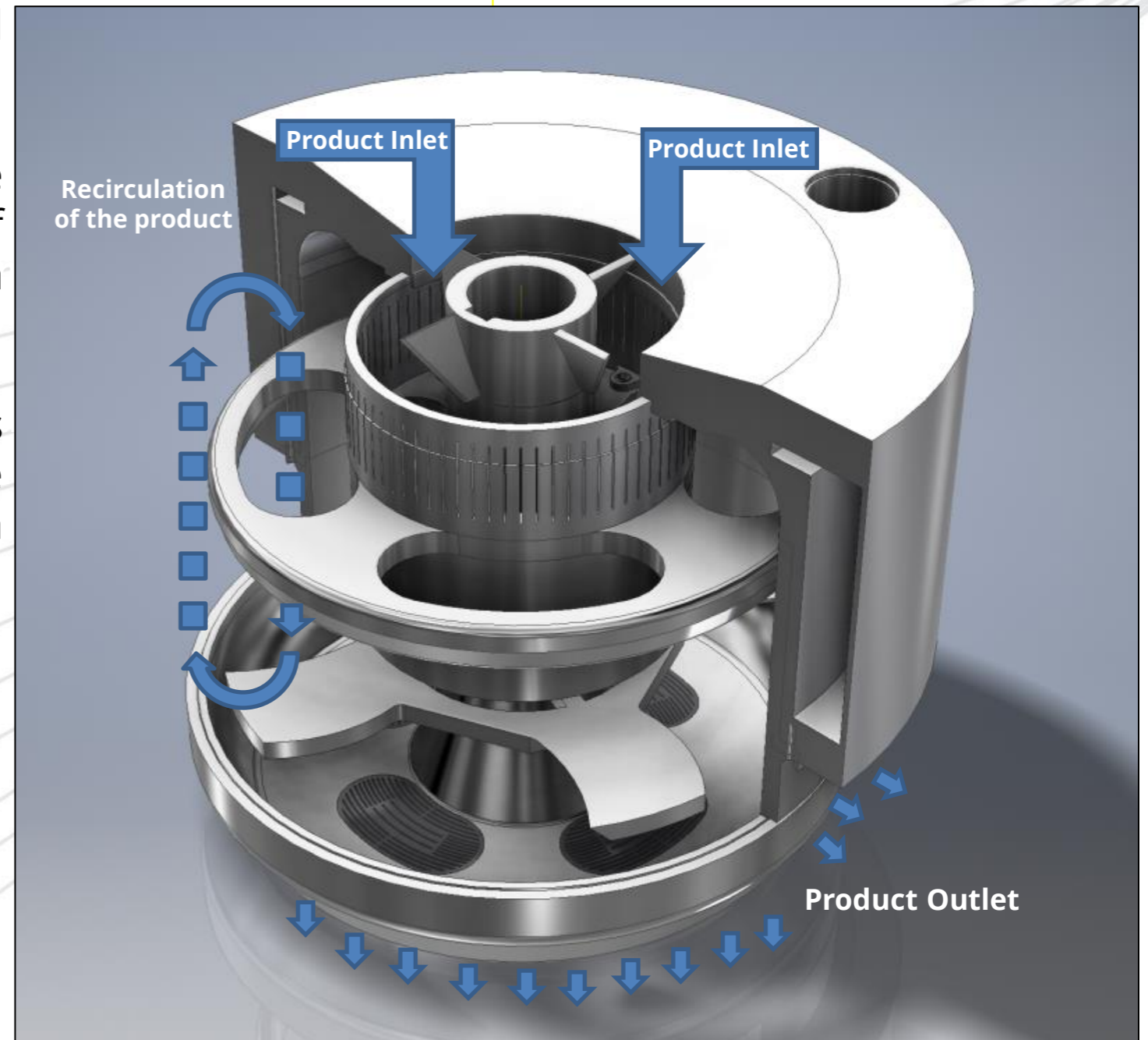
Inside the chamber, we have rotors threaded on the grinding shaft that contribute with the balls to grind low, medium, and high viscosity products.

The volume of balls has been reduced to 90%.

Spheres Range:  
1.6 ÷ 2.2 mm

Spheres Materials:

*Zirconium      Yttrium-Zirconium*  
*Sintered Zirconium      Cerium-Zirconium*  
*Zirconium*



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## Models and data sheet

Technical data sheet					
Model	Main Engine (kW)	Rotation speed(rpm)	Grinding capacity (l)	Spheres(l)	Viscosity range (cps)
PLUSMILL MS 11	11	1000-1200	50-400	1,2	
PLUSMILL MS 37/45	37/45	800-1100	300-750	5	100 ÷ 15'000
PLUSMILL MS 55	55	750-900	500-1000	8	

Comparative grinding time comparisons				
Product	Plusmill 37 kW Grinding Spheres 5 L		Standad Mill 37 kW Grinding Spheres 40 L	
	Ttime(min)	Grade(µm)	Time(min)	Grade(µm)
INK	45/90	0,1/5	240	5
WHITE SPRAY PLASTER	70	10	120	10
HIGH DENSITY GREY ANTI-RUST'	45/90	0,1	75/120	0,1
POLYURETHANE VARNISH	45/100	0,1/5	300	5
EXPORY PAINT	45/100	0,1/5	300	5
WHITE PIGMENTED PASTE FOR MIXING DEVICES	120	Full scale	1080/1200	Full scale
BLACK PIGMENTED PASTE FOR MIXING DEVICES	1080	Full scale	2400	<5

Mixing

Grinding

Dispensing

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