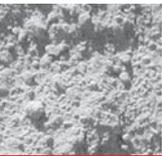


# PREMILL- HORIZONTAL ROLLER MILL

- Pregrinding
- Low electric power consumption
- High degree of flexibility
- High throughput
- Compact design



# PREMILL – Horizontal Roller Mill



Horizontal roller mill PREMILL PM 800



3D model of the PREMILL



PM 370 in the PSP pilot plant

## Application of the roller mill PREMILL

The medium-pressure horizontal roller mill PREMILL is used for grinding of all silicate materials up to 8<sup>th</sup> degree of the Mohse scale of hardness such as ceramic material, cement raw material, slag, clinker, quartz sand, lime, limestone, bentonite, scrap glass, etc.

The mill works independently in a simple line or in a circuit with an air separator or a mechanical screen.

The mill can be used as a pregrinding mill too due to its low energy consumption. Since the specific pressure of the grinding runners is relatively low, no firm agglomerates are formed in the grinding process, and therefore it is not necessary to use disintegrators before separation.

## Principle of operation

The material is ground between a fixed main roller and three grinding runners made of high-quality wear-resistant material. The main grinding roller is driven by a main drive. The first grinding runner can be driven by a slave drive. The rotary movement of other two grinding runners is initiated by friction of the material ground between the main roller and runners. Thrust of the grinding runners to the main roller is reached by hydraulic compression.

The ground material is taken from a hopper positioned in the upper part of the mill to the main grinding roller where it is fed to the first slot. On entering the slot, the material is evenly distributed across the driving roller and partially preground by lower specific load. On discharging from the first runner, the material is released. Released and redistributed material then enters the slot between the grinding roller and the second grinding runner where specific load is higher. The second grinding phase begins and grain disintegration takes place. After passing through, the material is released again. The material then is discharged to the third slot between the grinding roller and the third grinding runner where it is finished under the greatest specific load. The ground material is discharged from the lower part of the mill into a discharging hopper.

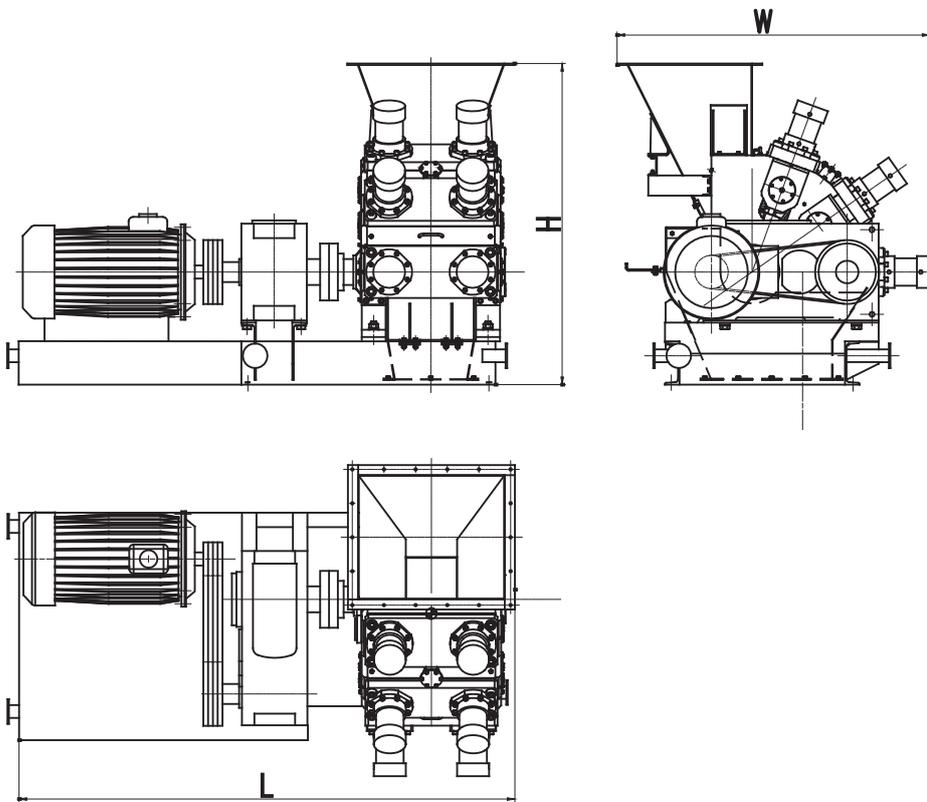
## Main characteristics

- Small built-up space
- Lower investment costs in comparison with classic equipment of similar capacities
- Low specific consumption of electric energy
- Easy installation
- High degree of flexibility
- High reduction factor ~ 20

## Technical parameters of the PREMILL:

- inlet size up to 70 mm
- inlet moisture up to 15%
- outlet size up to 3000 Blaine
- capacity up to 150 t/h

# PREMILL – Horizontal Roller Mill



PREMILL PM 800 in the PSP workshop



PREMILL PM 800 – limestone grinding

## Main dimensions of the PREMILL

Type	Length (L)	Width (W)	Height (H)
	mm	mm	mm
PM 370	1810	1090	1060
PM 500	2220	1100	1200
PM 650	2750	1800	1815
PM 800	3000	2155	2230
PM 1000	4125	2520	2700
PM 1200	4950	3235	2880
PM 1400	5775	3500	3100



PREMIL PM 370 – scrap glass grinding

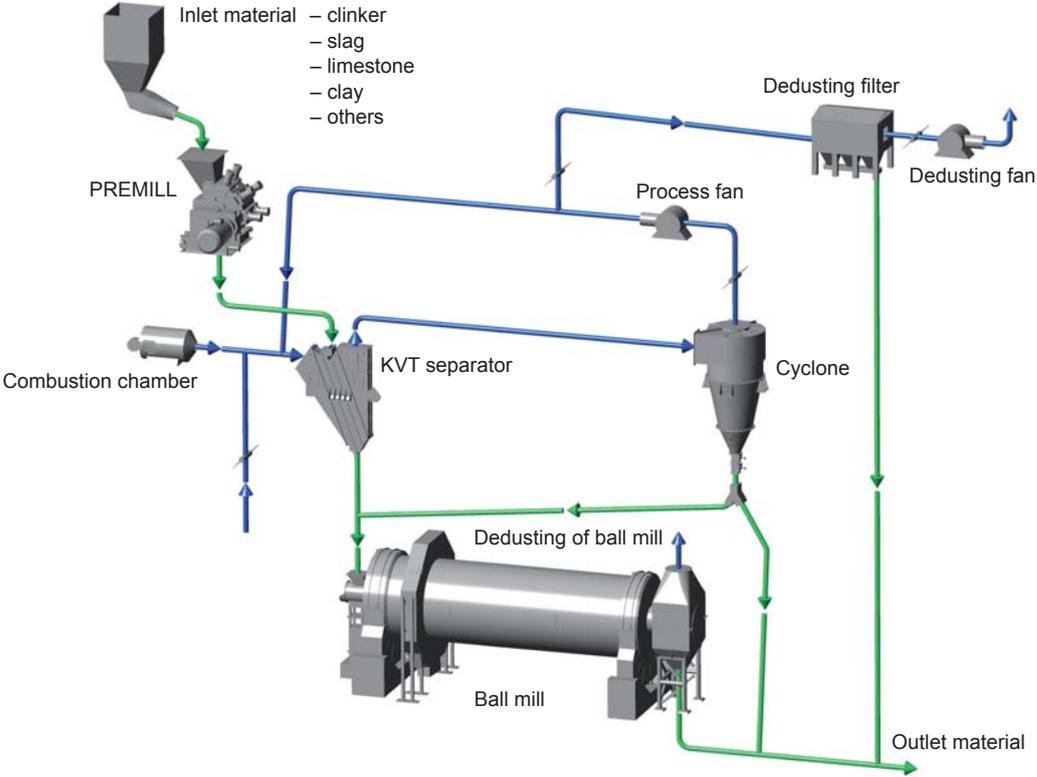


PREMILL in the PSP workshop

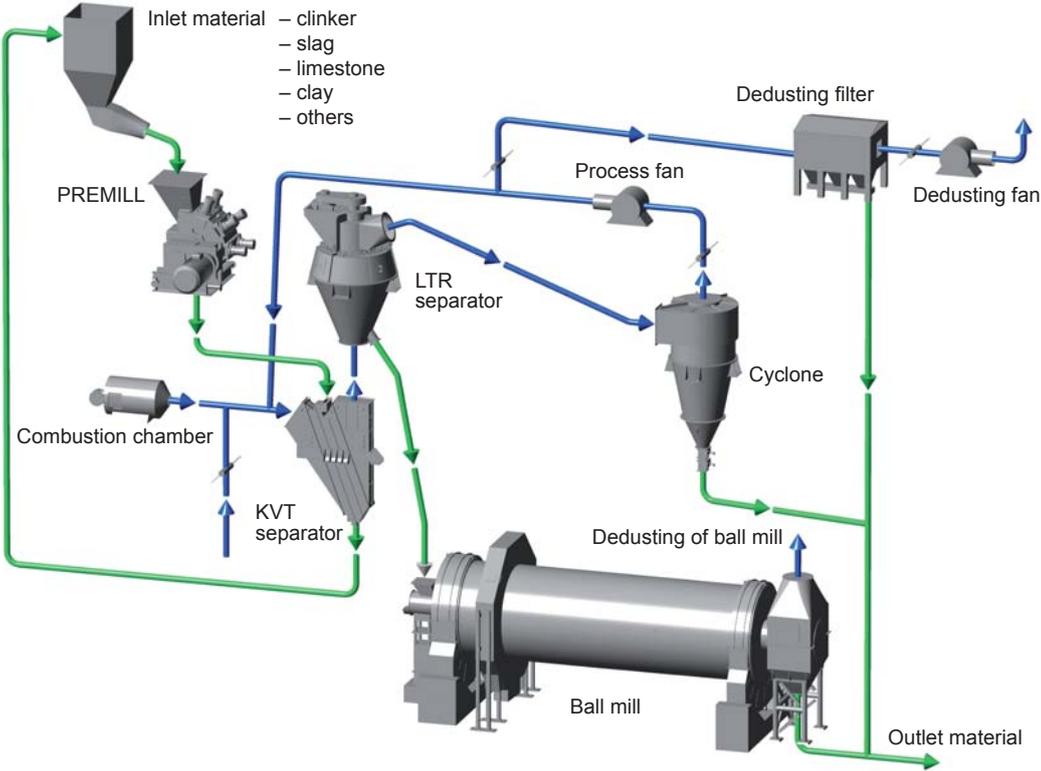
# PREMILL – Horizontal Roller Mill



Cases of PREMILL grinding circuits:

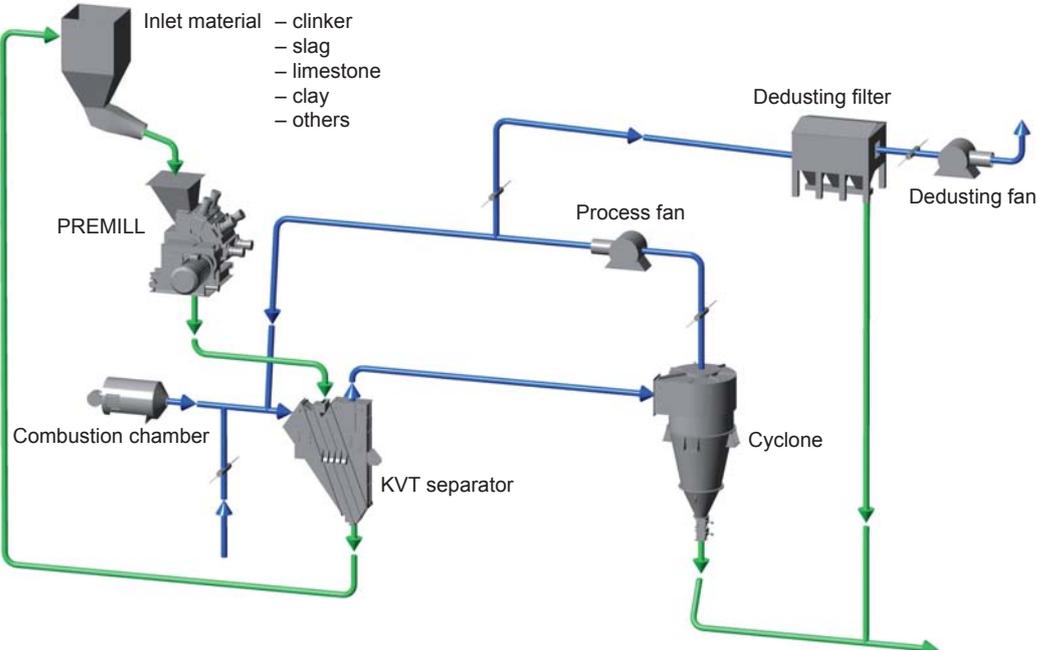


Open pregrinding circuit with PREMILL + ball mill circuit



Closed pregrinding circuit with PREMILL and dynamic separator LTR + ball mill circuit

# PREMILL – Horizontal Roller Mill



Closed finish grinding circuit with PREMILL



PSP pilot plant



[www.pspengineering.cz](http://www.pspengineering.cz)

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Grinding systems/Horizontal roller mill PREMILL EN 07/2012

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