

# HORIZONTAL ROLLER MILL - PREMILL

- Intensification of the grinding process
- Low electric power consumption
- High degree of flexibility
- Short change over times
- High throughput
- Compact design



# Horizontal Roller Mill - PREMILL



Horizontal roller mill PREMILL PM 800

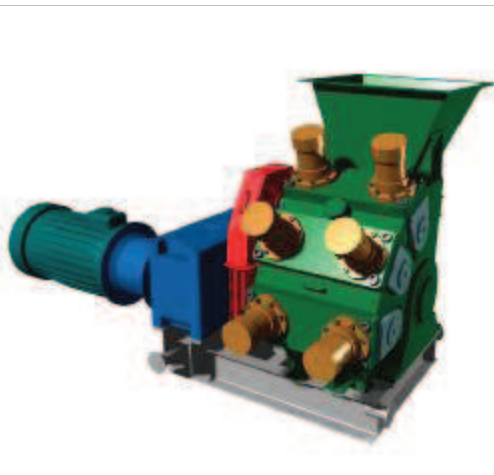
The medium-pressure horizontal roller mill PREMILL is used for grinding of all silicate materials up to 8<sup>th</sup> degree of the Mohse scale of hardness such as ceramic material, cement raw material, slag, quartz sand, lime, limestone, bentonite, scrap glass, etc.

The mill operates independently in a simple line or in a circuit with an air separator or a mechanical screener.

## Main characteristics of the roller mill PREMILL

- Small built-up space
- Lower total investment in comparison with classic equipment of similar capacities
- Low specific consumption of electric energy
- Easy installation
- High degree of flexibility and short change over times

The mill can be used as a pre-grinding 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 disagglomerators before separation.



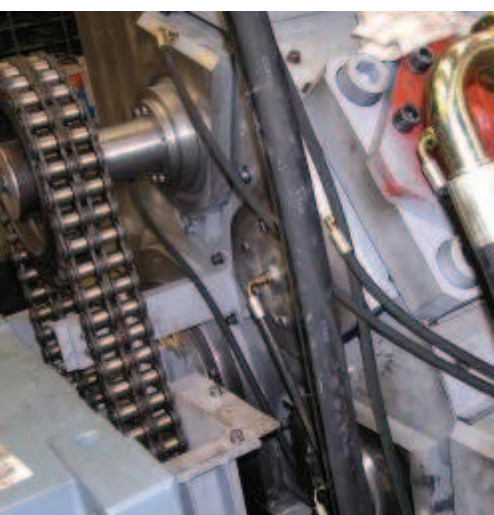
3D model of the PREMILL

## Principle of operation

The material is ground between a fixed main roller and three grinding runners made from 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 the other two grinding runners is initiated by friction of the material ground between the main roller and the runners. Thrust of the grinding runners to the main roller is developed 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. Upon entry into the slot the material is evenly distributed across the driving roller.

The compression between the main roller and the first runner is lower to help prepare the material for pre-grinding. Upon discharge 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 compressive stresses are higher. The second grinding phase begins and grain disintegration takes place. Upon passage 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.

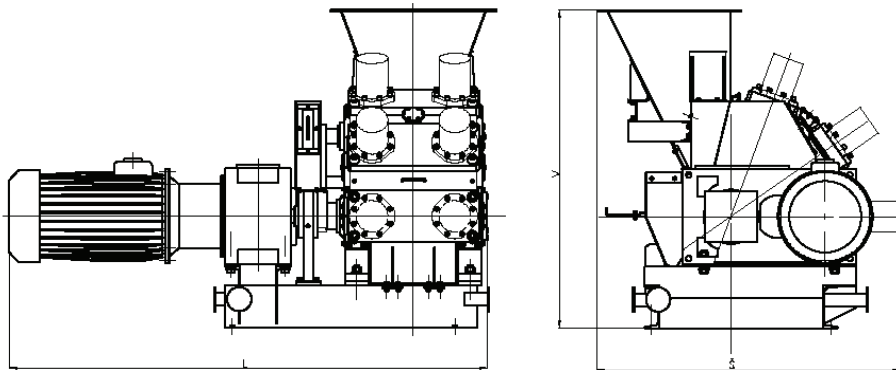


Detail of the chain drive of the first grinding runner of the PREMILL PM 800



PREMILL PM 800 in the test facility of PSP Engineering

# Horizontal Roller Mill PREMILL



## Main dimensions of the PREMILL

type	length (L) mm	width (W) mm	height (H) mm
PM 370	1 808	1 092	1 060
PM 500	2 300	1 411	1 395
PM 650	2 830	1 800	1 815
PM 800	3 300	2 155	2 230

## Main technical parameters of the PREMILL

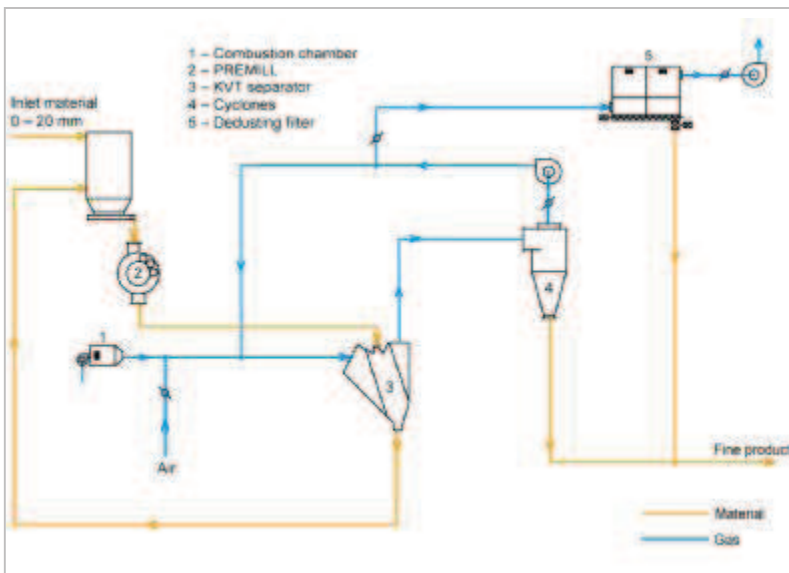
type	main roller dia. mm	grinding runners dia mm	grinding width mm	power input kW	mill capacity t/h	weight total kg
PM 370	370	125	60	10	2,0	1 000
PM 500	500	175	110	26	5,5	2 150
PM 650	650	240	220	70	15,0	5 200
PM 800	800	320	350	120	30,0	9 650



PREMILL PM 800 at the workshop PSP Engineering for limestone grinding at Vitošov, Czech Republic



Up and down: PREMIL PM 370 for the scrap glass grinding plant at Nemšová, Slovakia



Example of a grinding circuit with PREMILL

