



Mills

- PS Horizontal Mills
- PSB Stationary Basket Mills
- PRB Rotating Basket Mills

Horizontal Mills

PS

The PS Horizontal Bead Mills are used for the grinding and dispersion of initially pre-dispersed mixtures of pigments and binders or other substances requiring fine grinding in a liquid environment.

OPERATION:

The Mill consists of a milling chamber which is filled with milling media and equipped with specially shaped rotating discs on the shaft.

The predispersed millbase is brought inside the chamber via the feeding pump unit and is forced to pass into the gaps between the milling media (zirconium or glass beads).

While the discs are rotating, the shear stress between beads grinds the substance to the required fineness.

This mill provides the highest capacity of milling efficiency per pass and is capable of achieving final fineness down to $0.1 \mu\text{m}$ in some cases. The elongated shell provides a longer residence time, less dead zones, ensuring dispersion results within narrow particle size distribution.

APPLICATION:

The PS Horizontal Bead Mills are used in the production process of:

- coatings,
- enamels,
- pigments,
- microbiological products,
- cosmetics,
- photographic emulsions,
- pharmaceuticals that require dispersion,
- chocolate,
- dispersion paper coatings,
- data storage magnetic coatings,
- lubricant additives,
- waxes.



*A highly reliable machine!
Extreme flexibility in process
parameters,
Efficiency up to 5000kg/h !!!*

TECHNICAL SPECIFICATIONS:

model	main motor power (kW)	main motor power (HP)	mill chamber net capacity (ltrs)	zirconium beads weight 1,6÷2,5mm (kg)	membrane pump size (inch)	L x W x H (mm)	total weight (kg)
PS-1/1.5/2	3	4,0	1; 1.5; 2	2,1;3,2;4,2	¼"	1100x570x500	150
PS-20	22	29,5	20	42	½"	1400x890x1450	720
PS-50	45	60,3	44	110	½"	2050x1170x1650	1260
PS-100	55	73,8	113	210	1"	2270x1250x1780	1900
PS-200	90	120,7	195	420	1"	2400x1940x1800	2880
PS-500	200	268,2	500	1050	2"	5600x1110x1600	4800

OPTIONS:

- gear pump with motoreducer,
- filter for paste recirculation,
- two rotational speeds of milling discs,
- contact thermometer,
- contact manometer,
- zirconium beads supply,
- ex electric switchgear built into the mill,
- different discs (standard, plastic, coated),
- selection of separators,
- CE and ROSSTEST certificates,
- machine can be adapted for the EX explosive environment operation (European ATEX certificate and Russian GOZGORTECHNADZOR certificate).

Stationary Basket Mills

PSB

PSB Stationary Mills are designed for the grinding of pigments pastes or other substances in mobile vessels. Stationary, colled basket enables use of mobile vessel, even without cooling jacket.

OPERATION:

The mill consists of a rotating disc fixed on a vertical shaft inside a stationary basket. The basket assembly, immersed into the mobile vessel, is filled with appropriate milling beads.

By the disc rotation, the beads are accelerated and produce tremendous friction and shear effect, dispersing and milling the particles in suspension in the millbase passing through the basket.

The bottom of the basket, made of slotted bars, separates the beads from the product, which is pumped out by an impeller situated below the separator, and actuated by the same vertical shaft.

This impeller by its axial / radial pumping effect, creates the circulation of the product in the vessel and its transfer into the milling basket.

The temperature of the millbase is controlled by removing the excess of heat with the efficient cooling jacket of the basket; cooling of the vessel is not required.

APPLICATION:

PSB Mills are used in the dispersion and milling process of:

- coatings,
- enamels,
- microbiological products,
- cosmetics,
- dispersion of pharmaceuticals,
- chocolate,
- dispersion of paper coatings,
- lubricant additives.

Absence of pumps, pipes, transfer vessels, makes the PSB mill the ideal tool for high quality results with small and medium size batches, when formulation or colour changes are frequent or when operation is periodical.



Maintenance and cleaning operations are reduced to a strict minimum.

TECHNICAL SPECIFICATIONS:

model	main motor power (kW)	main motor power (HP)	vessel working capacity (ltrs)	basket volume (ltrs)	zirconium beads weight 1,6÷2.5 mm (kg)	basket rotation (rpm)	L x W x H (Hmax) (mm)	total weight (kg)
PSB-2	1,5	2,0	1-15	2	1,5	0÷1400	925x600x935 (1335)	200
PSB-20	15	20,1	600	13,2	34	0÷900	2100x1150x2100 (3100)	1850
PSB-50	37	49,6	1000	33	68	0÷750	2600x1455x2200 (3300)	2000

OPTIONS:

- options for control panel
- contact thermometer
- zirconium beads supply
- CE and ROSSTEST certificates
- machine can be adapted for the EX explosive environment operation (European ATEX and Russian GOZGORTECHNADZOR certificate).

Rotating Basket Mills

PRB

The PRB Basket Mills with rotating basket are used for the grinding of pigment pastes and other dispersing media in mobile vessels. Mills are made according to Mirodur - Turbomill, Italy license (World patent).

OPERATION:

The mill consists of a milling basket with an external part containing a slotted sieve, and an internal part with a special built-in grinding disc.

The basket interior is filled with the appropriate milling media (zirconium beads).

The external part of the basket rotates when in operation. The internal part is locked which results in the additional movement of the rotating beads. Such a solution creates a centrifugal force which, connected with the forced beads movement, generates huge shearing forces that result in a highly efficient grinding process.

The utilization of centrifugal force significantly decreases basket cleaning duration (5-10min), which consists of immersing and rotating the basket in solvent. This operation enables the complete replacement of the ground product.

It possesses the exclusive license for the latest generation RV3 basket!

APPLICATION:

The PRB Basket Mills are used in the production process of:

- coatings,
- enamels,
- microbiological products,
- cosmetics,
- photographic emulsions,
- pharmaceuticals that require dispersion,
- chocolate,
- paper coating dispersion,
- data storage magnetic coatings,
- lubricant additives,
- always when frequent product and color change is needed.



*The perfect mill for frequent color changes in the production process.
Easy to clean.
Grinding finer than 1 µm.*



TECHNICAL SPECIFICATIONS:

model	main motor power (kW)	main motor power (HP)	vessel working capacity (ltrs)	basket volume (ltrs)	weight of zirconium beads charge 1mm (kg)	basket rotation (rpm)	L x W x H (Hmax) (mm)	total weight (kg)
PRB-2	1.5	2,0	1÷15	0.34	0.65	0÷1400	925x600x935x(1335)	170
PRB-15	11	14,8	50÷250	2.7	6	0÷650	2040x1200x2280x(3380)	1650
PRB-20	15	20,1	50÷500	2.7	6	0÷650	2040x1200x2280x(3380)	1650
PRB-50	37	49,6	200÷800	10	22	0÷520	2600x1450x2300x(3400)	2500

OPTIONS:

- vessels with cooling jacket,
- options for control panel,
- contact thermometer,
- zirconium beads supply,
- CE and ROSSTEST certificates,
- machine can be adapted for the EX explosive environment operation (European ATEX certificate and Russian GOZGORTECHNADZOR certificate).