

RATHI Universal Mill

The versatile Rathi Universal Mill provides high-energy one-pass fine grinding while allowing maximum grinding flexibility for fine and ultra-fine particle size reduction. Interchangeable grinding mechanisms that provide for a flexible particle size distribution are a key design feature of the Rathi Universal Mill. Multiple feed and collection options further enhance its flexibility across food, pharmaceutical, and various chemical applications.

The Grinding Chamber houses a Rotor & Stator assembly responsible for size reduction in this vertical type mill. The feed material enters the mill from the centre, and is guided towards the periphery in highly turbulent air.

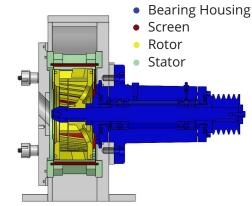
Grinding occurs by the interaction and impact of the feed material between the Rotor & Stator. Multiple configurations of the Rotor-Stator assembly enable the versatile usage of the mill. In addition to the Rotor – Stator combinations, the throughput and fineness of the desired product can be tweaked by varying the input feed rate as well as the rotor speeds.

The Rathi Universal Mills are designed for easy operations, minimal maintenance and maximum versatility. Process customization include closed-loop mill designs, up to 10 bar containment systems, temperature controlled and full cryogenic grinding.

Key Features:

- Interchangeable Grinding Elements
- Grinding ability from 20 to 400 Mesh
- Typical particle size ranges from D50 100μ to < 20μ
- Soft to medium-hard materials
- Drive power from 3 hp to 75 hp
- Explosion containment rated up to 10 Bar
- Cryogenic grinding





| | Rotor | | |
|------------------------|----------|----------|----------|
| | | МОС | |
| | CI | SS304 | SS316 |
| Bar Turbo | ~ | ✓ | ~ |
| Inclined Bar Turbo | ✓ | ✓ | ~ |
| Stud Bar Turbo | ✓ | ✓ | ✓ |
| Cross Bar Turbo | ~ | ✓ | ~ |
| Pin Bar | ~ | ✓ | ✓ |
| | Stator | | |
| Full Screen Classifier | ✓ | ✓ | ~ |
| Half Screen Classifier | ~ | ✓ | ~ |
| Bearing Housing | ✓ | ✓ | ✓ |
| Screen | X | ✓ | ✓ |

As equipment downtime can seriously affect the productivity of our clients, we ensure availability of all critical spares for all our products. Through effective stock keeping, Rathi Engineering is able to ready and dispatch most spares within 24 hours.

Rotor

A turbine ring or circular disc that is fitted in the grinding chamber, the rotor is the main dynamic component responsible for impact grinding. Precision tooling and balancing ensures that Rotors perform optimally. Depending on the application and product requirements, a variety of interchangeable rotor options can be availed.

Bar Turbo (BT)

A turbine ring or circular disc that is fitted in the grinding chamber, the rotor is the main dynamic component responsible for impact grinding. Precision tooling and balancing ensures that Rotors perform optimally. Depending on the application and product requirements, a variety of interchangeable rotor options can be availed.





Inclined Bar Turbo (BT-SL)

A turbine ring or circular disc that is fitted in the grinding chamber, the rotor is the main dynamic component responsible for impact grinding. Precision tooling and balancing ensures that Rotors perform optimally. Depending on the application and product requirements, a variety of interchangeable rotor options can be availed.

Stud Bar Teeth (SBT)

Used for grinding to a medium degree of fineness or processing material scontaining hard or large pieces, the Stud Bar Teeth Mill allows the material to be ground in stages between the studs on the rotating grinding disc and teeth on the mill door before passing through the sieve.







Bearing Housing

The heart of Universal mill, the Bearing Housing on which the rotor is mounted is the primary driver of the grinding process.

Pin Bar (PNB)

Also used for fine grinding, the pin-type rotor combination is best suited for sticky and aggregating materials that tend to clog the sieve ring.







Stator

The Stator or sieving assembly fit on the outer periphery of the Rotor in the Grinding Chamber can be availed in a variety of options.

Full Screen Classifier Stator – A Full Screen Liner to provide higher capacities & a coarser grind. Ideal for stickier materials

Half Screen Classifier Stator - A Half Screen- Half Liner used to achieve a finer grind

Screen

The screen at the bottom of the Grinding Chamber holds back the material from discharge until the required fineness is achieved by the Rotor-Stator setup.

