

## Tangential Mixer



Bainite Internal Mixers are widely recommended for mastication, master batch and final batch production. Specially designed contours rotors, designed & developed in house, ensures proper mixing and dispersion of carbon. Improve compound quality and rapid mixing is possible with new generation rotors. On the metallurgy side today we offer special coating for tougher applications like silica.

### Salient Features:-

- Capacities ranges from 1.6L lab mixer to 440L production mixer
- Rotor Types – 2W, 4W, 6W, 4W - Turbo Rotor™
- Pneumatic or Hydraulic Ram operation with Ram Position Indicator
- Swing type drop door and toggle latch design for locking.
- Large hopper throat for easy feeding.
- Direct drive or uni-drive gear box.
- PLC/SCADA and Recipe Management Software.
- Optimal utilization of space – Flexi Layout

### Superior Metallurgy:

All the parts, comes in contact with compound, are surface treated for wear protection. For accuracy all the parts are machined on CNC and ultrasonically/hydraulically tested. Stress relieving is done after welding. We have developed range of options for hard surface treatment for application like Silica.

**Cooling:**

Effective water cooling passage is drilled in Rotors, Chambers, Floating Weights, Rotor End Plates and Drop Doors. This ensures uniform batch temperature without localised heat build up situation. Provision for thermocouple is provided in door top and chamber for measuring compound temperature. We also offer Temperature Control Unit (TCU) for heating/cooling as per your requirement

**Feed Hopper:**

Large steep charging area for rapid feeding. Radius bottom floating weight to present maximum cooling and mixing surfaces to the compounds. Dust extraction hood fitted as standard. Charging door pneumatically/hydraulically operated.

**Dust Seal:**

Self sealing designing ensures any leakage of material from rotor ends. Working faces are stellited and ground to smooth finish. Hydraulic pressure is used for sealing in larger mixer 270 and above.

**Discharge Door:**

Bainite offers hinged type “swing away” design operated by double rack and pinion arrangement. 135 Deg opening ensures quick drop of batch. Door top is positively locked by toggle type hardened steel latch on a hardened steel contact plate. Latch is actuated by a hydraulic cylinder.

**Rotor:**

Computer designed rotor geometry is accurately machined to get better shear and movement of material from one end axially. This ensures uniform mixing batch to batch and higher productivity. We offer even speed TurboRotors™ for higher range of 270 Ltrs, 330 Ltrs, 440 Ltrs, Mixers. Please contact for further details.

**Drilled Side:**

Chambers are dovelled close to lip area and have higher included angle of lip to avoid inward banding or shearing of lips due to hydraulic closing and locking pressure of door.

### **Hydraulic Ram:**

- Bainite offers hydraulically operated hopper assembly as an option to pneumatically operated. The advantage Hydraulic Hopper Design are:
- Eliminate compressed air requirement, lower operating costs and energy saving
- Provide constant working pressure to the ram. Ram operation is not affected by variation in the plant compressed air. This results in increase product uniformity and repeatability
- Motion of ram is smooth and its speed can be controlled and regulated. This allows efficient mixing of different compounds. Pressure control and ram down speed control is possible.

### **Safety Arrangement:**

- Bearing & Dust Seal Protection – Temperature Sensor & Hooter provided
- Feeding Door – Manual Locking
- Drop Door – During Maintenance can be locked at 180 Deg opening
- Floating Weight – Locking pin provided during maintenance.