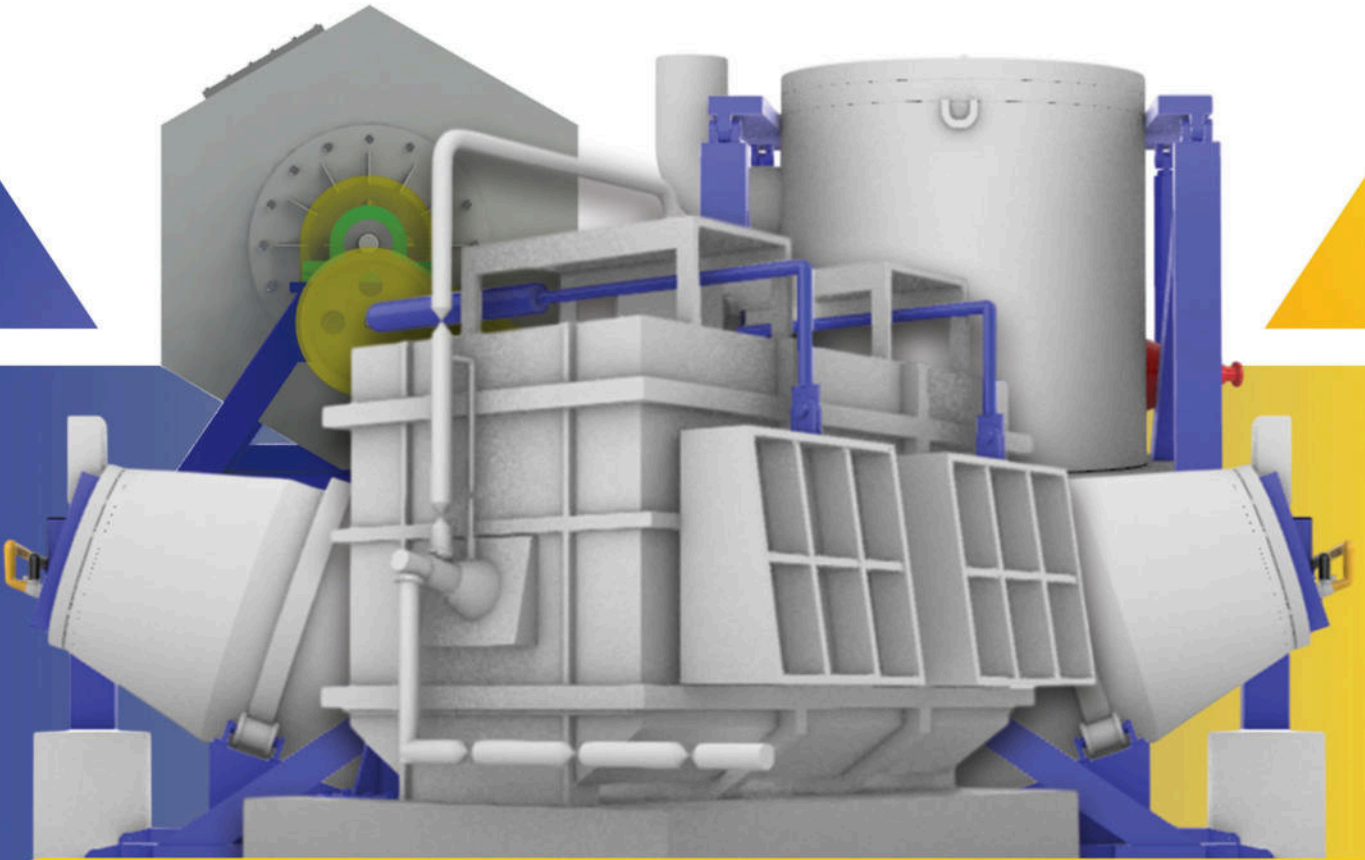




# **NAVONMESH ENGINEERING WORKS PVT LTD**



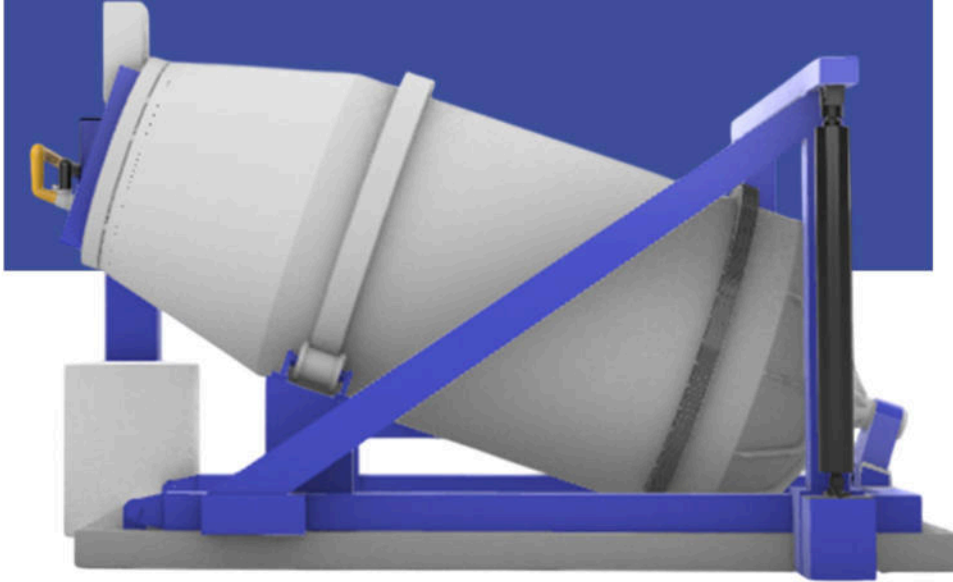
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Plot no. 861, Mauza, Palashbani, Pin: 831012, Thana no 1141,  
Town: Jamshedpur, East Singhbhum, Jharkhand

- 
- **Tilting Rotary Furnace**
  - **Reverberatory Furnace**
  - **Crucible Furnace**
  - **Ingot Casting Conveyor**
  - **Pollution Control System**
  - **Bundle Press Machine**
  - **Rotary Ball Mill**
  - **Hexagonal Ball Mill**
- 



## Tilting Rotary Furnace

Our Tilting Rotary Furnaces represent the pinnacle of rotary melting technology, designed for efficient processing of various metal scrap and secondary raw materials. The rotational motion ensures thorough mixing and optimal heat transfer, while the tilting mechanism allows for safe and controlled pouring.

### Technical Specifications

- **Capacity Range:** 250 kg to 15,000 kg per batch
- **Maximum Temperature:** 800°C
- **Burner System:** High-velocity oxygen-fuel burners
- **Rotation Speed:** Variable, 0-5 RPM
- **Tilting Angle:** 0° to 120°
- **Control System:** Manual or PLC-based with touchscreen interface
- **Energy Options:** Natural gas, LPG, or oil.

### Applications

- Aluminum and aluminum alloy recycling
- Copper and copper alloy melting
- Zinc and lead recovery
- Precious metal reclamation
- Processing of dross and metal-bearing residues



# Reverberatory Furnace

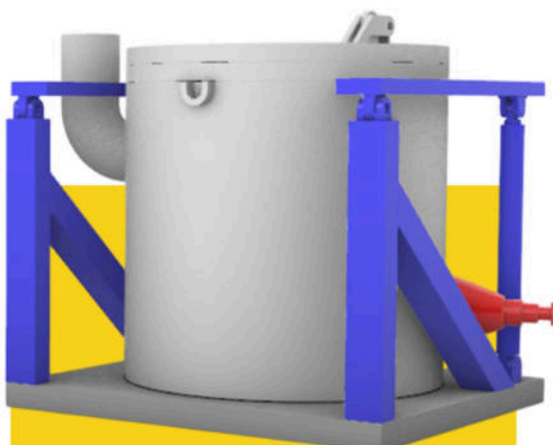
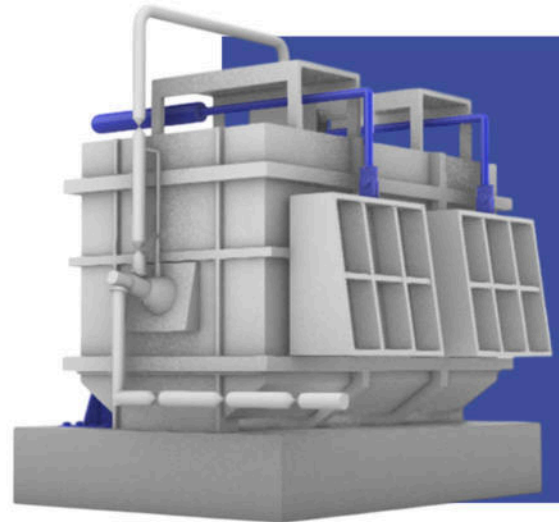
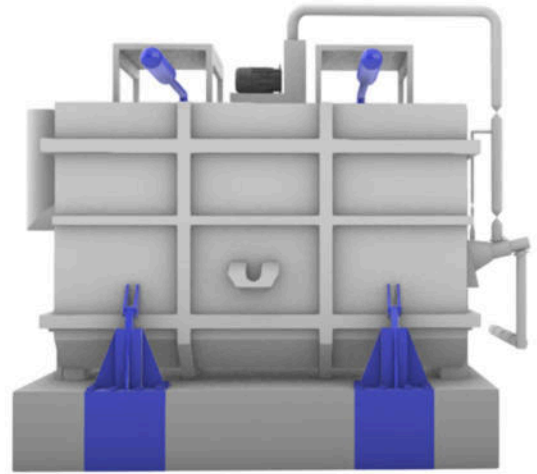
Our Reverberatory Furnaces are designed for high-volume metal melting with exceptional thermal efficiency. These furnaces utilize radiant heat from the roof and walls to melt metal charges, creating a large hearth area for maximum productivity while minimizing melt loss.

## Technical Specifications

- **Capacity Range:** 1 to 25 tons
- **Maximum Temperature:** 1,100°C
- **Melt Rate:** Up to 5 tons per hour (model dependent)
- **Refractory Lining:** Multiple layers with premium alumina-silica bricks
- **Control System:** Manual or PLC with remote monitoring capabilities

## Applications

- Aluminum smelting and recycling
- Copper alloy production
- Zinc processing
- Secondary aluminum processing
- Continuous casting operations



# Crucible Furnace

Our Crucible Furnaces offer versatile melting solutions with exceptional temperature control and metal purity. These furnaces hold metal in a removable crucible, preventing direct contact with heating elements for superior metal quality and precise compositional control.

## Technical Specifications

- **Capacity Range:** 30 kg to 1,500 kg
- **Maximum Temperature:** 1,100°C
- **Crucible Types:** Silicon carbide, clay-graphite, or ceramic
- **Heating Options:** Gas or oil fired.
- **Temperature Control:**  $\pm 5^\circ\text{C}$  precision
- **Tilting Mechanism:** Manual or hydraulic

## Applications

- Precious metal refining
- Die-casting feed systems
- Investment casting
- Laboratory and sample melting
- Small-batch specialty alloy production
- Education and research facilities

# Ingot Casting Conveyor

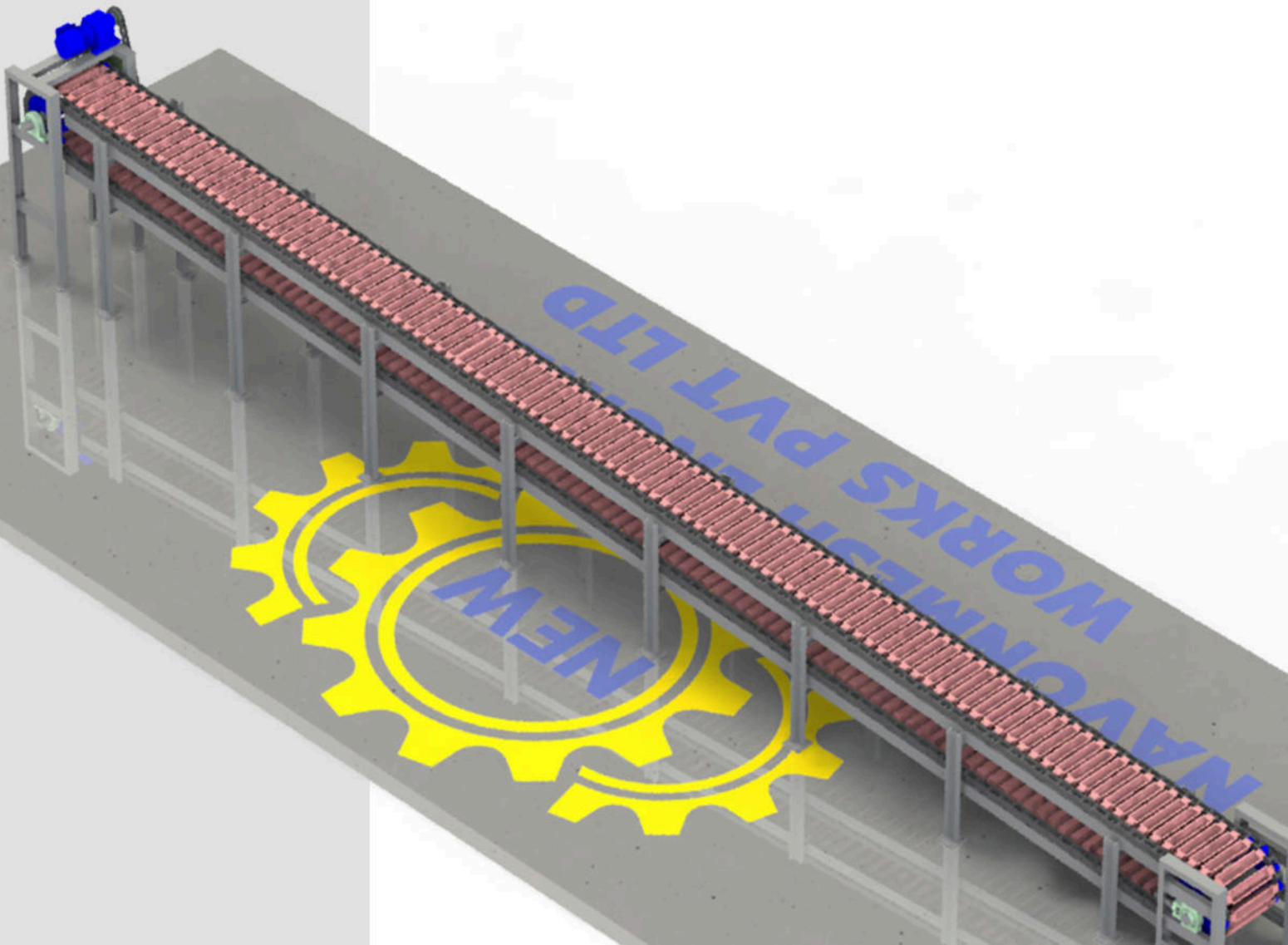
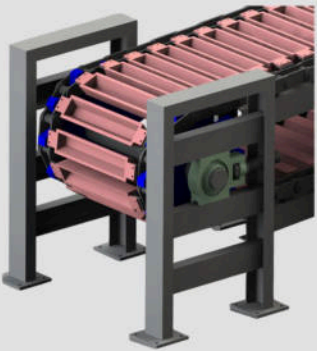
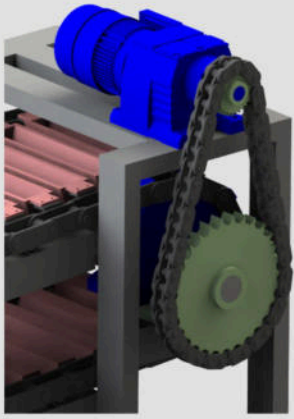
Our Ingot Casting Conveyor systems transform molten metal into standardized ingots with precision and efficiency. These automated systems handle the complete casting process from pouring to cooling and stacking, ensuring uniform ingot quality with minimal operator intervention.

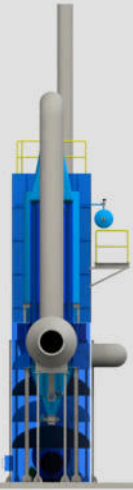
## Technical Specifications

- **Production Capacity:** 2 to 20 tons per hour
- **Ingot Weight Options:** 5 kg, 10 kg, 20 kg, 25 kg (customizable)
- **Mold Material:** Cast iron
- **Cooling System:** Multi-zone water cooling
- **Conveyor Speed:** Variable, up to 10 meters per minute
- **Control System:** Manual or PLC

## Applications

- Aluminum ingot production
- Copper and brass ingot casting
- Zinc and lead ingot manufacturing
- Master alloy production
- Secondary metal processing



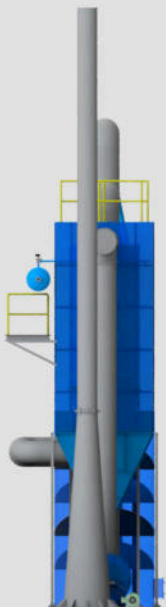
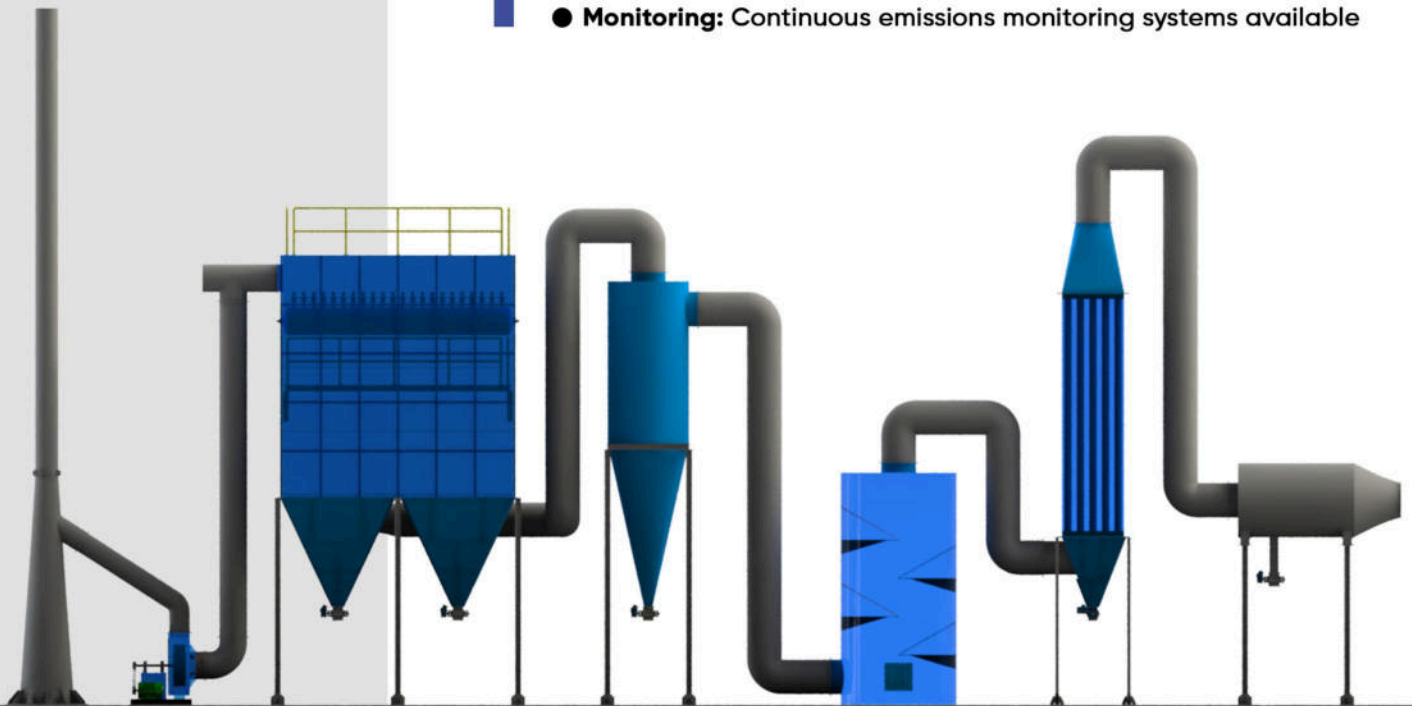


## Pollution Control System

Our comprehensive Pollution Control Systems ensure your metal processing operations meet or exceed environmental regulations while recovering valuable materials. From basic dust collection to advanced multi-stage filtration and gas treatment, our systems deliver optimal environmental performance and operational efficiency.

### Technical Specifications

- **Capacity Range:** 1,000 to 100,000 m<sup>3</sup>/hour
- **Filtration Efficiency:** Up to 99.9% for particles >0.5 μm
- **Bag Filter Options:** PTFE membrane, fiberglass, polyester
- **VOC Treatment:** Thermal or catalytic oxidation options
- **Heat Recovery:** Optional energy recovery systems
- **Monitoring:** Continuous emissions monitoring systems available



### Applications

- Furnace exhaust gas treatment
- Metal casting fume collection
- Material handling dust control

## Bundle Press Machine

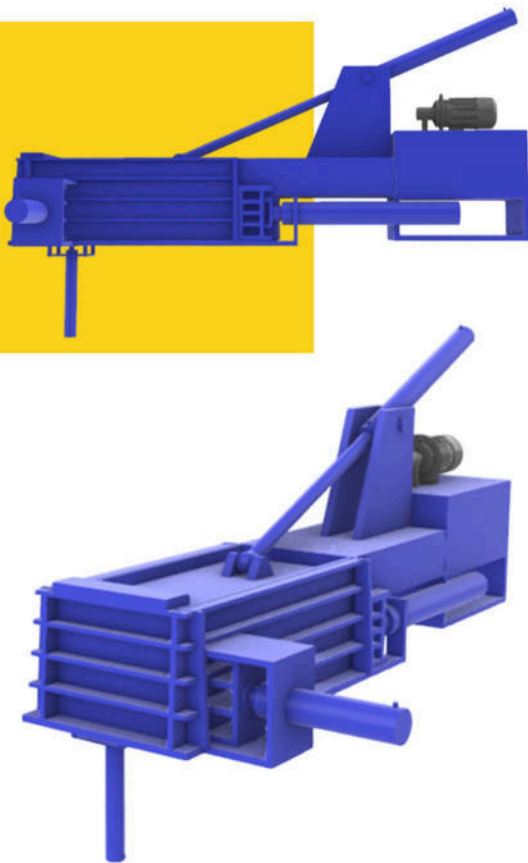
Our Bundle Press Machines transform loose, light-gauge metal scrap into dense, uniform bundles ideal for efficient furnace charging and transportation. These robust hydraulic systems compress various scrap materials into high-density packages that optimize melting efficiency and handling.

### Technical Specifications

- **Pressing Force:** 100 to 600 tons
- **Bundle Density:** Up to 2,800 kg/m<sup>3</sup>
- **Bundle Dimensions:** Customizable, standard 400 × 400 × variable length
- **Cycle Time:** 25–60 seconds (material dependent)
- **Hydraulic System:** High-pressure with energy recovery
- **Power Requirement:** 30 kW to 110 kW (model dependent)
- **Automation Level:** Semi or fully automated options

### Applications

- Aluminum sheet and extrusion scrap
- Copper and brass thin-gauge material
- Radiator and heat exchanger scrap
- Beverage cans and UBC processing
- Light steel scrap and turnings
- Cable and wire processing



## Hexagonal Ball Mill

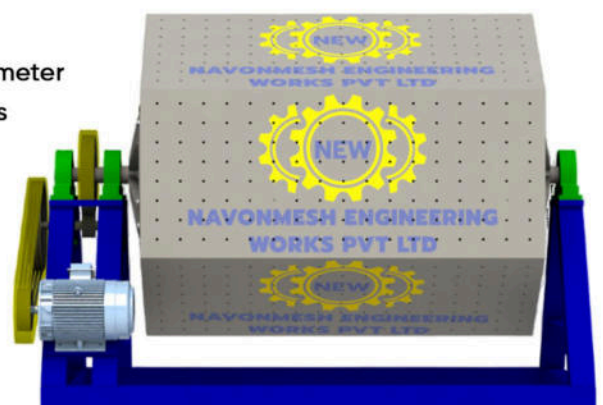
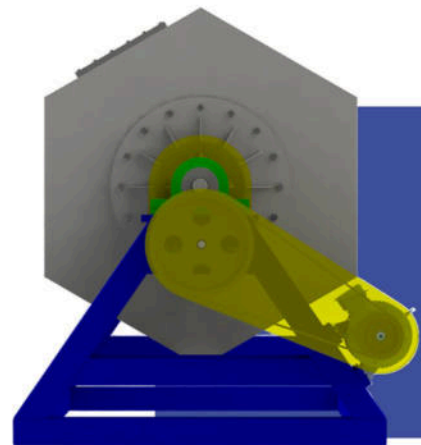
Our Hexagonal Ball Mills represent the next evolution in grinding technology, offering superior efficiency and performance compared to conventional cylindrical mills. The unique hexagonal chamber design creates enhanced material tumbling patterns, resulting in more efficient grinding action, improved energy transfer, and accelerated size reduction.

### Technical Specifications

- **Capacity Range:** 1 to 20 tons per batch
- **Mill Dimensions:** 1.2m to 4.5m across flats
- **Mill Length:** 2.5m to 8.0m
- **Drive Power:** 35 kW to 150 kW
- **Speed Range:** 65–78% of critical speed
- **Liner Options:** Hi-Chrome, manganese steel
- **Grinding Media:** Steel or ceramic balls, 20–100mm diameter
- **Discharge System:** Overflow or grate discharge options

### Applications

- Hard rock mineral processing
- Cement and clinker grinding
- Limestone and dolomite processing
- Fertilizer production
- Dross grinding
- Fine powder preparation for industrial applications





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