TIETUO MACHINERY

Technical Specifications

Production Capacity	160 t/h (rated)
RAP Content	Up to 50%
Total Installed Power	320 kW
Cold Feed Bins	5 x 10m³
Drying Drum	ϕ 2.25m x 9.4m
Burner	Capacity: 14 MW; Fuels: light oil, heavy oil, and residual oil
Mixer	Twin-shaft continuous mixer
Finished Mix Discharge System	Scraper conveyor
Dust Collection System	Pulse-jet baghouse dust collector

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MCP160

Mobile Continuous Asphalt Mixing Plant

Key Features

> MCP160 Mobile Continuous Asphalt Mixing Plant

Easy mobility, high RAP utilization, multi-fuel flexibility,
precise mix proportioning, and efficient, stable continuous production.

- **Integrated Mobile Design for Flexible Deployment:** The modular, integrated trailer-mounted design enables rapid installation and easy relocation, making the plant well suited to mobile construction projects and multi-site operations.
- **Dual RAP Recycling for High RAP Content and Reduced Costs:** Drum-based hot recycling and direct RAP feeding into the mixer allow for RAP content of up to 50%, delivering energy savings, lower production costs, and improved environmental performance.
- **Powerful Mixing for Uniform, Consistent Quality:** The curved-bottom mixer, inclined at 10°, combines gravity-assisted material movement with forced mixing to ensure sufficient mixing time and uniform blending, preventing material buildup and sticking while maintaining consistent mix quality.
- **Multi-Fuel Flexibility for High Efficiency and Low Energy Consumption:** Supporting oil-fired, gas-fired, and dual-fuel operation, the burner allows flexible switching between fuel options, delivering high thermal efficiency and low energy consumption across a wide range of operating conditions.
- **Dual Weighing for Precision Mix Control:** Continuous weighing of aggregates and asphalt binder enables real-time calibration of the asphalt-to-aggregate ratio, minimizing proportioning errors and ensuring consistent mix quality.
- **Pulse-Jet Dust Collection for Environmental Compliance:** The high-efficiency pulse-jet baghouse delivers effective dust filtration, keeping dust emissions within applicable regulatory limits and meeting environmental requirements for construction site operations.
- **Buffer Storage for Continuous, Efficient Loading:** The finished mix scraper conveyor and buffer storage bin enable seamless truck changeovers without stopping production, ensuring continuous truck loading and uninterrupted construction operations.



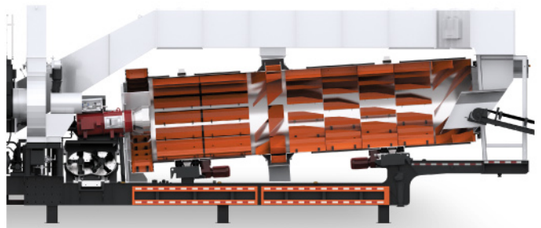




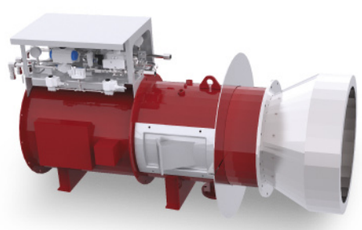
Main Components

> Drying Drum

- The ϕ2.25 m x 9.4 m drying drum features a large-diameter, elongated design that provides ample internal volume and efficient aggregate heating. Its burner produces a long, narrow flame that also burns off fumes released from RAP during heating.
- RAP enters through the recycling ring and exchanges heat with virgin aggregates in the heating zone. Specially designed lifting flights shield the RAP from direct flame exposure, minimizing binder aging and allowing RAP content of up to 50%.
- The drying drum employs a friction drive system powered by a shaft-mounted gearmotor, while aluminum silicate fiber insulation and stainless steel outer cladding help minimize heat loss.



> Burner



- Designed specifically for mobile drying drums equipped with RAP recycling rings, the burner allows precise adjustment of flame length and diameter to deliver a long, narrow flame. Its compact, lightweight design and excellent vibration resistance make it well suited to outdoor operations and frequent site relocation.
- Advanced low-pressure atomization technology produces a fine spray of diesel, heavy fuel oil, and other fuels for thorough mixing with combustion air, promoting more complete combustion while reducing black smoke emissions and carbon buildup. Stable, low-pressure operation minimizes noise and equipment wear, supporting high combustion efficiency and lower long-term operating costs.
- An intelligent digital control system precisely regulates air-to-fuel ratios for oil and gas combustion, dynamically adjusting airflow and fuel supply according to operating conditions and fine-tuning combustion parameters to ensure stable, reliable operation.

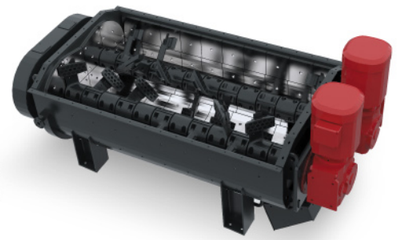
> Mixing and Metering System

Mixing Mechanism:

- A shaft-mounted gearmotor drives the mixer, while synchronizing gears ensure synchronized rotation of the twin horizontal shafts, delivering smooth, energy-efficient operation.
- The mixer is inclined at 10° and features a curved bottom that ensures uniform mixing while eliminating dead zones and preventing material buildup. A bottom access hatch simplifies routine cleaning and maintenance, minimizing downtime.
- High-strength, wear-resistant alloy mixing blades and liners offer excellent durability and impact resistance, extending component service life while reducing operating and maintenance costs.

Metering System:

- Continuous weighing of aggregates and asphalt binder replaces conventional volumetric metering to minimize proportioning errors. Real-time monitoring of material flow rates and weights enables fast response and high measurement accuracy.
- Automatic fine-tuning of asphalt binder dosage in response to changing feed rates and operating conditions enables dynamic adjustment of the asphalt-to-aggregate ratio through precise closed-loop control, ensuring consistent mix quality.



> Pulse-Jet Dust Collection System



- Automatic high-pressure pulse-jet cleaning uses periodic bursts of compressed air to remove dust buildup from filter bag surfaces, preventing clogging and blinding while maintaining high dust collection efficiency and effective airflow and heat transfer.
- Widely spaced cylindrical filter bags prevent contact and sticking during operation, while dedicated cleaning space around each bag enables thorough dust removal and reduces the risk of filter bag blinding.
- Collected dust can be returned to the mixer via a vertical screw conveyor for reuse or discharged separately through a centralized system.
  Particulate emission concentrations of ≤ 20 mg/Nm³ and a Ringelmann smoke opacity rating of Grade 1 or lower meet stringent environmental standards.