

PANGIN Series Forced Twin-Shaft Concrete Mixer

Product Description & Technical Specification

Brand: PANGIN

Model: PS1500-100

Capacity: 1 m³ (1000 Liters)

1. Overview

Dear Valued Customer,

Thank you for choosing the PANGIN Forced Twin-Shaft Concrete Mixer. This product is a masterpiece meticulously engineered by our team to meet the demands of the high-end market. It combines exceptional mixing performance, unparalleled durability, and intelligent operation, designed to provide you with the Lowest Total Cost of Ownership and the highest Return on Investment. Compared to ordinary products on the market, every detail of the PANGIN has been optimized to ensure it stands out in a competitive market and becomes the preferred equipment choice for consumers.

2. Core Technical Advantages Analysis & Comparison

Feature: Efficient Twin-Shaft Design

PANGIN Advantages: Two mixing shafts rotate in opposite directions, creating a complex compound motion (radial, axial, circumferential) that achieves multi-dimensional efficient mixing through "shearing, squeezing, and tumbling" of materials. No dead zones, extremely high homogeneity. Achieves optimal mixing in 45-60 seconds, improving efficiency by over 25% compared to single-shaft or planetary mixers.

Common Issues of Competitors: Single-shaft mixers have blind spots, leading to uneven mixing; low efficiency, often requiring 90+ seconds for the same effect, impacting batch production rhythm.

Feature: High-Chromium Alloy Wear Parts

PANGIN Advantages: Mixing blades are made of premium high-chromium cast iron (Cr: 23%-25%, Ni: 0.3%-0.5%, Mo: 0.3%-0.5%) with a hardness up to HRC 55-58. The liners are made of premium high-chromium cast iron (Cr: 18%-20%) with a hardness up to HRC 55-58. Their wear resistance is 3-4 times that of ordinary manganese steel. Arms are cast using the lost foam process, resulting in dense structure, no sand holes or porosity, high internal strength, excellent impact and fatigue resistance, eliminating fracture risk and ensuring a super-long service life.

Common Issues of Competitors: To reduce costs, most manufacturers use ordinary Mn13 material, which has low hardness (~HRC20), poor wear resistance, requires frequent replacement, causes long downtime, and results in high comprehensive maintenance costs. Ordinary sand-cast arms have defects and are prone to breakage.

Feature: Heavy-Duty Square Shaft Structure

PANGIN Advantages: The mixing shafts adopt high-strength 40CR square shaft design, And annealing treatment is carried out twice to make its density greater, transmitting torque through a massive contact surface. The load capacity far exceeds that of round shafts. It never loosens, preventing critical failures like broken shafts or sheared keys, ensuring reliability for continuous high-intensity operation.

Common Issues of Competitors: Only one annealing is performed, which is easy to deform

Feature: Multi-Layer Bearing Seal System

PANGIN Advantages: Utilizes a combined sealing solution of "Labyrinth Seal + Multiple Teflon Oil Seals + Air Seal". Effectively isolates cement slurry and dust, ensuring the bearing chamber remains absolutely clean. Bearings are premium brand heavy-duty spherical roller bearings, offering long life and smooth operation. Guarantees bearing life exceeding 10,000 hours even in harsh conditions.

Common Issues of Competitors: Often only use simple single-layer oil seals or felt seals, which are easily penetrated by dust, leading to premature bearing wear and seizure. Bearing replacement is labor-intensive and expensive.

Feature: Lybrication System

PANGIN Advantages: Adopting new four-port oil pump, the centralized automatic lubrication system continuously supplies the mixer's labyrinth seals. With sensors on each seal, you are immediately informed of any failure.

Common Issues of Competitors: Mostly rely on manual grease gun lubrication. Numerous lubrication points are inconveniently located, easy to miss, leading to poor lubrication and wear.

Feature: Superior Mixing Fineness

PANGIN Advantages: Thanks to the twin-shaft principle and scientifically arranged blade angles, this mixer excels with various recipes (including stiff, semi-stiff, plastic, and lightweight aggregate concrete). Easily handles aggregates with a maximum size of 80-120mm. The homogeneity coefficient of variation (CV) of the mixed concrete is less than 0.3%, far exceeding national standards.

Common Issues of Competitors: Poor adaptability to recipes, prone to segregation. ineffective mixing of high-grade or special concrete, affecting final project quality.

Feature: Sealed Mixer Cover

PANGIN Advantages: cover design effectively prevents dust spillage during mixing, ensuring environmental cleanliness. The cover features a large inspection door for easy daily check, maintenance, and cleaning, reflecting user-friendly design. The dust-proof mixer cover features a large maintenance hatch with safety switch and is supported by industrial gas struts, allowing for safe and easy maintenance. We offer a variety of connection types for material loading and other controls.

Common Issues of Competitors: Open designs cause severe dust pollution during production, failing to meet environmental standards and creating poor working conditions.

Feature: Precise Water Distribution System

PANGIN Advantages: Employs a high-pressure water pump + precision flow meter + nozzle system. Water is sprayed in a high-pressure mist, ensuring wide coverage and faster, more uniform integration with materials. Reduces mixing time, improves water measurement accuracy (error $\pm 1\%$), and ensures concrete strength stability.

Common Issues of Competitors: Often use simple straight pipes for water feeding, which can create puddles, lead to uneven mixing, low measurement accuracy, and affect water-cement ratio and concrete quality.

Feature: Hydraulic Discharge System

PANGIN Advantages: A high-flow hydraulic system powers the discharge gate, ensuring rapid, smooth, and powerful opening/closing. Dual hydraulic cylinders ensure even force on the gate, minimizing seal wear and preventing slurry leakage. The large gate opening enables fast discharge (< 5 seconds) and low residue (< 0.5%).

Common Issues of Competitors: Pneumatic or mechanical operation often lacks power, is prone to clogging, has poor sealing leading to leakage, slow discharge speed, and high residue.

Feature: Intelligent Hydraulic Control

PANGIN Advantages: The control system uses a PLC (Programmable Logic Controller), enabling manual and automatic modes. Features intelligent operation logic and strong self-diagnostic functions, making operation simple and intuitive.

Common Issues of Competitors: Use of miscellaneous electrical and hydraulic components leads to poor reliability and high failure rates. Outdated control systems are complex to operate and make troubleshooting difficult.

3. Technical Specification Table

Parameter Name: Discharge Capacity

Value/Description: 1 m³

Parameter Name: Feed Capacity

Value/Description: 1.6 m³

Parameter Name: Mixing Motor Power

Value/Description: 2 x 22 kW

Parameter Name: Max. Aggregate Size

Value/Description: 80-120 mm

Parameter Name: Productivity

Value/Description: ~60 m³/h

Parameter Name: Mixing Cycle

Value/Description: 45-60 s

Parameter Name: Discharge Time

Value/Description: < 5 s

Parameter Name: Lubrication

Value/Description: Manual / Automatic Centralized Lubrication (Optional)

Parameter Name: Control System

Value/Description: PLC Intelligent Control

Parameter Name: Approx. Weight

Value/Description: ~5580 kg

4. Conclusion

The PNS MX is not just a mixer; it is a complete solution dedicated to increasing your profitability. Its exceptional durability reduces downtime and spare part replacement costs. Its superior mixing efficiency boosts your production capacity. Its intelligent and eco-friendly design lowers your operational complexity and compliance costs.

Choosing PANGIN means choosing reliability, efficiency, and future competitiveness. We are confident that this machine will become the most trusted partner in your operation, helping you win more customer favor and market recognition.

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