N5S Fully Automatic Mortar/Self-Leveling Spray Machine

Product Overview

The N5S Fully Automatic Mortar/Self-Leveling Spray Machine is a highly efficient and fast construction machine that integrates mixing, pumping, and spraying into a single unit. Designed specifically for construction applications such as wall mortar spraying and floor self-leveling, it automatically completes the entire process—from mixing dry-mix mortar or self-leveling materials to continuous pumping and uniform spraying—significantly reducing the need for manual mixing and repeated handling; Its core advantage lies in its integrated design, which boosts construction efficiency several-fold. Precise control of the water-to-cement ratio and spray flow rate ensures uniform and stable output, while the large-capacity hopper and high-head pumping system support prolonged continuous operation and long-distance delivery. At the same time, the machine's compact structure and flexible mobility significantly reduce labor intensity and labor costs, making it the ideal choice for modern construction sites seeking to achieve mechanized construction and improve quality and efficiency.









Technical Specifications

Conveying capacity	1.5-2.5m³ /h;20-30L/min
Working efficiency	100 ㎡/h
Conveying distance	≤50m
Pumping motor	5.5KW
Conveying pressure	30bar
Hopper capacity	100L
Loading height	900mm
Connect the power supply	220V;380V
Italian water pump（Power）	0.37KW
Air compressor displacement	250L/min
Equipment weight	265KG
Progressive cavity pump	D7-2.5/D6-3
Dimensions	1275*710*1500mm
Package Dimensions	1470*850*1540mm

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Key Benefits and Features of the Product

One Machine, Three Functions: Fully Integrated Mixing, Pumping, and Spraying

The N5S integrates the three major processes—mixing, pumping, and spraying—into a single unit, completely eliminating the cumbersome multi-machine setup of “mixer + pump truck + sprayer” used in traditional construction. Operators simply load dry-mix mortar or self-leveling material, and the machine automatically completes the entire process—from adding water and mixing to continuous pumping and uniform spraying—with a single unit capable of replacing the workload of 3–5 workers.

High-Head, High-Flow Pumping: Covering Large Construction Areas

Equipped with a high-head screw pump system, it can deliver materials up to 30 meters vertically and over 80 meters horizontally, meeting the construction needs of multi-story buildings and remote work sites.

Its high-flow design supports continuous, uninterrupted operation, enabling a daily construction area of 500–800 ㎡—more than five times as efficient as traditional manual construction.

Large-capacity hopper: Reduces the frequency of refilling

Featuring a large-capacity 100-liter hopper, a single loading cycle supports extended continuous spraying operations, reducing downtime caused by frequent refills.

The hopper is equipped with an anti-clogging agitator to ensure smooth material flow and is compatible with various types of dry-mix mortar and self-leveling materials.

Compact design, flexible setup

The unit features a compact, integrated design with a footprint of only about 1.2 ㎡. Equipped with swivel casters, it can easily pass through standard doorways and be quickly moved between floors on a construction site; just two workers are needed to transport and set it up.

Foolproof operation; viscosity of the mixture can be adjusted as desired

Once the equipment is connected to the water source and power supply, simply keep feeding the material to ensure continuous operation. You can adjust the viscosity at any time by regulating the water pump. Even beginners can get the hang of it quickly, avoiding wasted time and improving work efficiency.

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Applications

Chemical Industry: Pigments, coatings, plastic pellets, and premixed additives

Building Materials Industry: Dry-mixed mortar, joint compound, and insulation materials

Food Industry: Seasonings, milk powder, and protein powder blending

Pharmaceutical Industry: Pharmaceutical powders and raw material blending for nutritional supplements

Feed Industry: Production of premixes and concentrated feed

Why Choose Us?

Expert Technical Team: Over 10 years of experience in R&D of mixing equipment, providing customized solutions

Quality Assurance: Rigorous quality control system; ISO 9001-certified company

After-Sales Service: Global service network, 24-hour response, and lifetime technical support

Success Stories: Serving over 500 companies across more than 20 countries and regions

Customer Testimonial

1.

★★★★★ Project Manager, a major contracting company (Saudi Arabia)

The small concrete pump delivered flawless performance on our four-story building project — powerful, reliable, and easy to maneuver. It kept our schedule tight and the concrete placement precise. Highly recommend this machine for mid-rise construction.

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2.

★★★★★ Construction Crew Foreman, a construction contracting company (Philippines)

This mortar spraying machine offers real advantages in both time and cost savings. It runs on electricity, so we’ ve saved significantly on expensive diesel fuel. We completed the plastering of a 1,500 sq.ft flat in just 1.5 days — that would have taken us nearly a week with traditional methods.

3.

★★★★★ Engineer at a construction company, a certain construction firm (Malaysia)

The electric startup takes just minutes, and the remote-controlled valve adjustment makes operation effortless. We all love its smooth pumping operation — it’s been a game-changer for our tunnel project.

FAQ

1.

Q: What is the minimum order quantity for your products?

A: For larger equipment such as mixers, our minimum order quantity is one unit; for smaller products such as valves and fittings, the minimum order quantity ranges from 50 to 100 pieces. Please contact our sales representatives to confirm the specific minimum order quantity.

2.

Q: From which port do you ship?

A: Since our company is located in Qingdao, most of our shipments depart from the Port of Qingdao.

3.

Q: Are you a factory or a trading company?

A: We are a manufacturing company with our own factory; all our equipment is produced in our factory's production lines.

4.

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Q: How much greater is the efficiency of a mortar spray machine compared to manual application?

A: The construction efficiency of mechanical spraying is typically 3 to 8 times that of manual troweling. Taking a 100-square-meter wall as an example, manual troweling requires 2 to 3 people working an entire day, whereas using a mortar sprayer requires only 1 to 2 people and takes 2 to 4 hours to complete. Specific efficiency depends on the mortar material, the condition of the wall substrate, and the operator's skill level.

5.

Q: What is the maximum area a mortar spray machine can cover in a day?

A: Taking a common fully automatic model as an example (such as the N5S model, with a delivery capacity of 20–30 L/min), under standard construction conditions, it can complete an average of 300–800 ㎡ of wall spraying per day. The actual area

covered depends on factors such as the spray thickness (typically 5–20 mm), the type of mortar, and the construction environment.

6.

Q: What types of mortar materials can a mortar sprayer apply?

A: Mainstream mortar sprayers have a wide range of applications and can apply:

① Gypsum-based mortar (plastering and leveling)

② Cement-based mortar (plastering, masonry)

③ Lime-based mortar (traditional plastering)

④ Self-leveling mortar (floor leveling)

⑤ Insulation mortar (external wall insulation systems)

⑥ Repair mortar (crack filling, spot repairs)

7.

Q: What is the hopper capacity of a mortar spray machine? What is its purpose?

A: Hopper capacity is an important parameter for measuring a machine's continuous operation capability. Common models have hopper capacities ranging from 50L to 150L; the N5S model has a hopper capacity of 100L. The larger the hopper capacity, the less frequently the machine needs to be refilled, and the longer it can operate continuously; however, the overall weight and size of the machine will also increase accordingly.

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8.

Q: What is the operating pressure (pumping pressure) of a mortar sprayer?

A: The N5S mortar sprayer has a delivery pressure of 30 bar, enabling it to reliably spray gypsum-based, cement-based, and self-leveling materials. Too low a pressure can result in uneven spraying and increased material rebound; too high a pressure accelerates equipment wear. For high-rise construction projects, be mindful of pressure loss during vertical delivery and adjust the mix ratio accordingly.

9.

Q: Do I need professional training to operate the machine after receiving it?

A: Mortar sprayers are relatively easy to operate; you can get the hang of it after 0.5 to 1 day of hands-on training. Fully automatic models are even more user-friendly, as the machine handles most of the process automatically; operators are primarily responsible for loading materials, monitoring the spraying process, and performing simple maintenance. We recommend that the first group of operators receive on-site training at the manufacturer's facility or request remote video guidance from the manufacturer.

10.

Q: Is a mortar spray machine difficult to operate? Can one person operate it?

A: Fully automatic models have a low learning curve; a single skilled operator can complete spraying tasks independently. We recommend having one assistant responsible for continuous material feeding, as this can significantly improve continuous construction efficiency. For beginners, we suggest that two people work together for the first few jobs; once they become proficient, a single operator can independently complete standard operations.

11.

Q: What is the typical spray thickness for a mortar sprayer?

A: Wall plastering: The recommended thickness for a single application is 5–20 mm; if the thickness exceeds 20 mm, it is recommended to apply the material in two separate applications.

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Self-leveling floors: The typical spray thickness is 3–15 mm, depending on the floor's levelness.

Repair and leveling: Localized thicknesses can reach 30–50 mm; in such cases, a thickening agent should be added or the application should be done in multiple passes.

Applying the mixture too thickly can cause sagging and cracking, while applying it too thinly results in insufficient coverage.

12.

Q: What should I do if the mortar spray machine clogs during operation?

A: Steps to resolve the issue:

Immediately shut down the machine and turn off the air supply;

Disassemble the clogged section and flush it with clean water or clear the blockage;

Check the mortar mix ratio (to see if it is too thick or contains foreign objects);

Readjust the water-to-cement ratio and resume operation.

Preventive Measures: Sift the mortar materials before use, control the consistency, and pump clean water through the pipes to moisten them before starting the machine.

13.

Q: How should a mortar spray machine be cleaned and maintained after a job is completed?

A: Cleaning is a key step in extending the equipment's service life:

① Immediate cleaning: Perform this within 30 minutes after the job is completed. After shutting down the machine, fill the hopper with clean water and run it to flush the system;

② Pump clean water: Pump a large volume of clean water through the pipes to flush out the pump chamber and piping;

③ Disassemble and clean the mixer: Remove the mixer assembly, rinse it with clean water, and wipe it dry;

④ Apply rust-preventive oil: Apply a thin layer of machine oil to metal contact surfaces to prevent rust;

⑤ Store in a dry place: Store the machine in a dry, well-ventilated area, away from direct exposure to rain.

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14.

Q: Can a mortar sprayer be used for exterior wall construction?

A: Yes. Both exterior wall insulation mortar and plastering mortar can be applied using a sprayer. However, the following precautions should be taken for exterior wall construction:

Safety ropes and aerial work platforms must be used for work at heights.

Exterior wall spraying should be suspended when wind speeds are high (≥ Force 4) to prevent the mortar from being blown away.

Specialized nozzles and lower pumping pressure are typically used when spraying exterior wall insulation mortar.

15.

Q: What is the fundamental difference between a mortar sprayer and a concrete pump?

A: Although both involve pumping, they serve different functions:

Mortar sprayer: Sprays fine-aggregate mortar (aggregate ≤ 5 mm), emphasizing spray atomization and surface smoothness; primarily used for wall plastering and self-leveling floors

Concrete pump: Pumps coarse-aggregate concrete (aggregate up to 20 mm or larger), emphasizing high-pressure, long-distance delivery, and is used for structural construction.

The two cannot be used interchangeably; using the wrong material can cause serious damage to the equipment.

16.

Q: Does the mortar spray machine come with a warranty? What does the warranty cover?

A: We offer a 1-year warranty on the entire machine. The main warranty coverage includes:

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① Non-human-induced malfunctions of the motor, pump body, and control circuit board

② Issues such as seal failure or mortar leakage caused by product quality defects

The following are generally not covered by the warranty: wear-and-tear parts (mixer, O-rings, nozzles, stator, rotor), damage caused by human error, and normal wear and tear of consumable parts. We recommend purchasing 2–3 extra sets of consumable parts as spares when buying the machine.