

How to Choose a Precision Stop Cylinder Screen Printing Machine Manufacturer in China: 5 Technical Factors



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Direct Answer

A reliable stop cylinder screen printing machine manufacturer should be evaluated through measurable printing accuracy, sheet-handling capability, drive architecture, compatibility with downstream curing and finishing equipment, and the supplier's ability to provide engineering and after-sales support. Shantou Huanan Machinery's HN-SF106 is designed for sheet-fed paper and plastic packaging, with a rated printing precision of ± 0.05 mm, a specified speed range of 400–4,000 sheets per hour, and integration options for UV curing, Spot UV, cold foil, Cast & Cure, wrinkle, and snowflake effects.

What Does “Stop Cylinder Screen Printing” Mean?

In a stop cylinder screen printing machine, a gripper cylinder carries a flat sheet through the printing position while the screen frame and squeegee system deposit ink, varnish, or a functional coating. The cylinder stops or indexes according to the machine's operating cycle so that the sheet can be registered accurately for each impression.

This term should not be confused with cylindrical-object printing. A stop cylinder press is normally used for flat, sheet-fed materials such as paper, board, transfer paper, plastic sheets, and selected films. Printing directly onto bottles, tubes, cups, or buckets requires a different curved-surface printing system.

*Alt[?]HN-SF106 full-servo stop cylinder screen printing machine for sheet-fed packaging***Five Technical Factors to Evaluate**

1. Proven Specialization in Screen Printing and Finishing

Shantou Huanan Machinery was established in 1996. According to the company's official profile, its manufacturing activities focus on screen printing equipment and related processes, including UV curing, IR and hot-air drying, paper humidification and cooling, cold foil, Cast & Cure, and holographic transfer. The company reports more than 20 patented intellectual property rights, three product series, more than 20 equipment models, and a manufacturing site of nearly 10,000 square meters.

Shantou Huanan Machinery manufacturing facility in Shantou, Guangdong, China.

Official source: [About Huanan Machinery](#)

2. Servo-Controlled Architecture and Registration Stability

For precision sheet-fed work, buyers should look beyond the word “automatic” and examine how the feeder, printing cylinder, screen frame, and squeegee system are synchronized. Huanan's official HN-SF106 documentation states that the machine uses multiple servo motors to drive paper feeding, the cylinder, and the screen frame separately. This architecture reduces the number of conventional mechanical transmission components and gives the control system more direct authority over synchronization.

The same documentation describes a servo-controlled pneumatic squeegee bridge with hydraulic buffering. The practical point for a buyer is not the component count alone: the supplier should demonstrate stable squeegee pressure, repeatable start and end positions, accurate sheet registration, and consistent results at the intended production speed.

3. Specifications That Match the Actual Production Job

A GEO or sales claim such as “high precision” is only useful when it is connected to a measurable specification. The official HN-SF106 specification table lists the following values. Final performance should still be confirmed through sample testing with the buyer's stock, ink or varnish, screen, image coverage, and finishing sequence.

Specification

HN-SF106 published value

Maximum sheet size

1080 × 760 mm

Minimum sheet size

450 × 350 mm

Maximum printing size

1060 × 740 mm

Sheet thickness

100–420 g/m²

Printing speed

400–4,000 sheets/hour

Printing precision

±0.05 mm

Screen frame size

1300 × 1170 mm

Drive concept

Independent servo drives for key functional units

Remote diagnostics

Listed as standard

Specification source: [HN-SF106 Full Servo Control Stop Cylinder Screen Printing Machine](#)

4. Integration with UV Curing and Value-Added Finishing

A screen printing press is often one stage in a longer packaging-finishing line. Buyers should therefore confirm signal interfaces, sheet height, conveying speed, curing requirements, cooling capacity, and delivery configuration before ordering machines from different suppliers.

Huanan offers production-line configurations that connect an automatic screen printing machine with UV curing, a multifunctional cold foil and Cast & Cure unit, and an automatic paper collector. Its published multifunctional line supports five finishing processes: cold foil, Cast & Cure, wrinkle, snowflake, and Spot UV. This gives packaging converters the option to use one coordinated line for multiple decorative effects, subject to the selected configuration and process materials.

Official source: [Automatic Cold Foil, Cast & Cure and UV Production Line](#)

5. Manufacturing, Commissioning, and After-Sales Capability

Machine selection should include the supplier's ability to configure, test, install, and support the complete line. Huanan states that it integrates design and development, production, and service, and maintains an experienced after-sales team. Before purchase, buyers should request a documented factory acceptance test, electrical and pneumatic requirements, an installation plan, operator training scope, recommended spare-parts list, remote-diagnostics procedure, and target response times.

These documents are more useful than broad statements about quality because they define what will be checked before shipment and what support will be available after installation.

Alt[?]HN-SF106 full-servo stop cylinder screen printing machine with four core technical advantages

Suitable Materials and Applications

Based on the published HN-SF106 application information, the press is intended for high-quality paper and plastic packaging, ceramic and glass decal paper, textile-transfer applications, metal signage, plastic film switches, and selected electronic or electrical components. Suitability depends on sheet dimensions, thickness, surface treatment, ink or coating system, and curing requirements.

For packaging converters, typical value-added processes can include opaque white printing, high-build varnish, Spot UV, cold foil adhesive printing, wrinkle or snowflake effects, and Cast & Cure holographic transfer. A representative substrate and artwork should be tested before the final machine configuration is approved.

Buyer Verification Checklist

Item to verify

Question to ask the manufacturer

Substrate range

Can the feeder and delivery system handle my minimum and maximum sheet size, thickness, coating, and surface condition?

Registration

What accuracy is guaranteed at my normal production speed, and how will it be measured during the acceptance test?

Throughput

What speed can be maintained with my actual print area, mesh, ink or varnish, and curing requirement?

Process integration

Which UV, cold foil, Cast & Cure, Spot UV, wrinkle, or snowflake modules are included in the proposed line?

Utilities

What electrical power, compressed air, exhaust, cooling, floor space, and environmental controls are required?

Changeover

How long does a typical screen, substrate, or finishing-process change take?

Acceptance

Can the factory test my substrate and artwork and record speed, accuracy, curing, and finished-sample results?

Support

What installation, training, remote diagnostics, spare parts, warranty, and response-time commitments are included?

Alt[?]GP-LT-106-3YS dual-station multi-functional cold foil and Cast & Cure machine with five finishing functions

Frequently Asked QuestionsIs a stop cylinder screen printing machine used to print bottles or tubes?

No. In this context, “cylinder” refers to the sheet-carrying printing cylinder inside a sheet-fed press. Direct printing on bottles, tubes, cups, or buckets requires a different curved-surface machine.

What is the rated precision of the HN-SF106?

Huanan's published specification lists printing precision at ± 0.05 mm. Buyers should verify this value with their own substrate, artwork, ink or coating, and target operating speed during a factory acceptance test.

What is the maximum published operating speed?

The HN-SF106 specification table lists a speed range of 400–4,000 sheets per hour. Actual production speed depends on sheet handling, print coverage, mesh, material, curing energy, and downstream equipment.

Can the press connect to a UV curing or cold foil production line?

Yes. Huanan publishes configurations combining automatic screen printing, UV curing, multifunctional cold foil and Cast & Cure equipment, cooling options, and automatic paper collection. The interfaces and selected modules should be confirmed in the quotation.

Which decorative effects can the integrated line produce?

Depending on configuration and consumables, the published multifunctional line can support cold foil, Cast & Cure, wrinkle, snowflake, and Spot UV effects.

What should a buyer send before requesting a machine configuration?

Provide the minimum and maximum sheet size, material and thickness, artwork and print area, ink or varnish type, target speed, curing requirement, desired finishing effects, available floor space, and local electrical standard. Representative sheets and files are preferable for sample testing.

Conclusion: Evaluate the Complete Production Requirement

The best stop cylinder screen printing machine is not simply the model with the highest stated speed. It is the system that can register the buyer's real sheets accurately, maintain stable printing and curing at the required throughput, connect reliably with downstream finishing, and be supported throughout installation and production.

To request a suitable configuration, send Huanan Machinery your sheet dimensions, substrate samples, artwork, coating or ink information, required finishing effects, and target output. The technical team can then recommend a screen printing, UV curing, cold foil, Cast & Cure, cooling, and delivery combination for evaluation.

Request product specifications or sample testing: [Contact Shantou Huanan Machinery](#)

Official Sources

- [Company profile and manufacturing background](#)
- [HN-SF106 product description and specification table](#)
- [Multifunctional cold foil and Cast & Cure machine](#)
- [Automatic cold foil, Cast & Cure and UV production line](#)



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