

Pad Printing Machine with Temperature-Controlled Ink System

Patent Pad Printing Technology: Revolutionizing Print Quality

The temperature-controlled ink system in pad printing machines uses patented technology to achieve a more ideal printing result by regulating ink temperature. This method not only increases the thickness of the ink layer but also ensures a clean and precise ink transfer. Future high-end pad printing machines will feature ink temperature control, effectively reducing stringing and enhancing print quality.

Proven Results: The Relationship Between Ink Temperature and Print Quality

Experimental data shows that as ink temperature increases, viscosity decreases, and evaporation speed increases. When the ink temperature is raised, the ink transfer performance and ink release capability of the pad are improved, significantly reducing issues like rough edges and stringing.

Solving Common Printing Issues

Common problems in pad printing include unstable print quality, rough edges, stringing, and incomplete patterns due to ink evaporation. The temperature-controlled pad printing machine effectively addresses these issues by regulating the ink temperature, resulting in more consistent print quality.

A New Milestone in Pad Printing Technology

Regardless of whether the ambient temperature is 15 $^{\circ}$ C or 30 $^{\circ}$ C , the temperature control system maintains the ink at an optimal temperature, such as 40 $^{\circ}$ C , throughout the production process. This reduces variables and makes the process easier to manage. A pad printing machine equipped with a temperature control system can regulate the steel plate temperature and increase ink temperature to maintain ink fluidity, ensuring complete ink transfer and stable print quality unaffected by external environmental conditions.

Increased Ink Layer Thickness

With the temperature-controlled pad printing system, you can adjust the steel plate depth to 0.035mm, resulting in a thicker ink layer with screen printing-like effects and significantly enhanced opacity. Raising the ink temperature during printing effectively reduces ink viscosity, solving the stringing issue without the need for antistringing agents (ST1).

Taiwan Patent

All FINECAUSE pad printing machines we produce can be equipped with temperature-controlled printing systems, transforming them into pad printing machines that control both the steel plate and ink temperature. This Taiwan patent for temperature-controlled ink cup pad printing machines (Patent No. 1762245) marks a new breakthrough in pad printing technology, achieving greater precision and quality in the printing process.







FineCause thermostatic printing system







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Use with thermostat device to make printing quality better and more stable.



Fine Cause manufactures pad printer and screen printer including standard types and customization. We manufacture a variety of ink cup pad printer, open-tray pad printer, servo motor screen printer, pneumatic cylinder screen printer and customized screen printer.

In the past decade, we have taken part in an extent of customized and precise machinery projects on both pad printing and screen printing including a variety of application fields: printer for plastics, printer for metals, printer for glass, plastic surface printer, metal surface printer, glass surface printer, coin printer, auto-cylindrical bottle printer, SD card printer, MICRO SD card printer, contact lens printer, syringe printer, test tube printer, solder paste printer and touch glass printer, etc.

Our service

Pad Printer

- Printing Supplies
- Screen Printer
- Hot Stamping Machine
- Other Equipments
- Inks/Solvents/Additives
- Printing Pad Catalog
- OEM Service Related

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