Thaimadam Machines

Eight Colour Rotogravure Printing Machine (Extra Heavy Duty)

Extra heavy structure

This machine is heavily constructed with main frame in 40 mm thick plate. Vibration free operation is assured. The basic design is made from the point of view of machine-operator and is user friendly. The print view and inspection is made easy by providing peculiar window for that purpose. Oil-dipped worm gear box for the transmission makes the machine run smoothly and silently. The air circulation through silent blowers makes the efficiency of the print drying faster and with less pressure on the substrate, reduced noise, and less electrical power.

The initial tasks like loading of cylinders, loading of rolls, register synchronization are made easy through new mechanisms. Once printed cylinders can be reloaded and printed with out going through much of the register synchronization tasks and avoids wastage of substrate.

Important features

Cartridge Loading of Print Cylinder Inking System
Cartridge Loading of Feed Rolls
Insert ability to feed rolls in between printing units
Split ability of the machine
Universal Reversibility
Unique Viewing Window
Distributed Control Panel
Motorised Register Synchronization

For futher details please visit
www.thaimadam.in www.thaimadam.com

Cartridge Loading of Print Cylinder Inking System

It is an altogether new idea and bold introduction to the printing machine. The cylinders (printing block) is normally mounted on the machine inside the printing unit. For mounting cylinders normally a shaft is used or a shaft-less corn mechanism is used. For both this the operator has to carry the cylinder varying about 10 kg to 25 kg inside the machine which carry a lot of risk of damaging the cylinder. The unloading and loading of printing cylinder in the machine usually takes above 15 to 30 minutes for each colour. The job changing requires printing cylinder to be cleaned before unmounting and the inking system has replenished or change before unmounting the cylinder. These operations takes up a lot of time leaving the machine idle for considerable time.

In Thaimadam machines most of the job changing operations are done outside machine while the printing machine is running. The cylinders are loaded on the shaft and mounted on the cartridge. The required ink is then filled in the tray of cartridge. And thus the cartridge is made ready for mounting on the machine even while the previous job is running on the machine. When the job is finished the finished cartridge is un-mounted by slipping out the used cartridge and the new job cartridge is mounted on the machine by pushing inside. For job changing of the colour the idle time required for the machine is less than 5 minutes. The cleaning of finished job is done outside the machine while the new job is running on. The cylinder is cleaned and the ink is drained to the tanks and the cartridge is clean to the accept the next job, outside the machine. This new technology safeguard the security of printing cylinder and eliminate the risk carrying heavy cylinder inside the machine. For a six colour job change Thaimadam machines - Six Colour printing machine requires only less than 10 minutes. This saves considerable idle time of investment and boost up production when compared to other machines.

Cartridge Loading of Feed Rolls

Feed rolls are usually heavy and occasionally is very difficult to mount on the normal machine. The mounting operation is done by either fixing on a shaft or on mounting shaft less holds. Both this operation requires lifting of the rolls and carrying on to the machine. For heavy rolls having more than 100 kg this operation is nightmare for the operators. But in Thaimadam Machines this operation is made simple. The mounting shaft is fixed to the core of the rolls and is mounted on the mounting cartridge at the place specified for the purpose away from the machine. Hydraulic jack mechanism or Chain pulley mechanism can be provided for lifting up the heavy rolls to place on the cartridge. Then the cartridge is carried to the machine on its wheels and slip inside the machine to fix it on the machine.

Insert ability to feed rolls in between printing units

Each printing unit is having a separate roll feed mounting rails, placed just before the printing unit. Thus a normal Thaimadam Machines with six colour printing capability is having six feeding stations. This facility reduces the substrate length considerably and their by reduce the probable wastage. Even while the printing operation is going on, next feed roll can be mounted on the feed cartridge and made ready on the available nearest feed stations. When the running roll is finished the machine need be stopped only for seconds to start the next roll and get running. This mechanism reduces the idle time on the printing machine, for roll change. This type of feed mechanism helps to split the machine to act as two machines.

Split ability of the machine

Thaimadam printing machine can be split into two to act as two separate printing machines. Thus on a six colours printing machine we can do either a single colour and a five colour job simultaneously OR a two colour and four colour job OR two three colour jobs simultaneously. The splitting operation is made very simple and requires only few minutes to make the machine ready for doing two print jobs and viz. This enable the machine to give double output.

Universal Reversibility

The machine is universally reversible to print on both side of the printing format. To print on Poly film tubes to make poly bags both side printing is necessary. The cross-bar technology twilt the substate. The mechanism can be moved and placed in between any printing units so that the furhter

progress of printing can be on the other side of the substrate. The adjustments to reverse the substrate is very easy and it does not require any mechanical miodification or change on the machine.

Unique Viewing Window

In the conventional machines, the operator has to sit down and look upwards, leaning inside the machine to get a view of the printed format or the doctor blade assembly if anything goes wrong the operator has to face a lot of troubles to get a clear picture of this situation. Almost all the upper area constituting drying chamber is enclosed and cannot be see from outside. This problem is completely eliminated in Thaimadam Machines.

The design of the printing machine is made in such a way to provide a unique viewing window for the operator for inspection of the printing operation. The front portion of the drying chamber is opened up as a window and is protected by glass. The glass faced window provide easy view of the complete printing process at the same time protect hazardous solvent vapor. This enable the clear view of doctor blade assembly, impression rollers and the printed substrate. Inside the window is adequately lighted up so that the printing image is clearly visible to scrutinized its colour and print registers. This protects the operator from the hazardous vapor of ink and solvent. The appearance of the machine is made simple and elegant. The control panel is placed immediately near to the viewing window so that the operation and necessary correction can be done while viewing through the window.

Register Synchronization:

The register synchronization (Calendaring) is done by motor drives. Feather touch push button switches for that purpose is very comfortably placed in each of the control panel. Actuate register can be easily attained and maintained with out much efforts for the operator.

Distributed Control Panel

In normal machines the electrical controls of different drives are placed on a control panel which is separated from the machine and placed and the back of the operator side. The Rotogravure Printing Machine are very long in size, the operator has to come to the control panel for every operation of the control like on /off drives to boost up its power and down and the likewise operations. Similarly on emergency the operator has to run to the control panel to take immediate action. In Thaimadam Machine, the control panel is distributed through each printing unit and winding station. Almost all operations can be done from any control panel because clone switches are given for almost all operations. The operator can do any operation from any point where the operator is standing just by a stretch of hand.

The built-in distributed control panels are extremely comfortable for the operators. Almost all the basic operations on run-time can be done from any of the panel attached to each printing units. The operator can on / off any drive like winding drive, main-drive, dryer-air-circulators, lights etc., increase / decrease the winding torque, speed of main-drive etc., adjust web alignment etc., from any control panel. Power distribution is from very safe buss-bars supported by high quality MCB and circuit terminators. The electrical equipment like dimmer state, rectifiers etc. are isolated from machine and are enclosed in separate cabin placed suitably away from operation side. Necessary pilot lamps are provided so that the status of the machine and switches can be ascertained at any point of time.