PELICAN

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w.e.f. : Oct. 2019

Innovative
engineering for..EXCELLENCE...

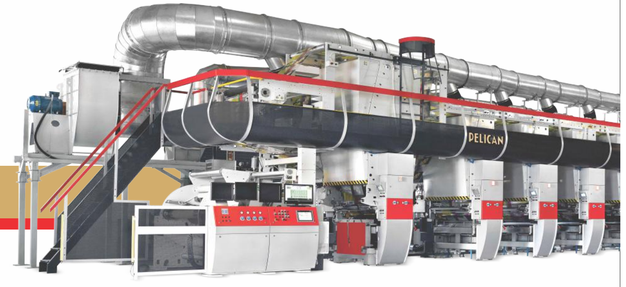
PELICAN

Solomark

ROTOGRAVURE PRINTING PRESS

- WITH SHAFTED CYLINDER CHUCKING
- WITH SHAFT-LESS CYLINDER CHUCKING

ROTOGRAVURE PRINTING PRESS (ELS) 400 mpm



Innovative
engineering for..EXCELLENCE...

INTEGRATED
register control

UNIQUE
service
SUPPORT

STANDARD TECHNICAL SPECIFICATION	
• Maximum web width	1300 mm
• Printing cylinder repeat range	450 to 900 mm
• Maximum mechanical speed	400 m/min
• Web tension range	60 to 400 N
• Standard drying hood length	2.0 mtr
• Reel diameter	1000 mm

400 mpm ELS Rotogravure press with option of either Shafted or Shaftless cylinder chucking. Both design enable fast make ready operations and quick changeover

THE MACHINE

The new generation Rotogravure Press is led by ELS technology. By perfectly integration of advanced electronics and ergonomically designed mechanical components to deliver optimum performance, better operational ease, faster print register response, higher productivity, better print quality, less waste, optimising ink solvent and energy consumption, faster job changeover etc.

LOW wastage

FAST JOB
change over

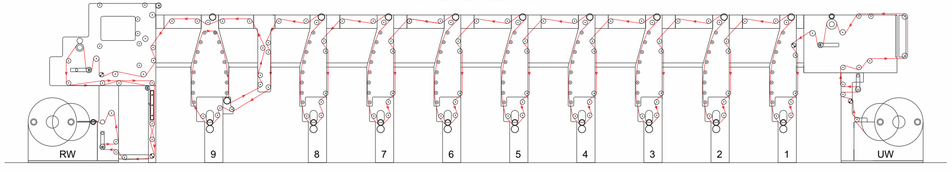
SERVICE CART (TROLLEY SYSTEM)

Specially designed Cart facilitates ease for insertion and extraction from the printing station. Thanks to a special mechanism: Cart slides on linear guide rail which ensures perfect in & out operation; only one operator can easily carry out the operation.

To carry out loading / unloading of gravure cylinder there is a lifting system on-board on the cart, which consist of hydraulic piston, levers etc.

- Possibility to remove only the inking system, leaving the printing cylinder in the printing station
- Possibility to remove only the printing cylinder, leaving the inking system in the printing station
- Possibility to remove the printing cylinder together with the inking system at the same time

STANDARD WEB PATH



FASTER registration response
and **BETTER** accuracy

SAFETY
on board

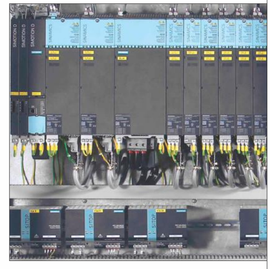
SHORTER
WEB PATH

PRINT STATION CONTROLS

FOLLOWING OPERATIONAL CONTROLS ARE AVAILABLE ON EACH STATION...

- HMI on each printing station to operate all individual print unit functions such as Auto ink tray levelling with respect to cylinder diameter, Cylinder loading/unloading sequence, register presetting and many more...
- Joystick for manual length & side register setting and offset set point in auto mode
- Pneumatic controls
- Push button for Emergency stop
- Rope switch for Emergency stop
- Push button for service cart function
- Push button for hood open/close

HIGH EFFICIENCY
LOW ENERGY
CONSUMPTION



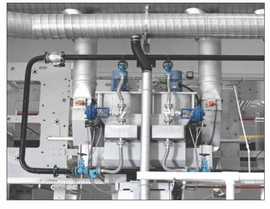
FAST JOB
change over

HIGH EFFICIENT VENTILATION MODULE

High efficient ventilation module ensuring optimum drying at minimum energy consumption. The system comprising servo controlled dampers to set recycling of supplied air to the drying hood and setting of the exhaust air

EACH VENTILATION MODULE COMPOSED OF :

- Thermal oil heat exchanger with necessary controls/feedback devices to maintain set temperature
- Central exhaust system common for all printing units
- Separate fan with necessary duct for floor sweep which ensures to reduce solvent contaminated odour within the lower area of the printing stations



DOCTOR BLADE GROUP

Designed to ensure a straight profile of the blade resulting in lesser blade pressure, better printing quality and longer cylinder life.

The blade locking by an eccentric rod without tools.

Reciprocating transversal movement of the doctor blade is taken from the separate AC motor and through gearbox.

Positioning of the doctor blade, adjusted by the hand wheel, referring to a graduated scale located at the back which refers to the cylinder circumference.

Pneumatic doctoring pressure with adjustment possibility from the unit control panel.

Viscosity Control System (Optional)

LOW **energy**
CONSUMPTION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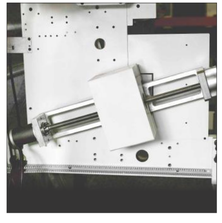
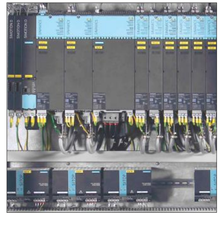
400 MPM ROTOGRAVURE PRINTING PRESS
WITH SHAFTED OR SHAFTLESS CYLINDER CHUCKING





UNWIND GROUP

Turret type Unwinder with flying splice (Bi-Directional).

The system mainly composed of push button initiated motorized rotating disc, pneumatically loaded automatic splicing arm, rubber covered pasting roller and cutting blade assembly etc.

Pneumatically expanded shafts and safety chucks to hold the reels.

Unwind Web Handling Control using latest generation AC servo technology. The system mainly composed of AC servo motor and drive, pneumatically loaded low friction dancing roller assembly and load cell for tension feed-back and actual tension display.

Electro-electric Edge Guiding System

IN-FEED WEB HANDLING CONTROL

The system provides precise tension control of the web before entering to the first printing station and isolates the printing unit from tension disturbance of the unwinding zone. Dancing roller on pivoting lever mounting loaded by a counterweight (Unique mechanism for tension feedback) having motorized movement by means of slo-syn motor. The dancing roller position controls the speed of the in-feed motor.

CONTROL SYSTEM

All the printing units, Unwinder, Rewinder, in-feed, and out-feed are individually driven by servo motors-drives and controlled and supervised by the high performance motion controller having its own intelligent software.

'Ethernet / IP based communication system' used to maintain tight synchronization between all the drives by providing fast reliable and jitter-free communication.

OPERATOR INTERFACE

Master operator control console (integrated with the control push button) mainly consists of touch screen operator interface, located at rewind side and remote operator control panel at unwind side, as well as each and every printing units facilitates ease in operation.

PRINT UNIT

Each print unit control panel mainly consists of touch screen operator interface (HMI), pneumatic controls for doctor blade group, impression rubber sleeve and electrical controls for manual length and side-lay register settings, temperature display for drying chamber, hooter and emergency stop etc.

SERVICE CART (TROLLEY SYSTEM)

Specially designed Cart facilitates ease for insertion and extraction from the printing station. Thanks to a special mechanism: Cart slides on linear guide rail which ensures perfect in & out operation; only one operator can easily carry out the operation.

To carry out loading / unloading of gravure cylinder there is a lifting system on-board on the cart, which consist of hydraulic piston, levers etc.

Possibility to remove only the inking system, leaving the printing cylinder in the printing station

Possibility to remove only the printing cylinder, leaving the inking system in the printing station

Possibility to remove the printing cylinder together with the inking system at the same time

SLEEVE TYPE IMPRESSION ASSEMBLY

The sleeve system, consists of an air mandrel with a rubber covered fiberglass sleeve, provides functional flexibility and sleeve change without tools. Impression roller raising - lowering on precision linear bearings.

The precision linear bearings ensure smooth and precise displacement. Pressure roller sleeve with antistatic rubber, solvent resistant made of fiberglass.

Main machine control is programmable for automatic detach of the pressure roller at machine stop.

TRANSMISSION

In case of shafted cylinder locking system: connection of cylinder shaft to the motor drive is direct (True direct transmission, without using any reduction ratio components) through a manual chucking mechanism ensures easy cylinder locking.

DOCTOR BLADE GROUP

Designed to ensure a straight profile of the blade resulting in lesser blade pressure, better printing quality and longer cylinder life.

The blade locking by an eccentric rod without tools.

Reciprocating transversal movement of the doctor blade is taken from the separate AC motor and through gearbox.

Positioning of the doctor blade, adjusted by the hand wheel, referring to a graduated scale located at the back which refers to the cylinder circumference.

Pneumatic doctoring pressure with adjustment possibility from the unit control panel.

DRYING SYSTEM

Innovative high efficient drying system: better heat and mass transfer are achieved by switching from the standard nozzle to arrays of circular impinging jets "3D" holes on the printed side and "2D" holes on the backside, blowing on both sides of the web.

Holes shaped and distributed on stainless steel plate to guarantee the maximum energy transfer efficiency and minimize the number of idle rollers in order to avoid shaking or deforming of the web itself.

The system allows full process control for the drying operation to reduce energy consumption and avoids solvent retention in the printed substrates.

Pneumatically operated drying hood opening/closing to allow easy access for web threading and cleaning.

HIGH EFFICIENT VENTILATION MODULE

High efficient ventilation module ensuring optimum drying at minimum energy consumption. The system comprising servo controlled damper to set recycling of supplied air to the drying hood and setting of the exhaust air

EACH VENTILATION MODULE COMPOSED OF :

Thermal oil heat exchanger with necessary controls/feedback devices to maintain set temperature

Central exhaust system common for all printing units

Separate fan with necessary duct for floor sweep which ensure to reduce solvent contaminated odour within the lower area of the printing stations

IDLE ROLLERS

Specially designed, dynamically balanced low friction-low inertia idle rollers made of Aluminum alloy mounted on low friction bearings, enhance rotational smoothness.

Metallurgy, Shaft end, Internal Boring of the aluminum pipe is done, computerized Dynamically balancing, bearing with self-lubricate, temp resist grease.

REWIND GROUP

Turret type Rewinder with linear splice.

The system mainly composed of push button initiated motorized rotating disc, pneumatically loaded automatic splicing arm, rubber covered pasting roller and cutting blade assembly etc.

Pneumatically expanded shafts and safety chucks to hold the reels.

Rewind Web handling Control using latest generation AC servo technology. The system mainly composed of AC servo motor and drive, pneumatically loaded low friction dancing roller assembly and load cell for tension feed-back and actual tension display.

Web break detection sensed by the dancer position.

Lay- on Roller Assembly

Pneumatically operated lay on roller assembly complete with pressure gauge and regulator for control of the pressure on the rewind reel.

MOTORIZED WEB VIDEO INSPECTION SYSTEM

Motorized web video inspection system consists of high quality CCD color camera, Industrial PC & Monitor (facilitates sequential inspection of the lateral and entire print repeat of the web).

OUT-FEED SYSTEM

The system provide precise tension control of the web before entering to the rewinder and isolates the rewinder from tension disturbance of the printing unit. The system mainly composed of AC servo motor and drive, pneumatically loaded low friction dancing roller assembly and load cell for tension feed-back and actual tension display. The dancing roller position control the speed of the out-feed motor.