# Autostar IM-350/560/660

## Introduction

The **Autostar IM-350, 560 & 660** is the latest offset intermittent packaging press to produce a wide range of printing products including labels to the highest quality without changing the print cassettes or tooling, as the electronic intermittent drive allows for variable print width and length depending on the model. The press can be built from 4 to 8 colours, including several finishing options from inline lamination, rotary hot foiling without change of cylinders, flexo varnishing, delam & relam, and other unique options which are available to the client's request. The press is included with the latest stepless control cold UV mirror system, to allow for both labels and sensitive film materials to be printed.

The press has a full HMI operating system with MIM management system to perform and deliver the highest level of print register and production control offering minimum wastage for the manufacture of very short runs.

# Main Features

## Electric Control System

The main PLC Operating System is constructed with the highest quality of international electrical components, together with a CPU via a DOS system to control the servo motors. This ensures accurate running and easy operation of the machine, whilst ensuring safety.

## Shaftless Drive

The machine uses high-power servo motor made by Yaskawa, Japan or Bosch Rexroth, Germany; to drive the impression cylinder and other driven shafts, providing a guarantee for precise high-speed running.

This offers many advantages, which include allowing the machine to run safely under higher loads, compared with machines equipped with a low-power servo motor. The efficient motors reduce the costs of production and guarantee years of maintenance free running.

## Operating Printing System with pre-register

Once the printing length is input at the main control unit, every print unit will move automatically to the preset position.

Each unit is controlled individually by a motor. With the help of CCD image, the registration of lateral, longitudinal and bevel direction of each printing unit can be achieved by the independent registration servo motor which can be controlled at each touch screen without stopping the machine production.

This greatly increases the print quality, and reduces the production wastage.

## Offset Printing Unit

Each unit can work independently, which greatly enhances the production efficiency. There is a touch screen on each unit so work can be done easily.

## Water & Ink Control

The machine adopts an advanced offset dampening system, which ensures the perfect printed image. The precision-engineered structure, has a unique bridge roller, which achieves perfect mixture and balance of water and ink on the very first forming roller. This design greatly reduces the material waste. The design of the machine and the high tolerance of the manufactured machine parts, allows for both Film and paper to be printed easily.

## Lubricating System

The machine has an automatic lubricating oil-supply system to ensure the accuracy and service life of the machine.

## Automatic & Manual Controlled Mounting & Dismounting Plate System

This greatly shortens the plate changing time and increases the safety level of the machine. The plate changing time is one minute per print unit, E.g. 6 colours = 6 minutes.

## Plate & Blanket Pressure Control System

The bearer to bearer plate blanket & pressure control system is assisted with a pneumatic clutch, which ensures perfect pressure to the cylinder contacts. The integrated clutch is manufactured to the highest quality by Japanese Fujikoshi company and uses a double-line, four-row, three-point suspension tapered roller bearings. This ensures that the offset plate and the Rubber Blanket are fully pre-inked so that the pressure contact between the two cylinders greatly reduces the pre-print paper wastage.

## Unique Geometry

The unique arrangement of the plate cylinder, rubber blanket roller, impression roller, high precision servo motor drive, and twice clutching control system which protects against colour loss; ensures the production of high quality printed products to increase profitability.

## Lateral Registration

A servo motor is used to adjust the plate roller rather than the printing unit, which is exactly the same as that of Heidelberg, which means the lateral registration can be achieved accurately and easily during printing.

Autostar IM-560

## Longitudinal Registration

A servo motor drives a linear device equipped with a high-precision reducer and special ball screw structure (similar in design which is used for machining beds on a high Precision CNC Tool-making Machine) to adjust the print unit.

## Impression Cylinder

The impression cylinder uses a Japanese P5 class 4-row TPR (Tapered roller bearing) structure with pre-tightening force. This ensures the radial clearance and bouncing is ZERO, so therefore the printing pressure is stable and the printing dots are clear and without dot gain.

## Alcohol Dampening Device

The Alcohol Solution is temperature controlled by re-circulating through the dampening unit, which guarantees the brightness of the printed image. The temperature controlled solution is processed by an alcohol dosing offline unit with an integrated refrigeration system.

## Ink Duct

The print unit includes a unique ink duct, which makes it easier to adjust the ink volume, reducing printing preparation time and paper waste (similar in design to Heidelberg's sheet-fed presses).

## Printing Pressure

The accuracy of the printing pressure to a maximum of 0.15mm ensures the printing dot produced is of perfect quality.

## HMI User-Friendly Operating Controls

The Main HMI control panel plus the independent control panels on each print station, allow for the machine to be operated from any print station for ease of access.

## High Quality Structure

The high strength machine cylinders, are finished with a hard chrome plating to guarantee rust-proof performance during the lifetime of the machine. The side frames are produced from HTS Cast Iron and manufactured to a very high tolerance with a web structured machine pattern which eliminates vibration and ensures perfect stability when the machine is operating at high speeds.

Autostar IM-660

## Optional Extras

This machine can also be equipped with the following unit/s to enable multi-printing & converting in one pass of the machine and provide lower production costs and increase profit margins for the end user.

- Automatic registration system
- Delamination & Relamination
- Corona Treater
- Automatic Remote Inking with integrated computer control
- Flexo press unit
- Cold Foil Unit
- Hot Foil Unit
- Letter press unit
- Dry offset unit
- Varnishing unit
- Rotary die-cutter unit, etc.
- Rotary Profile Cutting for folding box board products
- Sheeting Conveyor
- Waste Vacuum Extraction unit for folding box board products

## Custom-made Options

The machine can be manufactured to the customer's requirements, subject to clear confirmation of the customer's ideas or drawings of the product to be produced.

# Technical Specification

## Autostar IM-**350** - 6 colour

| Item | Specification |
|---|---|
| **Max. Web Width** | 370 mm |
| **Max. Printing Area (W x L)** | 345 x 350 mm |
| **Diameter of Unwinding Web** | 700 mm |
| **Diameter of Rewinding Web** | 700 mm |
| **Thickness of Printing Material** | 60-350 g/m² |
| **Printing Length** | 170-345 mm |
| **Printing Speed *** | 70 m/min |
| **Power** | 29.8 (4.97 KW/Colour) (3-phase 380V) 50/60HZ |
| **UV** | 4.8 KW/Colour (3-phase 380V) |
| **Overall Dimensions (L x W x H)** | 1000 x 3600 x 1900 mm |
| **Machine Weight** | 13000 Kg |

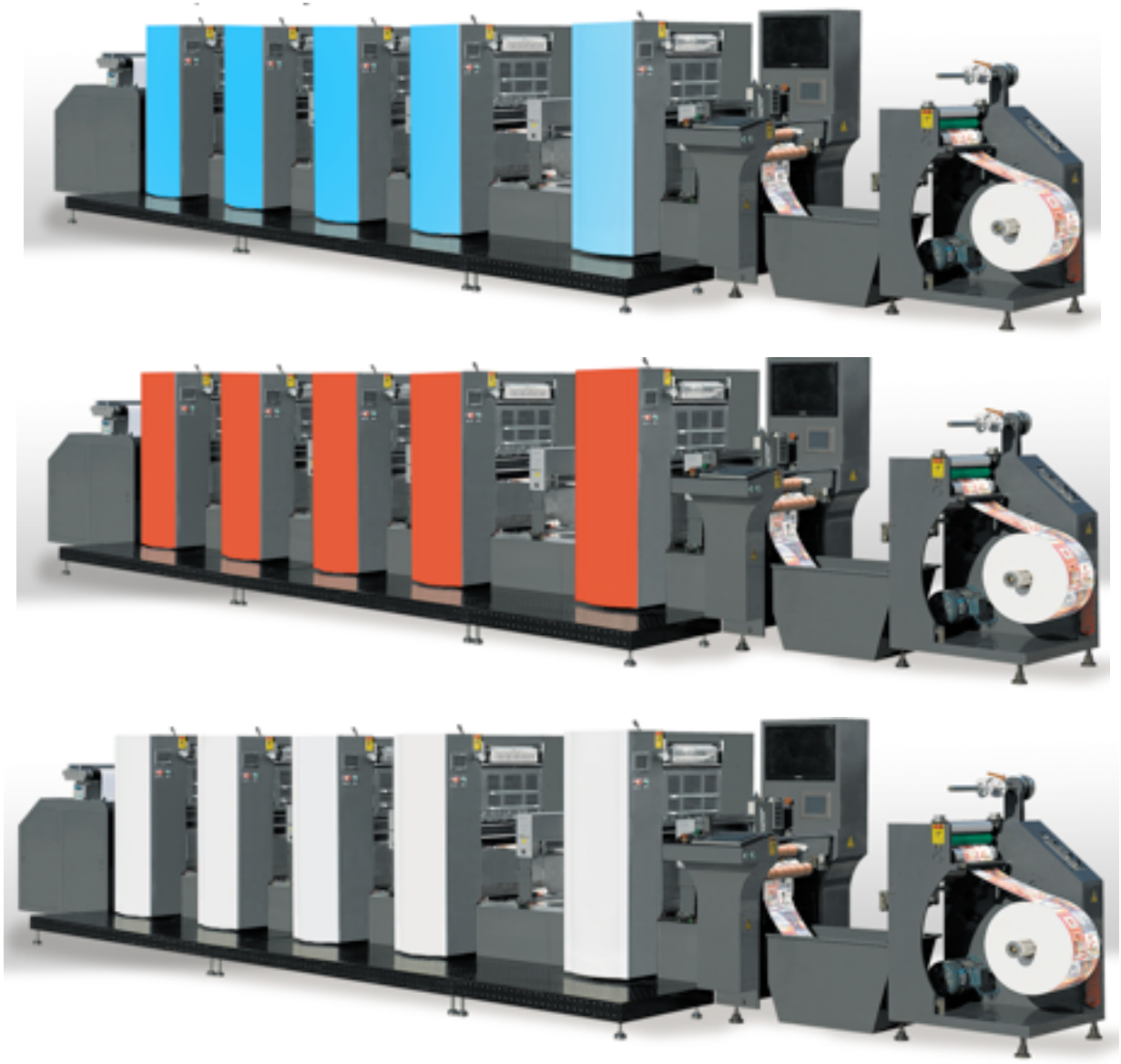
## Autostar IM-**560** - 6 colour

| Item | Specification |
|---|---|
| **Max. Web Width** | 560 mm |
| **Max. Printing Area (W x L)** | 550 x 410 mm |
| **Diameter of Unwinding Web** | 1000 mm |
| **Diameter of Rewinding Web** | 1000 mm |
| **Thickness of Printing Material** | 80-350 g/m² |
| **Printing Length** | 210-410 mm |
| **Printing Speed *** | 70 m/min |
| **Power** | 39.5 (6.58 KW/Colour) (3-phase 380V) 50/60HZ |
| **UV** | 10 KW/Colour (3-phase 380V) |
| **Overall Dimensions (L x W x H)** | 11000 x 4000 x 1900 mm |
| **Machine Weight** | 16000 Kg |

## Autostar IM-**660** - 6 colour

| Item | Specification |
|---|---|
| **Max. Web Width** | 660 mm |
| **Max. Printing Area (W x L)** | 660 x 520 mm |
| **Diameter of Unwinding Web** | 1000 mm |
| **Diameter of Rewinding Web** | 1000 mm |
| **Thickness of Printing Material** | 80-400 g/m² |
| **Printing Length** | 260-520 mm |
| **Printing Speed *** | 70 m/min |
| **Power** | 49.35 (8.2 KW/Colour) (3-phase 380V) 50/60HZ |
| **UV** | 12 KW/Colour (3-phase 380V) |
| **Overall Dimensions (L x W x H)** | 13000 x 4000 x 1900 mm |
| **Machine Weight** | 20000 Kg |

* Subject to the length and quality of the printing material. Max. Speed is 70m/min.



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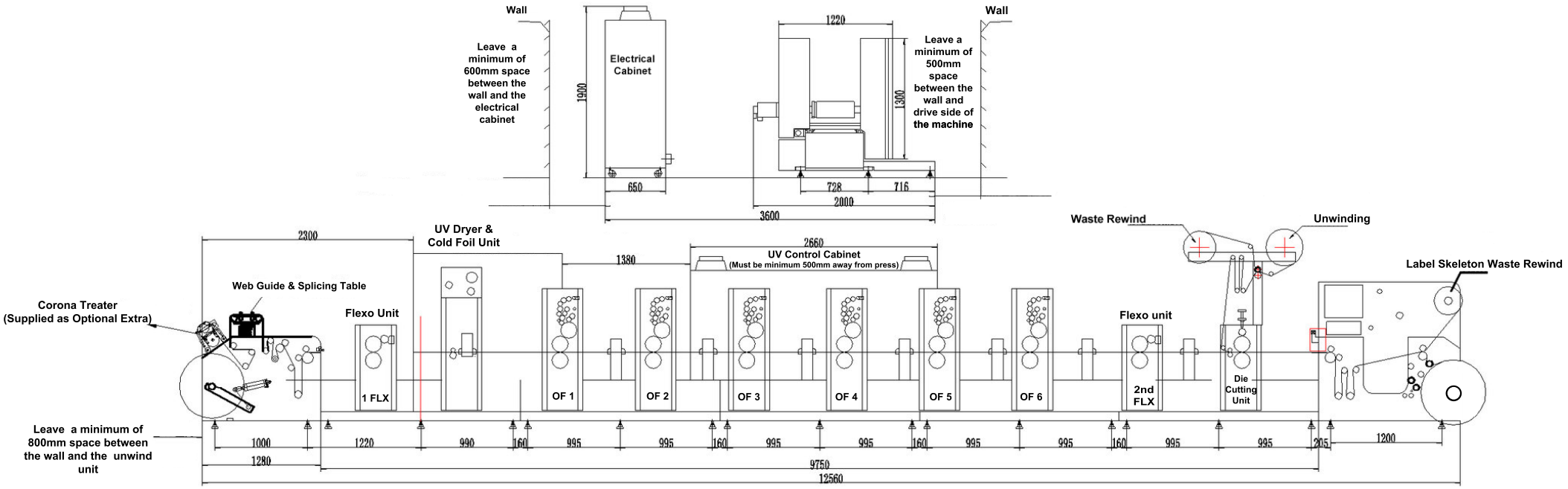


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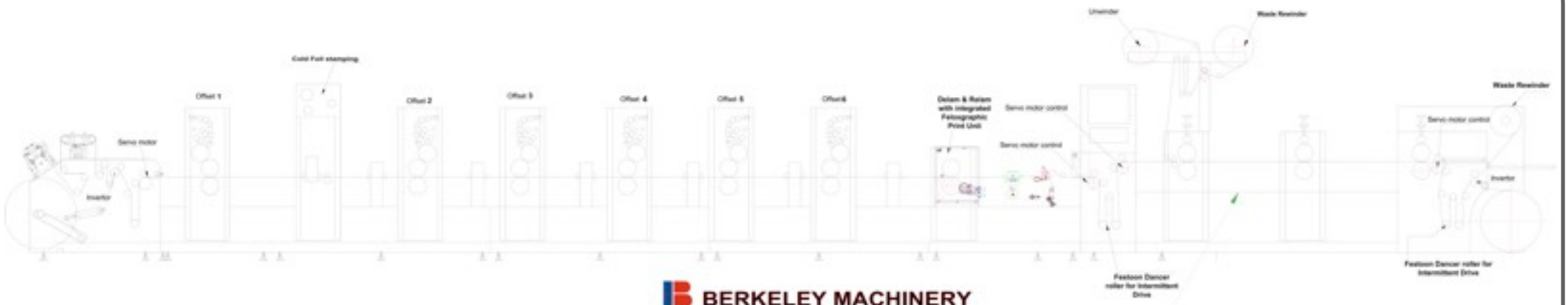
# AutoStar IM-350- 6 colour Offset + 2 Flexo units

**Key**

FLX = Flexo unit
OF = Offset Unit

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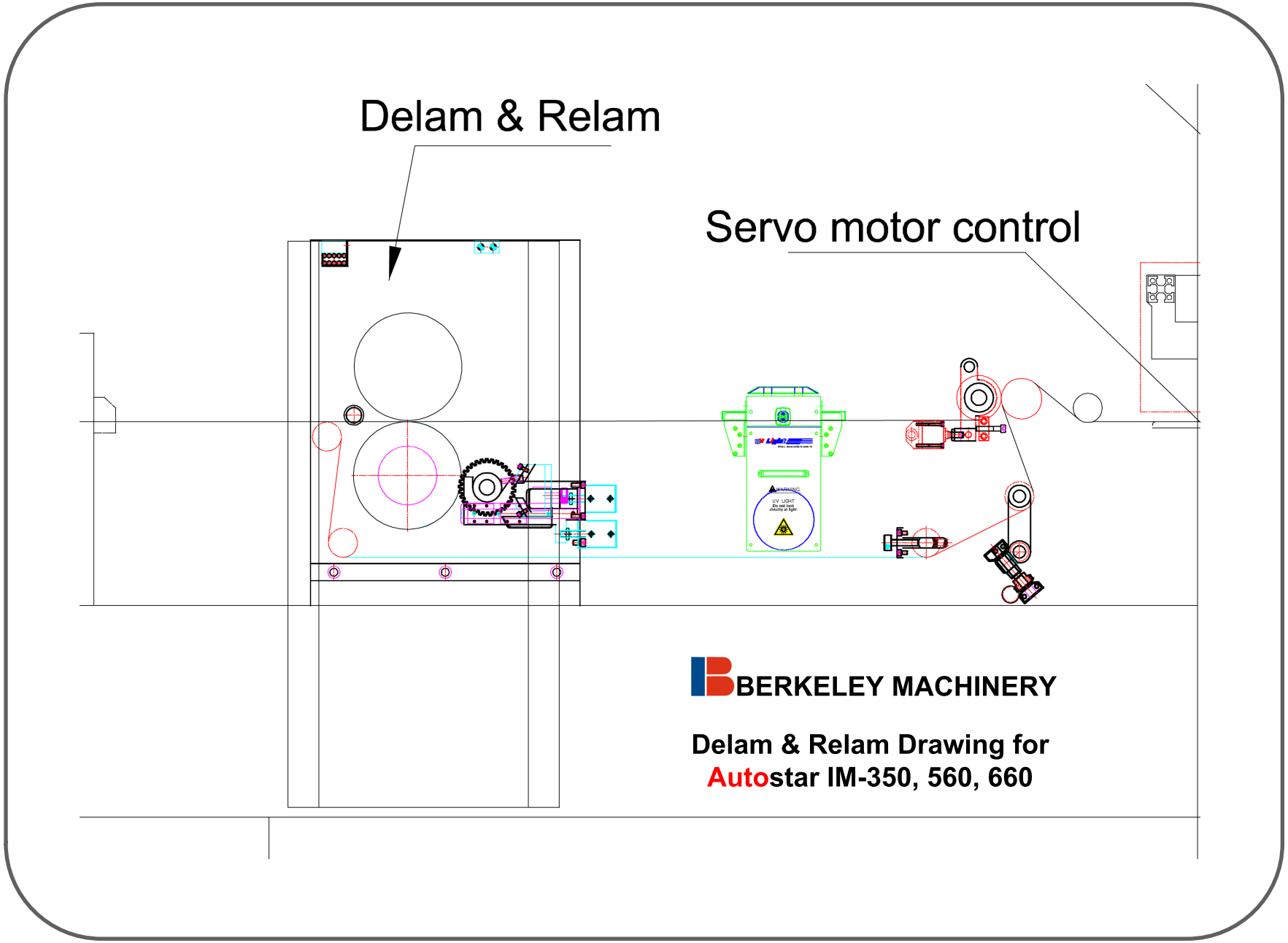
**Autostar IM-350-6/IM-560-6**

**6 Offset, Cold Stamping, 1 delam & relam, 1 hot stamping unit, 2 rotary die-cutting units & rewinder and sheet conveyor**


Delam & Relam
Servo motor control
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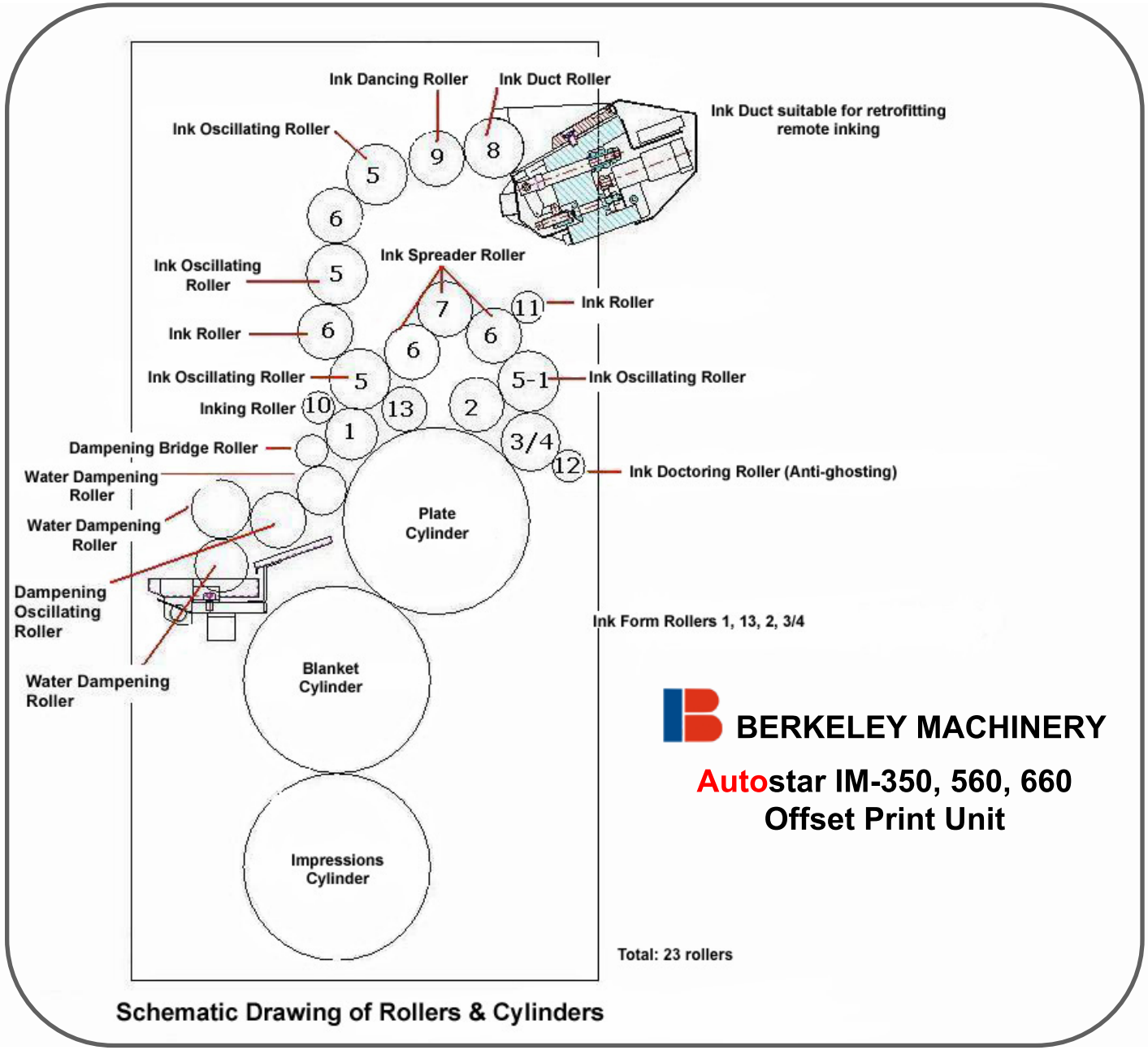
Delam & Relam Drawing for
Autostar IM-350, 560, 660

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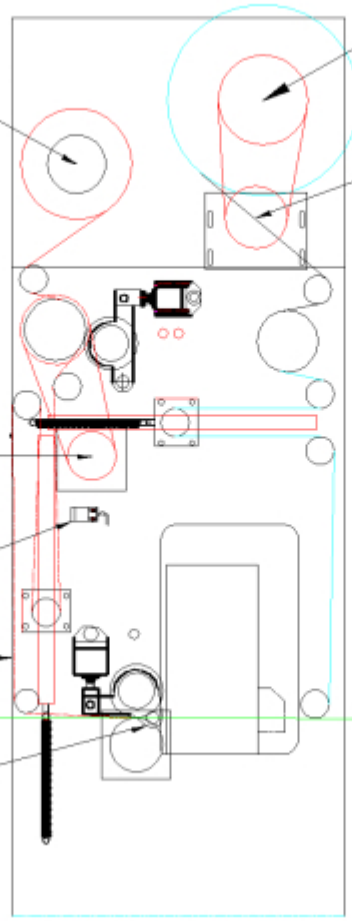
**Autostar IM-350, 560, 660**
**Offset Print Unit**

# Cold Foil Printing Unit

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**Autostar IM-350-6**
**Cold Foil Unit**

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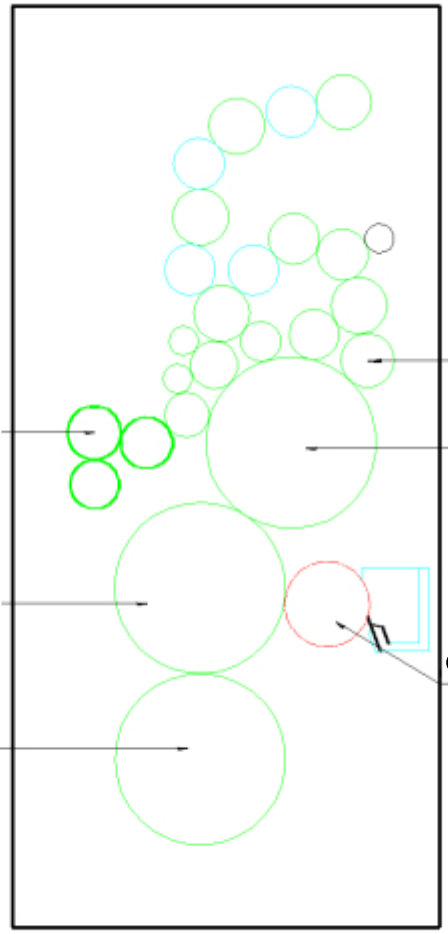
## Schematic Drawing of Offset Printing Unit with Integrated Flexo Unit



Autostar IM-660

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