

ONE STOP SOLUTION IN SEARCH OF
EVOLVING CONVERTING MACHINERIES



SUDDHA

www.suddhagroup.com

AN ISO 9001 : 2015 CERTIFIED COMPANY



Company Profile

Welcome to the world of
“SUDHA”

Company overview

Suddha Machineries & Industries Pvt. Ltd is a trusted name engaged in manufacturing converting machineries. Since 2003, this company has emerged as one of the key players in the global market of manufacturing world-class machineries for packaging industries. These machineries are indigenously designed and backed by an expert team of professionals. Our experts have thorough knowledge and experience and they use their creative powers while designing these machineries.

Background and Development

Suddha Machineries & Industries Pvt. Ltd is ready to equip clients with a wide range of automated packaging solutions. We offer machinery for different industries, like Pharmaceutical Packaging, Flexible Packaging, Label Industries, Paper Packaging industries & many more. Being a flagship name under Suddha Group of Industries, we recognize the value of our customers and deliver them with quality services.

The company showcases a vibrant environment that encourage employees to express their interest and potentiality towards their work. Our team of professionals incorporates custom and standard quality design to the machines. We provide customers with various upgraded machineries equipped with multitude of functions. We ensure that the products will be endowed with more agility for it to meet market demands.

Our Esteem Clients

Domestic Clients	State
P.Chotalal Manufacturers & Exporter	Daman
G T Paper	Gujarat
Gujarat Foils Ltd.	Gujarat
Kamakshi Flexo Pack	Gujarat
Marudhar Industries Ltd	Gujarat
Navratan Specialities	Gujarat
Paras Enterprise	Gujarat
R S Foil (p) Ltd.	Gujarat
Rajat Vinyl	Gujarat
Raviraj Foils Pvt Ltd.	Gujarat
Rototon Polypack Pvt. Ltd.	Gujarat
Spoton Coating Pvt Ltd	Gujarat
Uniworth Enterprises LLP	Gujarat
Varshil Packaging	Gujarat
Virgo Aluminium	Gujarat
Vishal Aluminium	Gujarat
Vishal Containers Ltd	Gujarat
LSKB Aluminium FOILS Pvt Ltd.	Haryana
Medipack Innovation Pvt Ltd.	Himachal Pradesh
Metnere Ltd.	Himachal Pradesh
Sun Packmet Pvt Ltd	Himachal Pradesh
Flexicap Polymers Pvt. Ltd	Karnataka
ACG PharmaPack Pvt Ltd.	Maharashtra
Amcore Flexible India Pvt Ltd.	Maharashtra
Amrapali Foils.	Maharashtra
Bilcare Ltd	Maharashtra
Coat All Industries	Maharashtra
Cosmo Flims Ltd.	Maharashtra
Hindalco Industries Ltd.	Maharashtra
Mahesh Plastics	Maharashtra
Manidhari Foils	Maharashtra
MMP Industries Ltd.	Maharashtra
NGPL Paper Pack Pvt Ltd.	Maharashtra
Packtime innovations Pvt Ltd	Maharashtra
Printmann Foils	Maharashtra
Baddi Foils Pvt Ltd	Rajasthan
Daga Poly Laminators	Rajasthan
P G Foils Ltd	Rajasthan
North East Pharma Pack	Sikkim
Prakash Flexible	Tamilnadu
Aurobindo Pharma	Telangana
ManCraft	Telangana
SLV Industries	Telangana
Excel Pack	Uttarakhand
Huhtamaki India	Uttarakhand
Sergusa Solutions	Uttarakhand
Sparsh Industries Pvt Ltd	Uttarpradesh
Uflex Ltd.(Flim Division)	Uttarpradesh
Jindal India Ltd	West Bengal
Simflex Packpro Pvt Ltd.	West Bengal

International Clients	Country
Sililabel S.A.	Argentina
Bangla Foils Ltd	Bangladesh
Chittagong Foils Ltd	Bangladesh
City Foils	Bangladesh
Jamuna Foils Ltd	Bangladesh
Metro Foils Ltd	Bangladesh
Padma Lamitube Ltd	Bangladesh
Rifat Aluminium Packaging Ltd	Bangladesh
ZK Foils	Bangladesh
Swisspack For Printing & Packaging	Egypt
Behineh Pooshesh Jam	Iran
Daroupat Shargh	Iran
Agri Chemicals Ltd	Nigeria
Bhojwani Impex	Nigeria
Maple Plastic Industries Nigeria Ltd.	Nigeria
Noor Plastics	Nigeria
Studio Press	Nigeria
Rich Flex Pvt Ltd	South Africa
Kandy Plastic	Sri Lanka
Orient Print Pack	Syria
Ascend Metal Industries LLC	UAE
RamaPack Industries	UAE
Nile Plastics	Uganda

OUR INFRASTRUCTURE

A sprawling campus of ample is built in the heart of Gandhinagar at Plot No. 651-652, Village Moti Bhoyan Kalol - Khatraj Road, Taluka - Kalol District - Gandhinagar Gujarat - 382721.

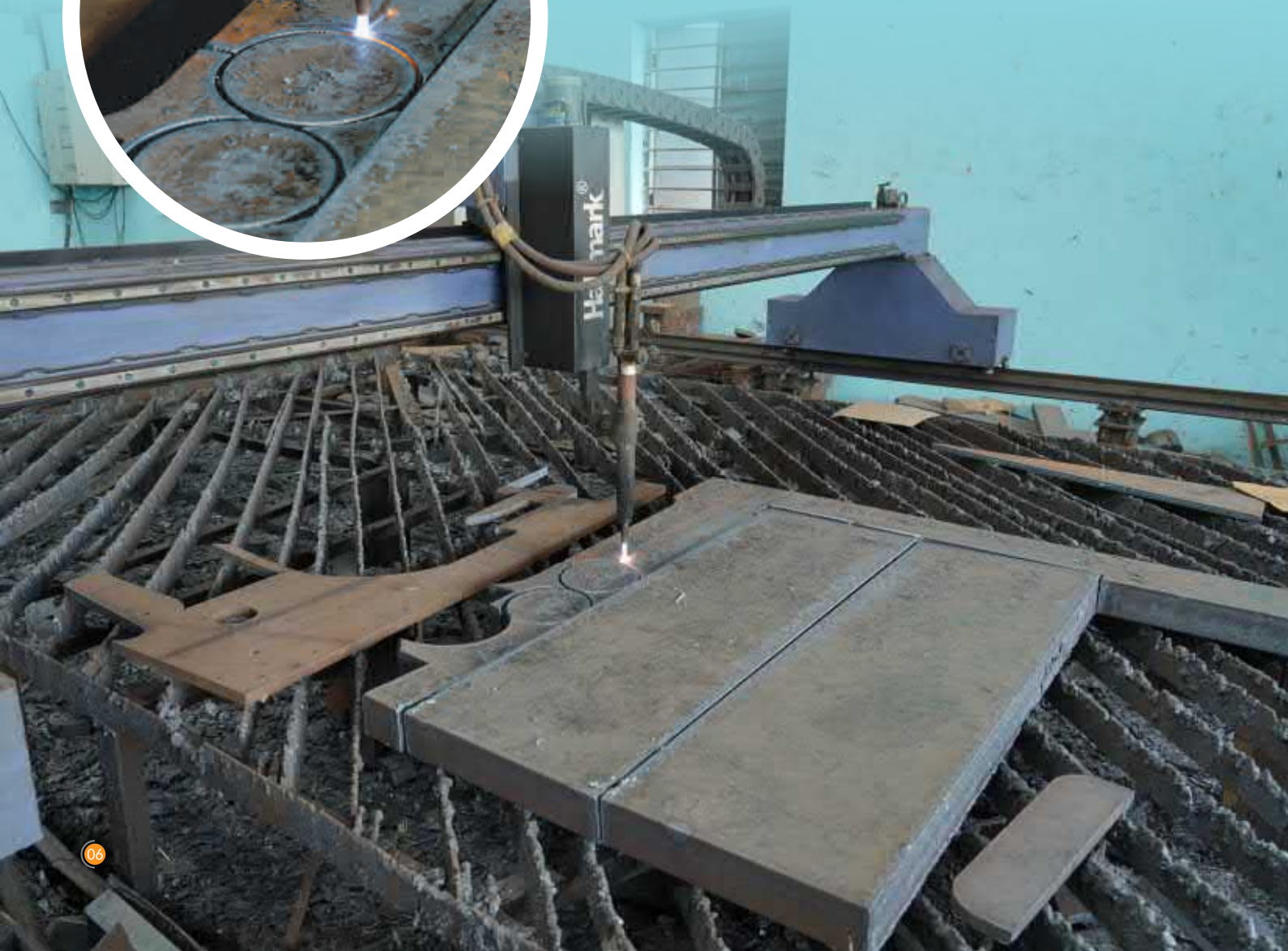
The place is comprised of admin office, design department and storing the products. The main shed is dedicated to production and machine assembly section.

Our designing or customization expertise helps the clients to get the converting design conceptualized on paper. The work consists of quality, accuracy, and robustness.

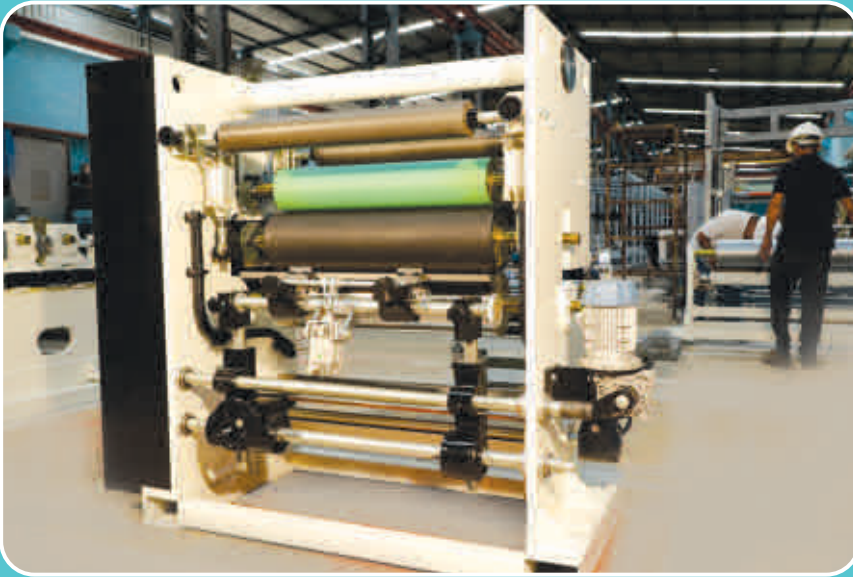
Frame is considered to be the heart of any machine. Our professionals manufacture the frames with CNC plate cutting. Therefore, the products are machining on "Hartford".





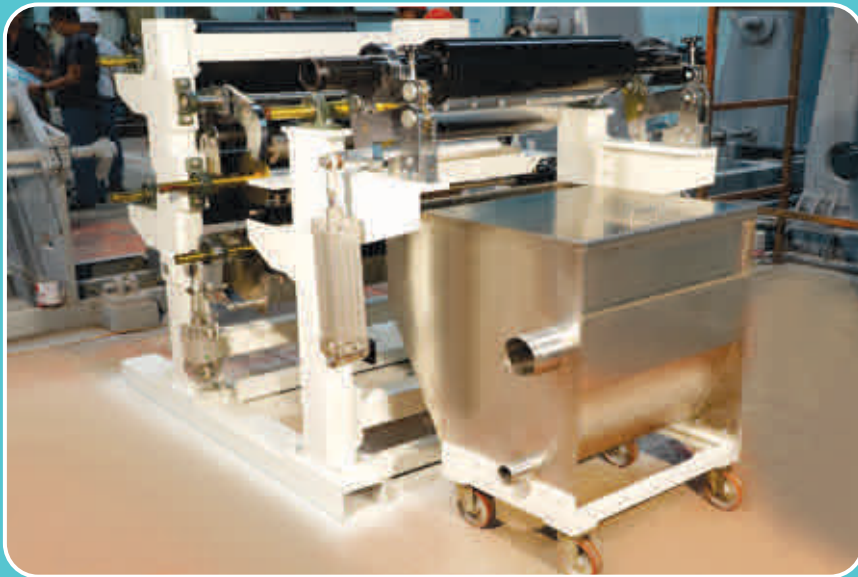


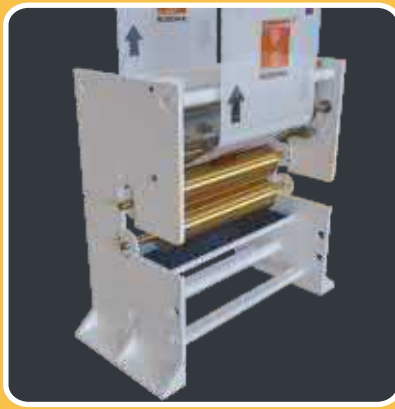




CHAMBER DOCTOR BLADE COATING SYSTEM



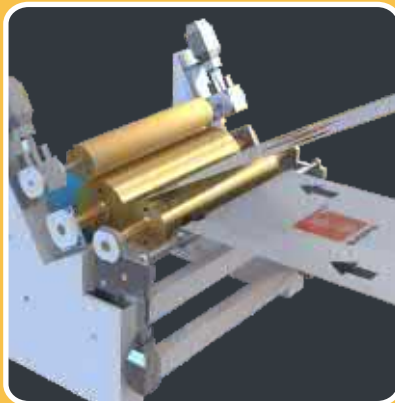




3 ROLL COATING



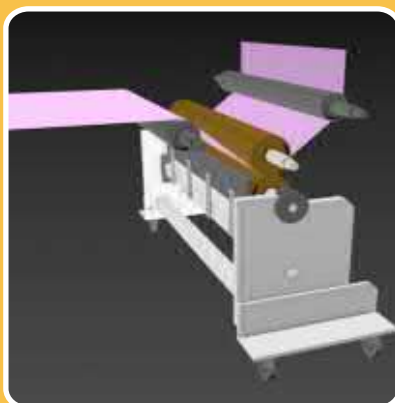
AIR KNIFE COATING



COMMA COATING



5 ROLL COATING



CHAMBER DOCTOR BLADE

COATING MACHINERIES



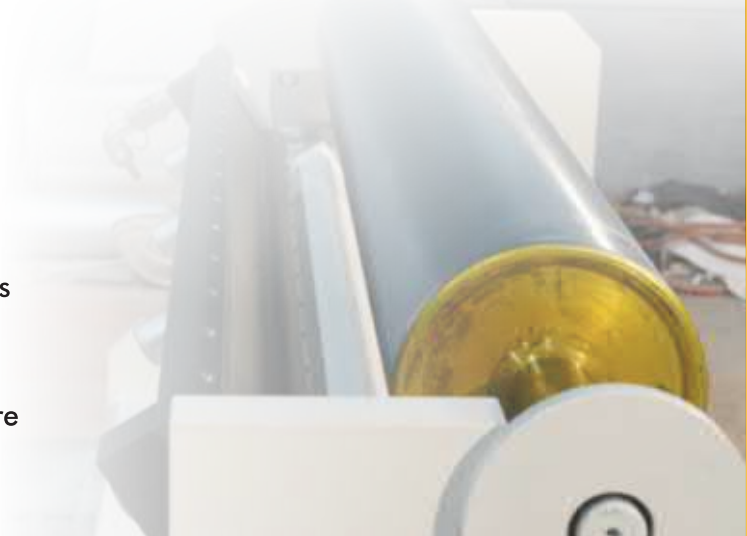
COATING

A **coating** is a covering that is applied to the surface of an object, usually referred to as the substrate. The purpose of applying the coating may be decorative, functional, or both. Coatings may be applied as liquids, gases or solids e.g. Powder coatings.

A major consideration for most coating processes is that the coating is to be applied at a controlled thickness, and a number of different processes are in use to achieve this control, ranging from a simple brush for painting a wall, to some very expensive machinery applying coatings in the electronics industry. A further consideration for registered coatings is that control is needed as to where the coating is to be applied. A number of these non-all-over coating processes are printing processes. Many industrial coating processes involve the application of a thin film of functional material to a substrate, such as paper, fabric, film, foil. If the substrate starts and ends the process wound up in a roll, the process may be termed "roll-to-roll" or "web-based" coating. A roll of substrate, when wound through the coating machine, is typically called a **web**.

FUNCTIONS OR PROPERTIES OF COATING

1. Water Resistance.
2. Chemical Resistance
3. Proper Adhesion
4. Abrasion Resistance
5. Ability Of Expand And Contract
6. Weather Resistance
7. Resistance To Bacteria And Fungus
8. Pleasing Appearance
9. Easy Application
10. Resistance To Extreme Temperature
11. Radiation Resistance
12. Friction Resistance.



COATING MACHINERIES

We provides web based Coating machineries having all applications in roll form. Any coating machine wherein Input as well as Output is in roll form or roll is prime applicator for coating that industries are served at Suddha.

Suddha Machineries is one stop solution serving all aluminum foil /paper / films based coating industries such as Pharmaceuticals, Food & Beverages, Media (Branding & designing), Textile, Label print and Adhesives.

The machines are equipped with various methods/technology used for coating such as Silicon Coating, Hot Seal, Cold Seal, Wax coating, PLA coating , VMCH Coating, Vinyl based lacquer coating and many more.

Suddha offers world class technology along with customized machinery for various industries as per their requirement.

VMCH (HEAT SEAL LACQUER) COATING MACHINE



Application

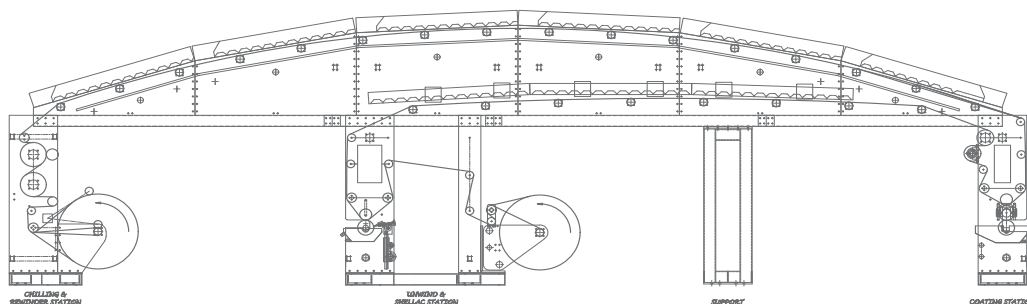
V.M.C.H. Coating on Aluminium Foil, and to apply a thin coating of Shellac on Reverse Foil Surface in a Single Operation. To produce Aluminium Blister Pack and Lid Foils.

Technical Specification

Materials to be processed	Blister Foil
Primer Coating GSM	0.15 – 0.50
Coating GSM	4.0 – 8.0

General Specifications

- 1) Shellac coating - Gravure method
- 2) V.M.C.H coating - three roll coating system / Gravure method/ Pneumatic application for pressure roller, Doctor Blade, drying hood and Nip unit.
 - High velocity VMCH drying system equipped with insulated drying tunnel of appropriate length
 - Shellac drying system equipped with insulated drying tunnel of total specific length
 - VMCH tunnel is distributed in heating zones & cooling zone having individual air blower for better temperature control.
 - Top (VMCH) dryer rollers are of Teflon coated to protect lacquer shifting from coated foil.
 - Air nozzles distribute uniform hot air across the wash width and are placed against idle rollers for proper support
 - Completely Enclosed Machine as Per GMP requirements. Machine will be fully enclosed from both operating side and from front side. Machine inside entry will be restricted to authorized operators. Outside covers are made of aluminium sections and transparent polycarbonate sheet. Drive side will be protected by five feet fabricated safety guard.
 - The catwalk railing will be sufficiently high, heavy duty construction and properly mounted with a ladder with only single entry facilities. All three sides of the machine will be covered by catwalk.
 - Dual timing pulley of special material to avoid heating effect. This pulley drive system will ensure zero slippage of tunnel roller & the scratch mark in coating.



SILICON COATING MACHINE



Application

To coat solvent free silicon through three roll / five roll / six roll coating system unit with a camel back drying system consist of gas based hot air system distributed in total eight zone or more as required.

Materials to be Processed

Paper : From 40 gsm – 150 gsm

Pet : All suitable dry lam range.

Speed : 400 MPM

Coating Method

Silicon coating - Three roll/Five roll/six roll coating (specially designed)

Pneumatic application for doctor blade and pressure roller, drying hood in coating units.

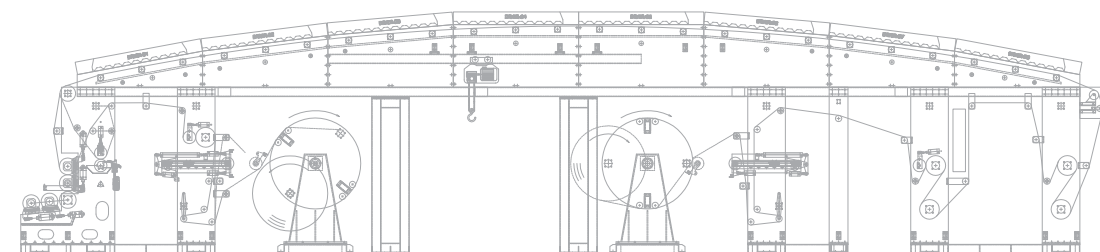
Drying tunnel is distributed in 5 heating zones having gas fired hot air based drying system.

Chilling roller outside top dryer are of 300 mm in dia with spiral circulation to remove the heat from surface before rewinding.

Air nozzles distribute uniform hot air across the web width and are placed against idle rollers for proper web support

Air volumes can be controlled by manual dampers at each station

A gear box and differential gauge based micro gap adjustment facilities in between gravure roll and impression roll will be provided in the machine.



REGISTERED COATING CUM REGISTER LAMINATION MACHINE



Application

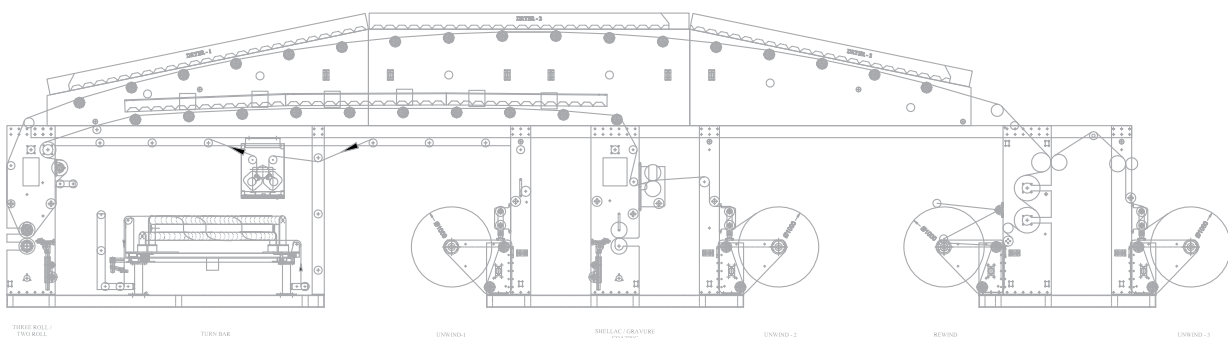
To in line register coating Hot Seal Lacquer, VMCH , Hot Melt in solvent based and Water Based emulsion through Gravure Coating unit with combination of drying system consist of I.R. dryer and hot air system distributed multi zone. Special attachments for hot melt application. In line Register Coating allows to apply expensive HSL etc. in targeted area with in line registration allowing to save expensive material.

Technical Specification

Material to be processed : Printed Paper-Al, printed Aluminium, Printed PET Film
 Mechanical speed : 200 mpm
 Coating GSM : 1-3 GSM

General Specifications

1. HSL COATING: Gravure Method
2. Hot melt Coating: Chilling roller before rewind and after coating unit.
 In line registration using special sensor using reference colour available of printed film.



REGISTERED COATING CUM REGISTER LAMINATION MACHINE

PVDC COATING MACHINE



Application

To coat Primer and Poly Vinylidene Chloride (PVDC) in a latex emulsion form in water on line through Air Knife, Chambered, Reverse Gravure Coating unit with a combination of drying system (horizontal web path) consist of I.R. dryer & hot air system distributed in multi zone.

Technical Specification

Materials to be Processed	:	Blister PVC 150 - 500, Other Thin Film e.g. PET, BOPP for Food Packaging
Mechanical Speed	:	100 MPM
Primer Coating GSM	:	1.0 – 2.0
PVDC Coating GSM	:	10.00 – 12.00 per coating head

General Specifications

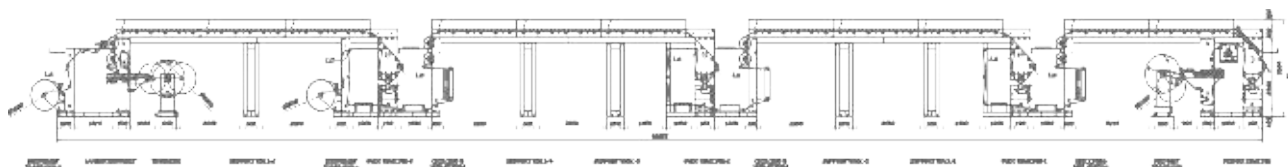
Chambered Doctor Blade / open Enclosed tray in Reverse gravure coating application in a chilled water circulation bath. Kiss coating with the help of a super finish coating roll and leveler and control of coating wt by the application of air knife during passing of the coated film through bridle roll.

Turret type unwind & rewind stand with safety chuck & air shaft. Top dryer hood will be provided with pneumatic cylinders for easy nozzle cleaning and easy material movement monitoring. The IR bank at the entry point of the dryer equipped with a pneumatic lifting system interlocked with machine start sequence. Air volumes can be controlled through suction damper, recirculation & exhaust dampers at each station all tray, tanks & dryer inside fabrication and machine portion coming in contact with PVDC vapor are made from SS – 316 material or epoxy coated.

All passing rollers of dryer will be driven by a synchronized separate drive. Interchangeable circulation system will ensure quick and easy change over from pass to pass. Material handling system through monorail at loading & unloading point. PVDC circulation system consists of S.S. tray with water circulation, specially designed anti foam circulation pump and jacketed tanks.

The top drying hood of each zone will be provided with a mechanical stopper interlocked with a alarm light and hooter system along with pneumatic actuation for safety during cleaning of passing roller inside drying hood.

The electrical panel will be with IP-55 protection and emergency switch will be provided on each important position.



HOT MELT / WAX COATING CUM LAMINATION MACHINE



Application

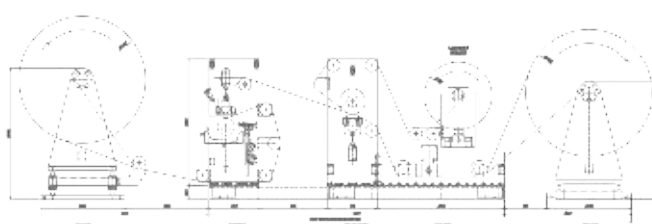
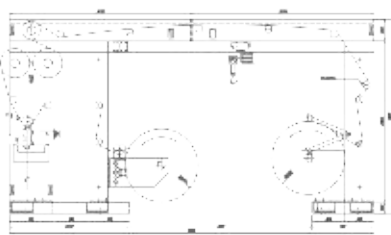
Wax/Hot Melt Coating on Aluminium Foil Laminates,
Papers through Gravure coating Method / Three Roll Coating Method.

Technical Specification

Materials to be processed	:	Aluminium Foil, Laminates, Paper
Maximum Mechanical Speed	:	150 MPM

General Specifications

- Cat walk along the machine length provides easy access to the whole machine
- Sturdy body frame construction enables high speed coating without vibration
- Load cell based tension control unit at both unwind station
- Chilling roller before rewind unit and after coating unit.
- All transmission through timing belts and pulley.
- Un-winder and re-winder are with safety chuck and air shaft type mounting system / shaftless.
- Separate melting tank along with distribution line with hot oil circulation and jacketed tray for application unit.
- Separate inbuilt hot thermic fluid heating system for heating





BIODEGRADABLE WATER REPELLENT COATING/ SUBLIMATION COATING MACHINE



BIODEGRADABLE WATER REPELLENT COATING/SUBLIMATION COATING MACHINE

Application

To coat water based coating through three roll coating with air knife system and mayer bar unit with an air flotation drying system consist of diesel fired hot air system distributed in total five zone of four meters each.

Materials to be processed

Base paper of 70 - 150 gsm

Max dia of parent roll

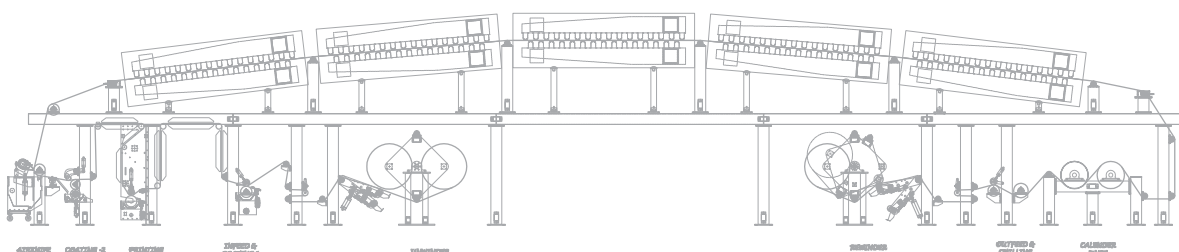
1200 mm

Speed of the machine

Max mechanical speed of the machine -- 200 meters per minute.

Coating process

A roll coating system of 5.00 gsm - 11.00 gsm with the help of Bath roll, Application roll, Impression rubber roll, steel Brest roll, Air knife and Mayer bar application. The top rubber roll (impression roll will be without drive) will act as a pick up roll.



LAMINATION MACHINERIES



HEAT & PRESS LAMINATION MACHINE (STANDARD)



Application

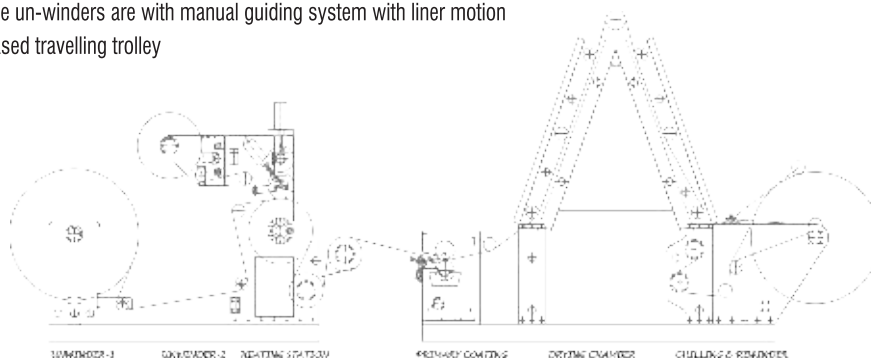
To laminate poly film with pharmaceutical grade Aluminium foil by pressure application through rubber rolls in presence of hot drum and to apply a thin coating or shellac on foil surface.

Technical Specification

Materials to be processed	Aluminum Foil, Papers, PE Films
Maximum Outer Diameter	1000 mm
Maximum Operational Speed	60 MPM

General Specifications

- Heating drum is driven by AC drive system synchronized with re-winder and are dynamically balanced, ground and hard chromed.
- Pneumatic pressure application system (both side control) for both rubber rolls (hot drum & shellac wash unit) & back up roll.
- Temperature control of heating drum through submersed electric heater in thermic fluid inside drum and exit of expanded oil through rotary joint.
- Gravure coating method for shellac wash unit suitable for minimum exposed solvent area.
- Coating roller-mounting assembly can accept integral shaft type as well as hollow type coating rollers.
- High velocity drying system equipped with different zone electrical radiator based hot air dryer to dry shellac coating on foil surface.
- Passing roller inside dryer made from seem less pipe duly chromed and dynamically balanced provided proper web support against hot air.
- A separate AC re-winder drive system synchronized with drum drive.
- Pneumatic brake un-winder tension system with load cell for both un-winder with suitable controls.
- All un-winder and re-winder are with air shaft and safety chuck mounting system suitable to adopt paper / metal core.
- Nos. of adjustable rolls are provided in different positions to compensate gauge variations of any winding defects on foil.
- Both of the un-winders are with manual guiding system with liner motion bearing based travelling trolley



HEAT & PRESS LAMINATION MACHINE

ALU ALU LAMINATION MACHINE



Application

Solvent based dry lamination of aluminium foil with nylon / pvc film and other substrate by gravure coating system and lamination after specially temp monitored drying application in double operation. A premeasured treatment is required after first lamination.

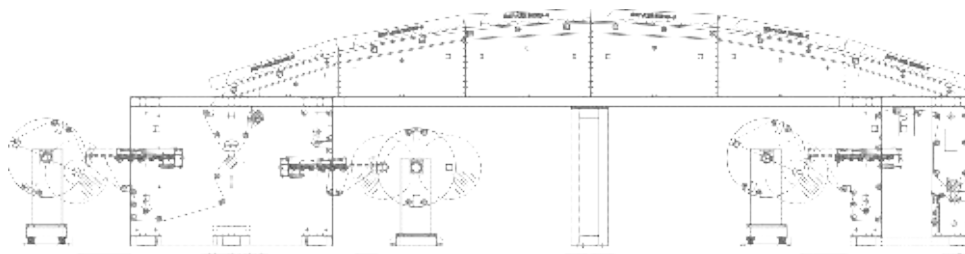
Technical Specification

Materials to be processed

Aluminium foil	: 40 μ - 50 μ
Pvc	: Up to 60 μ
OPA	: Up to 40 μ
Maximum operating speed	: 120 MPM

General Specifications

- Solvent based adhesive application -- Gravure coating system
- Pneumatic application for doctor blade and impression roller, horizontal camel back drying hood, coating and dry lamination nip unit.
- High velocity drying system equipped with multi zone drying tunnel of proper length and with individual air blower and radiator with plc based three way control valve for better temperature control up to the required temperature.
- Chilling roller outside top dryer are of specified diameter with spiral circulation to remove the heat from film surface before rewinding.
- The electrical panel will be with IP-55 protection and emergency switch will be provided on each important position.



WET LAMINATION WITH ON LINE COATING MACHINE



Application

Water / solvent based wet lamination by multiple coating systems and drying. Dry lamination of two webs on dry lamination nip after dryer exit on re-winder side with a dry lamination attachment.

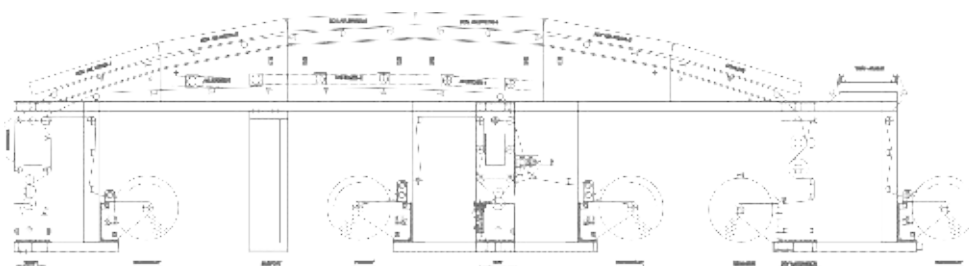
Technical Specification

Materials to be processed

Materials To Be Processed	Aluminium Foil, PET, MET PET, BOPP, LDPE, Paper
Maximum Un-winder / Re-winder Roll Diameter	1000 mm
Mechanical Speed	200 MPM

General Specifications

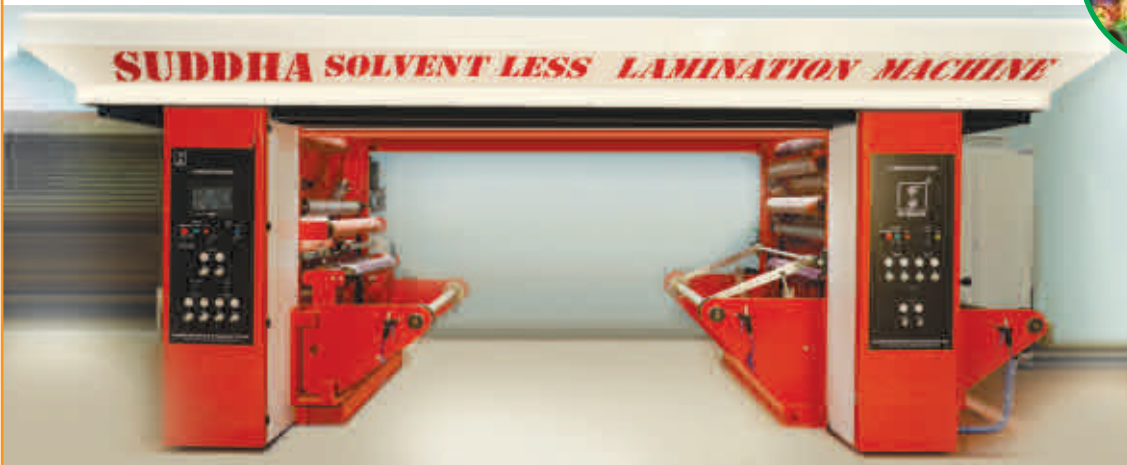
- Adhesive Coating : Gravure coating method with Doctor Blade Application Method
- Water Based Lamination : Doctor Blade Application Method
- Pneumatic application for application roller and pressure roller, vertical drying hood lamination nip in wet coating and lamination unit
- Pneumatic application for doctor blade and pressure roller, drying hoods.
- Drying tunnel is distributed in different heating zones having individual entry and exit port for better flow control in each zone.
- Dry lamination attachment with nip after drying tunnel before chilling station.



WET LAMINATION WITH ON LINE COATING MACHINE



SOLVENTLESS LAMINATION MACHINE



Application

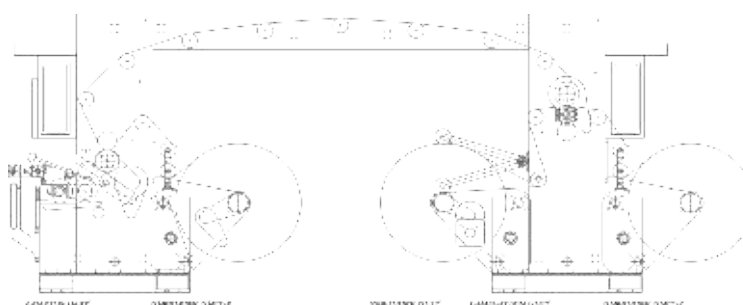
Solventless laminator is Suitable for High-Speed Solventless adhesive lamination of different types of plastic/metalized films, paper and Aluminium Foil. This Application is most suitable for food packaging industry.

Technical Specification

Materials to be processed	:	Polyester, BOPP, Aluminium Foil, LDPE/HDPE
Un-winder/Re-winder Diameter	:	1000 mm
Mechanical Speed	:	500 MPM (Max)

General Specifications

- Laminating station is located on the opposite side of the gluing section. This results in their close proximity with the un-winder of the material to be laminated. This particular configuration facilitates and optimizes the lamination of delicate webs such as thin aluminum foil at high speed.
- High precision measuring steel roller with three rollers for adhesive transfer.
- Precision micro gap adjustment for adhesive ensures precise coating weight.
- Back up pressure for lamination nip to ensure better performance.
- Roller heating through water/oil heating systems.
- High precision digital a/c vector drive.
- All electrical and electronic components are confined inside of a cabinet which is part of the machine body for easier wiring and maintenance.
- Very precise tension controls due to selected electronic components.
- Shaft less un-winders and re-winder.
- Thick stress released metal frame. CNC machined for total machine fabrication.



Hi-SPEED HEAT & PRESS LAMINATION MACHINE



Application

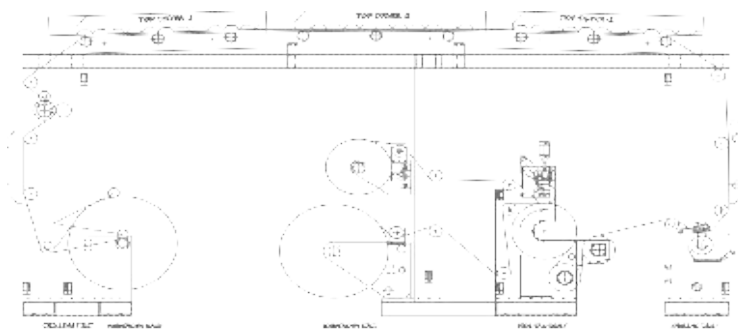
To laminate poly film with pharmaceutical grade Aluminium foil by pressure application through rubber rolls in presence of hot drum and to apply a thin coating or shellac on foil surface.

Technical Specification

Materials to be processed	Aluminum Foil, Papers, PE Films
Maximum Outer Diameter	1000 mm
Maximum Operational Speed	100 MPM

General Specifications

- Completely Enclosed Machine as Per GMP requirements. Machine will be fully enclosed from both operating side and from front side. Machine inside entry will be restricted to authorized operators. Outside covers are made of aluminium sections and transparent polycarbonate sheet. Drive side will be protected by five feet fabricated safety guard.
- The catwalk railing will be sufficiently high, heavy duty construction and properly mounted with a ladder with only single entry facilities. All three sides of the machine will be covered by catwalk.
- Dual timing pulley of special material to avoid heating effect. This pulley drive system will ensure zero slippage of tunnel roller & the scratch mark in coating.
- To protect operators from hot drum surface, two nos of pneumatically actuating sliding cover will be provided with proper interlock from both side.



PRINTING MACHINERIES



ROTOGRAVURE PRINTING MACHINE FOR ALUMINIUM FOIL



Application

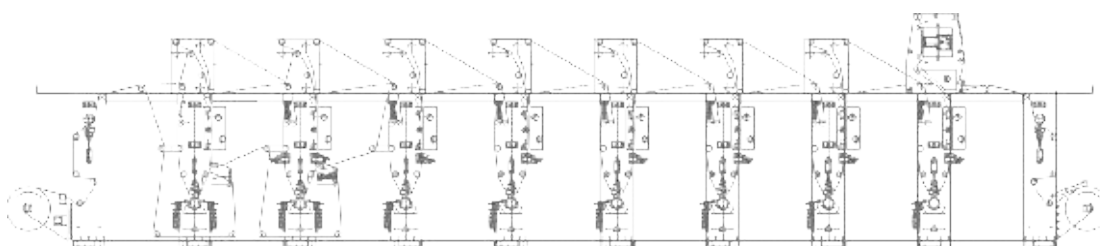
Single or Multi Color Printing through Rotogravure process for Aluminium Foil, Shrink PVC Laminates.

Technical Specification

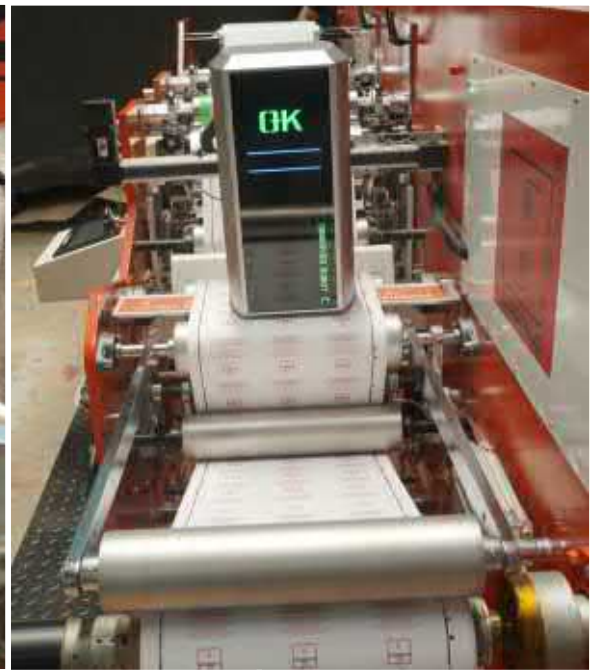
Materials to be processed	Aluminium Foil, Foil Laminates
Printing Station	Up to 6 Colour/4+3 Colour
Maximum Mechanical Speed	150 MPM

General Specifications

- Machine can be made of different combinations as per customer's requirements for forward and reverse printing.
- Auto Tension control / Servo
- Electronic Registration Control (Optional)
- Ink Circulation System (Optional)
- Web Video Attachment (Optional)
- The machine will be provided with co2 suppression arrangement in coating area. We will supply the complete piping along with sensors and nozzle point. The Co² tank will not be in our scope of supply. (Optional)



FLEXO PRINTING MACHINERIES



FLEXO PRINTING MACHINE



Servo driven Flexo Printing with 360 degree circumferential register adjustment with Online Web Monitoring Camera System

Application

This slitter rewinder simplex /duplex surface winding machine capable of handling extensive materials with guage variations to high tensile films, specially PET, BOPP and Polythene film at specified speeds. It is designed for easy operation and minimum maintenance,

Technical Specification

Material to be processed	Paper upto 120 Gsm / Aluminum Foil – 20 mic to 40 mic
Speed	150 Mpm
Repeat length	Min 250mm / Max 450mm
Max Unwinder Dia	600 mm
Max Rewinder Dia	600 mm

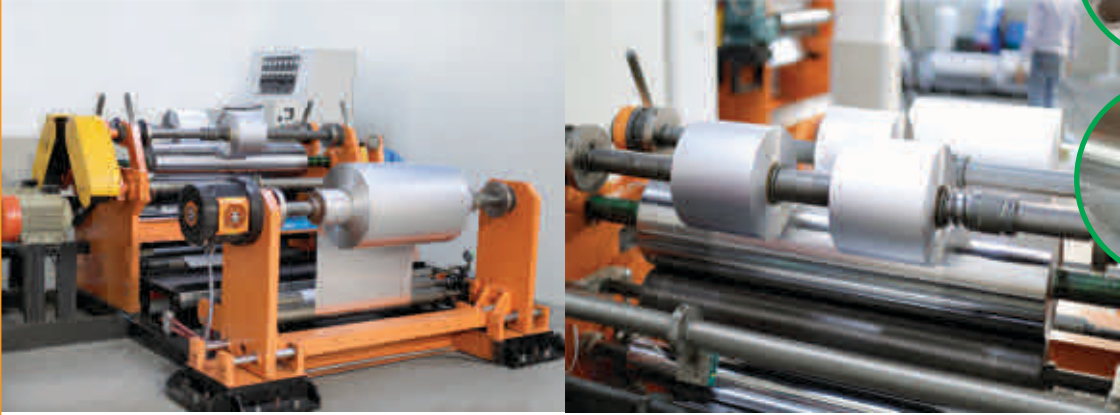
Salient Features:

- Unwinder and Rewinder is Driven by 5.5 KW SEW make Geared Motor
- 76mm Airshaft at Unwinder and Rewinder.
- Infeed and Outfeed is driven by 2 KW Servo motor with Planetary Gear Box.
- BST make Edge Guide System to Guide the material till Rewinder.
- Impression roll is Driven by 5 KW Servo Motor with Planetary Gear Box
- Stereo roll is driven by 2 KW Servo motor with Planetary Gear Box.
- When machine is in Idle condition Ink Roll is driven by 0.1 hp motor so that the Ink do not get saturated in the Tray
- Pneumatically Controlled Doctor Blade unit for Fine Adjustment.
- Online Web Monitoring System along with Defect Detection System.
- Micro gap adjustment vertically and horizontally for Stereo Roll.
- Movable 11 inch Easy Access HMI system for easy operation.
- Stainless steel hardened and ground plate roll shafts.
- High capacity dryers with 9 KW Electrical Heating system for each Printing Station
- Lenze make servo motors and drives

SLITTING & DOCTORING MACHINERIES



SURFACE SLITTING MACHINE



Application

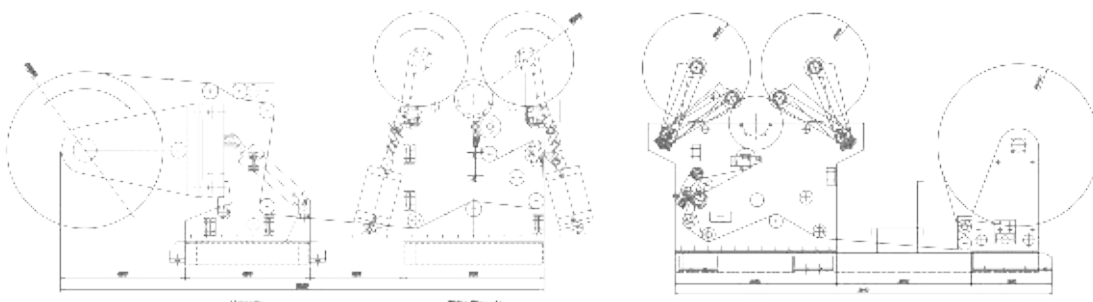
This slitter rewinder simplex /duplex surface winding machine capable of handling extensive materials with guage variations to high tensile films, specially PET, BOPP and Polythene film at specified speeds. It is designed for easy operation and minimum maintenance,

Technical Specification

Materials to be processed:	Plain or printed films-PET, BOPP, Polyfilm & Paper, plain and printed Laminates.
Minimum Slit Width	30mm
Maximum Mechanical Speed	300 MPM
Maximum Un-Winder Diameter	1000mm
Maximum Re-winder Diameter	600mm

General Specifications

- A heavy duty un-winder with tracking trolley with safety chuck based air shaft mounting along with edge guiding system.
- Also shaft-less un-winder provision is there.
- Safety interlocks are provided in all operations sequences.
- Razor Blade & Rotary Slitting system.
- Heavey duty, multiple bearing supported rewind friction shaft is provided for easy and fast changeover.
- The electrical panel will be with IP-55 protection and emergency switch will be provided on each important position.



GIANT CANTILEVER SLITTING MACHINE



Application

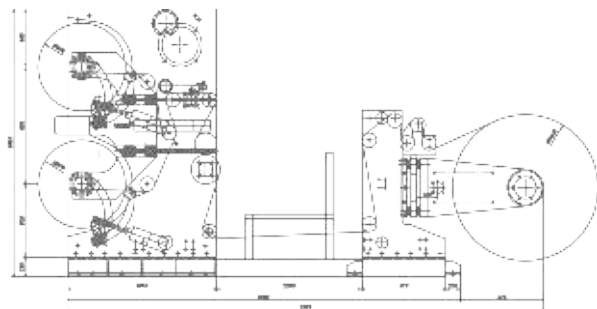
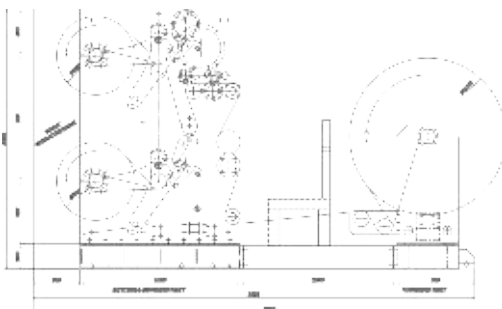
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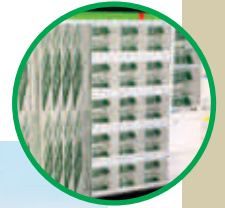
Technical Specification

Materials to be processed	Plain or printed films- PET, BOPP, Polyfilm & Paper, plain and printed Laminates.
Minimum Slit Width	30mm
Maximum Mechanical Speed	500 MPM
Maximum Un-Winder Diameter	1000mm
Maximum Re-winder Diameter	600mm

General Specifications

- A heavy duty un-winder with tracking trolley with safety chuck based air shaft mounting along with edge guiding system.
- Also shaft-less un-winder provision is there.
- Safety interlocks are provided in all operations sequences.
- Razor Blade & Rotary Slitting system.
- Heavey duty, multiple bearing supported rewind friction shaft is provided for easy and fast changeover.
- The electrical panel will be with IP-55 protection and emergency switch will be provided on each important position.





100% INSPECTION MACHINE EAGLE VISION



Application

Typical Inspection/doctoring process involves, rewinding the printed web and inspecting the same under stroboscope/web video to check for defects. In this process human interface is primary parts (in case of stroboscope human eye works as images scanning and processing, while in web video system, human eye view images on screen and decided whether it is correct or defective images.) Most critical fallacy is basis of still image by stroboscope is that we are missing of 70-90% images, which are skipped in inspection process. For quality checking basic premise is the randomness, but in above-mentioned process we are putting scanning in pattern missing of the randomness part. Conventional inspection is not through i.e. not-100%, it depends upon human's capacity to scan images and compare them simultaneously with the acceptable criteria images. To this task without any more error or thoroughly is beyond human capacity. Even when operator detect the defect it is his subjective judgment to accept or reject the defect. So to minimize above-mentioned shortcomings we have developed -

“The 100% Print inspection System- Eagle Vision” FULLY AUTOMATIC DEFECT DETECTION/INSPECTION SYSTEM

Adopting the imported 4K/8K (as per requirement) color line scanning CCD camera, the fully automatic inspection machine-“Eagle Vision system” can inspect the printing quality/defect of different material and roll can be doctored immediately by placing the error portion precisely on splicing board or mark errors or defects being detected, and digitally store all errors and corresponding information for further analysis in a real-time manner. The data generated from this machine can used as input for the other special purpose doctoring machine where pre-inspected rolls can be rectified as per the marked/flagged errors identified by this machine.

Technical Specification

Material to be processed	: Aluminum- 15mic- 60mic	Unwinder Roll Weight	: 100kg
Mechanical speed	: 200 MPM	Main Drive	: 2.2KW
Unwinder Max outer dia.	: 500mm	Unwinder Drive	: 2.2 KW
Unwinder Roll Weight	: 100kg	Rewinder Drive	: 2.2 KW
Rewinder Max outer dia.	: 500mm	Digital Web Guide	: +/- 50mm (E+L Make)

Inspection Parameter:

Maximum detection accuracy	: 0.1 mm ² for high contrast 0.2mm ² for low contrast
Registration	: +/- 0.1mm

Salient Feature--

It has a unique design allows to detect the defect and provide provision to rectify the defect in line or flagged defect to be rectified on other machine. In addition to common printed defect, shade variation, Off registration, ghosting, speckling It will stop after detecting a defect, which helps users determine the defect position and eliminate it. This fully automatic web inspection machine can conduct detection for materials with the width of 300mm and the maximum detection speed reaches 100m/min. With relatively high working efficiency, it is a good choice for customers especially in Pharma Packaging segment.

HI-SPEED REVERSIBLE DOCTORING MACHINE REVERSIBLE +



Application

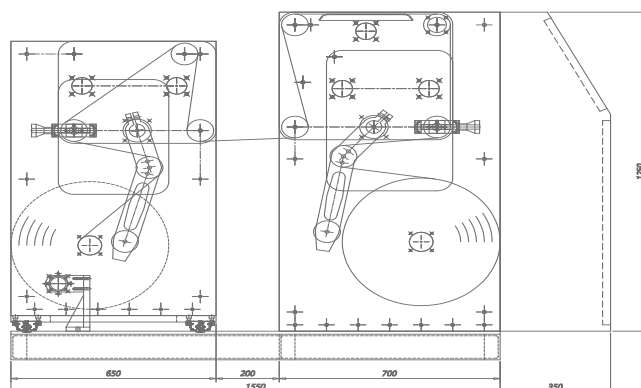
Perfectly suitable to salvage any type of wrongly build up & defective printed, laminated reels with minimum change over time by single operator. Feature of Inkjet printing on film surface online also can be incorporated.

Technical Specification

Materials to be processed	Aluminum Foil, Laminates
Maximum Outer Diameter	500 mm
Maximum Mechanical Speed	300 MPM

General Specifications

- Table top differential model to suit your specific need
- All passing rollers are heavy duty and dynamically balanced
- Air shaft on re-winder & un-winder for a quick change over
- Heavy duty three roll assembly of rollers will travel horizontally with unwind shaft on linear motion bearing and imported hardened shaft ensure correction for any type of defect on material
- Option of standard pneumo-hydraulic web-aligner or photocell sensor.
- On line slitting arrangement.
- Speed & total length meter indicator.
- On line print defect stoppage provision
- Machine will return in reverse direction to exact defect print.
- Online Inkjet printing in-sync with speed, time & photocell mark.
- Option to print in both direction (forward & reverse).
- Also in continuous mode print defect can be flagged & in reverse operation machine will stop at defect flagged position.



REGEMBOSS- REGISTER EMBOSSING MACHINE



Application

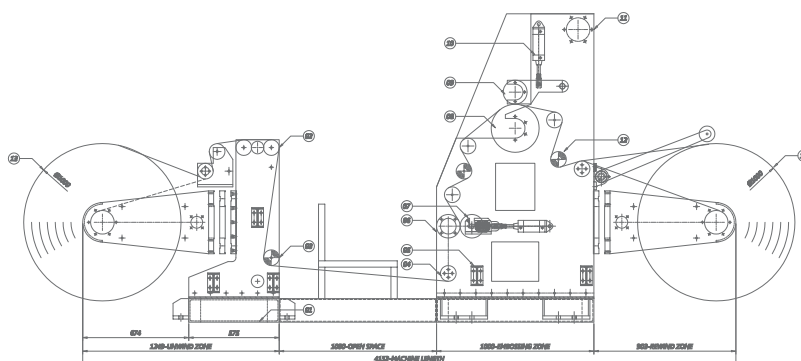
Applicable packaging materials include paper laminate, metalized paper, aluminum foil / paper, composite film etc. The surface Embossing Machine not only provides attractive beauty, but also greatly increases visual effect. Inline registration feature will allows to emboss in area as per the design on existing printing

Technical Specification

Material to be processed	Printed Paper-Al, printed Aluminium, Printed paper
Mechanical speed	150 MPM
Unwind Diameter	1000mm

General Specifications

- Rewind / unwind stand incorporate with safety chuck based air shaft / shaftless makes the loading easier.
- The unwind tension is sensed by load cell sensor and compared to set tension. The auto controller will increase or decrease tension according to the calculated differences automatically.
- The embossing system is hydraulically operated to achieve consistent grain depth.
- Designed Embossing roll in combination with paper roll ensures required results.
- No product damage and high production efficiency.
- Equipped with meter counter for machine auto stop when setting length reached.



REGEMBOSS- REGISTER EMBOSSING MACHINE

SPECIAL TYPE OF MACHINERIES



REGISTERED DEMETALIZATION MACHINE



Application

Registered demetalization of flexible laminates through registered Gravure Coating unit and drying after washing the laminates to remove coated area.

Registration accuracy will be +/- 0.5mm at constant speed

Technical Specification

Materials To Be Processed	:	24 mic laminates Up to 50 mic
Max. Un / Rewinder roll dia	:	1000 mm
Max. Mechanical speed	:	150 mpm

Coating method

Chemical coating / VMCH / Cold seal - Rotogravure coating method.

General Specification:

- Shaftless Unwinder and Rewinder Suitable to adopt 76 / 152 mm Core.
- Pneumatic application for doctor blade, pinch roller and out feed.
- Pneumatic application (with liner bearing) for impression (rubber) roller.
- Motorized spraying system, water filter for water recycling, pinching roller set and a set of air knife to remove water before entering to dryer will be provided with set of rollers.
- Air Nozzle Distributes uniform Hot air across the working width.
- Digital vector auto tune, microprocessor controlled synchronous a/c drive. All running parameters of control panel will come through plc.

ELS PRINTING MACHINE (For Flooring PVC and Decor Paper)

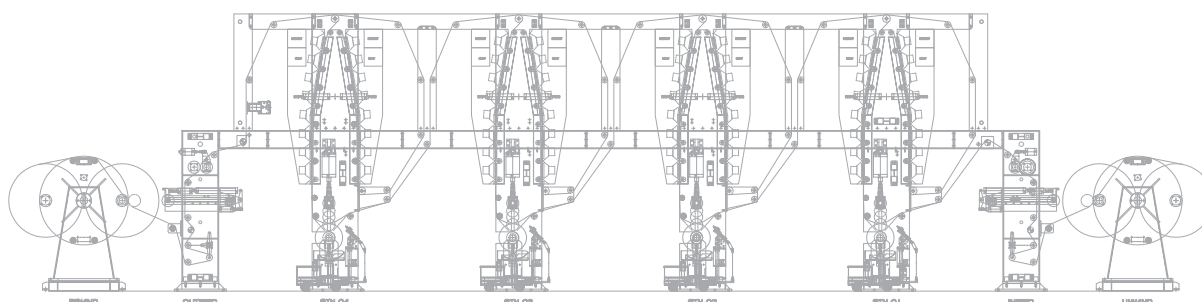


Application

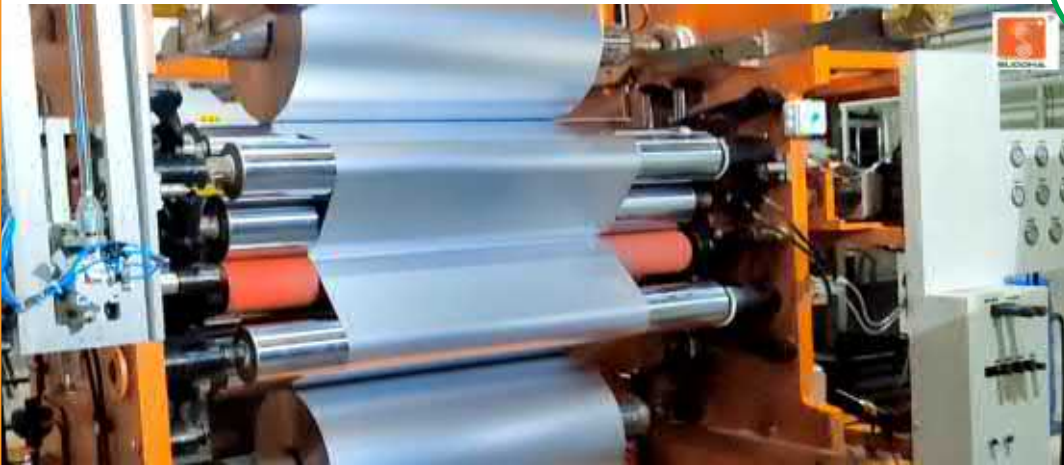
Paper, Soft PVC, Flexibles, Foil.
Max Width : Upto - 2200

Features

- Machine is synchronized and integrated with the register control system through a special encoder mounted on each Servo Motor independent drive at each station allow slow rotation of printing cylinders during machine stops
- Reciprocating traversal movement of +/- 12.5 mm on low friction linear bearing slide assembly and is pneumatically activated.
- Inking system assembly is mounted on light weight trolleys interchangeable between each printing station along with a ink circulation pump at each station.
- Auto Register Control System both Longitudinal and Lateral.
- Turret system with Auto Splicing at Both Unwind and Rewind Unit.
- Web Video Inspection.
- Non registered full coverage coating on the last station by one common cylinder irrespective of the print repeat being processed.
- Auto Dia Sensor at Unwinder.



FOIL SEPARATOR MACHINE



Application

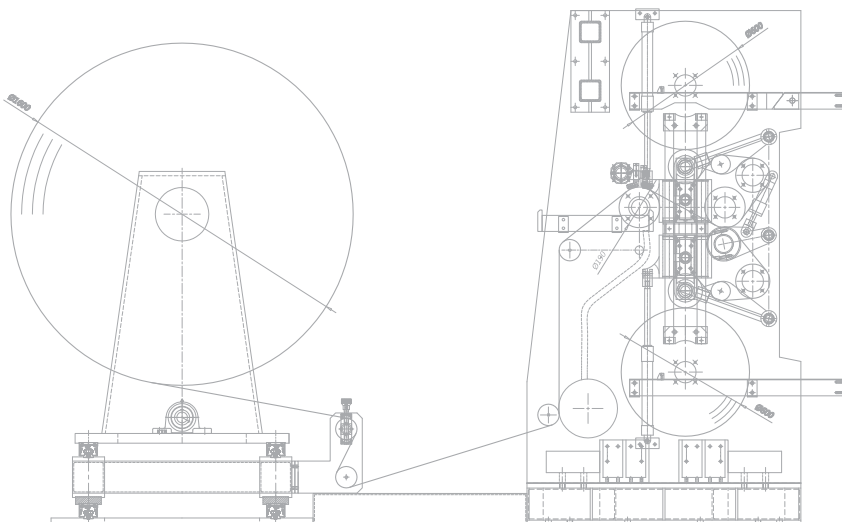
Effective Solution with reliable technology to open and separate the paired foil after Rolling in two rolls in 600 mm dia. Edge Slitting Facility is also provided before rewind. Construction of the machine will be vertical construction.

Technical Specification

Material to be processed	: Aluminum Foil
Type of slitting	: Razor in groove slitting system.
Thickness range	: 6 mic -- 40 mic (double sheet)
Type of rewinding	: Duplex Air shaft winding
Max design speed	: 400 mtr / min.

This machine is designed for easy operation with minimum manpower with one of the best quality of finished roll at the Re-winder.

All important parameters such as speed, tension are displayed in HMI
The integrated ultrasonic welding unit is used to join the foil webs after changing the unwind reel or after a web break.



EXTRUSION COATING & LAMINATION MACHINE (LDPE / PP / PLA)



Application

To coat the LDPE / PP / PLA on the paper, board, film, foil, fabric, woven sack. Extrusion Coating and machine will be with centralized PLC control System along with integrated AC drive system & Beaks as per specifications. This Lamination machine will able to process PP / LDPE / PLA material for multiple coating applications & lamination.

Materials to be processed --

Paper, Board, Film, Pet, BOPP, Aluminium Foil,
Fabric, Woven Sack

Coating Thickness –

8 mic- 60 mic

Max dia. of parent roll ----

1000 mm

Max Weight of Parent Roll ----

1000kg

Extruder Screw size ----

Diameter - 90mm;

Extruder O/P ---- 100kg/hr

(subject to coating thickness, width and material used)

Coating process

Extrusion coating and laminating unit

The heart of the machine is the lamination station, which is characterized by a three-roll system with indirect pressure. The rolls, due to very precise engineering, ensure a constant temperature across the entire web, thus avoiding any stress to the material being coated - and improving the adhesion properties of the coated material to the substrate. The point of lamination is fixed giving the best web handling. Component parts of the extrusion coating and laminating unit, such as the chill roll and the pressure rolls are easily and quickly replaced and the whole group affords optimum accessibility for cleaning and maintenance. For T die decking provision is provided.

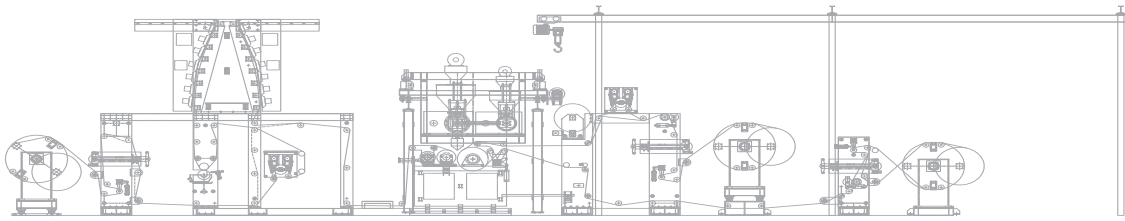
General construction of the machine -- Total Machine adopts PLC Concentrated Control, Human-Machine Interface, FullAutomatic Constant tension Control, New shaft pre-speed start to realize large diameter high speed roll exchange, material cutting and connecting.

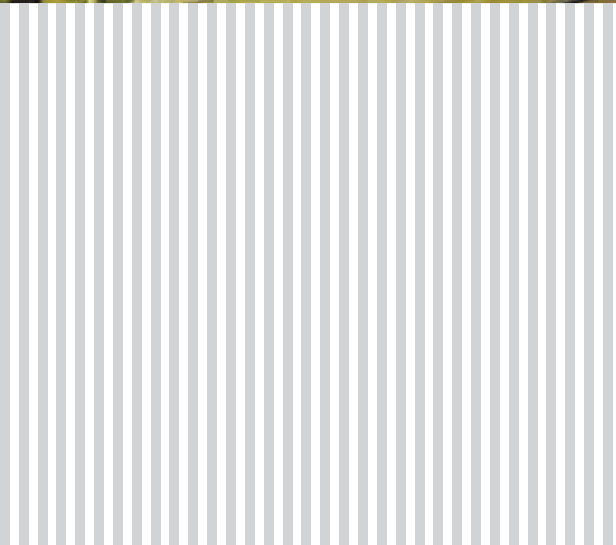
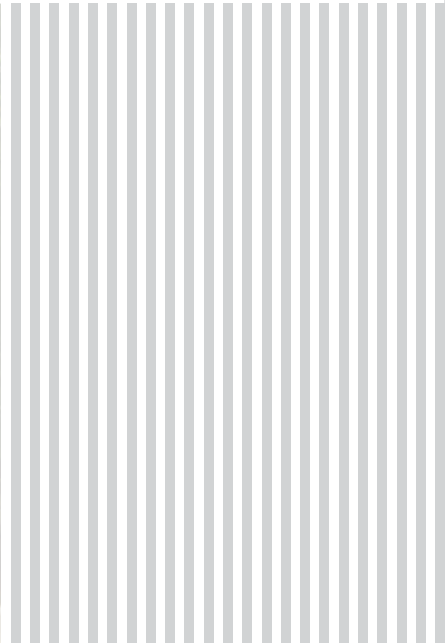
This line is suitable for equipping with single extruder, multi extruders and co-extrusion.

Two Station Unwinder enable fast change over of job.

Optional corona treatment unit will be provided to give a treatment to the film/fabric before lamination.

All Idler rollers (Diameter-100mm/) will be hard-anodized Steel/Aluminum rollers as per process requirement,





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