

**SYNCHRONISATION**

**REGISTRATION**

**INSPECTION**

**DIGITALIZATION**



**SAAPL**<sup>®</sup>  
S A Automation Pvt. Ltd.



Group Company

**SA(AS)**

**One Stop Solution for  
Industrial IOT**

**INTEGRATION**

**SOLUTION**

**SUPPLY**

**COMMISSIONING**

**SERVICE**

**REPAIRING**

| [www.saautomation.com](http://www.saautomation.com) |



# SAAPL<sup>®</sup>

S A Automation Pvt. Ltd.  
Synchronisation, Registration,  
Inspection and Digitalization in Converting

## Our Philosophy

SAAPL believes the philosophy that customer satisfaction is the most important for its growth. Bearing this in mind, SAAPL gives very special attention and take care of their clients' needs. To achieve this, our expert team consists of product engineers and specialists would go out of their way to assist customers, find out the needs and fulfill their requirements. Our products preference in the market explains the best quality products and the customer satisfaction as well.

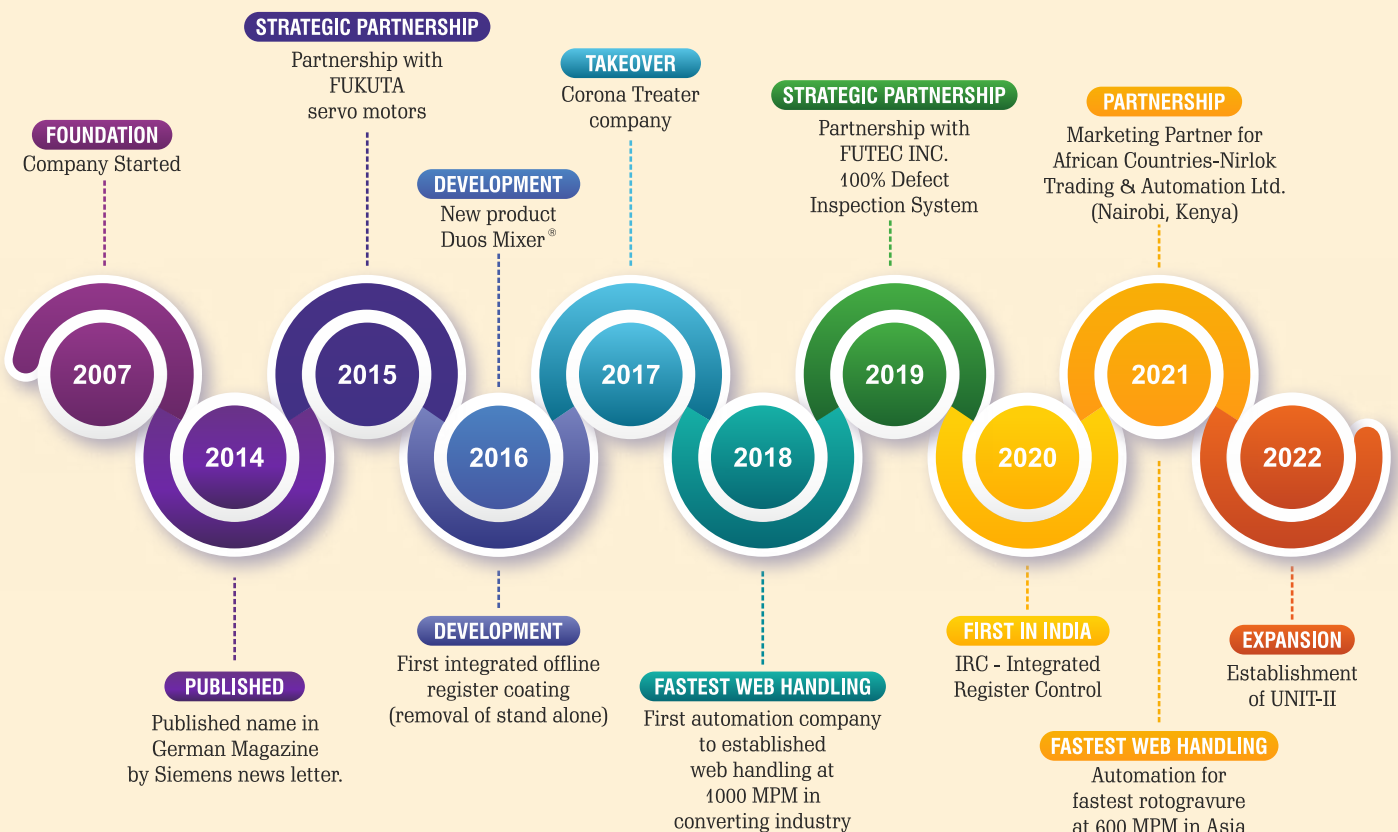
## Our Strength

- More than 85,000 sq. ft. factory area.
- 200+ dedicated & experienced team.
- R&D Department.
- Back up support by our principal.
- Use of globally accepted make of components.
- Regional service support.
- Various strategic partnership

More & more your ultimate partner for customised solution.

**At the time of your decision making for adding technology & values to your projects, we would surely help you to go for right inputs.**

## TIMELINE



## PRODUCT RANGE

CPMS<sup>®</sup> Control Panels for - Multi Axis Synchronisation

Off Line Register, Front & Back Register / Automatic Tension Control

WVIS - Web Viewing & Inspection System

SIMS - 100 % Inspection / IQM - PDF Viewer / Work Flow

Digital Inspection Table

ARC / IRC - Automatic / Integrated Register Control System

Duos Mixer<sup>®</sup> - Mixer Solution for Solventless

One C Doser - Single Component

Auto Loading Pump - Auto Refilling Pump for Mixer Tank

Hot Melt Tank - Dispensing System for Hot Melt

Static Measurement Solution, Stroboscope, Laser Core Positioning

**COROTREAT**<sup>ETC</sup> Corona Treatment Solution

CAS - Turret, Splicing & Mechatronics Products

Repeat Length Measurement

Splice Detection System

IIoT - Digitalization & Industry 4.0

**SIEMENS**

**FUKUTA**<sup>®</sup>

*MacroSys*

**FUTECH**

“

G

ood management is the art of making problems so interesting and their solutions so constructive that everyone wants to get to work and deal with them. ”

- Paul Hawken



## Control Panels for

- Multi Axis Synchronisation
- Off Line Register
- **Front & Back** Register
- Automatic Tension Control



# INDUSTRIAL AUTOMATION SOLUTIONS FOR

- **PRINTING**
- **PACKAGING**
- **CONVERTING**
- **TEXTILE**
- **RUBBER**
- **PHARMA**
- **& CUSTOMISED APPLICATION**

## APPLICATIONS

- Rotogravure Printing Machine - MLS / ELS Configuration
- Flexographic Printing Machine - Stack / CI- MLS / ELS Configuration
- Coating & Lamination Machine - Solventbase / DG Coating / Combi / Solventless
- Slitting & Rewinding Machine - Surface & Cantilever Configuration
- Inspection Rewinding and Doctoring Machine
- Extrusion Coating & Lamination Machines
- Hot Melt Control System - Full / Registered System
- Offline Register Control System - Cold Seal / Hot Melt / Window Lamination / VMCH / UV Coating
- Paper Converting Machine
- Label Converting Machine
- Heat & Press Lamination
- Blown Film Plant
- Metalizer Plant
- Rubber Processing Machine
- Special Purpose Machine
- Pharma & Textile Machineries
- Special Customised Turnkey Projects
- Stenter Machine
- Singeing Machine

**RETROFITTING  
SOLUTION**



**SCADA**

# DUOS MIXER<sup>®</sup>

Adhesive Mixing & Dispensing System

  
**SAAPL<sup>®</sup>**  
S A Automation Pvt. Ltd.

**3**  
MODELS



• Duos Mixer Std.

HIGHLY ADVANCED CONTROL SYSTEM  
USING VECTOR DRIVE

AUTOMATIC DENSITY CALCULATION,  
WEIGHT CALIBRATION

QUICK INSTALLATION AND CALIBRATION

REAL TIME & HISTORICAL DATA

PRECISE GSM MEASUREMENT THROUGH  
HIGH RESOLUTION ENCODER

REMOTE SUPPORT & SERVICE THROUGH Wi-Fi  
(Internet Connection is Required)

AUTOMATIC GSM CONTROL INTEGRATION  
WITH MAIN MACHINE (OPTIONAL)

SCHEDULE PREHEATING

ALARM CONTROL FOR SET POINT SAFETY

MIS - REPORTS, SERVICE



## APPLICATIONS

- SOLVENTLESS LAMINATION MACHINE
- SOLVENTBASE LAMINATION MACHINE
- COATING MACHINE
- PAINT BOOTH



Pneumatic NRV

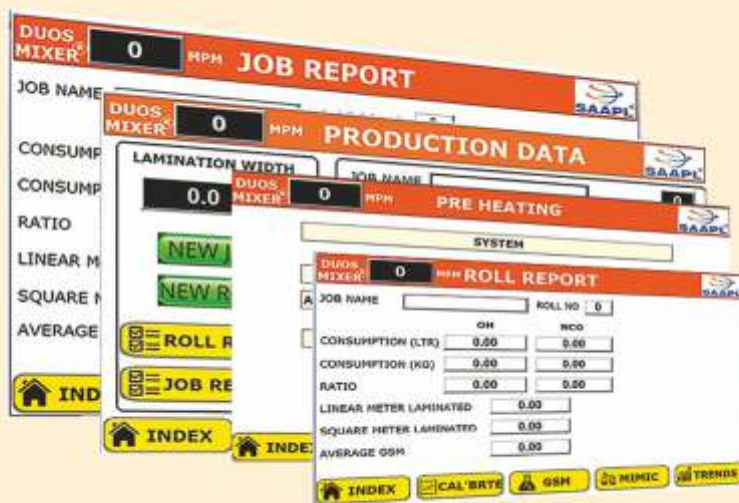


• Duos Mixer Eco



• Duos Mixer +

## Operational HMI Screens



IIoT 4.0

INTRODUCING DUOS MIXER®+ WITH 30CC NCO PUMP, FLOWMETER, PNEUMATIC NRV, WEBCAM MAINTENANCE VIEW & IIOT ENABLED.

# ONE-C-DOSER

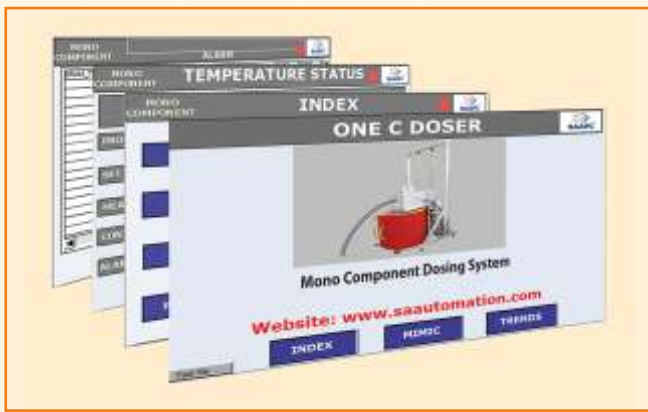
## Mono Component Dosing Pump

### FEATURES

- Paper, aluminum foil, met pet, pet etc. lamination.
- High quality vertical type heater for 200 litre adhesive drum.
- Dosing capacity for machine speed upto 600 mpm.
- 7" operational HMI.
- Remote support through Wi-Fi
- Alarm history, reports and many advanced features.

### APPLICATIONS

- SOLVENTLESS LAMINATION MACHINE
- COATING MACHINE



## AUTO LOADING PUMP SET

SAAPL's auto loading pump set is an optional system offers with Duos/other make mixer to ensure time saving.

### FEATURES

- Auto refilling of mixer tank as per required set programmed level.
- Stand alone Electro-pneumatic control panel with Auto/Manual selector switch.
- Pneumatic solenoid valve to shut off, release, dose.
- Automatic refilling by means of additional pneumatic diaphragm pumps for both NCO/OH.
- Works better with 200kg. adhesive drums.
- It allows the use of the drums on a vertical position.
- No manipulation needed.

### BENEFITS

- Increase productivity
- Fully automatic process.
- Prevents creation of jelly skin on adhesive top.
- No longer moisture intake.
- Works on a complete closed loop.

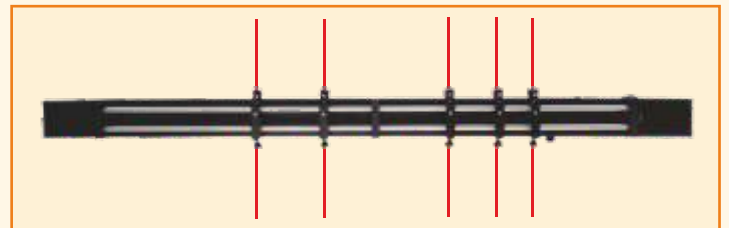
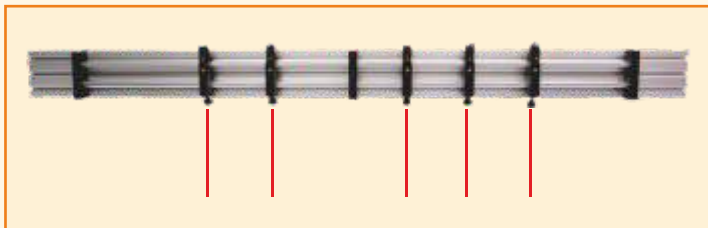




# STROBOSCOPE



# LASER SYSTEM



# STATIC MEASUREMENT



ONLINE STATIC MEASUREMENT

KNOW HIDDEN TERRORIST OF YOUR FACTORY

## Automatic Register Control System

### REG 4000

SAAPL's latest series of REG 4000 for rotogravure printing machines provides optimum efficient register correction at either speed with use of latest double eye photoelectric sensor, highly efficient embedded PC, touch monitor and Individual unit motor control.

Pictorial symbol with suitable guidelines ensures easiness in quick set up with optimum correction in just a "ONE TOUCH".



### APPLICATIONS

- ROTOGRAVURE PRINTING MACHINE
- FLEXOGRAPHIC PRINTING MACHINE
- OFF-LINE REGISTER MACHINE



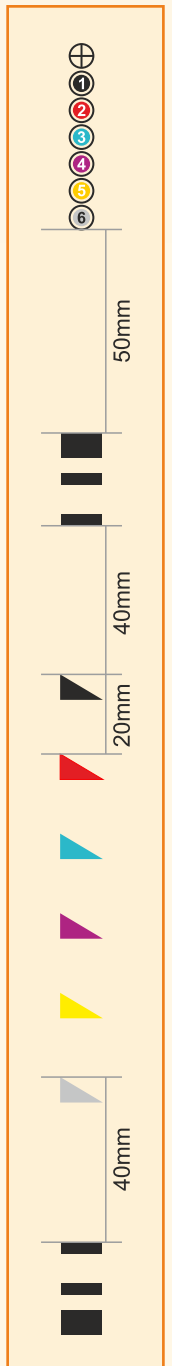
UNIT CONTROLLER



DOUBLE EYE SENSORS



ALARM UNIT



### SPECIFICATIONS

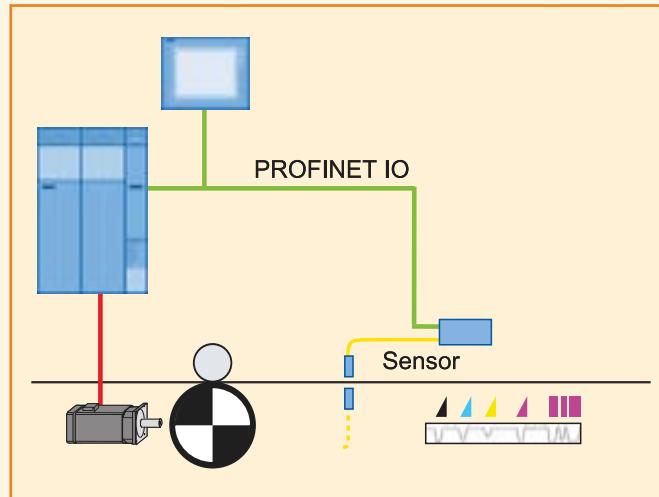
| MODEL           | REG 4000                      |
|-----------------|-------------------------------|
| Speed Control   | Up to max 400M/min            |
| Accuracy        | ± 0.01mm                      |
| Amendment Speed | 1mm/s                         |
| Repeat          | 350-1500 mm                   |
| Unit            | Up to 16 color                |
| Area            | Vertical and horizontal error |
| Power           | 800 W                         |
| Voltage         | AC 230V±10% 50-60Hz           |

- Presetting Function(Optional)
- Machine integration for motor or drive(Optional)

## Integrated Register Control System

### APPLICATIONS

- ELS ROTOGRAVURE PRINTING MACHINE
- REGISTER COATING MACHINE
- ELS FLEXO PRINTING MACHINE



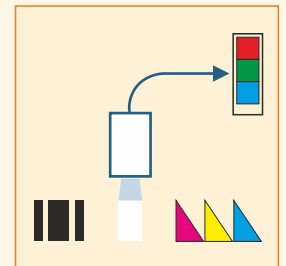
### FEATURES

- Integrated with Simotion to avoid communication delay. It works on IRT communication.
- No Noise issue in communication cable.
- Communicate via profinet communication which is faster than profibus communication.
- Minimum error detection is 10 micron.
- Automatic register mode will change from manual to auto within 5 sec. with minimum wastage.
- Fast correction in splice and ramp up/down period.
- Individual station register control parameters (gain, revolution, time etc.).
- Pre-register integration with Simotion.

### AVAILABLE VERSION

**TRC 3000**

**TRC 7000**





# CORONA TREATMENT SYSTEM

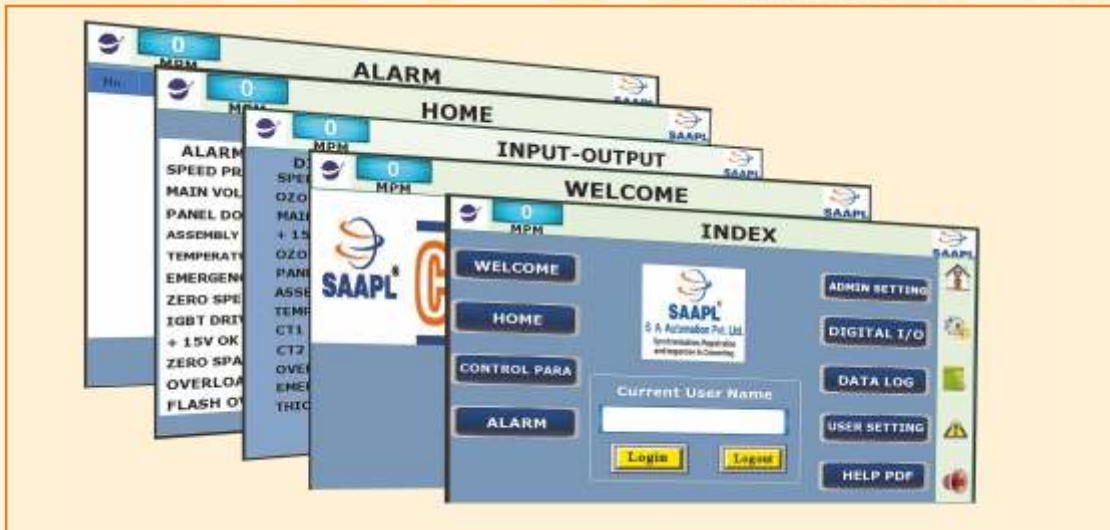


## FEATURES

- Real time IIoT compatible over wireless network supporting
- Remote access via internet.
- Email notifications for completion of roll, consolidated job report, critical alarms & Trends - Predictive Maintenance
- Intelligent software detects mechanical & electrical failures quickly
- Built-in feature of automatic opening and closing of electrodes during operation based on machine speed. No dependency on operator for this function.
- Flashover trip unique feature to prevent fire.
- Latest IG BT technology.
- Power efficiency above 90%.
- Stepless treatment power control.
- Zero speed / overload / short circuit trip with audio - visual (stack light ) alarms.
- Advance protective circuits guard against : over temperature, over current and high voltage.
- Wide load matching 5 to 1.

## WORKING

Surface tension of plastic film, paper, metal foils, teflon coated fiber glass cloth etc. is not sufficiently high to permit good wetting of inks/gums or lamination. Corona Treatment makes films receptive to ink lamination by including molecular changes on surface of the film.



## APPLICATIONS

- Blown film extrusion single layer/multilayer plastic film plants
- Woven sack roll on-line flexo printing machine
- Extrusion/Lamination coating plant for paper
- Lamination plant for aluminum foil / plastic film
- PVDC coating on PVC film for pharmaceuticals applications
- Sheet line plant
- Gum coating on PTFE coated fiber glass cloth
- Plastic moulded articles
- Rotogravure, flexographic, solventless coating, solventbase converting machines.
- Lable printing machine

## SPECIFICATIONS

- Treatment Power : 500 Watts to 20 kW
- Frequency : 10 kHz to 45 kHz
- Treatment Width : 150 mm to 4400 mm
- Material : LDPE/LLDPE/HM/PTFE/Paper/Aluminum Foil/PVC/Kapton etc.
- Max. Thickness : 5 mm



Optional available with

## FLAPPER SYSTEM

ENSURE DOOR TO OPEN AND PREVENTS DISTURBANCE TO ELECTRODES BY JOINT/SPLICE

# SPLICE DETECTION SYSTEM

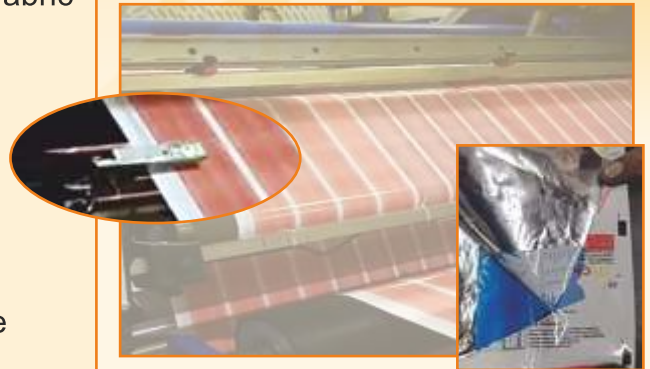
Splice/Joint detection system either visible (top level) or nonvisible (sandwich joints) useful for converters, fabric manufacturers, raffia, blown film machines.

## FEATURES

- Counts number of joints.
- Measure distance between joints.
- Machine stops once joint detected with alarm signal.

## BENEFITS

- It is touch panel operated and programmed to generate interlock/alarm in machine control.
- In case of flexographic machine, momentary opening of the impression cylinder leads to incremental life of plate.
- In case of gravure printing machine, preset data triggers rewind splice at the time of extra joints.
- At converting stage (Slitting) quality output fulfils customer requirement without any chances of output reel (sandwich joints/splice joints).



# REPEAT LENGTH MEASUREMENT

## FEATURES

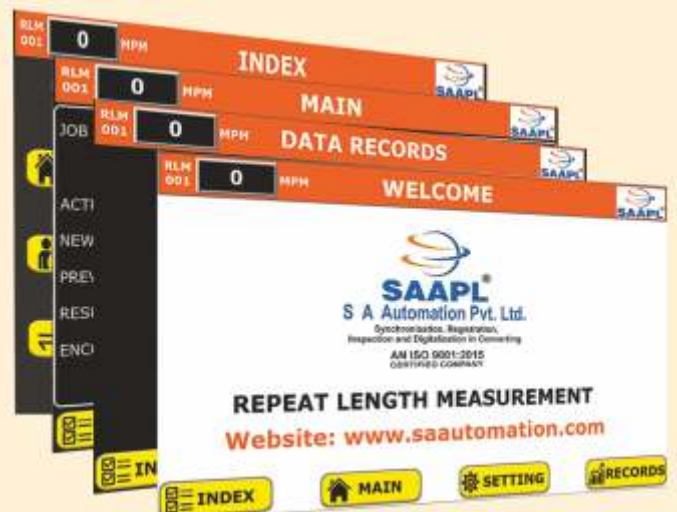
**Accurate length within +/-0.2mm per meter of printed substrate**

- **On-Line accurate print length repeat measurement**  
Able to meet customers quality standards with minimum waste at higher press speeds.
- **Better management of tension control (optional)**  
Allows minimum pressure to be used on nips roll and between the nips, this means less web tension, less wear and tear, together with more sensitive tension control.
- **Improve control of flexible substrate**  
With better management of tension between in-feed and out-feed. Substrate can be printed / laminated at higher speed.



## BENEFITS

- It constantly monitors the print repeat length.
- Enables the operator to control the substrate length.
- Ensures the product meets the customers length and snap-back specification.
- Archive records for future reference.





# DIGITAL INSPECTION TABLE

## PRINT IMAGE VERIFICATION SYSTEM

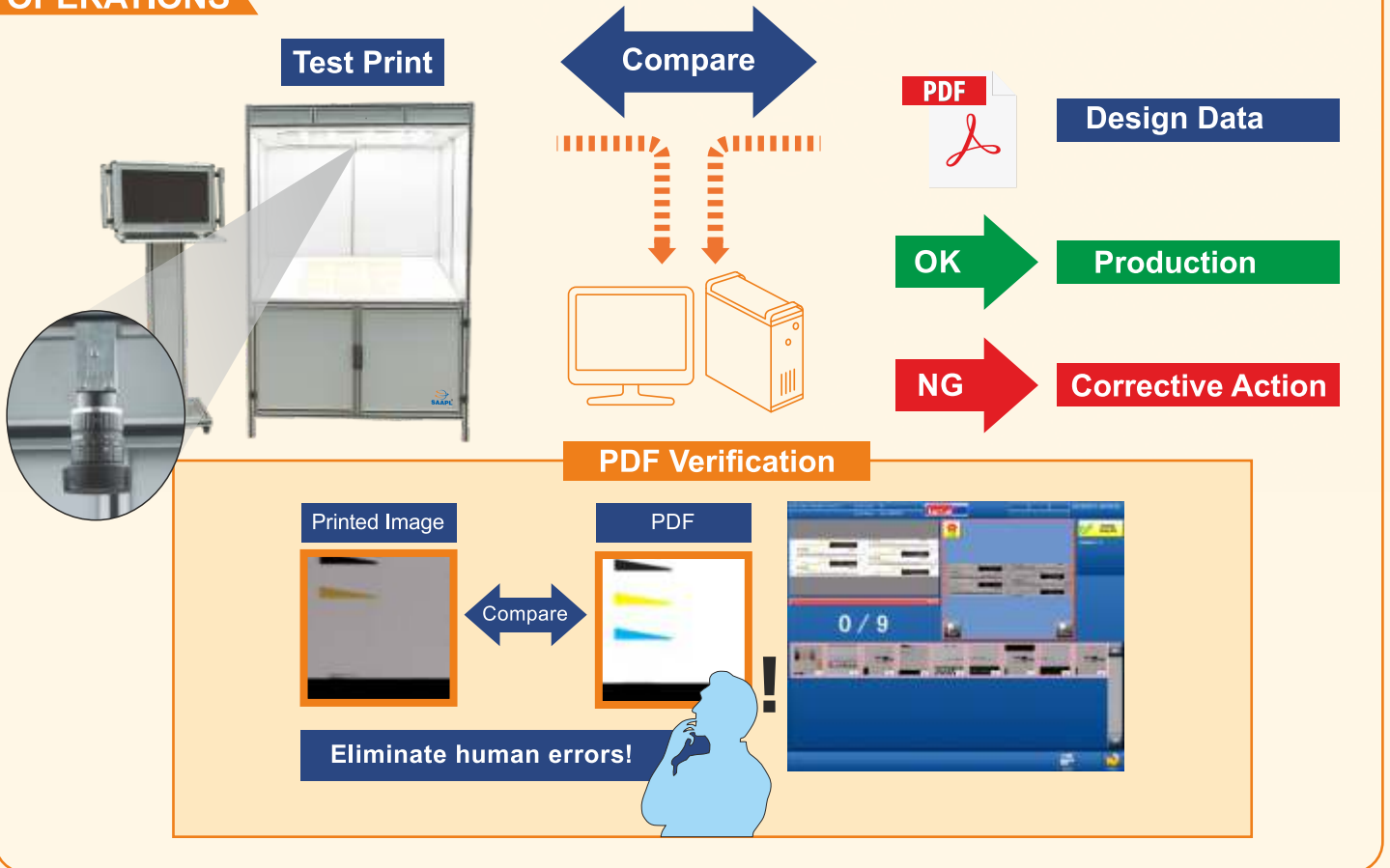
### CASE STUDY

Operators cannot identify whether the cylinder is correct or not?

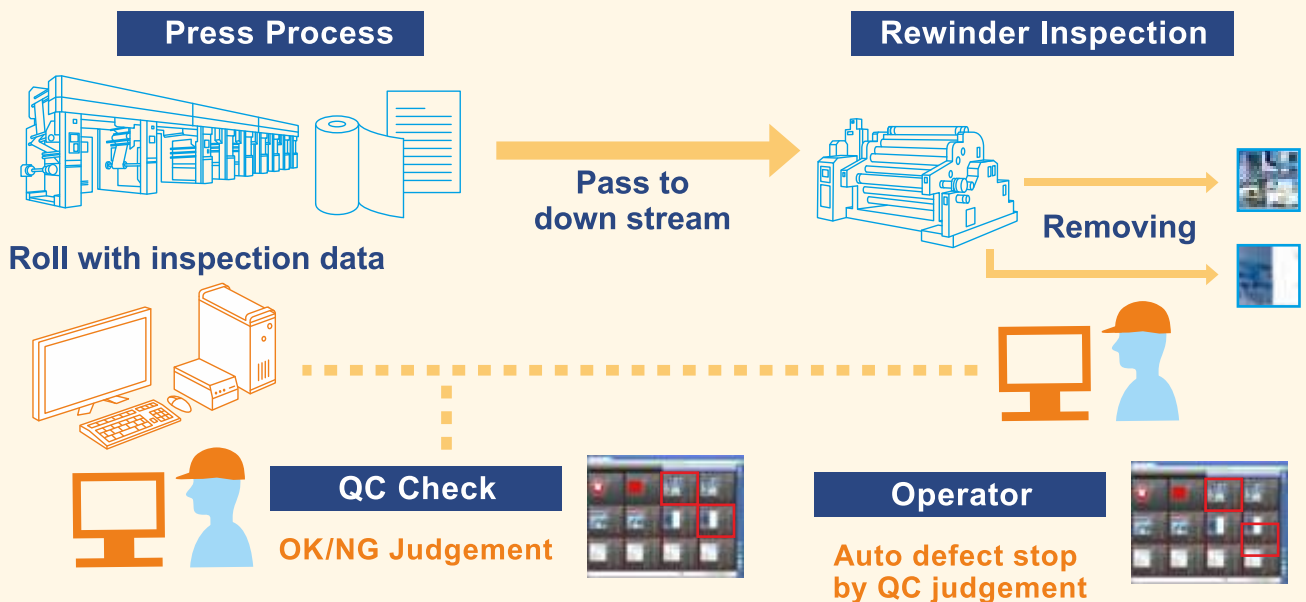


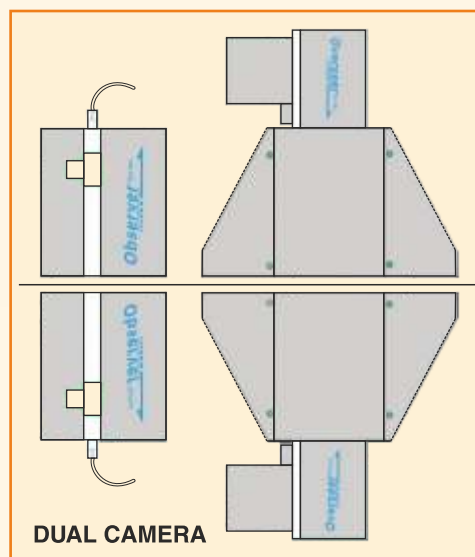
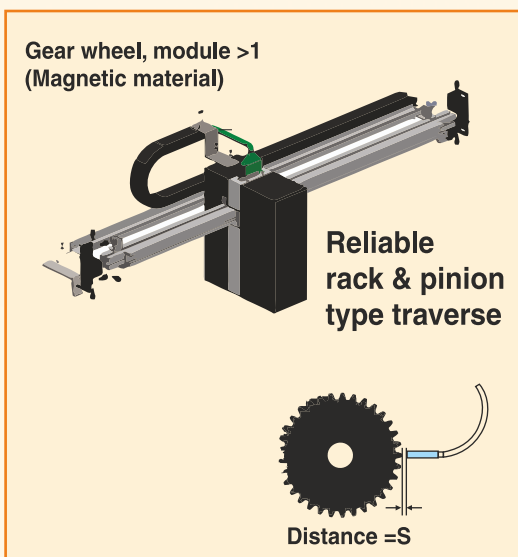
The printed image need to be compared with the design data by machine

### OPERATIONS



# WORK FLOW MANAGEMENT SYSTEM





### STANDARD FUNCTIONS (OBSERVER 4000)

- Image Rotate X/Y/XY
- Image Split & Freeze
- CMYK/RGB value detection (optional)
- Second monitor (optional)
- Backstroke for cold seal view (optional)
- Touch monitor (optional)
- Print speed & length measure
- Image sharpen with gamma
- Image roll and slow shot
- Optical zoom saving

### OVERSEER 100

- 100 x 75 field of view
- Touch GUI in high definition
- 21.5" operational monitor
- Touch monitor (Optional)

### OVERSEER 200

- High-end printing image monitor
- 200 x 120 field of view
- Optical lens with long range HD transportation
- 23.8" operational touch monitor

## EasyMax.GR

### FEATURES

#### Quality of your products are guaranteed!



80 MHz high speed camera enable high-precision detection with fine images, even on high speed running web.

#### Colour monitoring

Monitor the trend of colour density.



#### Real time print monitoring

Display the monitoring images of designated points.



### Flexograph Feature

#### Focusing on flexo specific missing characters

A specific filter for missing character detection is adopted as a standard. Tiny defects like partial missing character can be detected.



#### Easy startup

You can start inspection with just one click. Everyone can use it.



#### Multi client

You can get inspection info with smart phone or tablet from anywhere.



#### Free layout

You can customize the window layouts are you like.



#### Multi client

You can access inspection info with smart phone or tablet from anywhere.



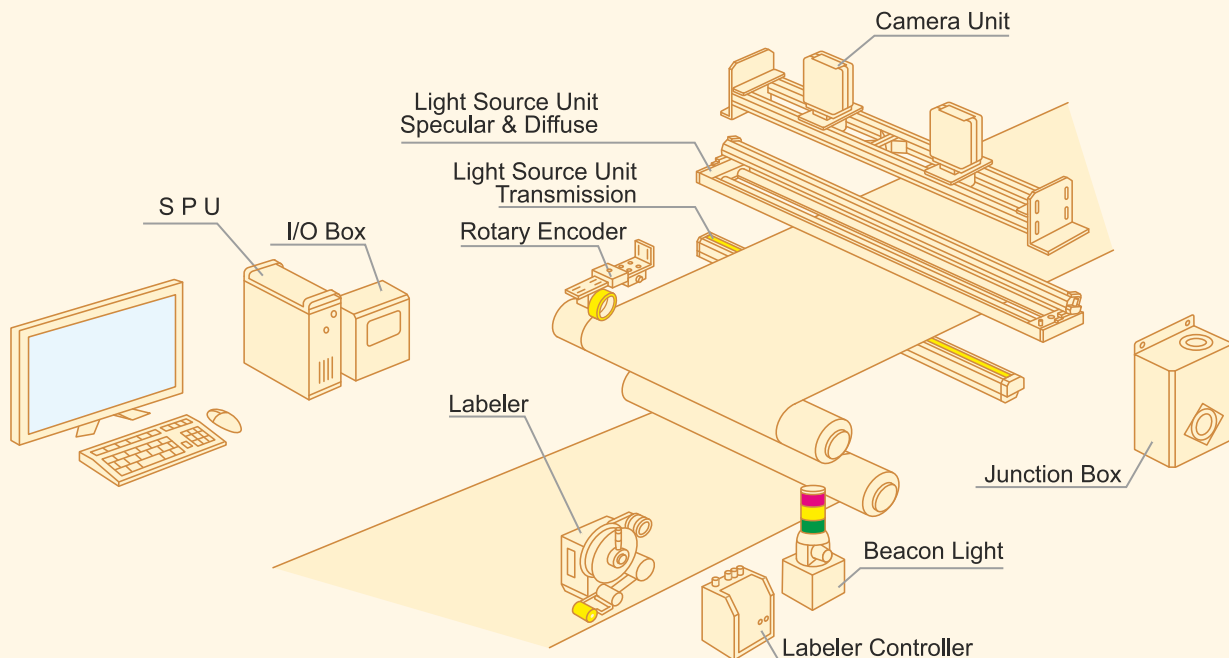
#### Robust over web meandering

Image position is precisely adjusted automatically. Web meandering never affect the inspection stability any more. Only desired detection can be performed.

#### High Detectability and Clear Flaw Images



### SYSTEM CONFIGURATION

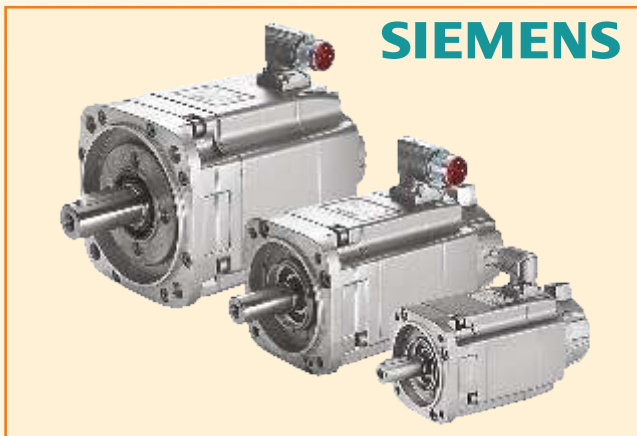






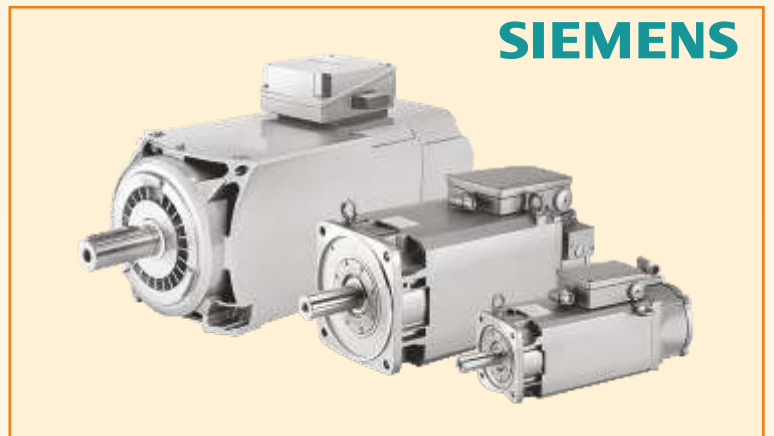
**FUKUTA**<sup>®</sup>

SERVO MOTORS



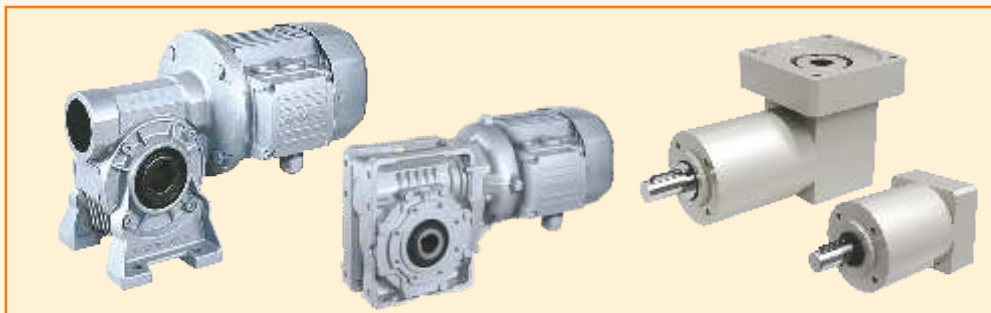
**SIEMENS**

SERVO MOTORS 1FK7



**SIEMENS**

SERVO MOTORS 1PH8



GEAR BOX AND MOTOR



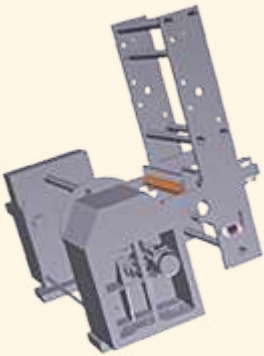
**MVV**  
GEAR PUMPS

METERING GEAR PUMP

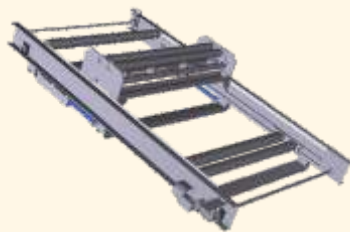
# CUSTOMIZED AUTOMATION SOLUTION



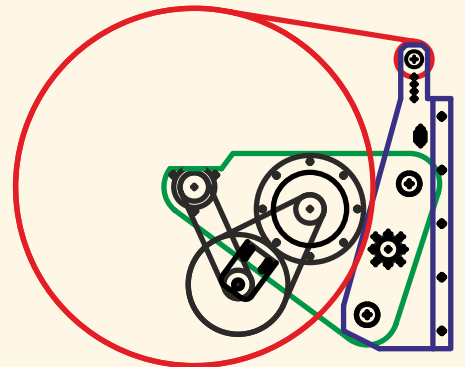
**TURRET WITH INTEGRATED SPLICING**  
(Used in converting/offset industry)



**TURRET & SPLICING WITH  
INFED UNIT**  
(Used in rotogravure  
& coating machines)



**SPLICING WITH  
BUTT TECHNOLOGY  
FOR HIGHER GSM**  
(Used in corrugations and  
cigarette paper industry)



**UPDATION IN  
OLD/EXISTING MACHINE  
WITH CUSTOMISED SOLUTION**

SAAPL offers automatic reel change over system including the following :

- State-of-the-art design
- Dancer based technology
- Linear type splice
- User define width and speed
- Easy installation on existing machine without disturbing main machine synchronisation
- Gap winding (optional)



## SMART MACHINES

- PREVENTIVE MAINTENANCE
- PREDICTIVE TOOLS
- SUPERVISORY MONITORING
- ANALYTICS
- SECURE ACCESSIBILITY
- ENERGY OPTIMIZATION
- PRE-DEFINED NOTIFICATION
- USER-DEFINED APPLICATION

• AUTOMATION

• ANALYTICS

• DASHBOARD

• DAQ SYSTEM

• DIGITALIZATION

• OEE



## WEB APP - SACAS 4.0

- Optimize visualization on Dashboard includes real-time data with various charts & tables.
- Accessible on PC & mobile which are connected with internet.
- Report generation helps to plan a job & focus on a breakdown accordingly.
- In addition, power quality can be analysed, which further used to improve efficiency.





**We have successfully handled Retrofitting Projects  
at various converters.**

## Retrofit of European OEMs

- Nordmeccannica
- Cerruti
- Flexotecnica
- Olampia
- Valmet
- Refeinhauser
- Kampf
- Comexi
- Prati
- Bobst
- MBCoater
- Schiavi
- Remac
- Rotoflex
- Heidelberg
- Titan
- Nilpeter
- Svecom
- Bielloni
- W&H

## Retrofit of Asian OEMs

- SAM
- Wordly
- Yillian
- Fong kee
- Wuxi
- Winrich
- Pro Doing

## Retrofit of American OEMs

- Davis Standard
- Mark Andy

## Retrofit of Indian OEMs

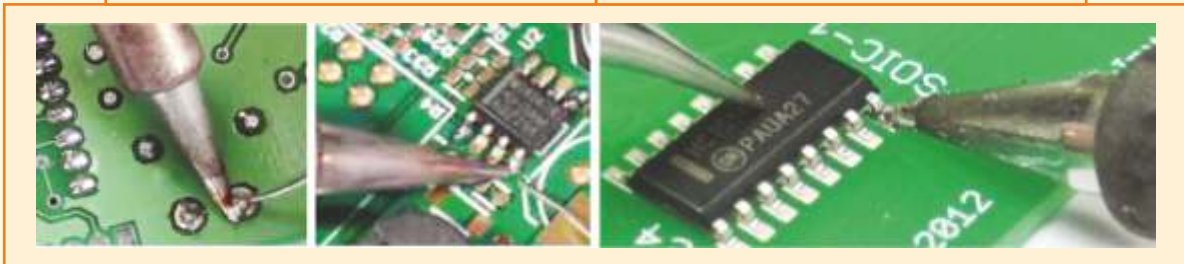
- Expert
- Kohli
- SP Ultraflex
- Uflex
- Pelican
- Raulimex
- Kolsite
- Rajoo
- Windsor

and many more...

**WE WOULD BE THE RIGHT PARTNER  
TO UPGRADE/RETROFIT OF YOUR EXISTING SYSTEM WITH OPTIMUM QUALITY**

# REPAIRING

## EQUIPMENTS



## LOAD CHECK



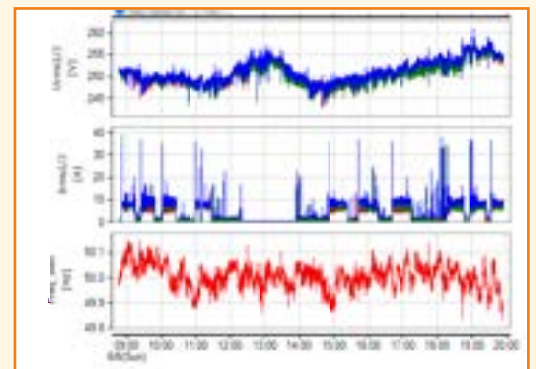
All types of VFD & servo drives, motors, HMI & IPC  
(Siemens, Lenze, Parker, ABB, A&B, B&R etc.)

PLC, IO modules, extension modules etc.

ARC & Web view systems

Power supply, stroboscope, amplifier card, DC cards etc.

All types of controllers i.e. temperature controller, brake controller etc.



**WE ALSO ANALYSE YOUR POWER QUALITY**



**LOCALLY DEDICATED,  
GLOBALLY ACCEPTED**

|                                    |              |
|------------------------------------|--------------|
| BANGLADESH                         | NIGERIA      |
| BHUTAN                             | OMAN         |
| DUBAI (U.A.E.)                     | RUSSIA       |
| EAST, WEST, CENTRAL & SOUTH AFRICA | SAUDI ARABIA |
| ETHIOPIA                           | SRI LANKA    |
| EGYPT                              | SUDAN        |
| GHANA                              | SYRIA        |
| HONG KONG                          | SWITZERLAND  |
| KUWAIT                             | THAILAND     |
| MALAWI                             | TURKEY       |
| NEPAL                              | U.S.A.       |
| NEWZEALAND                         |              |

And Many More..



**SINCE  
2007**



**SAAPL**<sup>®</sup>  
**S A Automation Pvt. Ltd.**

Synchronisation, Registration,  
Inspection and Digitalization in Converting

**AN ISO 9001:2015  
CERTIFIED COMPANY**



SCAN & VISIT OUR WEBSITE



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Piplaj, Ahmedabad - 382 405. Gujarat, INDIA

REGIONAL PRESENCE

**DELHI • KOLKATA • MUMBAI • BANGALORE • HYDERABAD  
KANPUR • INDORE • SURAT • VAPI • VASAI**

