



Automata

SOLUTIONS

what many can't, we can!

COMPANY PROFILE



SYSTEM HOUSE OF



MANUFACTURER OF EDGE GUIDE & CENTER GUIDE CONTROLLER

AUTOMATA SOLUTIONS formerly known as '**Cabinet Systems & Controls Pvt Ltd.**' is a professionally managed automation products & services company delivering innovative technology solutions to help you stay ahead in your industry. Our expertise lies in industrial automation across various sectors, including pipe plants, iron and steel, paper, chemicals, and material handling.



Leveraging robust engineering capabilities, AUTOMATA emerges as a comprehensive "Solution Provider," offering end-to-end services from conceptualization and design to manufacturing, implementation, and support of advanced factory automation systems. With a focus on enhancing productivity and helping clients achieve their manufacturing objectives, AUTOMATA delivers tailored solutions to meet diverse industry needs. Our business ethos centers on surpassing customer expectations through efficient and cost-effective solutions. Fostering enduring relationships with our clientele underscores our commitment to excellence, establishing a reputation unparalleled in the industry.

Automata is also actively involved in the design, development, and manufacturing of EDGE GUIDE AND CENTER GUIDE CONTROLLERS for steel, aluminium, paper & other industries.

ABOUT US



Mr. Balakrishna Puttur, the founder of Automata Solutions and Cabinet Systems & Controls Pvt Ltd., established the company after over 42 years of experience in the market. His extensive expertise and vision have been instrumental in shaping Automata Solutions into a company that combines deep industry knowledge with innovative technology solutions, ensuring we remain at the forefront of industrial automation.

Mr. Balakrishna Puttur received the Top Achiever Award from Welspun Corp Limited, Anjar, Kutch in Gujarat, for developing indigenous software for manufacturing MS pipes in 2013. This software, developed by Mr. Puttur, is the first of its kind in the Asian continent, facilitating offshore rigs in pumping crude oil to processing units based on the coast. It is the second such innovation globally, following a Russian enterprise's invention.

In 2021, Mr. Balakrishna Puttur was awarded the second prize in the “Engineering Solutions Sector” by the MSME Ministry – Government of India. The Minister for MSME presented the award to Mr. Puttur during the Engineering India Awards 2021 event held in New Delhi in September 2021.

Mr. Puttur is an esteemed alumnus of the 1982 batch of the National Institute of Technology Karnataka (NITK), one of India's premier engineering institutes known for producing leaders in the field of engineering.

These accolades underscore his contributions to the field and highlight the exceptional leadership guiding Automata Solutions.

AUTOMATA PRODUCTS

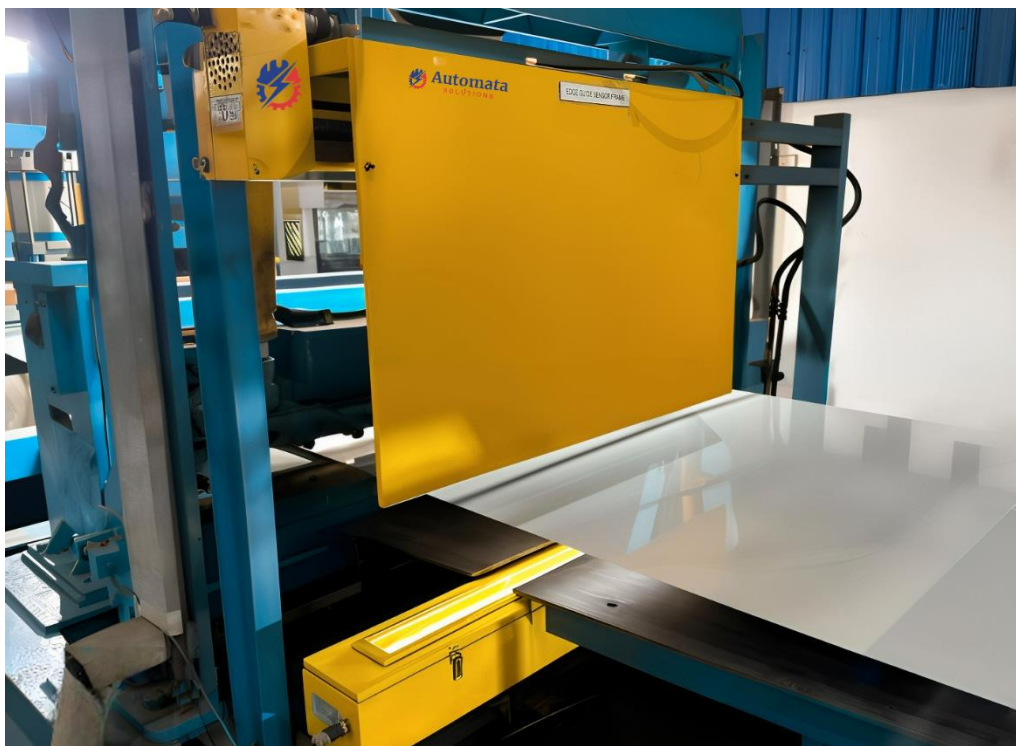
1- RECOILER EDGE/STAGGER GUIDE



Used in Process lines like: Continuous Galvanizing line; Colour coating line; Pickling line; Annelling line; Slitting Line

In recoiler guiding system, the recoiler is continuously aligned to the position of the strip. For obtaining better Recoiler guiding performance, the Recoiler must follow in perfect unison with sensor signal. The sensor has to be located just after the deflector roll before the Recoiler. The sufficient wrap angle of the strip on the deflector roll shall avoid lateral slippage of the strip as the Recoiler slides in its base.

The synchronism of recoiler & sensor is achieved in two ways, Mechanical & Electronic Coupling.



2- UNCOILER EDGE GUIDE

Used in Process lines like: Continuous Galvanizing line; Colour coating line; Pickling line; Rolling mill payoffs; Slitting Line; Cold Roll Mill; Hot Roll Mill; Trimming line.

The Uncoiler Edge Guide System is specifically engineered and designed to reposition the uncoiler to align the strip edge to a predefined position.

The system operates in two distinct modes:

Correction Mode: In this mode, the strip position is adjusted based on the position of the trimmer cutter. The system automatically corrects the strip position to ensure precise alignment during the cutting process.

Manual Mode: Alternatively, the system can be operated in manual mode, allowing the operator to feed the strip at their preferred position. The strip position is maintained wherever it is fed by the operator, providing flexibility in production operations.

The Uncoiler Edge Guide System enhances the efficiency and accuracy of strip alignment, contributing to improved quality and productivity in metal processing operations.



3- CENTER GUIDE CONTROLLER

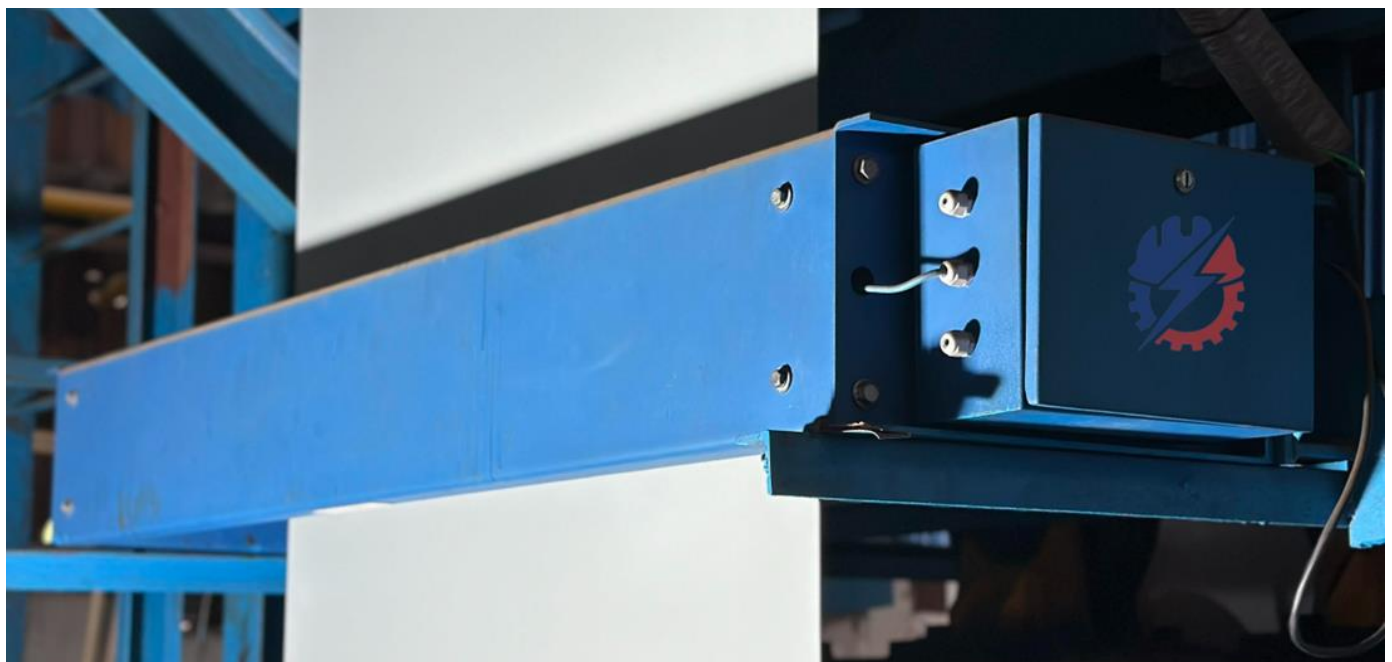


The Center Guide Controller is an integral component of strip guiding systems, ensuring precise alignment of the moving strip along the centerline of the process line. Here's how it works:

Monitoring: Both edges of the moving strip are continuously monitored by photoelectric or capacitive sensors.

Control: Based on the sensor data, the electronic controller precisely adjusts the machine's swiveling frame. This action aligns the material to the centerline of the process line, maintaining optimal positioning throughout the production process.

Purpose: The primary objective of intermediate guiding is to keep the strip approximately centered within the line, minimizing deviations and ensuring consistent product quality.





The Center Guide Controller plays a crucial role in enhancing production efficiency and product quality by ensuring accurate strip alignment in various industrial processes.

Types of Center Guide Frames: There are several variations of center guide frames available, each tailored to specific applications and requirements. These include Single Roller, Dual Roller, Z-Wrap with Kamber Roller Guide, with or without an offset pivot.



4- WELD HOLE DETECTOR

Achieving high productivity is the primary goal for all continuous strip-finishing lines. With most operations being automated, the need for intelligent sensors that can detect and initiate necessary actions has become crucial.

Detecting a weld joint in a continuous strip processing line—such as galvanizing, color coating, leveling, etc.—is essential to trigger the opening or closing of certain rolls in the line. This is typically done by punching a hole near the weld joint on the strip.

Using photoelectric sensing principles, these sensors detect the punched hole and activate a potential-free relay contact. This relay contact can then be used by a sequential controller system to initiate the required operation, ensuring seamless and efficient processing.



AUTOMATA SERVICES

1. DESIGN & ENGINEERING

Automata offers Design & conceptualization of process to plan the electrical engineering for machines and plant systems, operations flow chart & system architectures.

Our Design & Engineering activities include:

- Graphical Arrangement (GA) - 2D Layout
- Electrical, Power & Load calculation
- Component, Incomer & Panel Sizing
- Schematics including BOM, SLD, Control & Power Wiring, PLC/Drive/HMI Wiring



2. MANUFACTURING

At Automata, our expertise lies in the meticulous assembly of components according to design and engineering specifications while adhering to stringent assembly and safety standards. We specialize in engineering and integrating systems using leading brands of PLCs, drives, HMIs, and instruments to ensure optimal performance and reliability.

Some of our panel manufacturing capabilities include:

- PLC Panels
- AC/DC Drives Panels up to 1MW
- Soft Starter Panels
- Thyristor Panel
- Recoiler - Uncoiler Panel
- Control Desks (free standing, swivel, SS top)
- Junction Boxes



3. INSTALLATION & COMMISSIONING

At Automata, we offer comprehensive installation and commissioning services to ensure the seamless integration and optimal performance of your automation systems. Our services include:

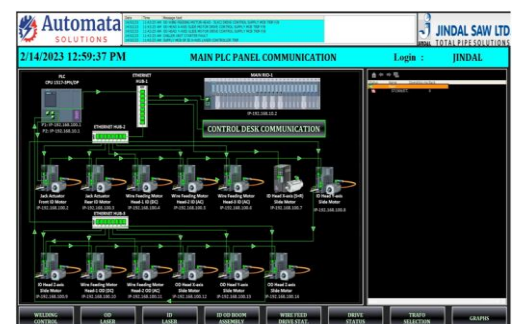
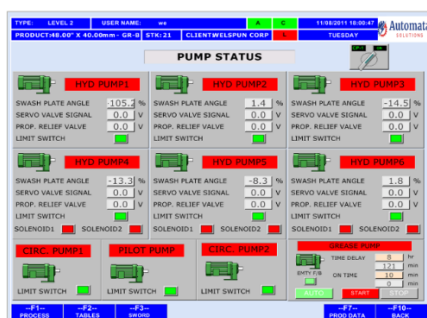
- **Site Supervision & Support:** Our experienced engineers provide on-site supervision and support during the installation process to ensure that all equipment is installed correctly and according to specifications.
- **Cold Testing:** Prior to commissioning, we conduct cold tests on individual equipment to verify functionality and identify any potential issues.
- **Synchronization & Load Testing:** We perform synchronization and load tests on equipment to ensure that they meet required process parameters and operate efficiently under varying load conditions.

Our goal is to ensure that your automation systems are installed and commissioned successfully, allowing you to maximize productivity and achieve your operational objectives.



4. SCADA, HMI & REPORT DEVELOPMENT

Automata Solutions specializes in developing and implementing advanced SCADA systems, HMI solutions, and comprehensive Report & Trend development. Our expertise ensures efficient and reliable monitoring, control, and data analysis for various industrial processes.



5. SERVICES

At Automata, we are committed to providing reliable support and services to our clients to ensure the smooth operation of their automation systems. Our services include:

- **Onsite/Online Technical Support:**

Our team of skilled engineers offers prompt onsite and online technical support during breakdowns and routine maintenance activities. Whether you require immediate assistance onsite or remote troubleshooting, we are here to help resolve issues efficiently and minimize downtime.

- **System Study & Analysis:** We conduct comprehensive system studies and analyses of existing old and new equipment to identify areas for improvement and enhancement. By evaluating performance metrics and conducting thorough assessments, we provide recommendations to optimize productivity and enhance system performance.



Our dedicated service team is equipped with the expertise and resources to address your technical challenges effectively, allowing you to maintain reliable and efficient operations.



PROJECTS EXECUTED

Automata Solutions, formerly operating under the name Cabinet Systems, has successfully executed a wide range of automation projects. Some of our notable projects include:

Steel/Aluminum Plant:

- 1- Continuous Galvanizing Line
- 2- CTL (Cut To Length) Line
- 3- Slitter Line
- 4- Colour Coating Line
- 5- Skin Pass Mill
- 6- Cold Rolling Mill
- 7- AGC (Automatic Gauge Controller)
- 8- Annelling Line



Pipe Plant:

- 1- ERW Pipe Plant
- 2- Forming Press (JCO)
- 3- Tack Welding
- 4- Pipe Coating Inside & Outside
- 5- Decoiling Line
- 6- Plate & Coil Mill
- 7- Pipes Conveyor Automation
- 8- Expander
- 9- Hydrotester



Furnace:

- 1- Roler Hearth Furnace
- 2- 100 TPH Pusher Type Billet furnace
- 3- Blast Furnace Gas Flare System

Water:

- 1- Water – Sewage Treatment Plant



CLIENT LIST

DOMESTIC

WELSPUN CORP. LTD.
ARCELLOR MITTAL NIPPON STEEL INDIA LTD.
TATA STEEL LTD.
JSW STEEL LTD.
JINDAL STEEL AND POWER LTD
MAS EQUIPMENTS PVT. LTD.
RATNAMANI METALS & TUBES PVT. LTD.
RCS STEEL AND AUTO PVT LTD
NATIONAL STEEL AND AGRO INDUSTRIES LTD
RHIMJIM ISPAT LTD.

INTERNATIONAL

WELSPUN TUBULAR LLC. LITTLE ROCK, USA
KANAFULLY STEEL MILLS, BANGLADESH
RAJESH METAL CRAFTS, NEPAL
AL GHURAIR IRON & STEEL LLC., UAE
EAST PIPES INTEGRATED COMPANY, KSA
KANDIL STEEL, EGYPT
JEBBA PAPER MILLS LTD., NIGERIA.

India's only company to develop and implement the automation for JCO press



Welspun Corp, Anjar: Pioneering Pipe Manufacturing with Automata Solutions

At Welspun Corp, Anjar, M.S. plates of 18 meters in length, 4 meters in width, and 50 millimeters in thickness are longitudinally bent and formed into round pipes with a maximum diameter of 1.3 meters within just 5 minutes.

Automata Solutions is the only company in India to develop and implement the automation for the JCO press, making this rapid and precise manufacturing process possible.



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A3-1103, Bramha Suncity, Wadgaon Sheri, Pune, Maharashtra, India, 411014



Gat No 878, Dhomkhel Vasti, Awhalwadi Rd, Near Crystal Electrodynamix, Vadjai, Pune, Maharashtra, India, 412207



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