



TRILLION
AUTOMATION



SPECIAL PURPOSE MACHINES

& INDUSTRIAL AUTOMATION

Engineering • Automation • Fabrication • Integration

PUDUCHERRY 605 009 • INDIA
+91 95240 53395 | +91 93451 53624



Company Profile

Trillion Automation was started with the aim of solving industrial problems by incorporating automated machines and equipment. The company combines mechanical and electronic automation expertise to address routine industrial problems in production, inspection and maintenance. Its capabilities include materials, machining and manufacturing processes, PLCs, servo and stepper motors, sensors, pneumatic, hydraulic and mechanical actuators, and CATIA-based design.

Trillion Automation works with qualified and innovative partners and individuals with the skills and experience required for challenging automation needs, with customer satisfaction as a central objective.

Our Values

• Commitment	• Customer Value
• Teamwork	• Professionalism
• Flexibility / Adaptability	• Social Responsibility

Company Information

MSME Category	Micro
Nature of Business	Manufacturer
Type of Organization	Partnership
Founder	R. Sulaiman, M.Tech (Manufacturing)
No. of Employees	5
Date of Registration	16-05-2017
GSTIN	34AAMFT2899N1Z8

Contact

Address: Plot No. 1, R.S. No. 190/2, First Main Road, Panchali Ammal Nagar, Marie Oulgaret Road, Puducherry 605 009

Contact: R. Sulaiman — +91 95240 53395 / +91 93451 53624

Email: trillionautomation@gmail.com



Our Core Product Range

Special Purpose Machines Custom SPMS up to 3 HP	Pick & Place Machines Up to 1 m × 1 m, with servo or stepper motion
Belt Conveyors Conveyors up to 5 m length	Automatic Sheet Feeder & Die Lubrication PLC-controlled systems for power-press applications
Vibratory Feeders Part feeding and orientation solutions	Bowl Vibrators Bowl vibrators up to 500 mm bowl diameter
Reverse Engineering Reverse engineering of machines and equipment	Machine Retrofitting Retrofitting and control upgrades
Filling & Packing Machines Dedicated filling and packing automation	Inline Inspection Equipment In-line inspection and process monitoring
Poka Yoke Systems Mistake-proofing and process assurance	Material Handling Solutions Custom handling, transfer and collection systems
Shrink Tunnel Conveyors Conveyor solutions for shrink-tunnel applications	Inspection Systems Dedicated inspection and checking systems
Process Indication Equipment Industrial process indication and monitoring	Special Sensors Banner special-sensor based solutions



Expanded Automation Solutions

The following categories are included as additional custom-engineering opportunities after reviewing publicly listed Indian automation product ranges and machine demonstrations. They are presented as **solutions Trillion Automation can develop subject to the customer's application**, not as claims of an existing standard product catalogue.

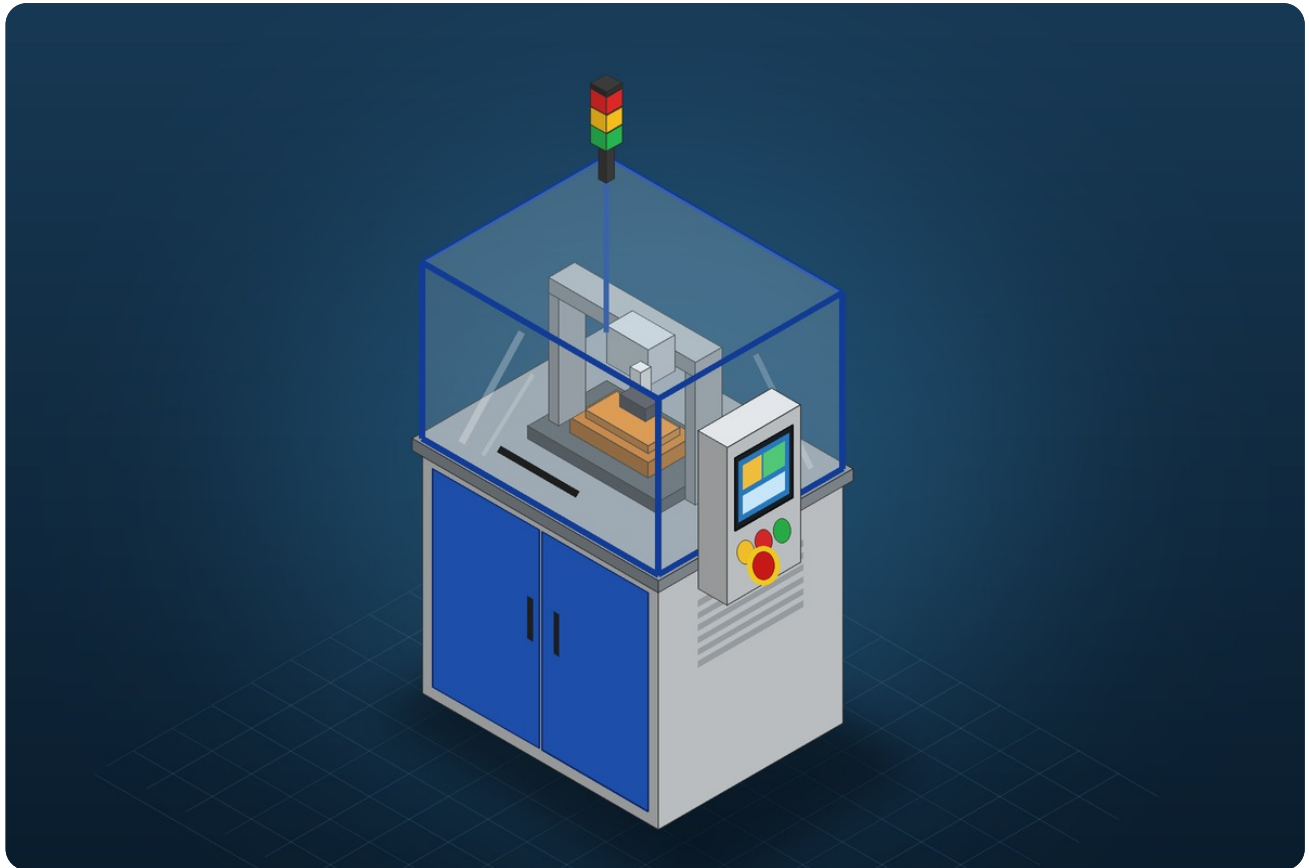
Automatic Assembly Machines Component insertion, press-fit, screw fastening, riveting and multi-step assembly cells.	Performance / Endurance Test Rigs Force, torque, proof-load, endurance and functional test stations.
Leak Test Systems Pneumatic pressure, vacuum and immersion-based leak-test machines with automatic sealing and result handling.	Vision Inspection Systems Camera-based dimensional, presence/absence, appearance and defect inspection.
Drilling & Tapping SPMs Dedicated drilling, tapping, chamfering and multi-operation machining stations.	Pressing & Forming SPMs Pneumatic, hydraulic and hydro-pneumatic pressing/forming systems.
Welding Automation Spot/MIG welding fixtures, automated welding stations and part positioning systems.	Laser Marking & Traceability Part marking, barcode/QR identification and production traceability integration.
Robotic Machine Tending Robot-assisted loading/unloading for presses, CNCs and inspection stations.	Palletising & Depalletising Robot or pneumatic handling for boxes, trays and end-of-line operations.
Rotary Indexing Assembly Machines Indexing tables with multiple stations for sequential assembly, inspection and testing.	Automatic Counting & Sorting Counting, batching, OK/NG sorting and rejection systems.
Filling & Pouch Packing Liquid/viscous filling, pouch handling and automated packing modules.	Cap / Plug Assembly Feeding, orientation, insertion and closing operations.
Scissor Lift / Goods Lift Material lifting and level transfer equipment for production areas.	Elevator / Hopper Feeders Bulk-to-line feeding using hopper, elevator and controlled discharge systems.
Rotary & Centrifugal Feeders Alternative feeding technologies for components requiring controlled orientation.	Slat / Power Roller Conveyors Heavy-duty transfer and accumulation for industrial material handling.
Vacuum Conveyors Gentle or enclosed conveying where component handling requirements demand it.	Dispensing Systems Controlled dispensing of adhesive, lubricant, sealant or process fluids.

Market reference note: Indian automation suppliers publicly list combinations of leak testing, assembly, welding, inspection, pick-and-place, vibratory feeding, conveyors, robotic handling, pressing, marking and specialized SPMs.



Special Purpose Machines

Trillion Automation designs and builds **custom Special Purpose Machines (SPMs)** around one specific part and one specific process. Every machine is engineered in-house from requirement study and CATIA 3D design through fabrication, PLC programming, testing and commissioning — so the customer gets higher output, consistent quality and safer operation than manual work.



Representative illustration of a guarded SPM with PLC + HMI control panel, pneumatic actuation and tower lamp.

SPMs We Build

Assembly & Press-Fit SPMs Insertion, press-fit, riveting and screw fastening.	Drilling, Tapping & Chamfering Dedicated single or multi-spindle machining stations.
Cutting & Slitting Machines Bead, hose and profile cutting with servo length control.	Crimping & Forming Pneumatic, hydro-pneumatic and motorised crimping/forming.
Welding Automation MIG welding SPMs, rotary positioners and welding fixtures.	Deburring & Finishing Linishing, buffing and emery-belt finishing stations.

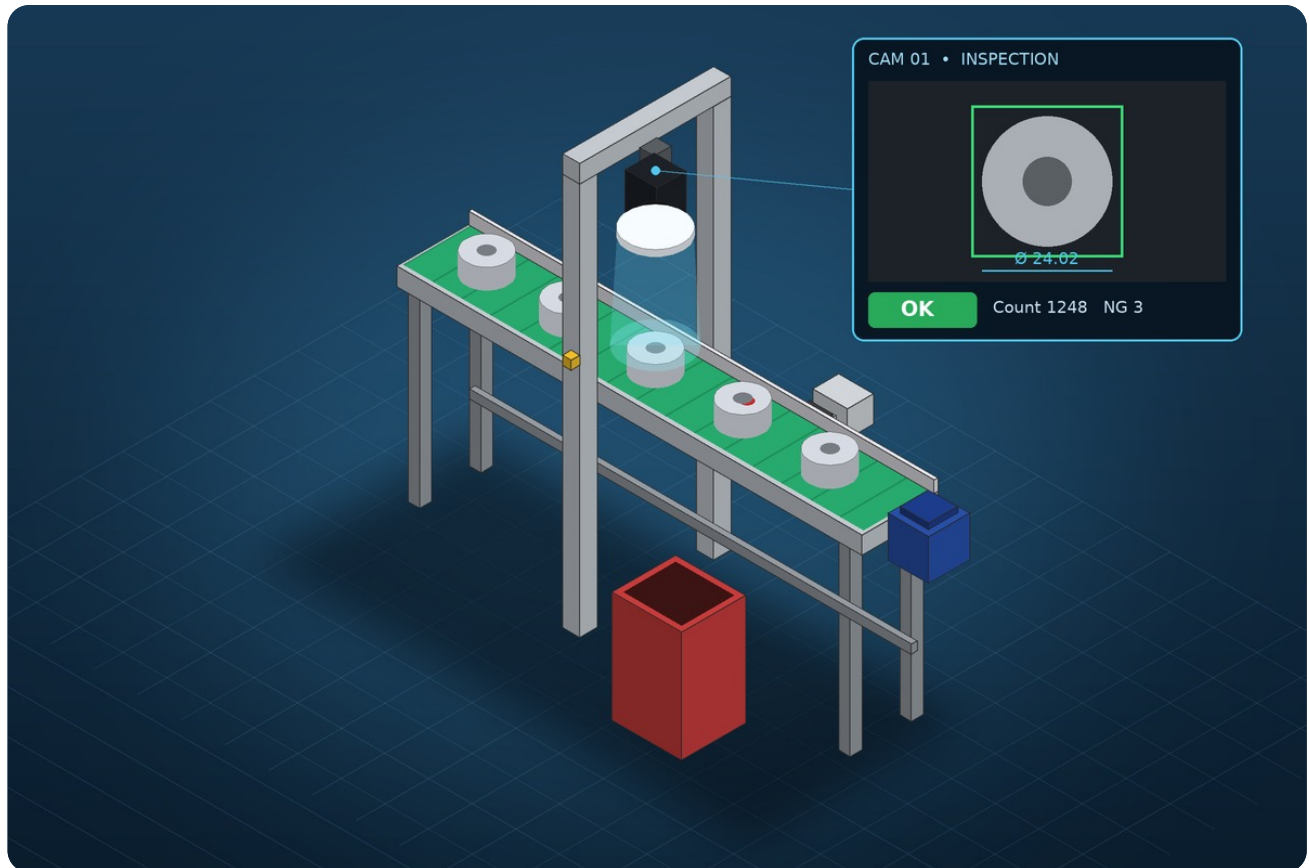
Standard Features

Power rating	Custom SPMs up to 3 HP
Actuation	Pneumatic, hydraulic, hydro-pneumatic, servo or stepper motion
Control	PLC with HMI, cycle counter, auto/manual modes and fault indication
Safety	Polycarbonate guarding, emergency stop, interlocks and two-hand / sensor-based operation
Design & Build	CATIA 3D design, in-house fabrication, assembly, trials and commissioning



Vision Inspection Systems

Camera-based inspection that checks **every part, every time** — without operator fatigue. A camera with controlled lighting captures each part on the line, software compares it with the reference, and the PLC automatically rejects NG parts while counting OK parts. Systems are configured to the customer's part, defect type and line speed, and can be added to new machines or retrofitted to existing conveyors.



Representative illustration: conveyor-mounted camera with ring light, trigger sensor, OK/NG result display and reject bin.

What It Can Inspect

Presence / Absence Missing components, holes, inserts, caps, labels or springs.	Dimensional Checks Diameter, length, hole position and gap measurement.
Surface Defects Dents, cracks, burrs, scratches, stains and damage.	Orientation & Position Correct side up, direction and location before assembly.
Code & Text Reading Barcode, QR code, date code and print verification.	Colour & Sorting Colour checks and automatic OK/NG sorting.

System Components

Camera	Industrial / smart camera with lens selected for the field of view
Lighting	Ring light, back light or bar light for stable, repeatable images
Processing	Smart-camera tools or PC-based image-processing software
Integration	PLC interface, trigger sensor, pneumatic reject and HMI display
Output	OK/NG result, production counter, rejection and data logging



Selected Product Samples

Actual machine and automation samples from Trillion Automation's supplied product material.



Blank Feeder for Power Press



L Conveyor with Auto Collection Trays



Pounding Machine



Servo Sheet Feeder for Power Press



Rubber Bead Sample Cutting Machine



Linear Vibratory Feeder



More Automation Projects



PLC Controlled Lubrication System



SS Roller Conveyor



Control Desk



Cooling Table



SS Trolley



Pneumatic Soap Forming Machine

Additional solutions shown in the supplied product material include Poka Yoke systems, material handling, shrink tunnel conveyors, inspection systems, process indication equipment and Banner special sensors.



Engineering & Automation Capabilities

Mechanical Engineering Machine design, fixtures, mechanisms, shafts, bearings, guides, conveyors, tooling and fabricated structures.	Electrical & Controls PLC-based control, control desks/panels, HMI integration, sensors, VFDs and machine interlocking.
Motion Control Servo and stepper motor applications for feeding, positioning and pick-and-place operations.	Pneumatics & Hydraulics Pneumatic cylinders, grippers, regulators, valves and mechanical/hydraulic actuation.
Manufacturing Process Knowledge Materials, machining and manufacturing-process understanding applied to practical machine design.	CATIA Design 3D mechanical design and engineering support using CATIA.
Inspection & Sensing Inline inspection, process indication, special sensors and automated checking systems.	Retrofit & Reverse Engineering Assessment, redesign, controls replacement and modernization of existing equipment.

Typical Project Flow

Requirement → Concept → Mechanical / Electrical Design → Fabrication → Assembly → Controls → Testing → Commissioning



Customers & Application Areas

Selected customers:

- Schlemmer Technologies
- Rane (Madras) Ltd
- Tenneco Automotive India Pvt. Ltd.
- Manatec Electronics
- West Pharmaceutical Packaging India Pvt. Ltd.

Application Areas

Production Automation	Feeding, conveying, pick-and-place, forming, packing and process automation.
Inspection	Inline inspection, checking systems, sensors and process indication.
Power Press Automation	Blank feeding, servo sheet feeding and die-lubrication systems.
Material Handling	Conveyors, collection trays, trolleys and transfer solutions.
Process Safety	Poka yoke, power-press safety monitoring and controlled machine operation.
Machine Modernization	Retrofitting and reverse engineering of existing machines and equipment.

Let's Solve Your Automation Problem

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ADDITIONAL MACHINE PORTFOLIO

Selected machines engineered and supplied by Trillion Automation



Bead Cutting Machine



Power Press Feeder



Corrugated Hose Slitting Machine



Motorised Terminal Crimping Press

ADDITIONAL MACHINE PORTFOLIO

Selected machines engineered and supplied by Trillion Automation



Pipe Flange MIG Automatic Welding Machine



1200 mm Stretch Wrap Machine



Automatic Linishing Machine



2-Tonne Aluminium Ferrule Crimping Machine – Hydro-Pneumatic

ADDITIONAL MACHINE PORTFOLIO

Selected machines engineered and supplied by Trillion Automation



Servo Hose Cutting Machine



Conveyor