



**Iyalia Engineering Solutions  
India Pvt Ltd**

ISO 9001:2015

Research & Development  
Special Purpose Machines


# SPM METAL CUTTING / MATERIAL HANDLING


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## **Iyalia Engineering Solutions India Pvt Ltd**

Revolutionizing Industrial SPM Machine

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## About Iyalia

"Iyalia Engineering Solutions India Private Limited is at the forefront of revolutionizing industrial manufacturing challenges. Through our innovative Special Purpose Machines, we are committed to delivering remarkable returns on investment and heightened productivity. Our commitment to quality standards ensures our customers' businesses thrive with increased profitability. Let Iyalia be your partner in navigating the complexities of industrial manufacturing, and together, we'll set new benchmarks for success."

## Our Team

Our team strength is 45+ people, with dedicated teams in all departments. Our factory has 15000 square feet of working area, equipped with the latest machines in the machine shop, Fabrication and Assembly shop.

## Our Commitment

"At IYALIA, our core commitment lies in consistently surpassing customer expectations. With an unwavering dedication to quality, reliability, and innovation, we distinguish ourselves as leaders in the field. Understanding the intricate dynamics of modern industrial processes, we provide solutions designed to enhance efficiency and boost productivity. Trust IYALIA to be your partner in achieving unparalleled operational excellence."

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R & D and SPM Machine

SPM Metal Cutting

SPM Material Handling

Multi Drilling and Tapping

Steel Plant Machineries



## SPM for Tube End Thickening Machine



Industry:-	Steel Tubes
Operation:-	Expands the diameter of the tube's end
Machine-Type:-	Manual
Tube Weight:-	Parts weigh upto 10 grams to 10 tons
Manpower:-	Single person
Cycle Time:-	20 Sec/comp



We can also customise as per your requirement

A Tube-expanding hydraulic Press with two cylinders is a specialized Machine designed for the R and D of the TATA Group. The purpose of this machine is to expand the ends of tubes from INSIDE; this is a special customized requirement.

Two cylinders operate by applying hydraulic force to expand the diameter of the tube's end. It features two high-pressure hydraulic cylinders that work in tandem to exert uniform pressure on the tube, causing it to expand radially. One of the key features of this machine is its customization.

It can be tailored to meet the specific needs of various industries and applications.

## Heat Sink Assembly Machines



- Industry:-** Aluminium  
**Operation:-** Screwing the IC in the component  
**Machine-Type:-** Fully automatic  
**Part Weight:-** Weight upto 10 grams  
**Manpower:-** Single operator



This is Heat sink assembly machine with I C. We need to put all part automatically including screwing it. Only I C has to be fed manually.

Heat sink and the Screws are fed from Bowl Feeder. First one screw is assembled and then Conductive material is applied.

IC is placed manually and once again both the screws are tightened. Then the finished Heat sink is taken out of machine.

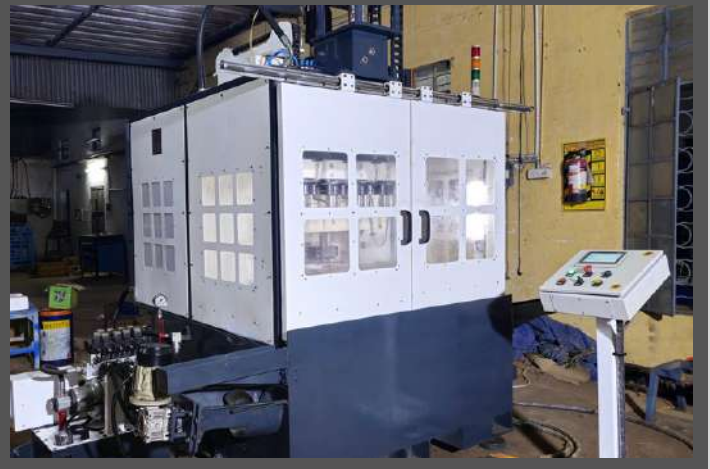
## SPM for Pre Drilling of Solid Rods



Industry:-	Pump, Railway, Autoparts
Operation:-	Pre Hole drilling and feeding to CNC
Machine-Type:-	Automatic PLC with Manual loading and unloading
Drilling Size:-	Udrill up to Dia 30 mm and (Dia 50mm second model)
Manpower:-	Single person
Cycle Time:-	0.8 mm / Sec Depth drilling



We can also customise as per your requirement



### Key Benefits of Iyalia Pre-Drilling Machine:

-Enhanced productivity: Drills four components simultaneously, increasing productivity and providing faster delivery for the next operation.

Efficient use of space: It is designed to fit in compact floor space, making it ideal for facilities and saving space for other activities.

- Reduced labour costs: Can be operated with a single workforce, reducing workforce cost.

Time and energy savings: The ability to process multiple components simultaneously saves considerable time and energy, streamlining the manufacturing process.

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## SPM for Breather Hole Punching Machine



- Industry:-** Autoparts  
**Operation:-** Breather Hole Punching  
**Machine-Type:-** Automatic PLC with Manual loading and unloading  
**Punching Size:-** Punching Dai / Perifery / Linear position can be varied  
**Manpower:-** Single person  
**Cycle Time:-** 20 Sec approx for 6 holes



We can also customise  
as per your requirement

### Key Benefits of Iyalia Pre-Drilling Machine:

The Air Brake Chamber Breather Hole Punching Machine is a fully automatic machine that revolutionizes the process.

From fixing components to automatic punching and rotating, the machine seamlessly handles every step, saving time and reducing errors. Thanks to the machine's versatile design, even parts requiring holes in two different planes are effortlessly accommodated.

Setting up a new part is simple and quick, with a user-friendly interface allowing easy configuration through pre-programmed settings.

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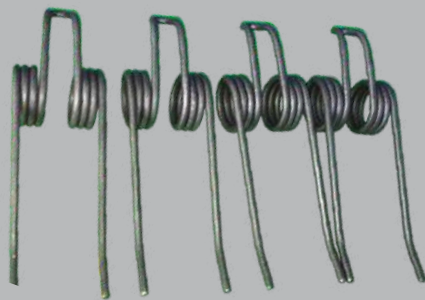
- **ROI in less than 1 year**
- **20% Rejection of Raw Material**
- **with 1/3 manpower used**
- **Improve safety with advanced safety features.**
- **Flexible configurations for various applications.**
- **Fast delivery times for urgent requirements.**



## Keyway Milling Machine



## Spring Bending Machine



## ConRod Cap Boring Machine

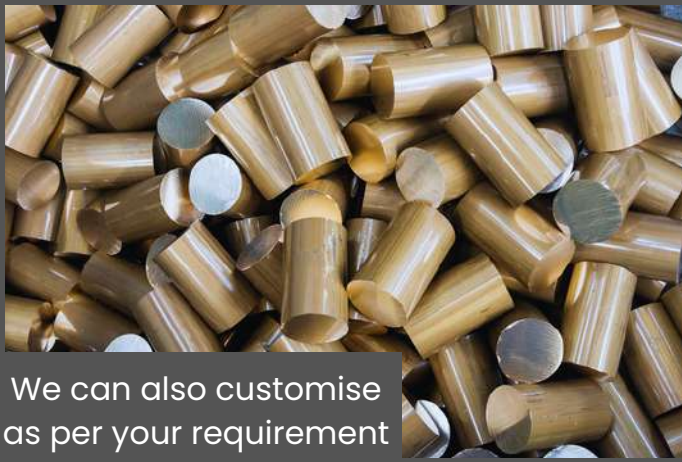




## SPM Billet Chamfering machine



- Industry:-** Hot Forging  
**Operation:-** Duplex Billet Chamfering  
**Machine Type:-** Fully automatic, setting required for new size  
**Billet Size:-** Dia 20mm to 100 mm  
**Manpower:-** No manpower; Billets loading in bulk feeder to be done.  
**Cycle Time:-** 7 to 9 seconds, depending upon the Diameter



We can also customise as per your requirement



This machine does the Chamfering operation fully automatically. The billets will be put in the pit formed Step feeder system. From there, it moves to the machine for chamfering, automatically weighing inspection without manpower hindrance.

Billets must be Chamfered from corners perfectly to enter the die, and the weight has to be within the weight tolerance. This will safeguard the Die and ensure the product output is as expected.

Billets' size can be 20mm to 100mm dia. Billets, and similarly, the length has to be 1:1.2 times or higher to hole and move properly.

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## Duplex Bar Cutting and Chamfering Machine



Industry:- Steel plants  
Operation:- Double End Bar Chamfering Machine  
Machine-Type:- Fully Automatic  
Manpower:- Single operator  
Cycle Time:- 24 to 30 Sec/Bar



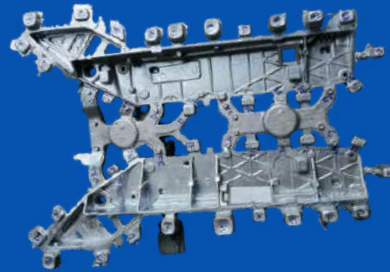
We can also customise  
as per your requirement



- # Bar Details Input:- 8 meter Length input and Dia 20 to 65 Bar
- # Output Parameters:- Length from 7 meters to 2.5 meters
- # Operations:- Maintaining Length and Chamfering to be done both sides
- # Cutting with Circular Saw and Chamfering with 2 Axis Head
- # Completely controlled with Servo controls with Safety interlocks
- # Fully automatic working from Loading till it reaches Bundling area
- # Hydraulic used for walking beam and parts Clamping system

- **Boost productivity with advanced SPM technology.**
- **Reduce operational costs with efficient machinery.**
- **Achieve precision with high-quality manufacturing.**
- **Ensure consistent quality with reliable systems.**
- **Lower maintenance costs with durable components.**

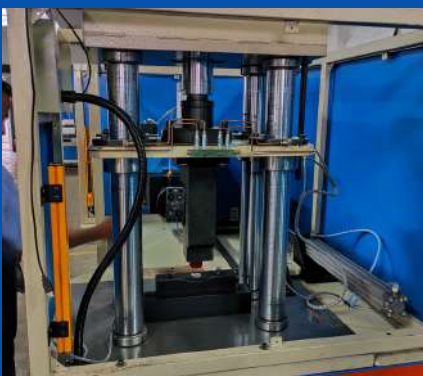
## Aluminium Runner Cutting Machine



## Facing & Chamfering Machine



## Hydraulic Side Hole Punching Machine



## SPM for 4 Spindle CNC Turning Machine



**Industry:-** Aluminium  
**Operation:-** turning, boring, facing and grooving and also threading  
**Machine-Type:-** Manual  
**Manpower:-** Single operator  
**Cycle Time:-** 60 Sec/ 4 comp



We can also customise  
as per your requirement



4 hydraulic chuck fixed in 4 spindle cnc lathe vertical lathe.

- hydraulic chuck dia 135mm
- cd between chucks 200 mm
- spindle rpm 1500 with linear tooling

Machine have 4 hydraulic chucks dia 135 and 4 sets of linear tooling's with a capacity of dia 160 mm, where 4 parts will be machined at a time, which results 4 times production in one cycle. It can do turning, boring, facing and grooving and also threading.

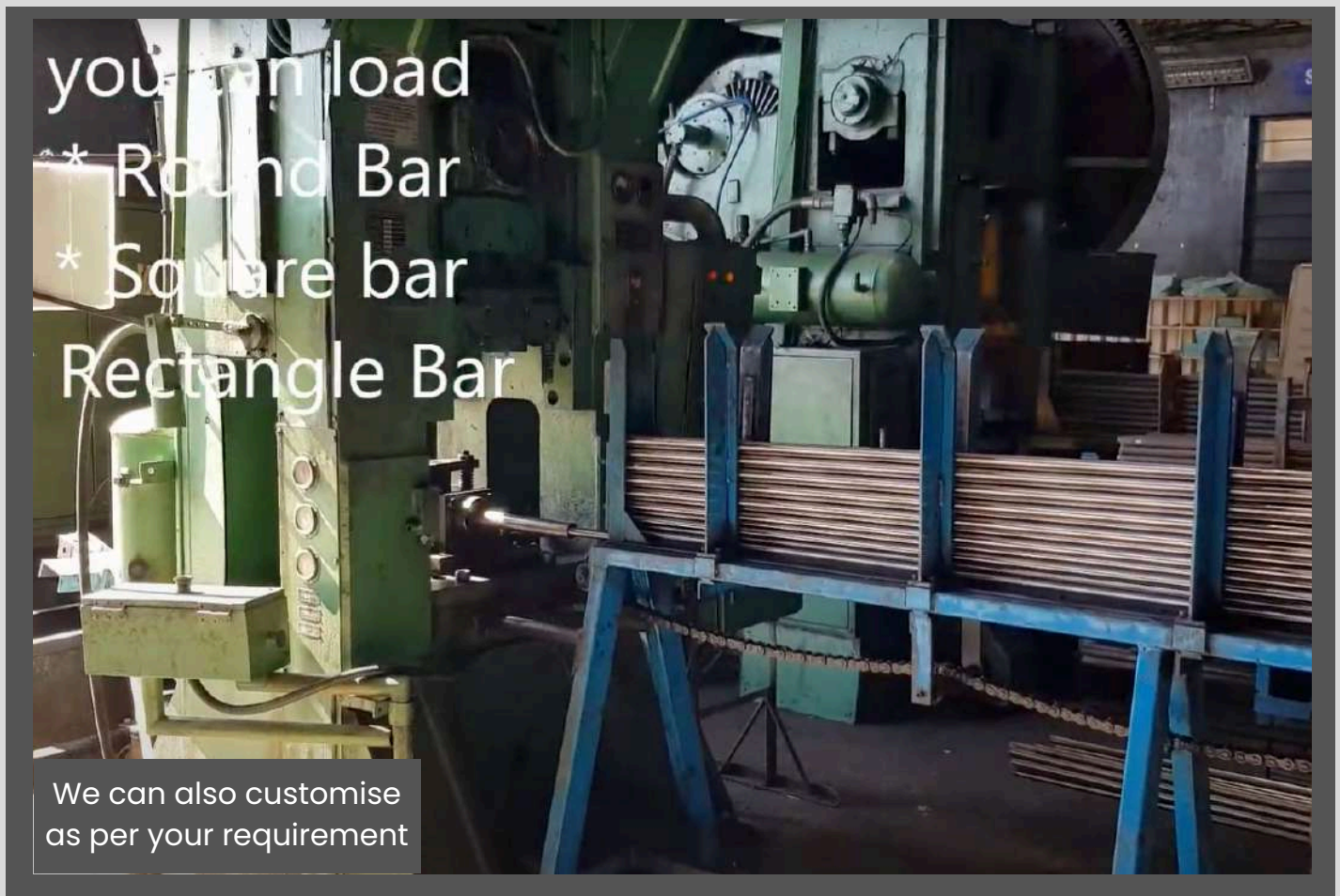
Products like flanges, sleeves, and cups can be produced with high efficiency. The machine's versatility makes it ideal for first operations, ensuring that products are made to exact specifications every time.

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## Bar Feeder Machine



Industry:-	Steel
Operation:-	Bar Feeder for Round, Square, Rectangle Bar
Machine-Type:-	Manual
Part Weight:-	20 feet length
Manpower:-	Single operator



- \* This is automatic bar feeder for Cold forgings and hot forgings.
- \* We can load 1 ton material
- \* The raw material can for of any shape
- \* Round Rod bar Feeding, Square rod bar feeding
- \* man power savings in terms time and money
- \* 0 down time in the bar feeding system,
- \* Stopper can be rotary or flat

The bar feeding has the capacity of 6mm to 35mm dia and upto 20 feet length.

No need of operator in the machine.

- Custom solutions tailored to your needs.
- Minimize manpower with automated processes.
- Enhance production speed and efficiency.



## Mosquito Bottle Assembly Machine



## Micro Screw Making Machine



## Pick & Place Machine for Forging Component



## SPM Banjo Bolt Drilling Machine



**Industry:-** COLD FORGED FASTENERS  
**Operation:-** Banjo Bolt Turning and Drilling SPM  
**Machine-Type:-** Fully Automatic  
**Manpower:-** Single operator  
**Cycle Time:-** 4 to 5 Sec/part



We can also customise  
as per your Tube size



Banjo Bolt Turning and Drilling SPM, which has a cycle time of 4 to 5 seconds/part. With a single workforce, turning the Drilling machine automatic can operate both machines, improving productivity and increasing profits.

As the machine is fully automatic, the human resources and the production output consistency are the best. You can bet on the machine for the output. Ultimately, giving you peace of mind, your profits will double or more.

You can also get more Saving time and use your human resources in a better place. A similar type of component that needs turning, Drilling and threading can be done with CNC controls.

## Rotary Transfer Drilling Tapping Machine



**Industry:-** Automobile  
**Operation:-** Drilling & Tapping using rotary table  
**Machine-Type:-** Fully Automatic  
**Manpower:-** Single operator  
**Cycle Time:-** 4 to 5 Sec/part



We can also customise  
as per your requirement

Drilling and Tapping machine, its designed and manufactured for high volume production, of Heat Sink and similar components. Many types of Aluminum Heat sinks, are widely used in industries, which normally requires Drilling and Tapping for fixing.

This Heat Sink Drilling and Tapping machine, dose 4 components at a time. it has 4 station and each station, is on continuous operation, 1st station, loading parts manually, 2nd station, Drilling in the heat sink, 3rd station, Tapping. 4th station, component ejection and Cleaning the fixture for next component clamping.



## UJ Cross Machine



Industry:-	Forging
Operation:-	Cross 4-way Drilling Machine
Machine-Type:-	Automatic
Part Weight:-	150 to 200 gms
Manpower:-	Single operator
Cycle Time:-	4 to 5 Sec/part



We can also customise  
as per your requirement



The UJ Cross machine operates on a servo drive, allowing users to adjust the RPM and feed according to the requirements of different components. This feature ensures precision and reduces the chances of errors, leading to considerable savings in terms of time and resources.

It come in various sizes, and this machine is adept at handling them all. Whether you're working with steel or any other grade of material, the machine's spindle speed and power are up to the task.

## Insert / Nut Tapping Machine



Industry:- Traders & Fasteners  
Operation:- Insert / Nut Tapping Machine  
Machine-Type:- Automatic  
Manpower:- Single operator



We can also customise as per your requirement

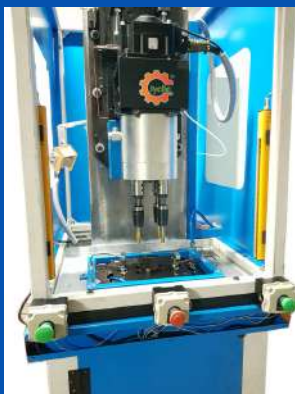
- BLIND HOLE DEPTH CONTROLLED  $\pm 0.1\text{MM}$
- FULLY AUTOMATIC INCLUDING FEEDING
- 1000-1200 PARTS/HOUR
- Auto Separate Reject parts

- First-time-right manufacturing for fewer errors.
- Seamless integration into existing workflows.
- Robust design for long-lasting performance.
- Optimize space with compact machine layouts.
- Increase output with high-capacity machines.



## Vertical Drilling Machine

## Drill Tap Centre



## Multi Spindle Drilling Machine



## Few valuable customers



**SAMSUNG**



**Competitive edge with state-of-the-art solutions.**



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