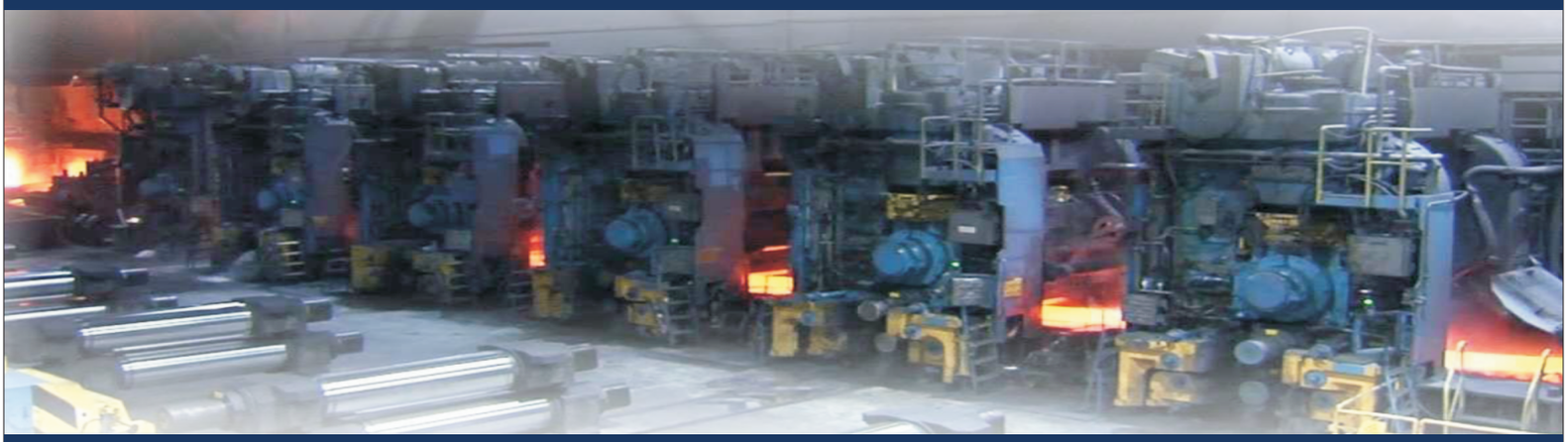
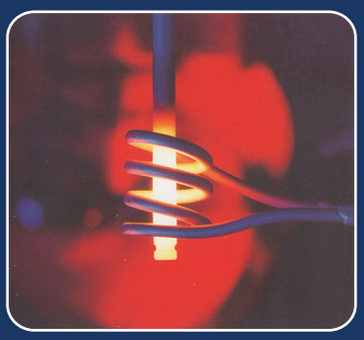
SIEMENS

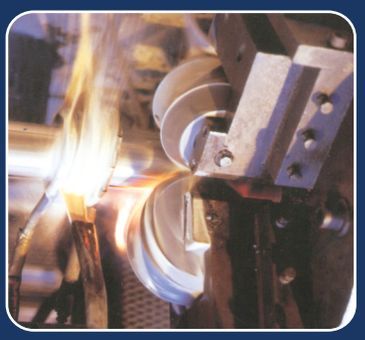
Drives & Automation

Monosef Controls Pvt. Ltd.

Engineering the future...







APPLICATIONS

- Hot Rolling Mills
- Cold Rolling Mills
- Paper Mills
- Tube Mills
- Sugar Mills
- Packaging & Printing Machines
- Process Industry
- Cut-to-Length / Flying shears
- SPM Machines
- Custom-built Applications

Monosef

Engineering the future

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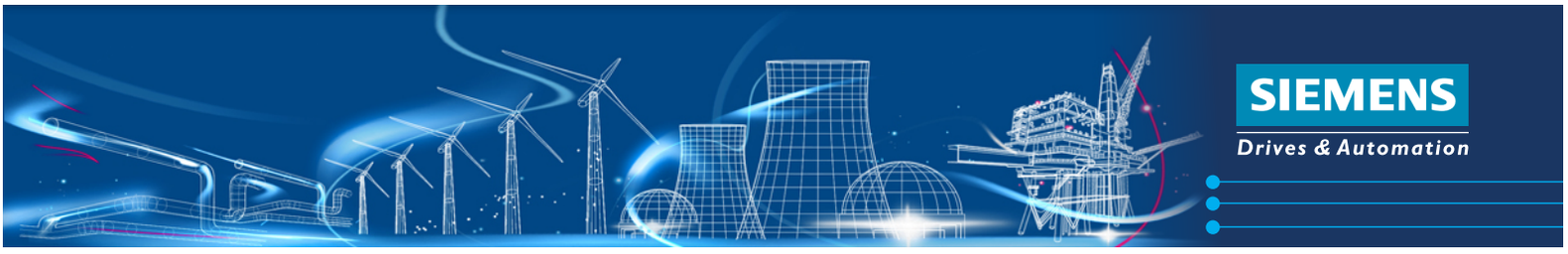
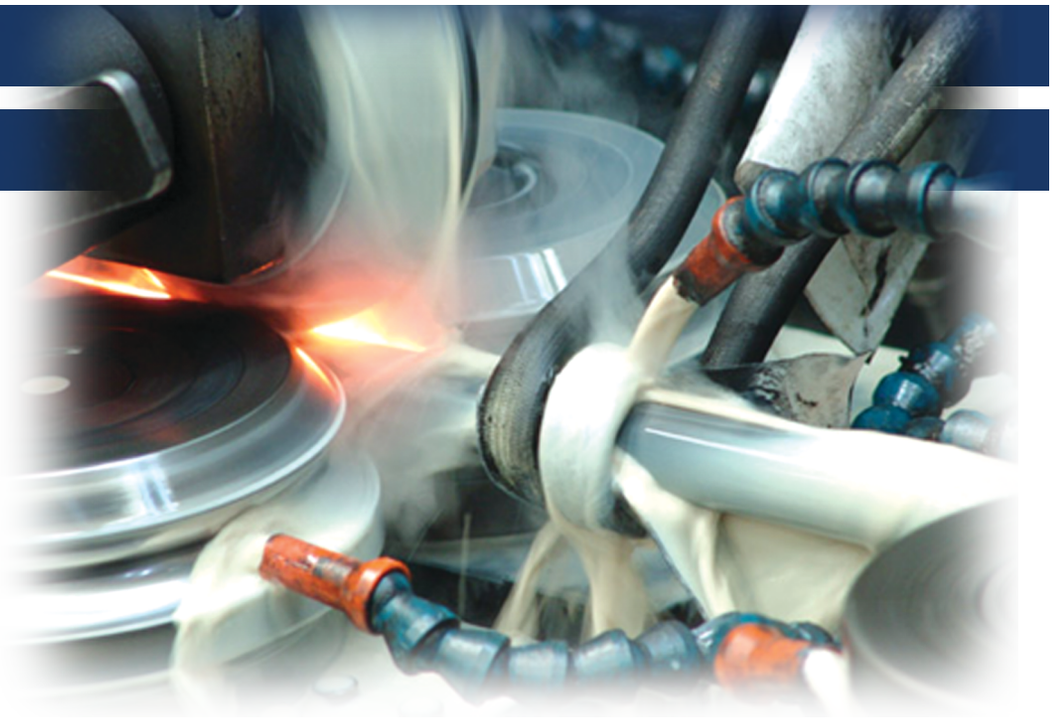


About the Company



Monosef Controls Pvt. Ltd. is a Company with a mission to offer the latest and high-tech power control systems for plant automation comparable with relevant European standards.

Product Spectra

- DC Drives.
- Variable Frequency AC Drives.
- HF Welders.
- PLC & SCADA Based Automation.
- D.G. AMF / Synchronizing Panels.
- Power Factor Panels.
- Thyristorised Heating Panels.
- LT Panels (PCC/MCC/Breaker Panels).
- Custom-built Control Panels.

Quality Policy

Buying the best is true economy. ***Monosef*** continues to place a great emphasis on quality of all its products.

Result

Our system are successfully evaluated in live applications by our valued customers in India and abroad.

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Digital DC Drive

We at *Monosef* provide the system integration with SIEMENS DC Drives which are Next Generation Drives.

Which are dedicated for industrial applications in which static and dynamic performance and independent controls of speed, acceleration, torque etc. are essential.

A simple programming structure, guarantee a quick motor "Start-Up" of more complex systems regulation, either by use of standard keypad or using the PC tool 'Starter'.

Features

- Controls of auxiliary transducers , encoders & dancer arms etc.
- Motor parameters self tuning.
- Choice of several operating and control modes.
- Automatic management of operating sequences
- Profibus / Profinet Communication to Monitor the status.
- Communication among various drive units for cascade control :
  - Various analog Input and Outputs are available.
  - Programmable Digital Inputs and Outputs are available.
- Drives for Multiple motor with management of special function as :
  - Tension controls with diameter, inertia and Friction calculation.
  - Synchronization of Sectional Drives with Draw / Ratio Control.
- Flat ribbon cable wiring to facilitate quick replacement.
- Speed feedback from Armature Voltage, Tacho or Pulse encoder.

Semi Digital DC Drive

DC Drives manufacturing by us are highly sophisticated and features provided are rarely available in its contemporary system.

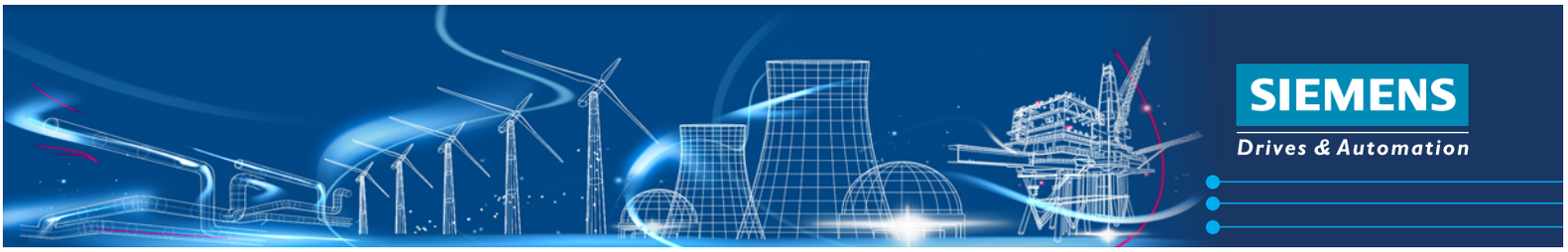
Led Indications

- +15V/-15V.
- Drive Trip.
- Motor Off.
- Feedback Loss.
- Current Limit.
- Field Loss (CT operated).
- Phase Loss / Reverse.
- Overload.
- Internal Fault.

Features

Enhance performance by advance technique such as :

- Phase Locked loop (PLL) ensure flawless synchronization and compensates for mains voltage variation.
- C.T. Operated field protection to make a precise tripping.
- Train of firing pulses by using ferrite core transformers.
- Speed amplifier has facility for external current limit.
- Current amplifier has facility for external current reference.
- A trip relay with electrical latch provides interlock with motor.
- Control card LED monitoring to assist fault diagnosis.
- Designed for larger power supply variations.
- Adjustments and terminal raw on extent card to eliminate the Re-Tuning of control card.
- Flat ribbon cable wiring to facilitate quick replacement.



AC Drive

We at *Monosef* provide the System Integration with SIEMENS AC Drives which designed to satisfy the typical needs of modern controls, where innovative technical solution and high performance are essential.

A simple programming structure, guarantee a quick motor "Start-Up" of more complex systems regulation, either by use of standard keypad or using the PC tool 'Starter'.

Full Flexibility

- Profibus / Profinet Communications.
- Motor Parameter self tuning.
- Independent programmable ramps.
- Programmable multispeed.
- "Auto capture" function (Flying restart)
- Mains loss detection with controlled stop.
- Programmable auto restart.
- PID Application block.
- Energy saving function.
- Skip frequencies.
- Motor thermal protection

PLC & Motion Controllers with Servo Drives

We at *Monosef* Provide the system Integration with SIEMENS PLC and motion Controllers with Servo Drives which designed to satisfy the typical needs of modern control systems.

We have strong technical team for development a sophisticated PC based automation by suing PLC & SCADA system in the field of Plant automation.

We have a proven track record to control the application and run the systems efficiently in the field such as:

- Rolling Mills.
- Tube Mills.
- Paper Mills.
- Cut - to - length.
- Winding Applications.
- SPM Machines.
- Packaging & Printing Machines.
- Laminating & Coating Machines.
- Process Industry.
- Custom built applications.

L T Panel

(PCC/MCC/Breaker Panels)

Control Panels

Monosef make control panels are compartmentalized, bolted construction and custom built to meet the requirement of the modern industries and confirm to relevant specifications.

Construction

Generally, panels are cubical construction made out of CRCA sheet steel.

Cable Alley in all cubical panels has ample width and spacing so that cable can be easily terminated. Cable entry can be from top and / or bottom of the panel.

Compartments

Panels are generally in compartmentalized construction. Each compartment is provided with hinged doors. Sheet metal/Bakelite barriers are provided between compartments, busbar chamber and cable alley to make the panel fully compartmentalized.

Busbar and Alley

Electrolytic Aluminum Flats/Bars of E-91E grade and Copper Flats/Bars of 99.9% purity are used for busbars. Busbars are designed for fault level upto 50 KA cms for one second. All busbars are provided with heat shrinkable type PVC sleeves and color coded. Busbars supports are non-hygroscopic SMC/DMC molded and are specially designed for long creapage distance and strong enough to with stand electro mechanical force during fault conditions.

Power Factor Control Panel

Monosef make Automatic Power Factor control panels are microprocessor controlled system that automatically manages capacitor banks to compensate for the reactive power absorbed by the load.

The controller calculates the power factor by load based on the Current & Voltage value circulating on the line.

Silent Features

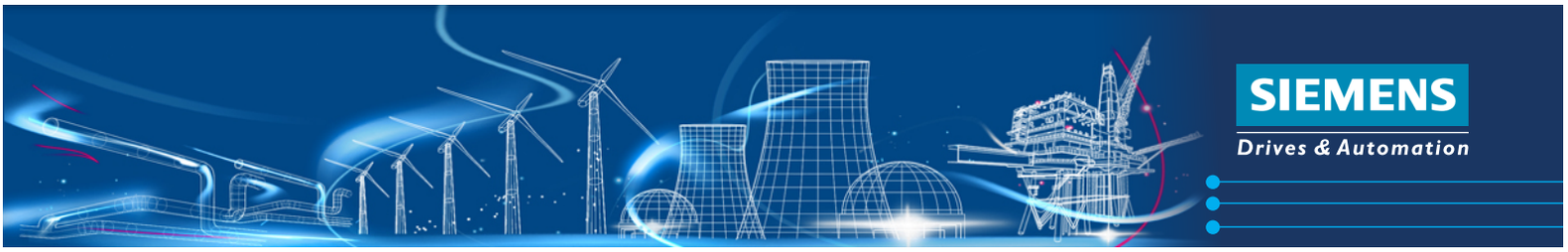
- Sensitivity of the relay is 1% of the total load value.
- Self adjustment to any capacitor step value.
- Digital indication of Power Factor, Voltage, Current, Number of Bank & rating of each Banks, Preset Parameters & specified installation data.
- Various protection i.e Over voltage, Over temperature, Harmonics overload, Power Factor correction fault etc.
- Reduce current required for the loads and electricity bill consumption.
- Facility to connect RS 232 serial port.

Breaker Panel

Motor Control Center Panel

DG Synchronizing Panel

Power Factor Control Panel



HF Welder

Monosef make Solid State HF welder is designed for straight seam induction welding of steel pipe and for continuous working, the whole set of equipment achieve the control and diagnostic faults by PLC system, the working status is observed by HMI or LCD display.

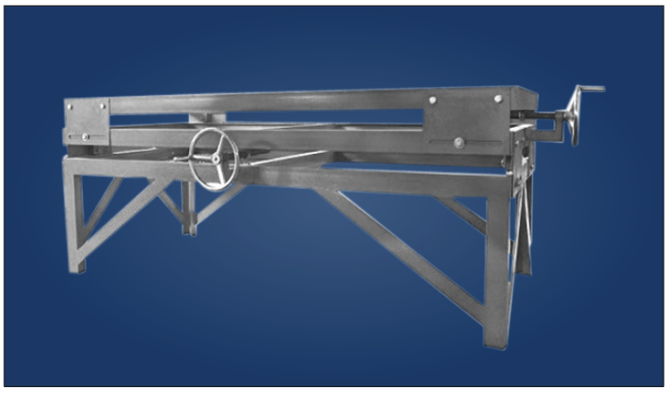
Rectifier Cabinet

Step-Down Transformer

Water - to - Water Cooling System

Inverter Cabinet

Output Leg



2D Adjustable Bracket

Console

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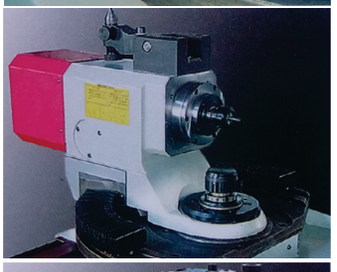
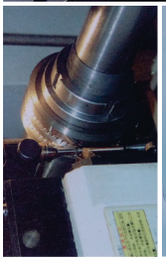
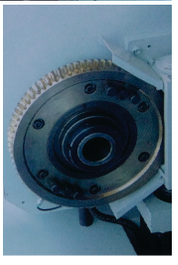
CNC Roll Notching & Branding Machine (Model : XK 9350D)

Features

- Designed to Get Swivel Function And Fly Cutting Function In One Unit.
- Suitable for Casting Rolls and Tungsten Carbide Roll Rings.
- Sturdy and rigid machine construction.
- One Machine For Two Jobs : Roll Notching & Name Marking.
- Fully Automatic Notching From First Grove to Last Groove.
- Equipped With 'Siemens' High Performance 4-Axis CNC System.
- System Can Continue Job From Pause After Tool Changed During Process.
- High Precision Ball Screw To Ensure Precision Transmission For Longitudinal.
- Precision Rolling Arc Guide-Way Provide Swivel Head With Fine Position Support.
- Notching on One groove can be done is about 15 – 20 Minutes.
- Logo Branding on One groove can be done is about 10 Minutes.





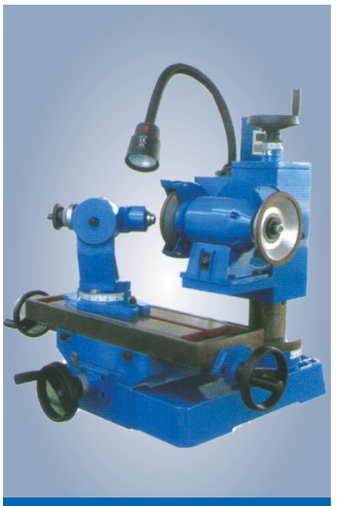


Technical Specifications

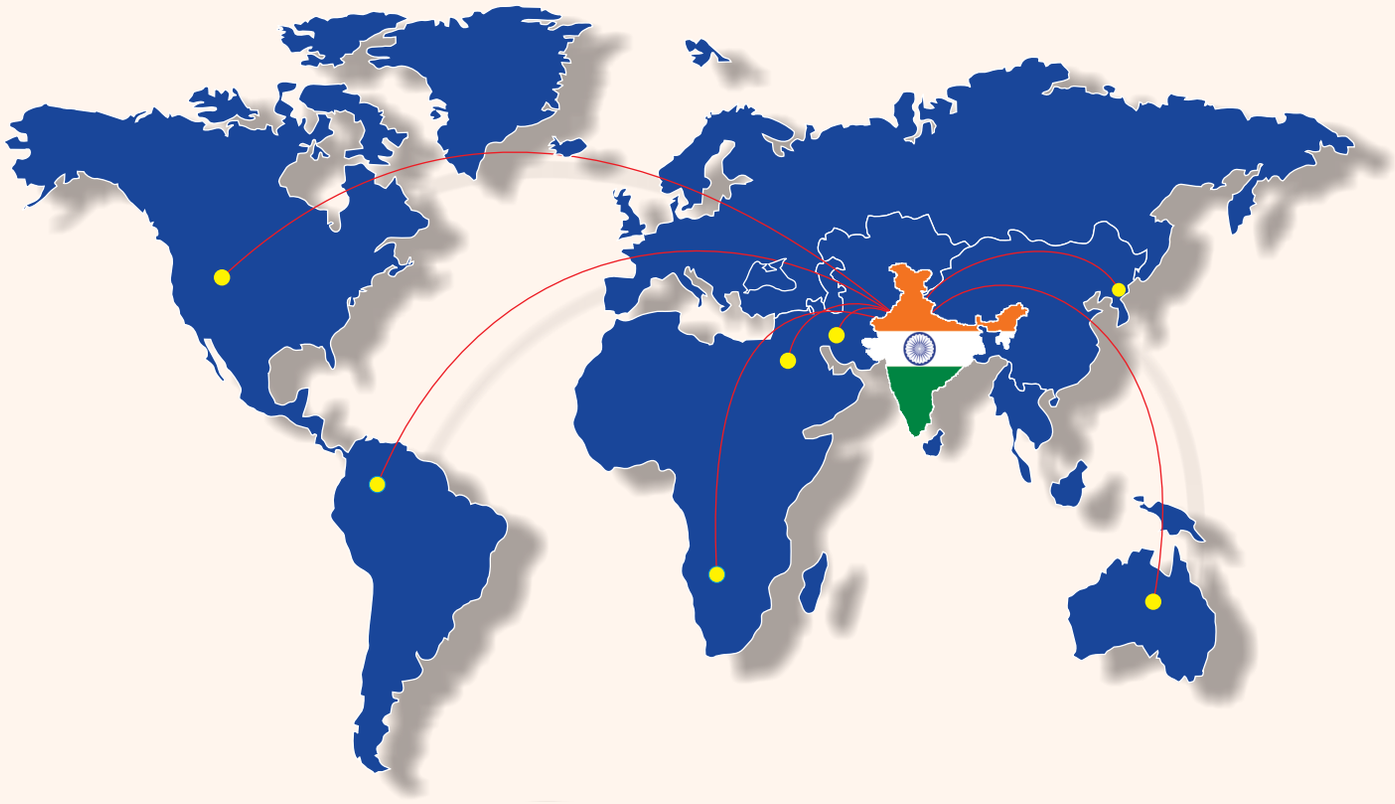
Specifications	Model : XK 9350D
Max. Diameter Of Processed Roller	550mm
Max. Length Of Processed Roll	2500mm
Notching for Re-Bar Diameter	Ø6mm - Ø50mm
Notching per Rolls	Free Choice
Omitting Ribs	Free Choice
Min. Feed Rate	0.001mm / deg.
Spindle Speed Of Flying Cutter Head (Notching)	0-600 RPM
Spindle Speed Of Milling Head (Marking)	0 – 3000 RPM
Head Stock Spindle Bore	MT#6
Head Stock Chuck diameter (4 Jaw Chuck Diameter)	500 mm
CNC 4-Axis Control System	Siemens CNC Controlers
Motors & Drives	AC Servo Motors & Drives
Overall Dimension (L x W x H) (Approx)	4000 X 1500 X 1900mm
Machine Weight (Approx)	4700 K.G.

General Requirement

- Individual room with dust free atmosphere.
- Room ambient Temp. 30 deg to be maintained.
- Provision for job loading/Unloading by Overhead crane.
- 10KVA Isolation Transformer.



Tool Grinder



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