

# the complete range of solution



$$k'n = \omega.KN$$

$$k'l' = \rho.c$$

$$hn = \sigma_m.mn$$

$$mn = P_{\eta \theta_{i}}.k'l' - Q_{\theta_{i}\eta}.k'n$$

$$mn = P_{\eta \theta_{+}}.\rho.c - Q_{\theta_{+}\eta}.\omega.KN$$

$$mn = P_{\eta\theta_{1}} \cdot \rho \cdot c - Q_{\theta_{1}\eta}$$

$$\omega = \frac{P_{\eta\theta_{2}} \cdot \rho \cdot c}{\sigma_{\eta}} + Q_{\theta_{2}\eta} \cdot KN$$



Neutral

F = SyR x 10<sup>-3</sup>

Et x 10<sup>-3</sup>

R = pre-spring back inside bend radius, mm

R<sub>1</sub> = post-spring back inside bend radius, mm

radius, mm

radius, mm

radius, mm

radius, mm

www.energymission.com

CNC V GROOVING MACHINE









Energy Mission Machineries (India) Pvt. Ltd. was established in 1999 with strong vision to deliver most reliable & economical solutions in sheet metal industry. Today Energy Mission is one of the fastest growing company with maximum satisfied customer base in India and Abroad.

#### WE ARE LEADING MANUFACTURER OF

- → CNC Servo Hybrid & Synchro Press Brakes
- NC / Conventional Hydraulic Press Brakes
- CNC / NC / Conventional Hydraulic Shearing Machines
- Four / Three Roll Plate Rolling Machines
- Hydraulic Iron Workers

- → Hydraulic / NC Busbar Cutting, Bending & Punching Machines
- Single / Double / Triple Action Deep Drawing Presses
- ◆ CNC Servo H & C Type Presses
- → Punching & Blanking Hydraulic Presses
- ◆ CNC V Grooving Machines

#### **OUR STRENGTH**

- 22 years of Experience in Manufacturing
- World Class manufacturing facility spread in 2,50,000 sq.ft
- Production capacity of 1200 machines per annum
- More than 5000+ installation across India & Abroad
- Trained & qualified team of 350 employees
- Dedicated team for design & development
- Sales & service network all over India
- Keen quality control on each component & process
- Awarded as "Outstanding Entrepreneur of Year" in Year 2008-09 & Year 2014-15

#### **OUR VISION**

We at "Energy Mission" believe to deliver high quality products at competitive price supported by best service support. To achieve this mission, we have developed in-house manufacturing facilities, focused manufacturing processes with in-depth technology know-how, sales network associates across India & abroad. Enthusiastic team of customer care is always ready to rush within shortest time at the doorstep of customer or any requirements. Our skilled workforce has a proven performance record in satisfying diverse needs of customers around the globe.





#### **FLOOR BORING MACHINE**

- In house single reference machining Facility ensures required quality parameters.
- CNC Floor Boring machines with Traverse Travel of 9 mtr& 8 mtr.
- Heavy duty 360° Machining position Rotary table

#### **CNCTURNING & VERTICAL MILLING CENTRE**

- High-tech CNC lathe with 8 station turret for precise cylinder component machining
- CNC Vertical milling machine with 24 stations auto Turret
- CNC boring machine suitable for Concave & Convex shapes machining.





### **CNC PLANO MILLER**

- CNC Plano Milling machines Up to 6 meter bed length
- Multiple head Single reference Machining
- Accurate, repetitive & fast operation reduces Production time & cost



#### **CNC PLASMA CUTTING**

- Precise & Fast CNC plasma cutting with X & Y controlled axis suitable for 4 mtr wide & 13 mtr long plates.
- Precise & accurate cutting accelerates manufacturing process.
- Inbuilt Nesting Facility to reduce wastage & production time





#### **SHOT BLASTING UNIT**

- Environment Friendly surface preparation Facility to remove rust and corrosive materials from the surface
- Capacity to handle up to 7 mtr. Long Plates & Assembly Structures

#### **PAINT BOOTH UNIT**

- Cross Draft type Paint booth facility to make painting & refinishing parts & Fabricated structures
- Suitable for 10 Mtr. Long Plates & Assembly Structures





# CNC **V GROOVING**

# **SALIENT FEATURES**

- ▶ Fast, precise & accurate V grooving
- \* Machine structure is made from Ultrasonically & tensile tested IS:2062 grade steel to ensures the
- Large table to easy working. The working area is max. 1.5 meter wide & up to 4.0 meter long
- ◆ 4 axis CNC controller with 15" Touch screen & graphics
- Finger profiling is possible
- → Possible to V Groove in embossed plate
- Uses Servo Motor, Ball Screw and LM Guide to ensure high accuracy
- ▶ Rack & Pinion is used for High Speed & Precise positioning
- Hydraulic clamps to ensure rigid clamping of work piece
- Carriage of Four single point cutting tools, The cutting amount is evenly distributed, reducing deformation of the machined part
- Air gun for removing metal chips from table

# **ACCURACIES**

 Cross Beam (Y-axis) Accuracy : ±0.01mm Cutter Holder (Z-axis) Accuracy : ±0.01mm

## **V GROOVING APPLICATION AREAS**

- Elevator Cabin, Entry, Exteriors & Interiors
- Decorative Facade Sections
- Decorative Wall, Exteriors Cladding System & Ceiling
- Architectural Fabrications
- Display Racks
- Hotel Detailing
- ▶ Decorative Kitchen Equipment Panels
- Door & Window Sections
- ♦ Machinery Claddings & Gates
- Tracks of Rolling / Sliding Gate Systems

# V GROOVING APPLICATION



Elevator Entry Area



Elevator Cabin Interior Wall Clading





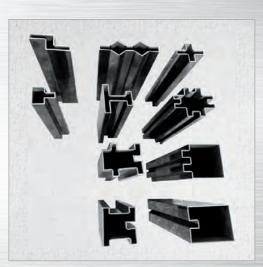
Exterior Wall Clading



Retail Fixture

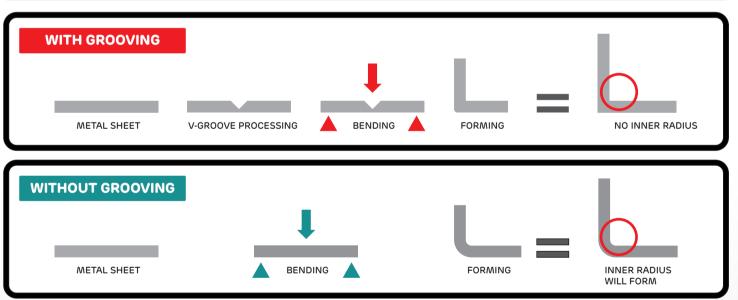


Decorative Wall





	MODEL	EM CNC HVG 1231	EM CNC HVG 1240	EM CNC HVG 1531	EM CNC HVG 1540
MACHINE	Material	MS/SS	MS/SS	MS/SS	MS/SS
CAPACITY	Length	3100mm	4000mm	3100mm	4000mm
	Width	1250mm	1250mm	1500mm	1500mm
	Thickness	0.6mm-4mm (Metal Sheet Flatness<3mm)	0.6mm-4mm (Metal Sheet Flatness<3mm)	0.6mm-4mm (Metal Sheet Flatness<3mm)	0.6mm-4mm (Metal Sheet Flatness<3mm)
	Minimum Edge	8mm	8mm	8mm	8mm
CNC CONTROLLER SPECIFICATION	Control Type	4-Axes CNC Control (X, Y1, Y2, Z)			
	Display	15" screen Touch	15" screen Touch	15" screen Touch	15" screen Touch
	Transmission Way	Gear and Rack	Gear and Rack	Gear and Rack	Gear and Rack
MACHINING SPEED	Cross Beam Forward Cutting (X-axis)	60m/min (Adjustable)	60m/min (Adjustable)	60m/min (Adjustable)	60m/min (Adjustable)
	Return Stroke (X-axis)	60m/min	60m/min	60m/min	60m/min
	Cutter & Holders (Y1 & Y2-axes)	30m/min	30m/min	30m/min	30m/min
	Cutter Up and Down (Z-axis)	10m/min	10m/min	10m/min	10m/min
OUTLINE	Length	5200mm	6000mm	5200mm	6000mm
DIMENSION	Width	2380mm	2380mm	2680mm	2680mm
	Height	1580mm	1580mm	1580mm	1580mm
	Weight	7200KG	8000KG	8300KG	11000KG





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