

# **TRISHUL**

**Winding Solutions Pvt Ltd**





# OUR PRODUCT RANGE



FOIL  
WINDING  
MACHINE



HV COIL  
WINDING  
MACHINE



PAPER  
FOLDING  
MACHINE



CUT TO  
LENGTH  
LINE  
MACHINE



TOROIDAL  
COIL  
WINDING  
MACHINE



LINEAR  
WINDING  
MACHINE



# OUR PRODUCT RANGE

**LV FOIL WINDING MACHINES**



# OUR PRODUCT RANGE



## FOIL WINDING MACHINE- FWM – 600 FOR CONTROL TRANSFORMER AND REACTORS

### SPECIFICATIONS

- FOIL WIDTH : Min - 200 - Max - 600
- FOIL THICKNESS : Al. Min - 0.20 - Max - 2 mm  
: Cu. Min - 0.10 - Max - 1.5 mm
- TYPE OF COIL : Round & Rectangle
- WINDING SPEED : Max - 30RPM with 4830 Nm
- LEAD OUT WELDING : TIG Welding Attachment  
(Cold Pressure Welding Optional)
  
- MAX -Coil Dia : 800 mm
- MAX -Coil Weight : 400 Kgs
- Machine Weight : 6800 Kgs (Approx)



## FOIL WINDING MACHINES



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# OUR PRODUCT RANGE



## Foil Winding Machine FWM - 600 for Distribution Transformer L.V Coils

### SPECIFICATIONS

- FOILWIDTH : Min - 200 -Max- 600
- FOIL THICKNESS : Al. Min- 0.20- Max-1.5 mm  
: Cu. Min-0.10- Max- 1.0 mm
- TYPE OF COIL : Round & Rectangle
- WINDING SPEED : Max- 30RPM With 3542 Nm
- LEAD OUT WELDING : TIG Welding Attachment  
(Cold Pressure Welding Optional)
- MAX-COIL DIA : 500 mm
- MAX-COIL WEIGHT : 250 Kgs
- MACHINE WEIGHT : 5500 Kgs (Approx)



FOIL WINDING MACHINES



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# OUR PRODUCT RANGE



## FOIL WINDING MACHINE- FWM – 600 FOR POWER TRANSFORMER L.V COILS

### SPECIFICATIONS

• FOIL WIDTH	: Min - 200 - Max - 600
• FOIL THICKNESS	: Al. Min - 0.2 - Max - 2 mm Cu. Min - 0.1 - Max - 3.5 mm
• TYPE OF COIL	: Round & Rectangle
• WINDING SPEED	: Max - 30 RPM With 4830 Nm
• LEAD OUT WELDING	: Tig Welding Attachment (Cold pressure Welding Optional)
• MAX - COIL DIA	: 600 mm
• MAX - COIL WEIGHT	: 350 Kgs
• MACHINE WEIGHT	: 6500 Kgs (Approx)



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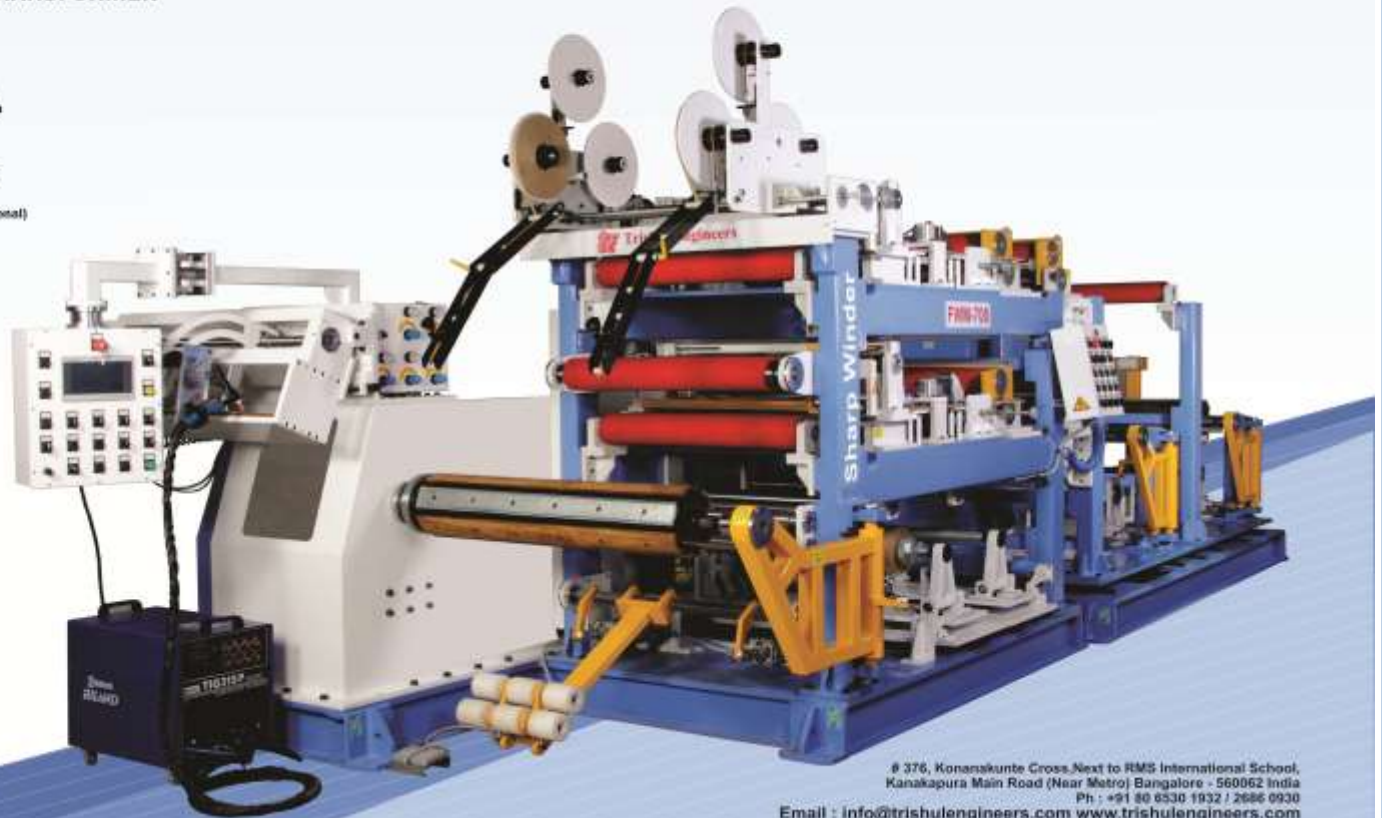
# OUR PRODUCT RANGE



## FOIL WINDING MACHINE- FWM – 700 FOR POWER AND DISTRIBUTION TRANSFORMER

### SPECIFICATIONS

• FOIL WIDTH	: Min - 200 - Max - 700
• FOIL THICKNESS	: Al. Min - 0.20 - Max - 2 mm : Cu. Min - 0.10 - Max - 1.5 mm
• TYPE OF COIL	: Round & Rectangle
• WINDING SPEED	: Max - 30RPM with 4830 Nm
• LEAD OUT WELDING	: TIG Welding Attachment (Cold Pressure Welding Optional)
• MAX - COIL DIA	: 600 mm
• MAX - COIL WEIGHT	: 500 Kgs
• MACHINE WEIGHT	: 9500 Kgs (Approx)



## FOIL WINDING MACHINES



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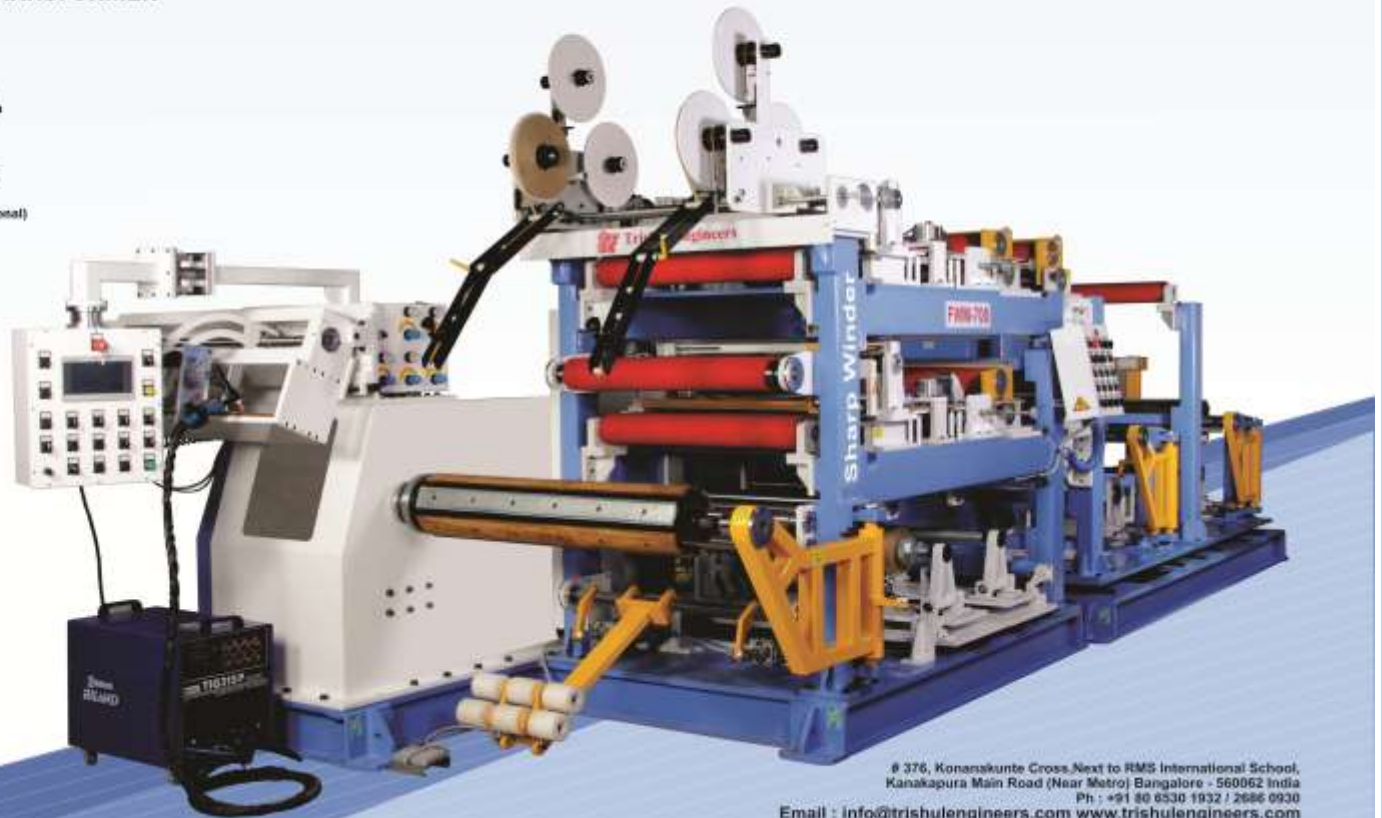
# OUR PRODUCT RANGE



## FOIL WINDING MACHINE- FWM – 700 FOR POWER AND DISTRIBUTION TRANSFORMER

### SPECIFICATIONS

• FOIL WIDTH	: Min - 200 - Max - 700
• FOIL THICKNESS	: Al. Min - 0.20 - Max - 2 mm : Cu. Min - 0.10 - Max - 1.5 mm
• TYPE OF COIL	: Round & Rectangle
• WINDING SPEED	: Max - 30RPM with 4830 Nm
• LEAD OUT WELDING	: TIG Welding Attachment (Cold Pressure Welding Optional)
• MAX - COIL DIA	: 600 mm
• MAX - COIL WEIGHT	: 500 Kgs
• MACHINE WEIGHT	: 9500 Kgs (Approx)



## FOIL WINDING MACHINES



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# OUR PRODUCT RANGE

## HV COIL WINDING MACHINES



# OUR PRODUCT RANGE



## HV COIL WINDING MACHINE T-300SH FOR DISTRIBUTION TRANSFORMER

### SPECIFICATIONS

Number of Spindle	: Single Spindle side loading
Winding Spindle Speed	: 0 to 450 RPM
Winding Motor	: 2.9 KW AC Servo Motor
Winding Mandrill	: Pneumatically operated collapsible type mandrill
Coil Swing Diameter	: 300 mm (max.)
Coil Weight	: 30kgs (max.)
Conductor	: 0.4 to 1.5 mm Super Enameled Copper round wire 0.8 to 2.0 mm Enameled Aluminium round wire 1.1 to 205 mm DPC Aluminium round wire
Traverse type	: AC Servo Motor Driven with Ball Screw of resolution of 0.01mm with max. travel width 300mm
Insulation Paper Width	: 350 mm (max) with Edge folding
Insulation Paper thickness	: 0.06 to 1.00 mm (max)
Paper Feeding & Cutting	: Automatic with predetermined length

## HV COIL WINDING MACHINES





# OUR PRODUCT RANGE

## HV COIL WINDING MACHINES



### H.V. Coil Winding Machine T-400 Distribution Transformers

#### SPECIFICATIONS

• Number of Spindle	: Single spindle side loading
• Winding Spindle speed	: 0 to 450 RPM
• Winding Motor	: 4.4 Kw Ac servo motor with direct drive
• Winding Mandril	: Pneumatically operated collapsible type mandril
• Swing Diameter of coil	: 400 mm (max)
• Coil Weight	: 35 kgs (max)
• Conductor	: 0.50 to 2.50 mm round wire
• Traverse Width	: 400 mm (max)
• Insulation Paper Width	: 450 mm (max) with edge folding
• Insulation Paper Thickness	: 0.08 to 1.00 mm (max)
• Paper Feeding & Cutting	: Automatic with predetermined length





# OUR PRODUCT RANGE

## HV COIL WINDING MACHINES



### HV COIL WINDING MACHINE- T – 600 FOR DISTRIBUTION TRANSFORMERS

#### SPECIFICATIONS

- Number of Spindle : Single spindle side loading
- Winding Spindle speed : 0 to 450 RPM
- Winding Motor : 7.5 Kw Ac servo geared motor with direct drive
- Winding Mandrill : Pneumatically operated collapsible type mandrill
- Swing Diameter of coil : 600 mm (max)
- Coil Weight : 100 kgs (max)
- Conductor : 0.80 to 3.50 mm round wire
- Traverse Width : 600 mm (max)
- Tension control system : programmable AC servo control system
- Motors & Drives : Yaskawa Japan

#### FEATURES OF MACHINE

- : Automatic layering with interlayer insulation feeding with cut paste system.
- : Automatic Graded insulation feeding for Higher Kv class winding.
- : Reduced overall dimension due to graded insulation.
- : High productive and less operator interaction during winding.
- : Online Support for program up
- : Password protection for data entry/operator interface.



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# OUR PRODUCT RANGE

## HV COIL WINDING MACHINES

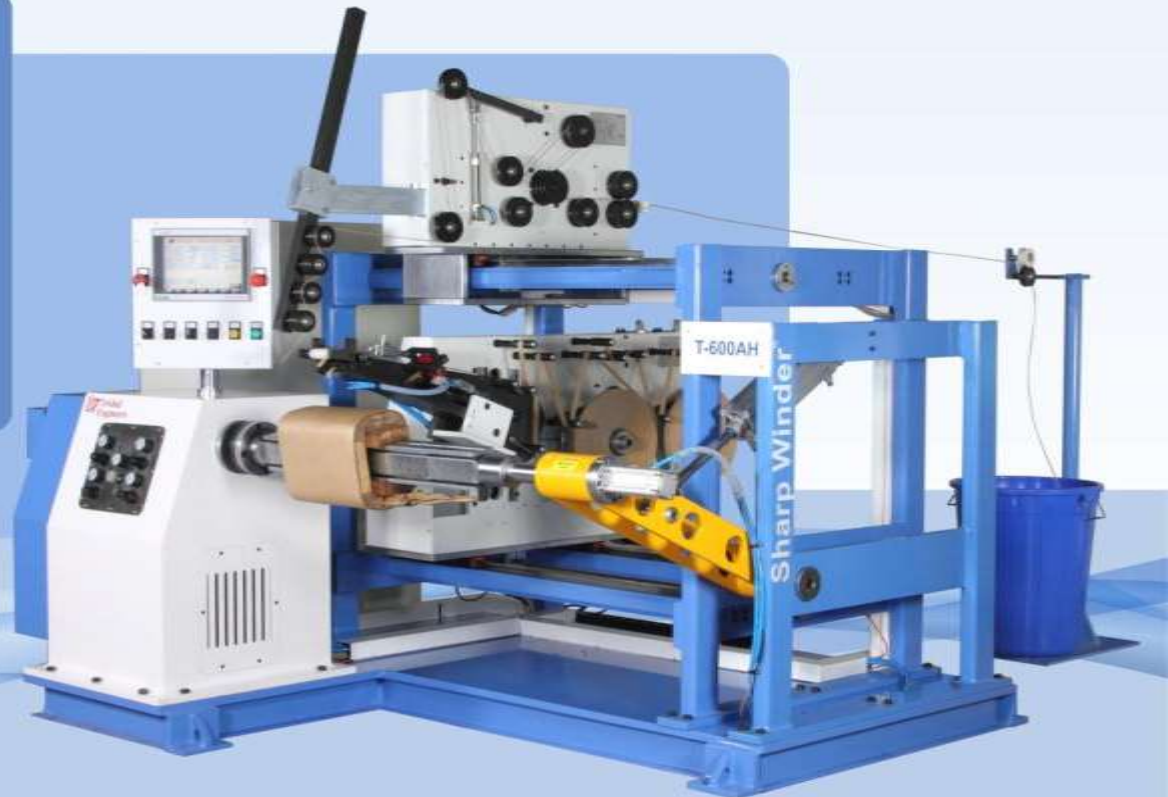


### PROGRAMMABLE HV COIL WINDING MACHINE Sharp Winder T - 600AH



#### Technical Specifications

WINDING HEAD	- Single spindle Side loading type with inbuilt Brake with Absolute Encoder Feedback.
NO COILS PER CYCLE	- Min. 1 and max.
WINDING MOTOR	- 7.5 KW asynchronous AC Geared Motor.
WINDING SPEED	- max.500 RPM.
WINDING WIDTH	- Max. 600 mm with Swing Dia of 600 mm per coil.
WINDING MANDRILL	- Expandable type (OPTIONAL)
CONDUCTOR TYPE	- Round
COIL TYPE	- Round, Rectangle and Elliptical.
COIL WEIGHT	- 100 kgs (Inclusive of Winding Mandril)
TRAVERSE TYPE	- AC Servo Motor Driven with Ball Screw of resolution of 0.01mm with max. Travel width of 650 mm.
TAIL STOCK	- Pneumatically operated Side Support.
TENSION CONTROL SYSTEM	- Programmable AC Servo motor type Tension control system.
GRADED INSULATION	- Min. 10 mm and max. 25mm
RIBBON WIDTH	- Min. 0.05mm and max. 0.15mm
RIBBON THICKNESS	- Yaskawa make Programmable Logic Controller with operator Interface.
CONTROL CONSOLE	- With operator Interface.
POWER SUPPLY	- 415 V AC 30 50 Hz. 12 Kw.
AIR SUPPLY	- 6 bar. (86 PSI)
MACHINE WEIGHT	- 2800 Kgs (approx)
DIMENSIONS OF MACHINE	- LxWxH - 1750x1900x1650 mm (Dimensions are approx.





# OUR PRODUCT RANGE

## HV COIL WINDING MACHINES



### Programmable Coil Winding Machine T-600H

#### Technical Specifications

Winding Head	: Single spindle Side loading type within built Brake with Absolute Encoder Feedback.
Winding Motor	: 3.7 KW AC Induction Motor With VFD Drive.
Winding Speed	: Max 750 RPM (0 to 750 continuous Variable In Torque mode)
Winding Width	: Max. 600 mm with Swing Dia of 500 mm.
Conductor Size	: 0.5 mm to 5mm round and
Distance Between Center	: Min. 100mm and Max. 700mm.
Power Supply	: 415 V AC 3Ø 50 Hz.
Air Supply	: 6 bars.
Machine Weight	: 1500 Kgs (approx).





# OUR PRODUCT RANGE

**PAPER FOLDING MACHINE**

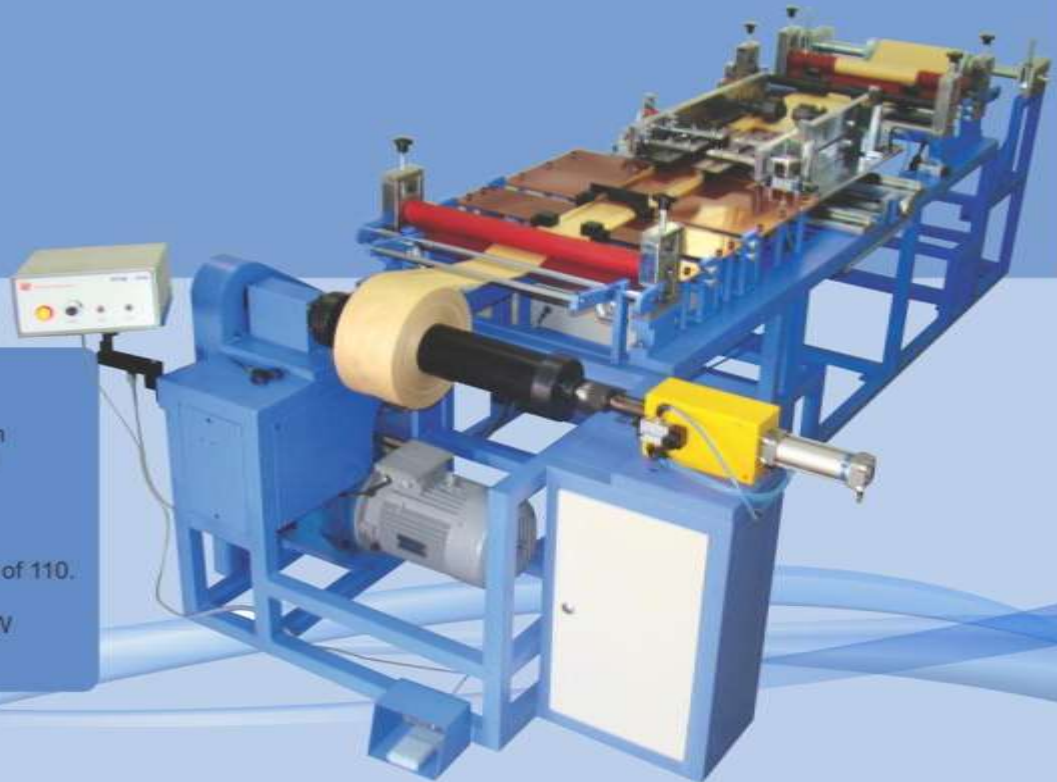


# OUR PRODUCT RANGE

## PAPER FOLDING MACHINE



### Paper Edge Folding Machine PFM - 640



#### Technical Specifications

Paper Width (Before Folding)	: Max 600 mm, Min 150 mm
Paper Width (After Folding)	: Max 400 mm, Min 65 mm
Folding Width	: Min – 8, Max – 35
Number of Folds Per Side	: 3 & 5
Tail Stock	: Pneumatically Operated
Mandril	: Slitted Type with diameter of 110.
Speed	: 100 RPM (Max)
Power	: 230 volt AC, 50 Hz, 2.5 KW





# OUR PRODUCT RANGE

**CUT TO LENGTH LINE**  
**MACHINE**



# OUR PRODUCT RANGE

## CUT TO LENGTH LINE MACHINE



Lamination cutting machine C.T.L. 200



### Technical Specifications

<b>CORE</b>	
Width	Min. 30mm Max. 200mm
Length	Min. 20mm Max. 1800mm
Core thickness	0.15 to 0.50mm
Maximum holes per sheet	As per requirement
Line speed	11.2 mts/min Max
<b>DECOILER</b>	
Coil ID	350mm min
Coil OD	1600mm Max
Coil Wt	1000 kgs Max
Drive Motor	AC induction geared Motor
Logic Control	Photo Electric Sensors
Slits Guide	Two way adjustable guide way
<b>PUNCHING UNIT</b>	
Punch Die	Min 6mm Max 20mm
Punch Wring	AC Servo Motor Driven
<b>GENERAL</b>	
Power Supply	415V 3 Phase, 7.5 KW, 50Hz
Air Supply	4 bar
Dimensions	L - 3640mm W - 1180mm H - 1910mm
Machine Weight	1000 kgs (approx)





# OUR PRODUCT RANGE

## TOROIDAL COIL WINDING MACHINE



# OUR PRODUCT RANGE

## TOROIDAL COIL WINDING MACHINE



Belt Type For PT Coil Transformers TCW - 100B

### Technical Specifications

Max. Speed	: 1500rpm
Finished Core OD	: 75mm (120 mm Optional)
Finished Core ID	: 6 mm min
Wire Gauge	: 35 SWG to 25 SWG
Core Winding	: Hybrid Stepper Motor
Winding Motor	: 1/4 HP PMDC Motor
Loading Length	: Auto / Manual in mts
Winding Turns	: Plunger Type Sensor
Display	: 16x 1 Alpha Numeric LCD
Online Correction	: Core Position
Optional Accessories	: Font Switch





# OUR PRODUCT RANGE

## TOROIDAL COIL WINDING MACHINE



### Toroidal Coil Winding Machine TCW-100S

#### Technical Specifications

Finished Outer Diameter	: 45 mm (max)
Finished Inner Diameter	: 8 mm (min)
Finished Height of Core	: 20 (max)
Maximum Wire Gauge	: 0.200 mm
Minimum Wire Gauge	: 0.080 mm
Magazine Drive	: PMDC 250 watts Motor
Core Drive	: Hybrid Stepper Motor.
Winding Speed	: 1500 TPM Programmable
Power	: 230 Volts 50 Hz
Wire Spacing	: Programmable
Segment Winding	: Programmable
Wire Length Calculation	: Auto & Manual





# OUR PRODUCT RANGE



Toroidal Coil Winding Machine TCW - 125 S

## TOROIDAL COIL WINDING MACHINE



### Technical Specification

Finished OD	: 50mm Max
Finished ID	: 9mm Min
Finished Height	: 20mm Max
Wire Gauge	: Min.44 SWG to Max. 35 SWG
Magazine Drive	: 0.25 HP PMDC Motor
Core Drive	: Stepper Motor
Winding Speed	: 1200TPM
Operating Voltage	: 230v, 50Hz AC supply





# OUR PRODUCT RANGE

## TOROIDAL COIL WINDING MACHINE



Toroidal Coil Winding Machine TCW - 150 B



### Technical Specification

Finished OD	: 100mm Max
Finished ID	: 10mm Min
Finished Height	: 50mm Max
Wire Gauge	: Min.28 swg to Max. 20 SWG
Magazine Drive	: 0.5 HP PMDC Motor
Core Drive	: Stepper Motor
Winding Speed	: 250 TPM
Operating Voltage	: 230v, 50Hz Ac supply





# OUR PRODUCT RANGE

## TOROIDAL COIL WINDING MACHINE



**Trishul  
Engineers**

**Torodial Coil Winding Machine TCW- 250G**

### Technical Specifications

Finished OD	: 250mm Max.
Finished ID	: 50mm Min.
Finished Height	: 80mm max.
Wire Gauge	: Min. 25 SWG to Max. 12 SWG
Magazine Drive	: 1 HP AC Motor
Core Drive	: 400W AC Servo Motor
Winding Speed	: 100 TPM
Operating Voltage	: 230v, 50Hz AC Supply







# OUR PRODUCT RANGE

**LINEAR WINDING MACHINE**



# OUR PRODUCT RANGE

LINEAR WINDING MACHINE



**Programmable Coil Winding Machine  
Sharp Winder T- 08**



## Technical Specifications

No of Spindle	: Two spindle side loading type
Winding Width	: 0 to 99.9 mm
Wire Gauge	: 45 SWG to 25 SWG
Winding Speed	: 300 rpm to 6000 rpm
Bobbin Swing Diameter	: 75 mm
Winding Motor	: ¼ HP, PMDC 180 VDC Rotomag motors (Controlled by PWM)
Operating Voltage	: 230 Volts AC 50 Hz
Traverse Type	: H.S.S lead screw with box nut of 10mm Pitch





# OUR PRODUCT RANGE

## LINEAR WINDING MACHINE

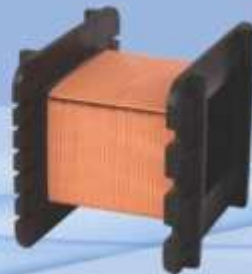


Programmable Coil Winding Machine  
Sharp Winder T-108



### Technical Specifications

No of Spindle	: Two spindle side loading type
Winding Width	: 0 to 139.9 mm
Wire Gauge	: 45 SWG to 19 SWG (Maximum wire gauge on single spindle only)
Winding Speed	: 300 rpm to 4000 rpm
Bobbin Swing Diameter	: 120 mm maximum
Winding Motor	: 1/2 HP, PMDC 180 VDC Rotomag motors (Controlled by PWM)
Operating Voltage	: 230V, AC, 50Hz
Traverse Type	: H. S. S lead screw with box nut of 10mm Pitch





# OUR PRODUCT RANGE

LINEAR WINDING MACHINE



Automatic Core Taping Machine S-8



## Technical Specifications

Tape Width	: 20 mm
Turns	: 10 (max)
Swing Diameter	: 50 mm
Speed	: 60 rpm
Power	: 230 V.AC. 50 Hz
Machine Weight	: 40 kg
Machine Dimension	: 360 x 480 x 380 mm





# OUR PRODUCT RANGE

## LINEAR WINDING MACHINE



Programmable Coil Winding Machine  
Sharp Winder T-208



### Technical Specifications

No of Spindle	: Single Spindle Side Loading Type
Winding Width	: 0 to 199.9 mm
Wire Gauge	: 0.2 to 1.2 mm
Bobbin Swing	: 200 mm Max
Winding Motor	: ¼ HP PMDC 180 V. DC of RotomagMotors
Winding Speed	: Minimum 0-20 RPM & Maximum – 1000 RPM
Traverse Motor	: Hybrid Stepper Motor 8 KG/ Cm2
Operating Voltage	: 230 V. AC. 50 Hz
Traverse Type	: HSS Lead Screw with Box Nut of 10mm Pitch
Optional	: Ball Screw Rod with Nut





# OUR PRODUCT RANGE

LINEAR WINDING MACHINE



**Coil Winding Machine 4 Spindle  
Front Loading PTW-100F**



## Technical Specifications

No of Spindle	: Four Spindle Front loading type
Winding Width	: 0 to 99.9 mm
Wire Gauge	: 45 SWG to 25 SWG
Winding Speed	: 300 rpm to 6000 rpm
Bobbin Swing Diameter:	75 mm
Winding Motor	: 1/2 HP, PMDC 180 VDC Rotomag motors (Controlled by PWM)
Power Consumption	: 230 V.AC. 50Hz
Traverse Type	: H, S, S lead screw with box nut of 10mm Pitch



# OUR PRODUCT RANGE

LINEAR WINDING MACHINE

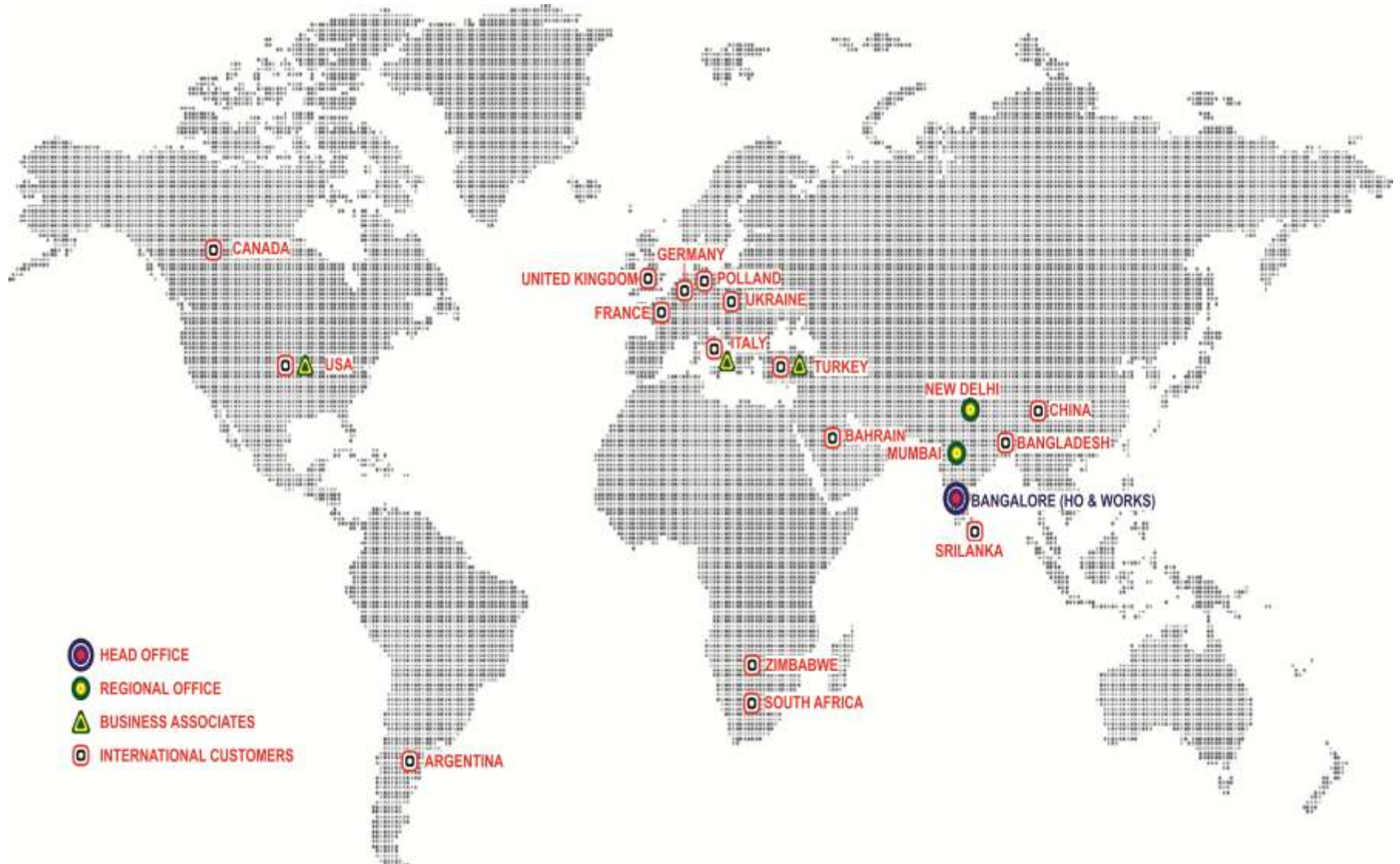


Heavy duty Coil Winding machine





# GLOBAL PRESENCE







# OUR PARTIAL CUSTOMER





# FUTURE PLANS





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