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Our Mission

At TRIHOPE, we aim to be the one-stop solution provider for transformer manufacturing and service companies around the world. Our mission is to offer a comprehensive range of products and services—from advanced manufacturing and testing equipment to transformer components, materials, and engineering support—empowering our clients to improve efficiency and quality.

Global Reach

TRIHOPE has served clients in over 20 countries, delivering thousands of pieces of equipment to major players like GE, WEIDMANN,WEG, QTC, NEOTRAFO, TSEA, MGM, VTC, VERTIV, PEL, Zetrak,MATCO and many others. Our commitment to high-quality products and excellent customer service has helped us build long-lasting relationships with clients worldwide.

Company Profile

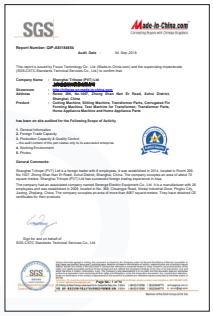
SHANGHAI TRIHOPE was founded in 2003 in Shanghai with an investment of over USD 2 million. Over decades, we have built a strong reputation for providing high-quality products and services to the power transformer industry. Our continuous investment in research and development has enabled us to deliver innovative solutions and establish ourselves as a trusted partner to transformer manufacturers and service providers worldwide.

What We Offer

- Manufacturing Equipment: TRIHOPE partners with leading manufacturers like SENERGE Automation to supply , all kind of transformer manufacturing equipment, including CNC slitting lines, core cut-to-length machines, automatic foil winding machines, CNC HV winding machine, corrugated tank fin forming machine, full automatic radiator production line and many more.
- Testing Equipment: Through DIELEC-JUTER Electrotechnics, we provide high-voltage test equipment to meet the rigorous standards of the transformer and cable industries.
- Transformer Components & Materials: We supply a wide range of essential transformer parts, including core assemblies, radiators, oil gauges, pressure relief valves, bushings, and more—ensuring smooth operation and long-lasting performance.
- Turnkey Services: With near 30 years of experience, our team offers customized turnkey solutions, including full engineering services and complete project management for transformer manufacturers, transformer conductor manufacturers and CT PT manufacturers around the globe.

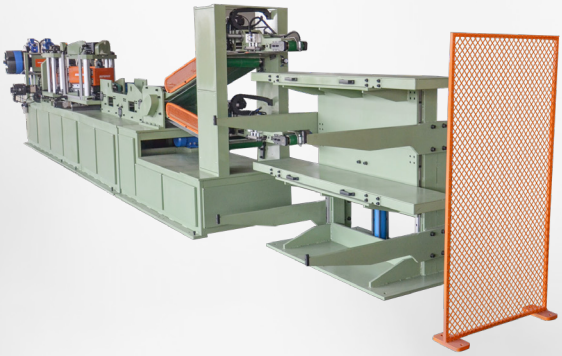
Why Choose Us?

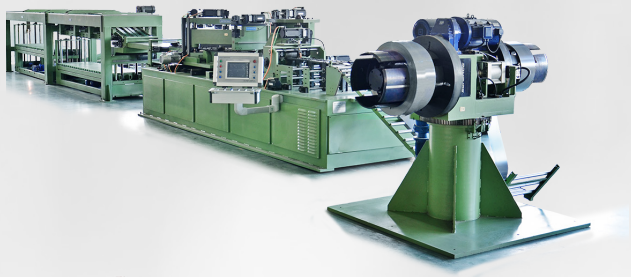
- Industry Expertise: About 30 years of experience in the transformer industry.
- Global Supply Chain: Strong network of suppliers for transformer materials and components.
- Certified Quality: ISO 9001, SGS, TUV and CE certifications ensure the highest standards.
- Comprehensive Solutions: Equipment, components, materials, and services—all at one stop service .

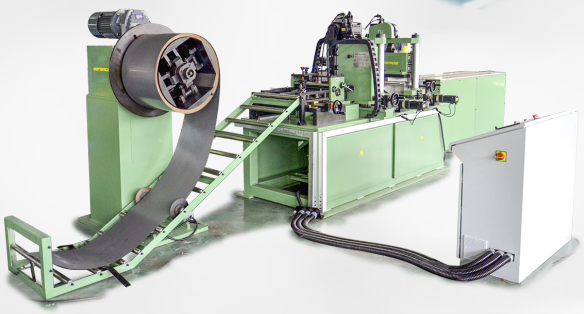


TRIHOPE Transformer Home.

Silicon Steel Core Cutting Line







APPLICATIONS:

- Silicon steel strip cutting
- High-speed production lines
- Customizable length & width setups

KEY FEATURES:

√ CNC-controlled, ±0.1mm tolerance
√ Dual-head feeding, 30+ cuts/minute
√ No-pit material storage, space-saving
√ Servo-driven system for smooth operation

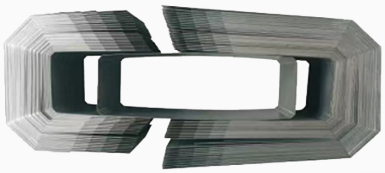
The core of transformer is the heart of transformer. HJ series core cutting machine is specialized equipment for production of transformer cores; It process the lamination of yoke, leg, center leg and etc.

Specification

Model		HJ-300	HJ-400	HJ-600
Processing range	Length(mm)	400--1800	400--2200	400--3500
	Width(mm)	40-300	50-400	60-600
	Thickness(mm)	0.23--0.35		
Feeding speed(m/min)		0-150	0-120	0-120
Decoiler	Single head Max. load weight(kg)	1500	1800	2000
	De-coiler line speed(m/min)	0--150 Adjustable	0--120 Adjustable	0--120 Adjustable
	Mandrel diameter change(mm)	φ480--φ520		
Feeding		Single servo feeding system	Single servo feeding system	Double servo feeding system
V-Notching	Notching range(mm)	25±	25±	35±
	Steps	7		
Hole Punching		None	1	1
Shearing		2 (45°&135°each)		
Depiler		Upper and lower depiler Stacking		
Total power(kw)		25	30	45
Power supply		380V±10%50Hz		
Size L*W*H(mm)		12000*1900*2400	13500*1900*2400	15000*2100*2400

UniCore Cutting Machine

KEY FEATURES:
- √ Fully Automatic Control
- √ High-Precision Servo Drive
- √ Premium Core Components
- √ Efficient & Durable Tooling
- √ Intelligent Decoiling
- √ Remote Monitoring

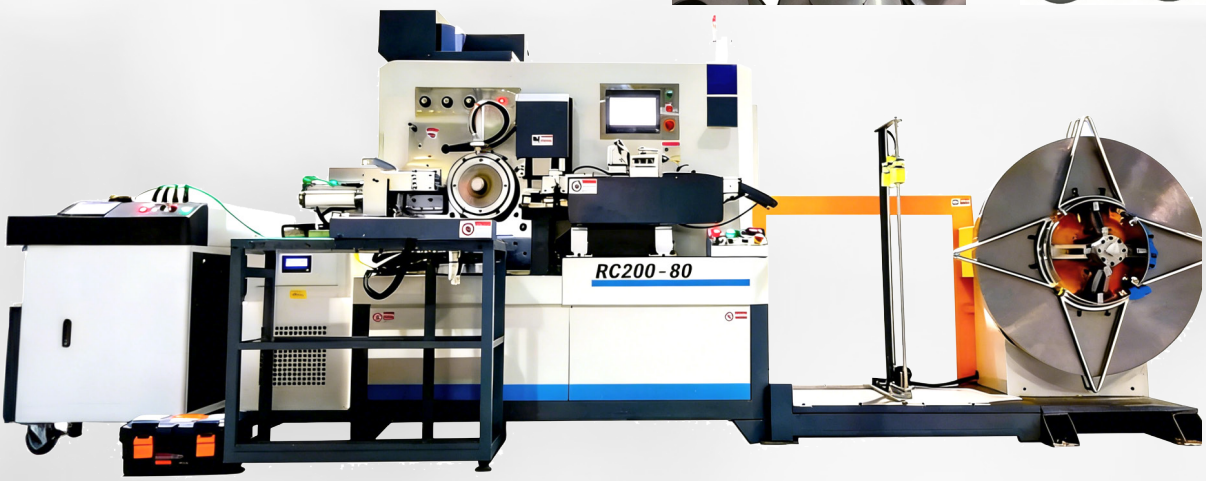


Designed for manufacturing transformer cores for distribution and power transformers. Fully automated decoiling, feeding, cutting, and bending with high precision, high speed, and stable operation. This device is widely used in the production of single-phase, three-phase, star-delta, electronic transformers, current transformers, and reactor cores

Specification

Technical Parameter Items	Parameter Specifications
Material Thickness	0.18 – 0.35 mm
Material Width	10 – 400 mm
Max Decoiling Load	1500 kg
Cutting Burr	≤ 0.02 mm
Bending Angle	45°
Core Window Width	150 – 400 mm
Core Window Height	300 – 900 mm
Step Lap Count	2 – 30 steps
Machine Color	Machine Grey / Sky Blue

Automatic Toroidal Core Winder



KEY FEATURES:

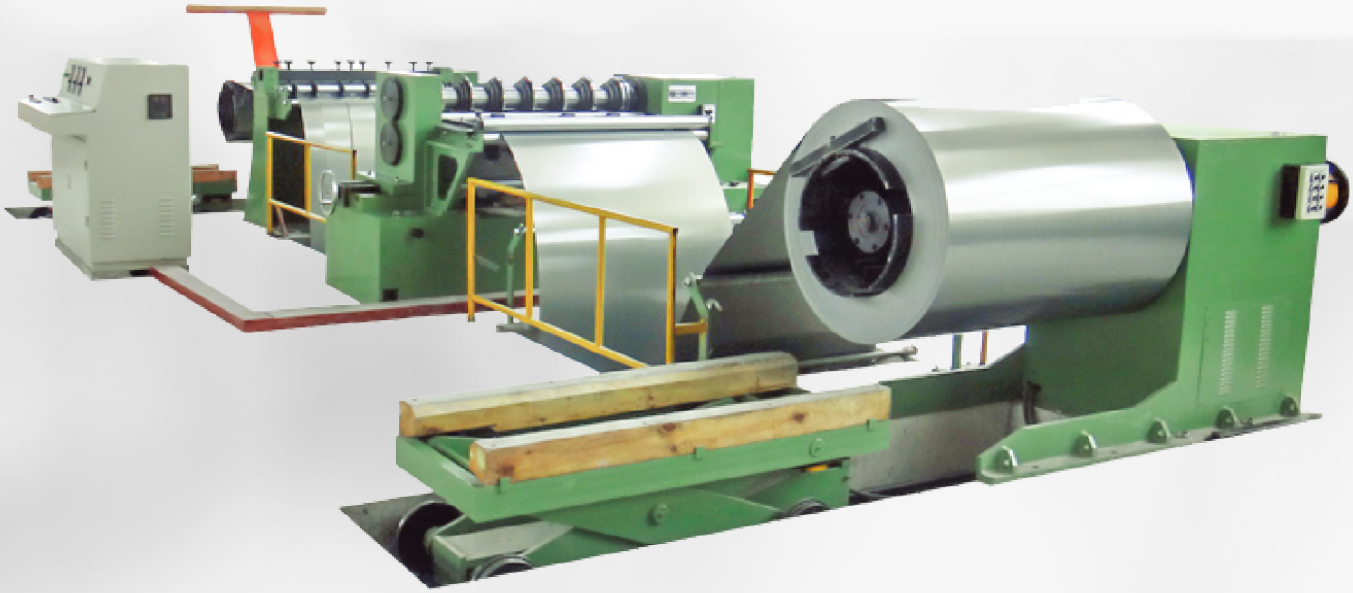
- √ **High-speed, fully automated system for feeding, punching, winding, cutting, welding, and collecting.**
- √ **Controlled via PLC and HMI with closed-loop monitoring and alarms.**
- √ **Integrates laser welding, a robotic arm, a lifting platform, leveling, and deburring.**
- √ **One laser welder can serve up to four core winders.**

The automatic toroidal core winder for producing of toroidal core made from grain oriented steel or non-oriented steel for small transformers, transmitters, instrument and voltage transformers, chokes and variable voltage transformers.

Specification

Model	RC100-30	RC150-50	RC250-100	RC300-120
Shape	Toroidal Core			
Servo Motor	5			
Mandrel Diameter	ø-10 ø80mm	ø20- ø120mm	ø40- ø200mm	ø80- ø260mm
ID (Min)	ø10	ø20	ø40	ø80
OD(Max)	ø100mm	ø150mm	ø250mm	ø320mm
Material Width	5-30mm	10-50mm	20-100mm	20-120mm
Material Thickness	0.18-0.35mm	0.18-0.35mm	0.18-0.35mm	0.18-0.35mm
Accuracy	< 0.1mm	< 0.1mm	< 0.3mm	< 0.3mm
Voltage	380VAC, 50/60Hz, with wire 4mm²			
PLC	Panasonic			
Air pressure	6kgf/cm²			
Power	6KW	8KW	14KW	15KW
Main Unit Size (Lx-WxH)	1800x1000x1530mm	1900x1200x1820mm	2450x1500x1750mm	2550x1550x1750mm
Decoiler Size (Lx-WxH)	1500x750x1410mm	1500x750x1410mm	1910x1320x1130mm	1910x1320x1130mm
Welder Size (LxWxH)	1000x1080x1000mm	1000x1080x1000mm	1000x1080x1000mm	1000x1080x1000mm
Total Weight	1430KG	1550KG	2500KG	2650KG
Language	Chinese/English			

Silicon Steel Slitting Line



Silicon steel slitting line is an equipment to slit silicon steel coil into required strips and rewind into coils under certain pressure.
Slitter is with high rigidity and accuracy structure, and the designed flexibility of spindle system can ensure 0.01% accuracy tolerance of production.
The line is electrically and hydraulically driven to have facilitated operation and high productivity. All the line is controlled by PLC.

Slitting speed can be adjusted. Speed regulators for de-coiler, slitter and re-winder are selected to realize synchronous speed running of the whole line. At manual operation, any single unit, any two units or all three units of the de-coiler, slitter and re-winder of the line can be started and run. At auto operation, all units of the line run synchronously.

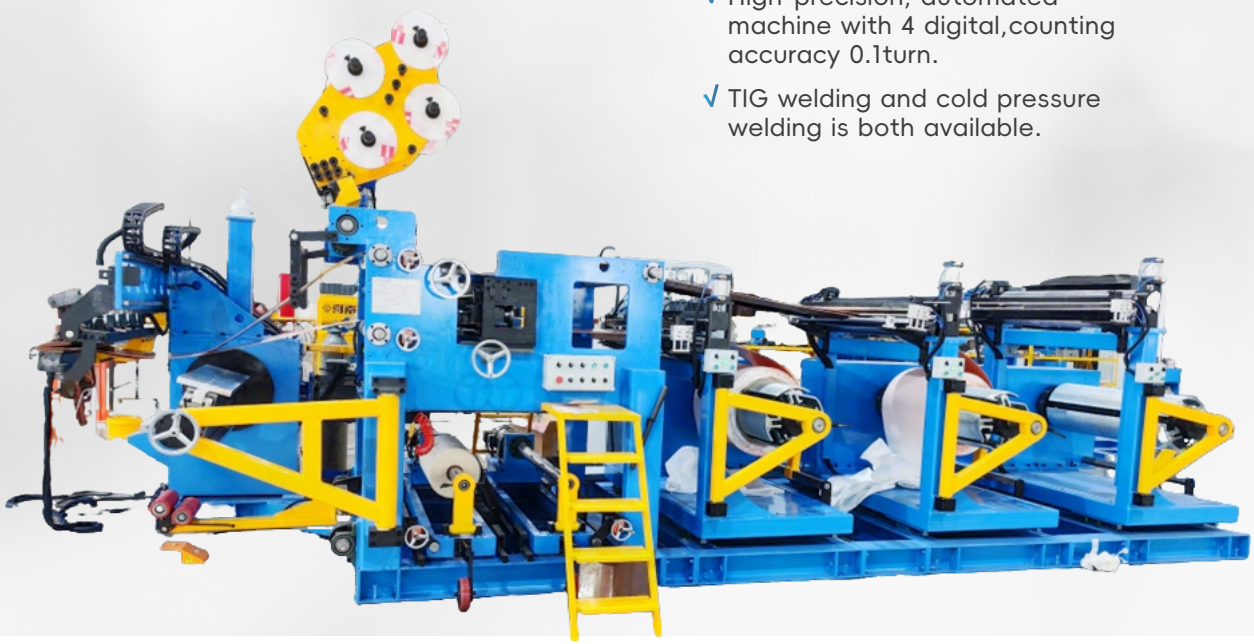
Specification

Item	Specification
Coil thickness	0.23~0.50mm
Coil width	Max.1250mm
Coil weight	⩽7000Kg
Widthafter slitting	⩾40mm
Speed of device	Max. 80m/min
Total power	37Kw
Slitting widh precision	±0.1mm
Straghtness deviation of each edge	⩽0.2mm/2m
Number of slitting strip	2~9 Strips
Slitting burr	⩽0.2mm
Decoiler/re-wingding drum expanding range	φ480~φ520mm

Foil Winding Machine

KEY FEATURES:

- √ Suitable for winding single-layer, 2-layer to multi-layer aluminum foil and copper foil with a width ranging from 600-1600mm.
- √ High-precision, automated machine with 4 digital,counting accuracy 0.1turn.
- √ TIG welding and cold pressure welding is both available.

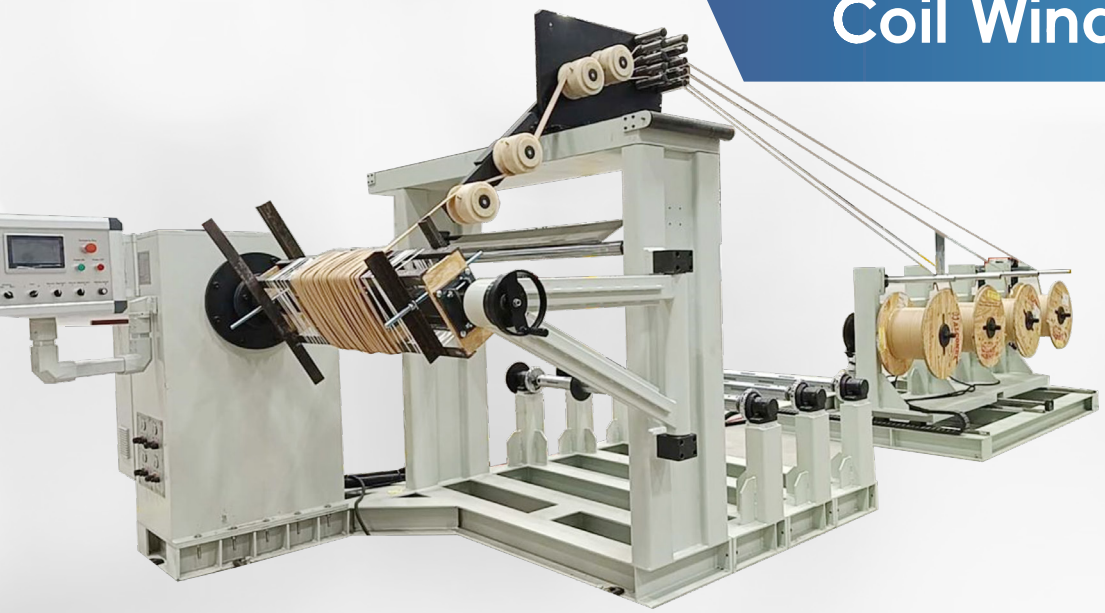


A Transformer Foil Winding Machine is a specialized industrial system designed to manufacture the low-voltage, high-current windings of power and distribution transformers. Instead of using round or rectangular wire, these machines precisely wind thin, wide strips of conductive foil (typically aluminum or copper) onto a transformer core or mandrel

Specification

Model		BR-800	BR/2-1100	BR/3-1200	BR/4-1400
Axial length(mm)		180-800	250--1100	250～1200	250--1400
Axial length(Include lead)(mm)		330-950	400--1250	400-1600	400--1600
Max.Outer diameter mm		φ600	φ700	φ1000	φ1000
Coil size	Form	Round/Rectangular			
	Width(mm)	180-800	250--1100	380-1200	380--1400
	Thickness (Max) (Total thickness)	Copper foil :0.3～2.5 mm Aluminum foil : 0.4～3 mm			
De-coiler	Numbers of Head	1	2	3	4
Welding device	Welding mode	TIG/ Cold pressure welding			
Cutting device	Qty.	1	2	2	2
End in-sulation uncoiling device	Qty.	2	4	6	8
Electric control system	Control mode	PLC automatic control,assisted by button operation			
	Number of digitals	4-digital(0--99999)Counting accuracy 0.1 turn			
Power Supply		3 Phase 5 wire 380V 50HZ			

HV Automatic Coil Winding Machine



KEY FEATURES:

- √ **Servo-driven systems with linear guides ensure micron-level winding accuracy.**
- √ **User-friendly HMI Touchscreen & PLC control stores all parameters for fast, error-free job changeovers.**
- √ **Achieve Multiple flat wires parallel wound and 2 round wires parallel wound at one time.**

Transformer HV Coil Winding Machine is a precision industrial system designed to manufacture the high-voltage windings for power, distribution, and specialty transformers. Unlike foil winders, these machines handle insulated round or rectangular magnet wire (or continuously transposed cable, CTC) to create the layered or disc-type coils required for the high-voltage side of a transformer.

Specification

Model		GZR-500	GZR-800	GZR-1100	GZR-1400
Wire Numbers		Max 16 Nos Flat wire , 2 nos round wire paralle winding			
Max Spool Center Height		550	850	1150	1450
Working Speed(rpm)		0-400	0-220	0-200	0-200
Speed Adjustment way		Frequency stepless control			
Applicable scope of work piece	O.D. (mm)	⩽350	⩽600	⩽700	⩽800
	Max. Weight(kg)	300	500	500	1000
Total Power(kw)		2.5	6		
Counter maximum set-ting lap		9999.9			
Wire specifica-tions	Round wire(mm)	φ-0.3φ3.5			
	Flat wire(mm)	2.5*6	3*12	3*12	4*15
Auto alignment wire function		Adjust Min.diameter 0.01mm			
Count way		5 digital display,preset totallaps and total 20 section of preset,reversible count, blackout memory			
Power supply		AC 380V 50HZ			

HV & LV Coil Combined Winding Machine

KEY FEATURES:

- √ **Advanced PLC Control System** – Color touchscreen operation with step programming, power-off memory, and easy process setup.
- √ **Precision Tension & Alignment** – Servo-controlled electric tension with stepless adjustment; alignment accuracy within ±0.5mm; supports parallel and overlapping winding.
- √ **Wide Material Compatibility** – Suitable for copper foil (0.3–2mm) and aluminum foil (0.3–3mm); supports round, elliptical, and rectangular coils.
- √ **Powerful Winding Performance** – Max. winding length 1200mm, max. outer diameter φ1120mm, working torque ⩾8000N·m, load capacity up to 1000kg.
- √ **Robust & Reliable Structure** – Independent unwinding unit, ultrasonic outer diameter detection, mechanical clamping for consistent long-term operation.

Transformer HV and LV Winding combined winding machine can make LV coil and HV coil together on one machine, save coils loading and unloading as well as coil shifting time, high efficiency , better product quality.

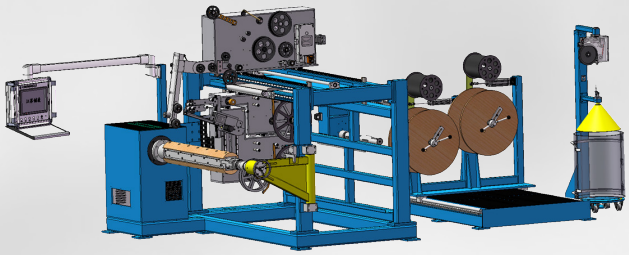
Specification

Parameter	ZHR/I-600 (Combined Winding)	ZHR/II-1200 (Combined Winding)
Coil Type	HV + LV coils	
Foil Decoiler	1	2
Max. Axial Length	600 mm (720mm with leads) or customized	1200mm (1320mm with leads) or customized
Winding Speed	HV:0~300rpm LV: 0~30rpm	
Copper or aluminum foil	Cu Foil Thickness: 0.3-2mm Al Foil Thickness: 0.3-3mm	Cu Foil Thickness: 0.3-2mm *2 Al Foil Thickness: 0.3-3mm *2
Wire quantity	2 flat wire, can be parallel winding / overlapping winding	4 Flat wires, can be parallel winding /overlapping winding
Suitable wire	Flat wire: Max 3.5 x 12.5mm	
Count digits	5 digits(0.0-9999.9)	
Total Power	15kw	23kw
Control System	PLC + color touchscreen	

Fully Automatic HV Coil Winding Machine

KEY FEATURES:

- √ German dynamic tension feedback system, adjustment of insulation paper tension and thickness
- √ Aluminum/copper conductors wound in layers with interlayer insulation paper
- √ No tension control insulation, No gradient optimization insulation , multi-layer insulation compatibility



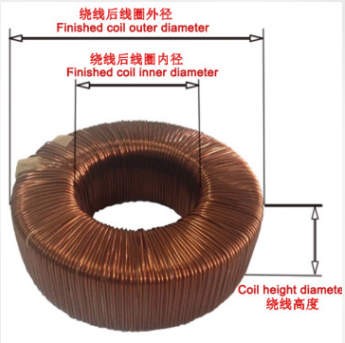
Designed for compact coil production in small/medium distribution transformers and similar applications. Achieves 20-30% volume reduction and 15-25% weight reduction in coils, lowering material costs and operational losses. Optimized insulation layout increases operational speed by 40% and reduces production interruptions by 60%, significantly boosting efficiency.

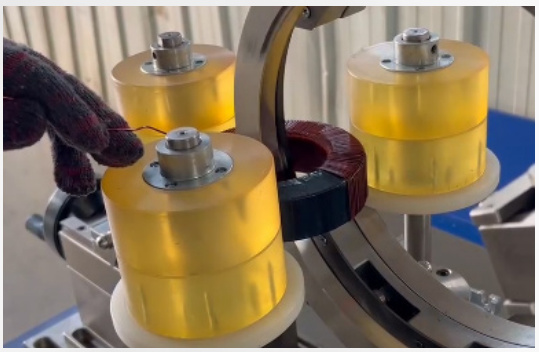
Specification

Item	ZD-GY880	ZD-CY1200
Center Height	900mm	1000
Axial Length	800mm	1400
Max Outer Diameter	φ800mm	φ1500mm
Min Inner Diameter	φ160mm	φ160mm
Workpiece Load Capacity	500Kg	1000kg
Quantity of Flat Wire	2 Nos, Max Enameled Flat Wire: 4×15mm,	
Quantity of Round Wire	1 No, Max Enameled Round Wire: 0.5-4.0mm, Round Wire Flattening <20%	
Winding Speed	350-0r/min	

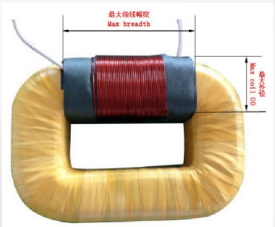
CT.PT Coil Winding Solution

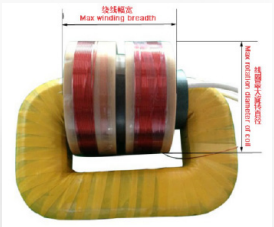
The current transformer coil is wound and equipped with a current transformer winding machine and include the round core winding machine and Square core winding machine.

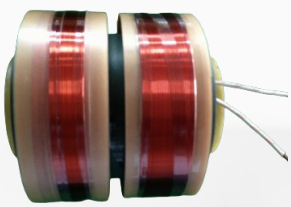


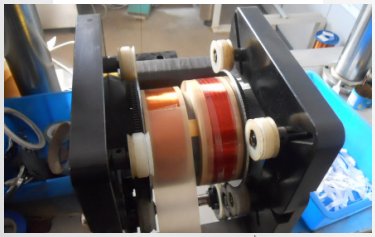


Voltage transformers are divided into primary winding machines and secondary winding machines.

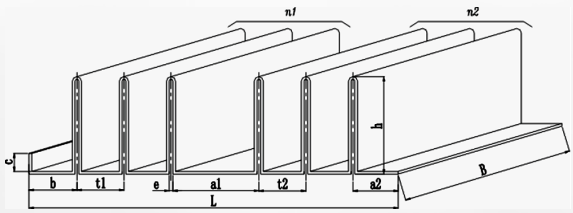




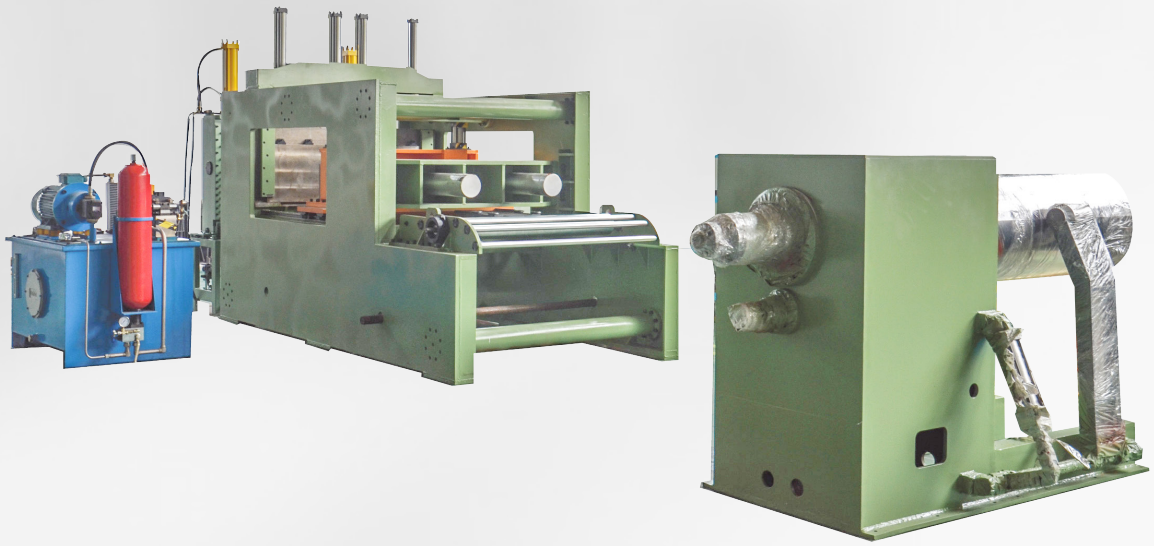




Corrugated Fin Forming Machine

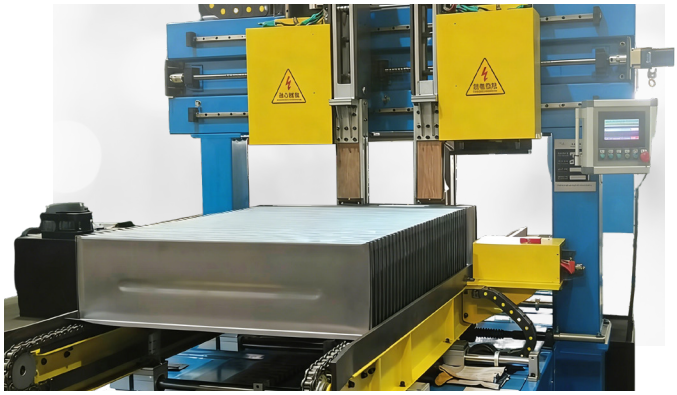


Item	Code	BW-1300	BW-1600
Steel plate width	B	300-1300mm	300-1600mm
Steel plate thickness	S	1-1.5mm	1.0 -1.5mm
Corrugated height	H	50-350mm	50-400mm
Corrugation pitch	t	≥45mm	≥40mm
Net clearance between corrugations	e	6mm	6mm
Number of corrugation band sets	n	1-4sets	1-4sets
Corrugation band length	L	≤2000mm	≤2000mm
Folding height	C	15-300mm	15-300mm
Length of box board tips (front gap)	b	≥60mm	≥40mm
Length of box board tips (rear gap)	a	≥40mm	≥40mm
Forming speed		≤40S	≤40S
Total power of motors		23.65kw	35kw
Total weight		17000kg	25500kg
Floor space		9000×6000(mm)	13000×7100(mm)

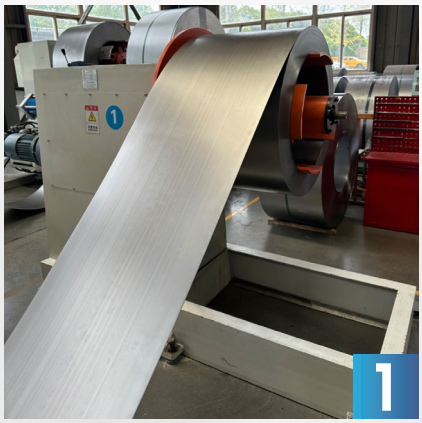


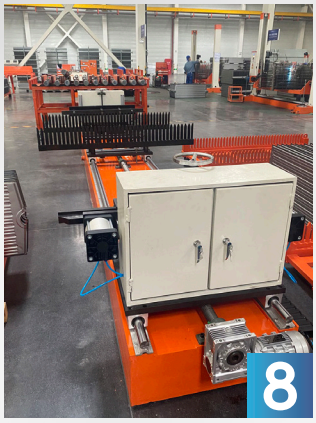
Corrugated Fin Auto Welding Machine

Corrugated Tank Double-Spot Welding Machine



Transformer Radiator Production Line





1. Decoiler 2. Rolling and forming 3. Automatic fins closing 4.Multi-spot welding 5. Double edge seams welding 6.Levelling 7. Robot stackinig or traditional stacking 8. Assembly machine 9. Welding positioner 10.Flange group butt welding machine (8~10 are auxiliary equipment)

This Radiator Automatic Production Line was developed by absorbing the advanced technology at home and abroad, It can produce 520mm width (380 , or customized), center distance of 500mm-4000mm radiators. With high automation and good forming quality, It is the ideal processing equipment for radiator manufacturers. The production line can be used together or single machine.

Vapor Phase Drying Equipment



Vapor Phase Drying is a controlled drying process that uses the condensation of a heated organic solvent vapor to remove moisture from transformer windings and core assemblies. Unlike traditional heat-drying, VPD uses vapor contact to transfer heat uniformly into transformer components.

Why VPD Matters in Power Transformers

Moisture in transformers is a critical problem that can:

√ Reduce insulation strength
√ Accelerate aging of paper insulation
√ Lead to partial discharge and breakdown
√ Shorten equipment life

Transformers manufactured in ambient conditions often absorb moisture from the atmosphere during winding, assembly, and transportation. VPD mitigates this risk by effectively removing moisture at low temperatures without damaging insulation.

Vacuum oil filling equipment

Vacuum oil filling equipment series: Used mainly in the vacuum oil filling of high-voltage power transformers, high voltage Instrument transformers, capacitors and other high-voltage electric appliances; Using PLC control and industrial computer to realize man-machine information exchange, the whole process of vacuum drying, vacuum oil filling, vacuum pumping and other drying automatic.

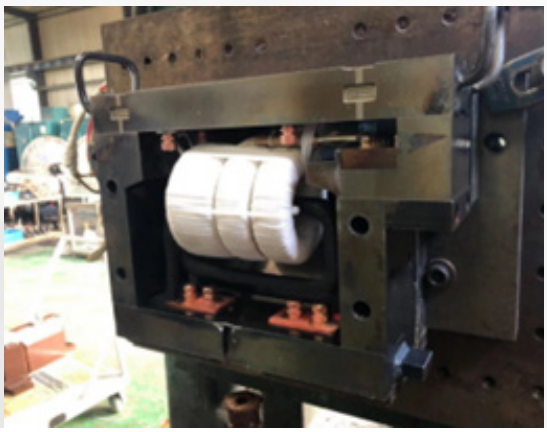
Vacuum Drying Equipment

The pressure-alternating vacuum drying system is designed for efficient drying and impregnation of industrial components such as transformer cores and insulation parts. The equipment features a 304 stainless steel oil circuit system, intelligent variable-pressure drying technology, and a fully automated control system, ensuring high efficiency, cleanliness, and stability throughout the drying process.

Epoxy resin vacuum casting equipment

Used mainly in resin impregnation and envelopment of electric appliance coils. The application objects include transformer, reactors, instrument transformers, high voltage insulation pieces, high voltage cable connectors, discharge coils, ignition coils, motors, electric welding machines, nuclear power actuator drive motor, magnetic suspension train long stator, Tokamak nuclear fusion low-temperature full superconducting coils;

Automatic Pressure Gelation (APG)

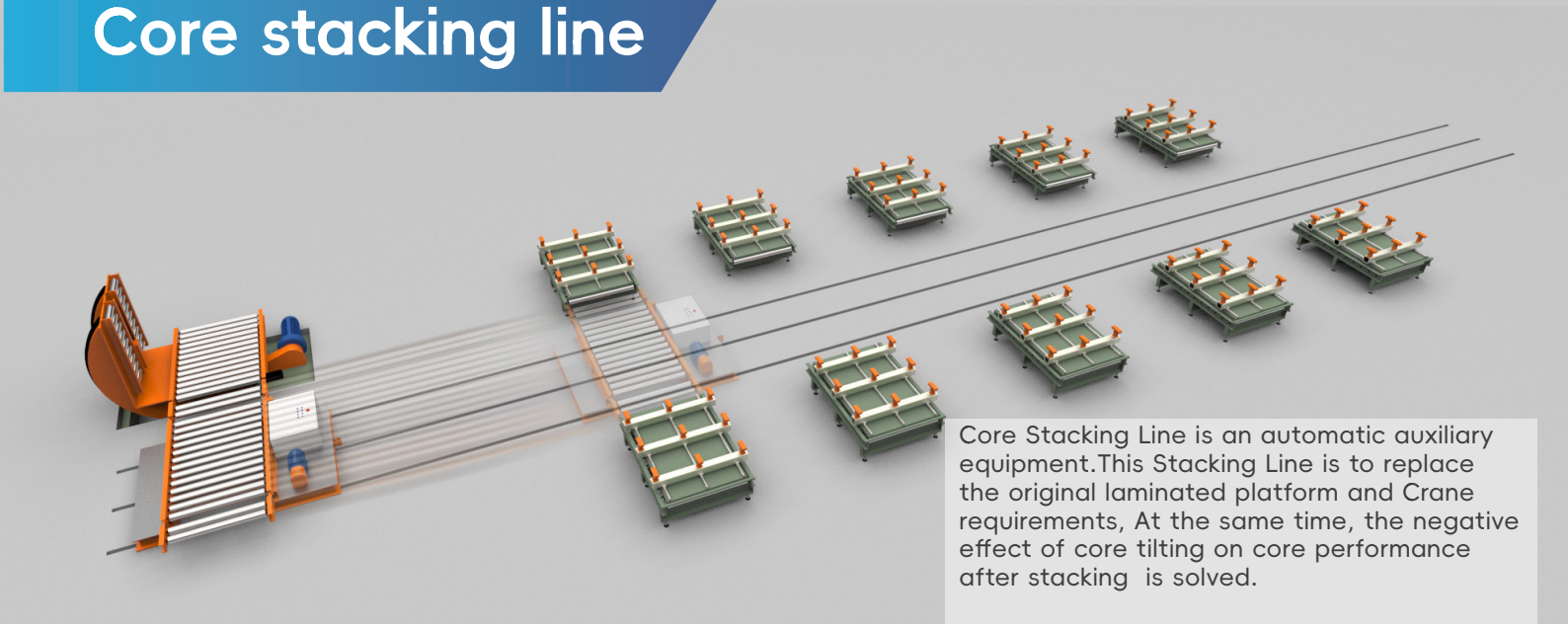


APG (Automatic Pressure Gelation) is an advanced molding process used for manufacturing epoxy resin insulation products such as insulators, bushings, current transformers, and more. This technology involves applying pressure and precise temperature control within a sealed mold to rapidly gel and cure epoxy materials under pressure, resulting in dense, uniform, and void-free high-performance insulation components.

We provide complete APG production lines, including:

- √ APG-specific hydraulic systems
- √ High-precision temperature-controlled molds
- √ Automated material mixing and injection systems
- √ PLC-based intelligent control systems
- √ Supporting curing and post-processing equipment

Core stacking line



Core Stacking Line is an automatic auxiliary equipment.This Stacking Line is to replace the original laminated platform and Crane requirements, At the same time, the negative effect of core tilting on core performance after stacking is solved.

Core Stacking and Tilting Table

This equipment is mainly used for stacking and tilting the cores of super large transformers, and tilting the complete cores of transformersthat have been stacked and placed in a horizontal position to an upright position. The transformer core, which is in an upright position, can also be flipped to a horizontal position (for use in repairing and folding the core)

Effective loading: weight ⩽200ton

Core size: 9000*4000mm

Plateform size: 10000 * 4500*466mm

Tilting angle:85° 90°

Tilting mode: Crane control

Hydraulic Type Core Tilting Table

Trolley Load : 35 ton

Walking speed: 30m/ min

Roller drive speed: 15m/min

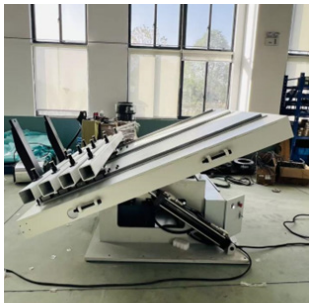
Roller drive qty: 1

Overall dimension :L 2500* W 2000 *H 400mm(ground to roller)

Power supply :380V, 50Hz, 15Kw

Control mode: PLC Control, It can be automatically positioned between stacking station and tilting station

Safety protection: The front and behind of trolley have walking protection, induction distance is not less than 0.3 meters, there is an emergency stop switch at front and behind.



Electric Type Core Tilting Platform

Moveable Core Stacking Table

Effective Loading: ⩽ 4 ton

Overall Dimension: 1600* 1200 (1800) *400mm (When the shrink rod is extended 1800)

Core column adjust range : A-B, B-C (Mo) : 160-700mm

Core Height: Max 1600mm

Core Stack Height: ⩽ 400mm

Roller Table

Roller power: self-power

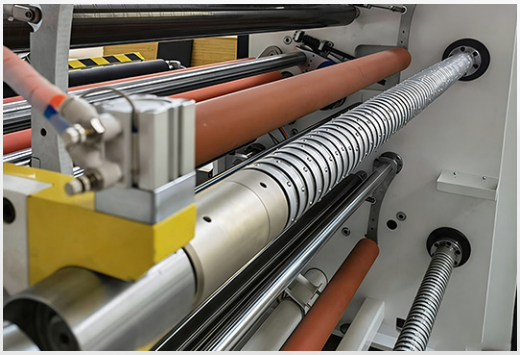
Effective load: ⩽ 4 tons

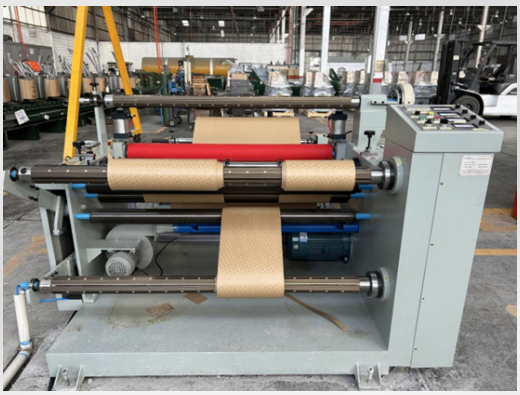
Single roller load ⩽ 300kg

Overall dimension : 1610 * 1120 * 400mm (ground to roller top ±20mm)

*Our company produces tilting platforms covering a wide range of specifications from 1 ton to 200 tons, designed to meet the core production needs of transformer manufacturers for silicon core tilting. We offer customized solutions tailored to different silicon core dimensions, ensuring versatile and precise fulfillment of diverse requirements.

Insulation paper slitting machine





The digitally controlled high-speed slitting machine is a new-generation compact structure slitting machine developed by the company after digesting and absorbing advanced models from Europe and Japan. Combining domestic raw material characteristics, operator body curves, and habits, it employs advanced 3D design technology. The entire machine optimizes the coordination of mechanical, electrical, optical, and pneumatic configurations, utilizing new drive and control technologies from abroad to achieve a unified balance of operational simplicity, stability, and high efficiency. It is widely used in the processing and production of insulation materials

Specification

Model	HX-1300FQ	HX-1600FQ High end
Material Type	BOPP.CPP.POF.PVC.PET and kinds of insulation paper /Film	
Material thickness	0.05-3mm	20-150um
Max feeding Width	1300mm	1600mm
Main Engineer Power	4kw	6 kw
Slitting Speed	80m/min	280m / min
Size	2400*2000*1300mm	2400*2300*1600mm
Weight	1200kg	1500kg
Unwinding Diameter	600mm	800mm
Winding Diameter	450mm	Max 600mm
Precision	0.1±mm	
Power	380V 50Hz	

Auto feeding Paperboard Slitting and Chamfering Machine (Single Brace)

KEY FEATURES:

- √ **Equipped with four high-stability cutter shafts, ensuring high-quality machining of straight battens and block strips.**
- √ **High spindle speed of 6,000 RPM for superior surface finish, perfection, and precision.**
- √ **Powerful cutter shafts enable simultaneous four-side machining of block strip materials.**
- √ **Compact design with short distances between cutter shafts guarantees high dimensional accuracy.**

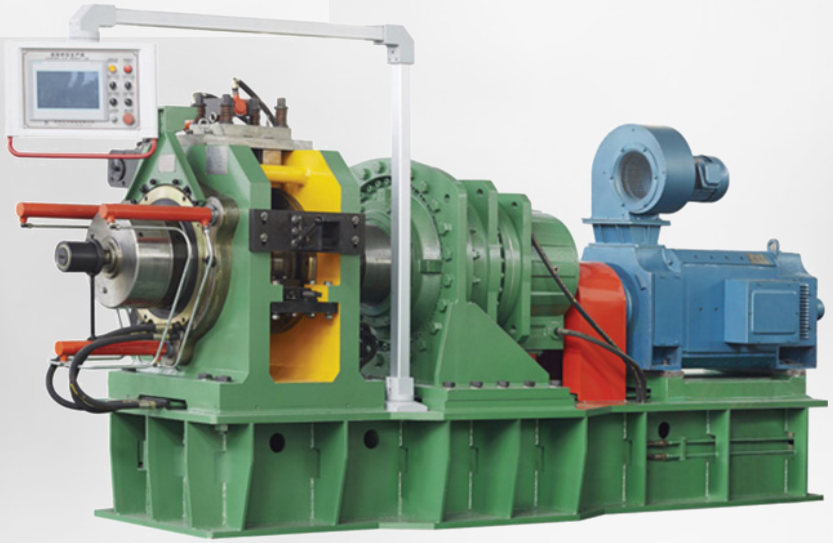
The processing single battens into T-shaped, dovetail, and rectangular profiles, as well as for four-side machining of block strips.

Specification

Profile Type	Processing Method	Length Range (L)	Width Range (W)	Thickness Range (T)	Special Instructions
T-Shaped Batten	Single-pass machining	500–3000 mm	10–70 mm	3–20 mm	-
Dovetail Batten	Single-pass machining	1000–3000 mm	10–70 mm	3–9 mm	-
Rectangular Batten	Single-pass machining	600–3000 mm	10–70 mm	1.5–9 mm	For battens with thickness ≥15 mm, only four-corner R-arc processing is applicable
Block Strip	Four-side machining in single pass	600–3000 mm	10–70 mm	1.5–15 mm	-

Copper wire / Aluminum wire Continuous Extrusion Machinery

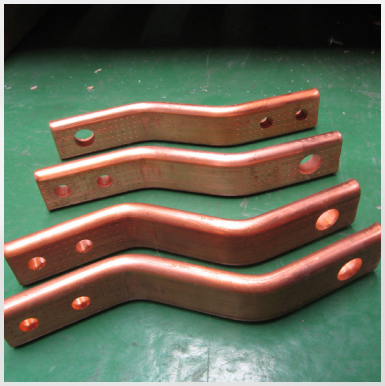
Wheel Diameter	250mm	300mm	550mm
Main Motor	45KW/1000rpm	90KW/1000rpm	400KW/1000rpm
Rotation Speed	1-11 rpm	1-12 rpm	1-8 rpm
Rod Diameter	8 mm± 0.2 mm	12.5 mm± 0.5 mm	22 mm± 0.2 mm
Min-Max Cross Sectional Area	5mm2~70mm2	10mm2~250mm2	400mm2~6000mm2
Maximum Width	15 mm	45 mm	280 mm (or 90mm rod)
Output (average)	100-200Kg/h	200-450Kg/h	2300Kg/h

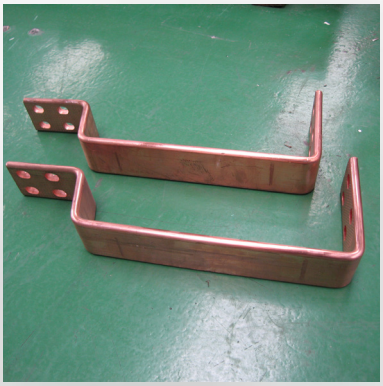


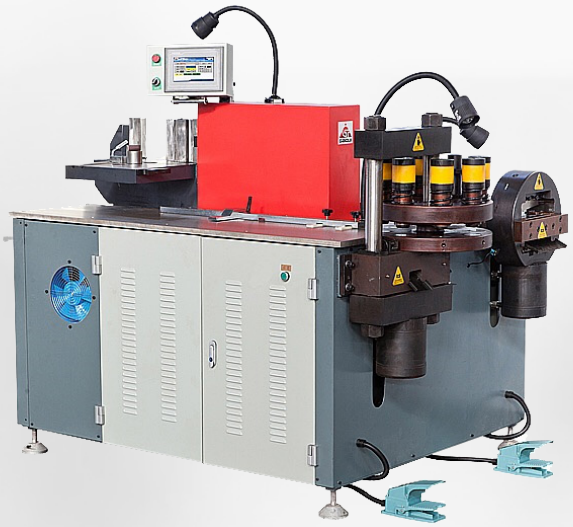
Horizontal/Vertical Paper Wrapping Machine

This equipment is a special equipment for producing paper covered wire. Paper covered wire is the winding wire insulated with bare wire or enameled wire as the core, power cable paper, high-density interturn insulation paper or heat-resistant insulation paper as the outsourcing.

Multifunction busbar processing machine







The punching unit adopts turret-type die kit ,capable of storing eight punching dies or seven punching dies with one set of embossing die .
The shearing unit adopts round integral structure ,with novel and unique design rendering reasonable force bearing ,and thus effectively guarantee the long-term use without deformation .
The bending unit uses integral structure and CNC angle control mode ,allowing easy operation and high accuracy .
The machine adopts the design approach of double-layer work bench ,truly realizing the simultaneous working of three stations without mutual interference .

CNC Busbar punching and shearing machine

CNC Busbar bending machine

Multi-strip Paperboard Slitting and Chamfering Machine

KEY FEATURES:

- √ **High Efficiency: Produces 10–22 strips simultaneously, offering approximately 5 times the output of conventional singlestrip processing machines.**
- √ **Material Saving: Increases material utilization rate by up to 20%, reducing waste.**
- √ **Superior Finish: Ensures strips with smooth, clean surfaces and rounded, even chamfers, ready for application.**

This machine is specifically designed for the efficient production of transformer oil ducts and insulation strips. It processes paperboard into multiple strips in a single pass, delivering a smooth surface finish while significantly improving production efficiency and material utilization.

Customization

Processing tools (slitting & chamfering blades) are custom-manufactured to match specific customer strip dimensions. Blades feature an alloy steel cutting edge on a tool steel body for durability.

CNC Insulation Pressboard Automatic Feeding Shearing Machine

KEY FEATURES:

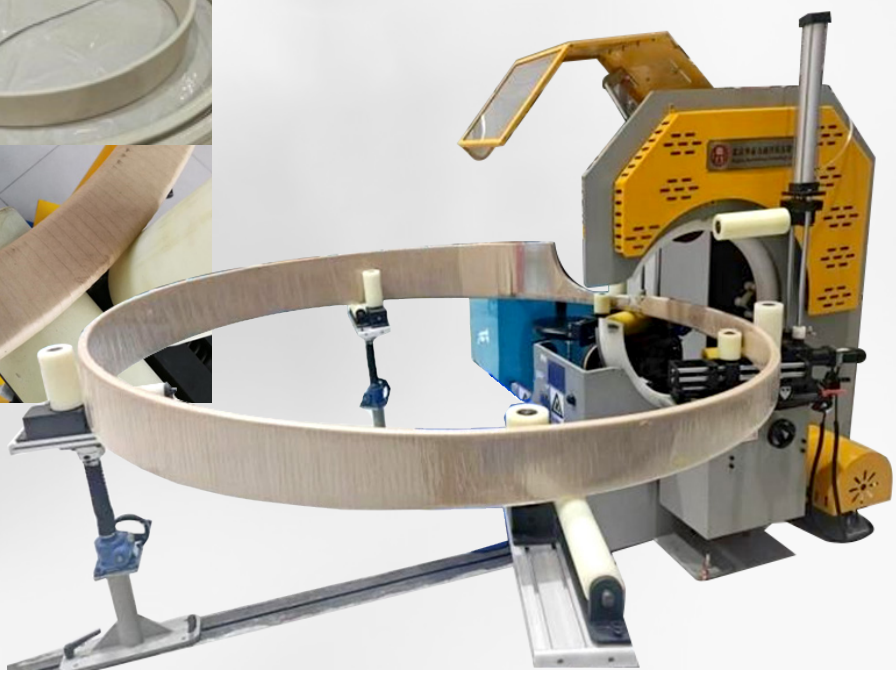
- √ **Touch Screen Programming--Operators can set shear width and end dimensions digitally.**
- √ **Dual Capability-- Cuts both rectangular strips and trapezoidal (wedge-shaped) strips automatically.**
- √ **High Feeding Accuracy-- ±0.2 mm for rectangular strips; ±0.5 mm for wedge-shaped strips**
- √ **Automation & Flexibility**
- √ **Efficiency-- Up to 40 strokes/min, feeding speed adjustable from 2 to 300 mm/s**

The CNC Pressboard feeding shearing machine is used for high-precision shearing of insulating pressboard in the transformer industry.

Specification

Parameter	Specification
Sheet Thickness Range	1–3 mm (up to 8 mm possible, but may increase burr)
Max. Shear Width	2000 mm / 2400 mm
Max. Feeding Length	2400 mm
Max. Burr	⩽ 0.1 mm (for 1 mm thick pressboard)
Equal-width Strip Range	5–1200 mm
Unequal-width Strip Capability - Length	1500 mm
Unequal-width Strip Capability - Narrow end	5 mm
Unequal-width Strip Capability - Wide end	50 mm
Feeding Speed	Adjustable from 2 to 300 mm/s

Transformer Insulation Electrostatic Ring Wrapping Machine



KEY FEATURES:

- √ **Touch-screen layer control -- Easy setup of 1–2 wrapping layers without mechanical adjustment.**
- √ **Adjustable tension & overlap-- Precise control of wrapping tightness and pitch (1/2, 1/3, 1/4 overlap).**
- √ **Automatic paper-break protection-- Infrared sensor stops machine if material breaks, preventing defects and waste.**
- √ **Non-metallic contact parts-- Prevents metal particle contamination in insulation—critical for transformer safety.**

The CNC Pressboard feeding shearing machine is used for high-precision shearing of insulating pressboard in the transformer industry.

Specification

Parameter	Specification
Max. workpiece outer diameter	3000 mm
Min. workpiece inner diameter	500 mm
Workpiece height range	8–300 mm
Max. radial dimension	20–200 mm
Workpiece width	20–200 mm
Workpiece thickness	10–50 mm
Wrapping materials	Copper tape, aluminum tape, cable paper, corrugated paper
Tape dimensions (width × thickness)	15/20/25 × 0.06–0.18 mm
Wrapping pitch options	1/2, 1/3, 1/4 overlap
Number of layers (set via touch screen)	1–2 layers

Transformer Wooden-step Milling Machine

KEY FEATURES:

- √ **Full CNC Structure – High machining accuracy with repeatability of ±0.1mm.**
- √ **High Efficiency – Processes at least 3 times faster than conventional milling machines, overcoming traditional cutter limitations.**
- √ **Simple & Automated Operation – Just input drawing coordinates; the whole process runs automatically, minimizing operator skill dependency.**
- √ **Professional Blades – Imported woodworking blades ensure long service life, smooth surfaces, and no carbonization or damage to pads.**
- √ **Smooth Finish – Processed surface is clean and ready to use without polishing.**
- √ **Energy Saving – Total system power≤ 7.5KW, saving over 50% energy compared to ordinary milling machines.**
- √ **No Foundation Required – Can be placed anywhere in the insulation workshop without special installation.**

Specification

Parameter	Specification
Blade Speed	2800 rpm
Feed Speed	0–5 m/min (stepless speed regulation)
Machining Accuracy	±0.2 mm
Total System Power	7 KW
Max. Pad Size	500 mm (W) × 500 mm (H) × 600 mm (L)
Customization	Non-standard sizes available upon request

Automatic Winding Spacer Punching Machine

Automatic Winding Spacer Milling Machine

The Winding spacer milling machine and punching machine are both suitable for manufacturing dovetail, pigeon tail, and straight grooves at both ends of insulation parts for 110KV to 1100kV transformers, They combines precision automation, operator safety, and material integrity—making it a reliable choice for high-volume insulation spacer production.

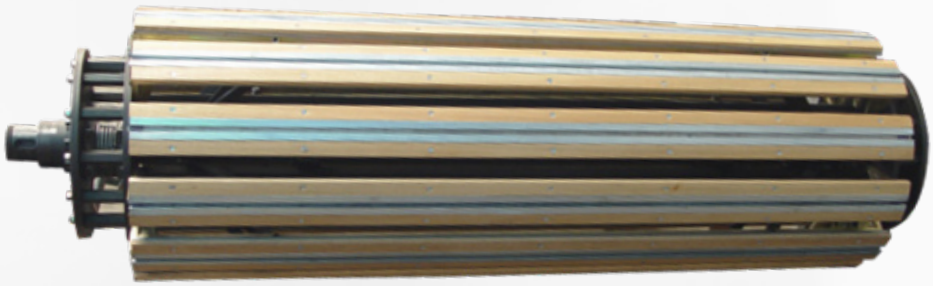
Specification

Items	Milling machine	Punching Machine
Processing Range – Length	25–300 mm	15–1000 mm
Processing Range – Width	25–60 mm	20–50 mm
Max. Pad Thickness	Up to 350 mm	1.3–3 mm
Machine Weight	3.5 ton	700 Kg
Motor power	≈ 16 kW (excluding dust collector)	≤1.2 kW

Expanding Mandrel





Application

This machine is applied for winding core with horizontal winding machine and vertical winding machine. The main specialty of the machine are good integrated, design in reason, high precision.

The machine can be designed and made by your request.

Curtain-type Oil Duct Auto Bonding Machine

KEY FEATURES:

- √ Fully Automated Process – From strip feeding to gluing, bonding, pressing, and winding – all controlled via a Siemens PLC touch screen.
- √ High Precision & Adjustability – Strip spacing, glue amount, and pressure are programmable and adjustable.
- √ Wide Compatibility – Handles strip lengths from 150–1500 mm, widths 5–12 mm, and thicknesses 3–10 mm.
- √ Integrated Drying System – Heating mechanism ensures glue bonding without overheating (surface temperature < 60℃).

This machine represents a fully integrated automation solution for insulation strip bonding, combining precision engineering, intelligent control, and operator safety for efficient transformer component manufacturing. Computer-controlled automatically arranging, gluing, and pressing insulation strips onto paper tape with high precision.

Specification

Items	A11-650	A11-750	A11-1500
Strip Length	150-650mm	150-750mm	Max 1500mm
Base Paper Thick-ness	0.05–0.5 mm	0.05–0.5 mm	0.05–0.5 mm
Strip Thickness	3–10 mm	3–10 mm	3–10 mm
Strip Width	5–12 mm	5–12 mm	5–12 mm
Gap Between Strips	Adjustable	Adjustable	Adjustable
Bonding Speed	40–60 pieces/min	40–60 pieces/min	40–60 pieces/min

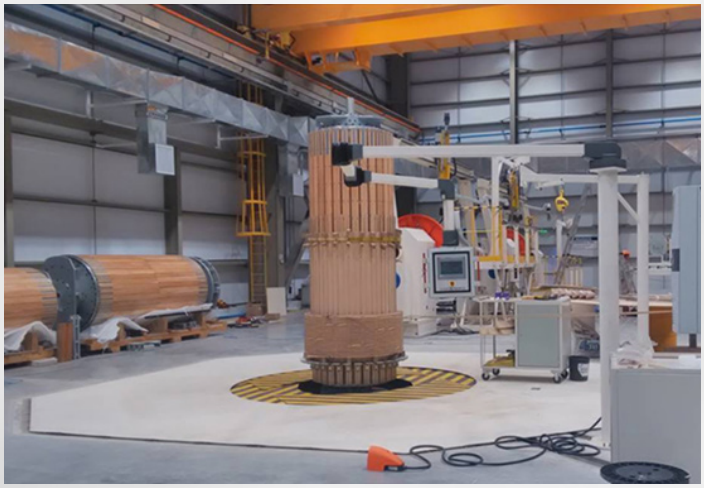
Power Transformer Body Assembly Frame

The Assembly frame is a specialized equipment used in the transformer manufacturing industry for the assembly of large and medium-sized transformers. This equipment generally consists of two frames arranged face to face symmetrically, and both sides of the frames can move independently to adjust the height and horizontal positions of their respective work platforms to meet the different requirements for operating positions during transformer assembly.

KEY FEATURES:

- √ **Safe & Locking--Dual self-locking lift system for secure stops at any height.**
- √ **Work-Ready Platform--Built-in power, pull-out trays with locks, and task lighting.**
- √ **Smart Dual Control--Interlocked floor/platform buttons prevent errors.**
- √ **Tough & Safe--Polyurethane wheels, tested safety components.**
- √ **Custom Load & Size--Available 2-25 tons. Table size made to order.**

Vertical Winding Machine



Pit Type

Platform Type

This winding machine is primarily designed for winding large-power transformer coils, and it is particularly ideal for processing high-voltage, ultra-high-voltage, continuous as well as pie coils. To meet diverse on-site application requirements, it is available in two variants, namely the pit type and floor type vertical winding machines.

KEY FEATURES:

Disc Lifting Design

- √ Adjustable winding height to suit coil requirements.
- √ Fixed operating table ensures simple and convenient operation.

Advanced Control System

- √ Variable frequency control for smooth speed regulation and reliable braking.
- √ Programmable winding count with forward/reverse rotation and power-off memory function.

Safety & Reliability

- √ Electric retractable pit cover adjusts automatically to coil diameter.
- √ Interlocking safety controls for disc lifting, rotation, and cover expansion.

Precision Engineering

- √ High-torque AC variable frequency motor ensures stable, stepless speed control.
- √ Robust disc construction (cast steel/welded) with T-slots and center hole for precise mold positioning.

Fiber Laser Metal Sheet Cutting Machine

A cost-effective, high-performance fiber laser cutting machine designed for the sheet metal processing industry, Widely used in various industrial applications.

CNC Press Brake/ bending machine

The CNC press brake is a precision machine that transforms flat sheets of metal into strong, formed parts like brackets, enclosures, and frames. For any metal fabrication business, it is a core investment for expanding capability, improving quality, and increasing profitability.

KEY FEATURES:

- √ **Hydraulic: Lower initial cost, good for simple, low-volume, or prototype work. Requires highly skilled operators.**
- √ **Advanced CNC Control: Operated by the E21 CNC system**
- √ **Precision Compensation: Features an upper die adjustment block slope compensation mechanism to ensure high bending accuracy.**
- √ **High Precision: Creates accurate, repeatable bends**

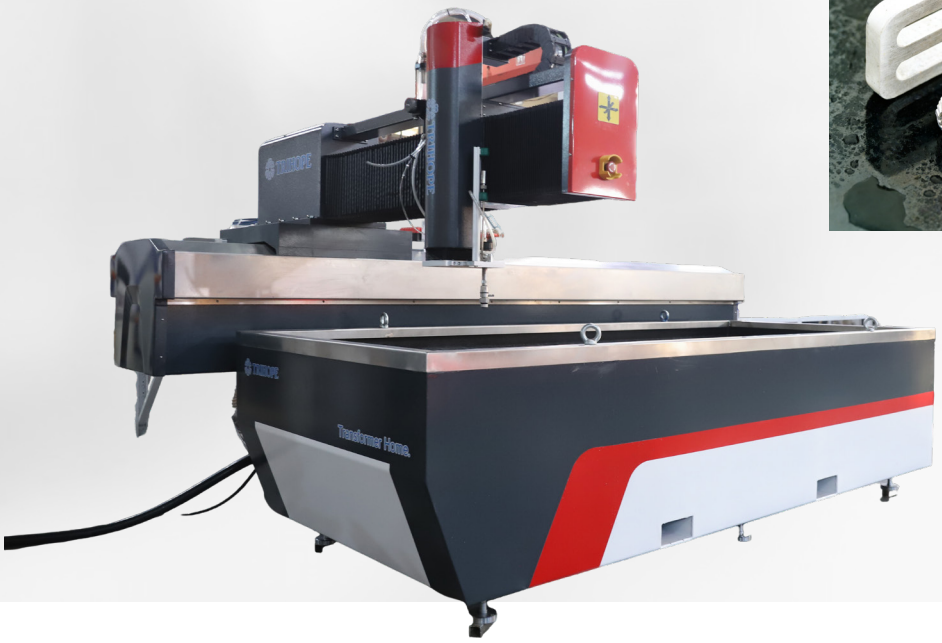
Power Transformer Coil and Active Parts Assembly Platform

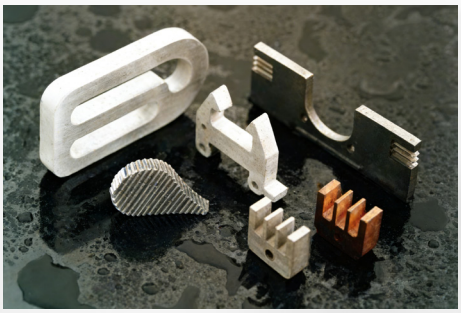
This coil assembly platform is used for the assembly of transformer coils, consisting of four column components, an operating platform, a ladder, a guardrail, and an electrical control system.

KEY FEATURES:

- √ **The operation platform lifting adopts a motor+worm gear reducer+screw lifting system, with dual electrical and mechanical self-locking protection. Ensure that the lifting platform can safely and reliably dock at any position.**
- √ **There is a new type of movable cover plate on the platform that can be freely extended and retracted according to the diameter of the coil, making it safe and reliable for workers to operate.**
- √ **Directly fixed to the ground, no need to move, simple and reliable operation**

Ultra-high Pressure Waterjet Cutting Machine





High-pressure waterjet cutting technology can cut a wide range of materials using pure water or water mixed with abrasive for very hard materials. Its basic principle is to increase the pressure of ordinary tap water to 100-400Mpa through a pressurizing device (high-pressure pump), and then spray it through a nozzle with a diameter of about φ0.1-0.4mm, forming a high-speed "water arrow" with a speed of 800-1000m/s (about three times the speed of sound). This water arrow can be used for cutting soft base materials and surface cleaning.

KEY FEATURES:

- √ **No material restrictions, capable of cutting almost any soft or hard material.**
- √ **Cold cutting, no heat is generated during the cutting process, eliminating thermal deformation and heat-affected zones.**
- √ **High efficiency and good surface quality.**
- √ **Can cut any complex shape without the need for molds or special fixtures.**
- √ **Small cutting gap, saving materials.**
- √ **Environmentally friendly, no toxic smoke or dust, and does not cause new industrial pollution.**

Transformer Comprehensive Test System

Transformer comprehensive test system is specially designed for routine tests, type tests and special tests of transformers with specified specifications according to the requirements of the demander. IGBT inverter SPWM pulse width modulation variable frequency power supply is used as the frequency modulation and voltage regulation power supply in the system.

TEST ITEM

Transformer winding resistance measurement;
Transformer short circuit impedance and load loss measurement;
Transformer no-load loss and no-load current measurement;
Transformer induced withstand voltage test;
Transformer power frequency withstand voltage test;
Transformer Temperature rise test;

TEST CAPABILITY

According to the temperature rise test capability calculation:
The maximum testable capacity : 35kV voltage level power transformer is 10000kVA,
with an impedance of 6-8%. The rated voltage on the low voltage side is 0.69kV and 3.3kV;

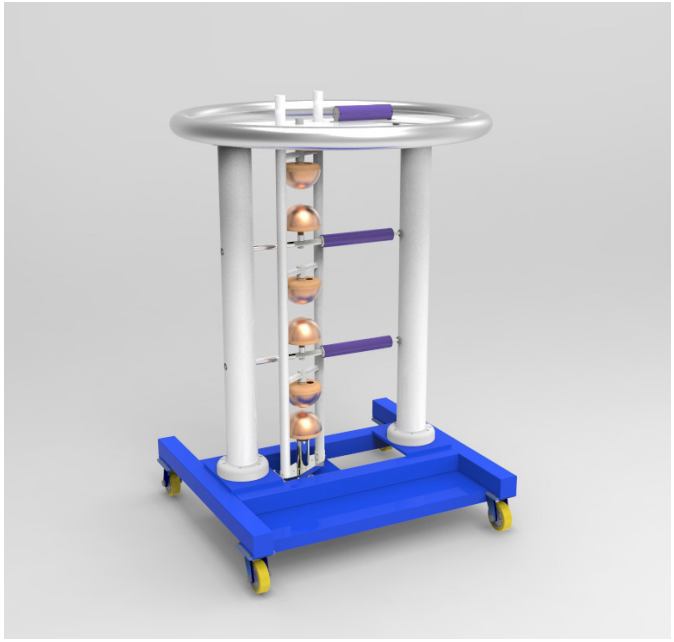
Multi-stage gap chopping device MCG series

Structure

The multiple-stage gap chopping device is composed of three HV pulse capacitors through series connection. The whole device is non-inductance low voltage arm type and movable (The wheel is made of Polyurethane so that the floor can be protected). With control desk, the sphere gap can be remotely regulated. The delay triggering function is more stable and reliable. On top of the chopping device is the toroid.

Parameter:

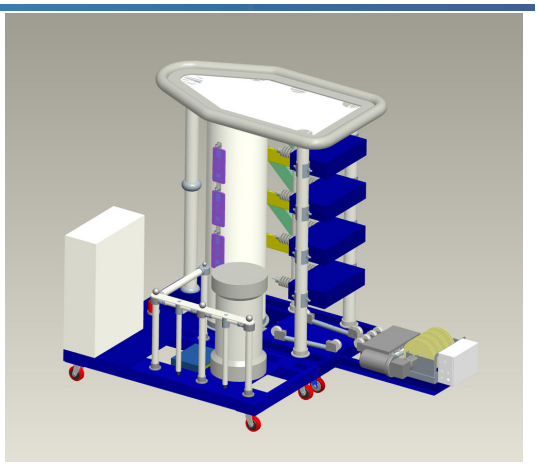
- Nominal voltage: ±400 ~ 3000kV
- Chopping capacitance: 500 ~ 600 pF
- Chopping time: 2 ~ 6uS
- Chopping time deviation: 0.1uS
- Trigger type: three gap sphere discharge triggering
- Delay type: electronic delay with regulatable circuit



IMPULSE VOLTAGE TEST SYSTEM

CJDS-400 Impulse voltage generator

- Rated voltage: ±400kV
- Rated energy: 20kJ
- Rated impulse capacitance: 250.0nF
- Rated charging voltage each stage: ±100kV
- Number of stage: 4
- Stage capacitance: 1.0F/100kV/2.0F/50kV
- Stage energy: 5.0kJ
- Waveform:
  Standard lightening impulse:1.2/50μS efficiency: 85%
  (1.2±30%/50±20%S)
- Generator dimension and weight(for reference)
  Dimension: 1680mm (W)×1850mm(L)×2300mm(H)
  Weight: 860kg



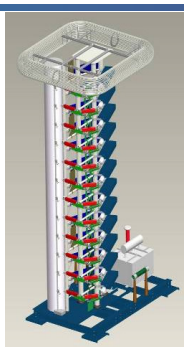
CJDV-4000 Impulse voltage generator

- Rated voltage: ±4000kV
- Rated energy:400kJ
- Rated impulse capacitance: 50.0nF
- Rated charging voltage each stage: ±200kV
- Number of stage: 20
- Stage energy: 20.0kJ
- Stage capacitance: 1.0F/200kV, 2.0F/100kV
- Waveform:

Standard lightening impulse:1.2/50μS Efficiency: 85 ~ 90% (1.2±30%/50±20%μS)
Switch impulse: 250/2500μS Efficiency: 65 ~ 70% (250±20%/2500±60%μS)
Chopping wave: 2 ~ 6μS variable

- Generator dimension and weight(for reference)

Dimension: 3674mm(W)×5500mm(L)×14900mm(H) Weight: 26700kg



Environment

- Maximum altitude: 1000 m
- Operation temperature for HV component: +10 ~ +45℃
- Temperature for electronic control & measuring: +10 ~ +45℃
- Relative Humidity of electronic components: 80%
- Components storing and transport temperature: 20 ~ + 60℃
- Altitude increases 100m, and rated voltage lowers 1%
- HV component relative humidity (non-condensing) 95 %
- Anti-seismic: Grade 8
- Grounding resistance: < 0.3
- No dust

System components

IVG-Impulse generator	1 set	LGR-DC charging system	1 set
CR- Low impedance capacitive divider	1 set	IGCS-Intelligent control system	1 set
IVMS-Digital measure and analyze system	1 set	MCG-Multi-gap chopping device	1 set

Medium frequency generator unit

Comparison of IGBT Power Source with MG unit

	Motor generator unit	IGBT electronics power sources	Remarks
Maintenance	Once a year	No maintenance, only replacing electronics components after 10000 hours running;	
Flexibility of Frequency Values	Fixed frequency or changed in small range;	Max 20-600Hz can be set, 0.01Hz step;	
Accuracy of Frequency Value	Usually exact, but if windings in generator are not exact then slight frequency variations.	Max 0.01Hz Exact Frequency Control by fast microprocessor	3rd,7th Harmonics is big for MG set.
Stability of Frequency Value (Very Important for Compensating)	Usually slight frequency changed by input frequency slight changed;	No influence by Input power source, very stable;	MG Set need to use VFD and synchronous motor to make frequency stable.
Injection of Harmonics for Test Transformer (Thermal Test)	Not possible	For the most used harmonics up 8 harmonics possible	Important for the dry type transformer.
Capacity Upgrading Future	Not possible	Easy to parallel more module;	
Investment	Total Investment and maintenance fee is high;	Total Investment and maintenance fee is Low;	
Working Quality Factor	Typical 0-0.5 or less;	0-0.98, it can load capacitive, reactive, resistive;	IGBT can be used at max current in any voltage.
Reliability	Good if maintenance is well;	Very Good, Life cycle is 15-20 year, easy maintenance	
Partial Discharge for Induce Voltage Test	Big PD, no IEC standard has PD requirement for MG Set;	Typically <50pC by filter;	
Start Time	Depend on size of transformer, it need 5-30 minutes	10 seconds	
Size of Location	Very Big, normally for big MG set need a individual room	Small	

IGBT Power Source

Feature

- 30-300kW rated energy.
- 0-600V output voltage.
- 20Hz-200Hz frequency adjust range.
- Sampling and display output voltage, output current,output frequency, phase angel, working temperature, running time, and fault warning.
- Automatic search the resonant point when start.
- Fast response time for select the voltage andfrequency.

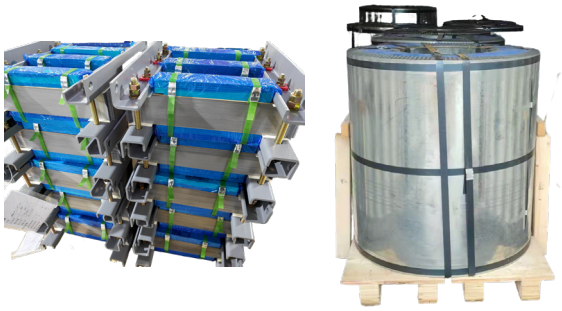
Transformer complex test main equipment

Main equipment	Transformer induction withstand	Transformer no-load loss and no-load current measurement	Transformer impedance and load loss of measurement	Transformer partial discharge measurement	Transformer temperature rise test;
PD free power source	●	●	●	●	●
Three-phase intermediate transformer	●	●	●	●	●
Exciting isolation transformer	●	●	●	●	●
Medium frequency filter	●	●	●	●	●
Low voltage compensation capacitor unit	●	●	●	●	●
High voltage compensation capacitor unit	●	●	●	●	●
High precision current transformer	●	●	●	●	
High precision voltage transformer	●	●	●	●	
Coupling capacitance	●	●	●	●	●
Power analyzer	_	●	●		_
Digital Par al discharge detector	_	_	_	●	_
Temperature itinerant detector	_	_	_	_	●
PLC Integrated Test System And Digital control desk	●	●	●	●	●

Transformer Radiator

The transformer radiator is a device to release the heat generated by the loss of the transformer in operation to ensure the safe operation of the transformer, There are many kinds of center spacing of fin radiator like: 500mm, 625mm,75 0mm,1000mm,1250mm,1500mm etc, with width 310mm, pitch 50mm.

CRGO and Core Assembly



Global supplier specializing in CRGO electrical steel and transformer core solutions.With strong sourcing capabilities, in-house processing, and an expanding international presence. Material thickness 0.18mm, 0.23mm, 0.27mm, material grade 85, 90, 100 and M4 .

Electrical Laminated Wood

Electrical insulating laminated wood is widely used as insulation and supporting materials in transformers and instrument transformers. It has many virtues such as moderate specific gravity, high mechanical properties, easy vacuum drying, no bad inner-reaction with transformer oil, easy mechanical processing etc. The dielectric constant of this material is close to transformer oil, so it makes a reasonable insulation match. And it can be used in transformer oil of 105℃ for long time.

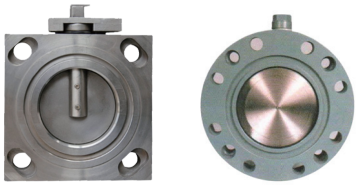
Americal Type Parts

The Four Instrument Parts used in Americal Type Transformer include : Transformer Temperature Indicator Thermometer, Transformer Vacuum Pressure Gauge,Transformer Oil Level Meter and Transformer Pressure Relief Valve.

Off-circuit Tap Changer (OCTC)

This kind of switch applies to the single-phase,three phase,combination oil-immersed transformer electrical power with frequency of 50HZ,60HZ,rated voltage of 10kV,20kV,35KV,rated current of 30A~500A; the voltage-regulating mode are:central part, terminal point neutral point, which can be directly fixed on the tank cover of the transformer, ex-change under the off-circuit condition.

Transformer Butterfly Valve

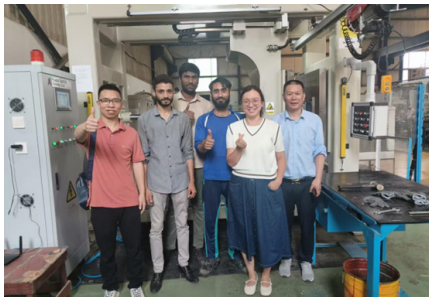


Butterfly Valve is usually installed between oil tank and radiator of oil-immersed transformer to control oil flow between oil tank and radiator of transformer. It is used to open or close transformer oil circuit when vacuum oil injection and transformer operation and maintenance. It can also be used in oil discharge in accidents or in maintenance.

Global Installation Portfolio

Trusted by industry leaders like GE, WEIDMANN, VTC, MGM, PEL ,Zetrak and MATCO across more than 20 countries, TRIHOPE delivers precision-engineered equipment worldwide. Each installation is built on quality, service, and lasting partnership.







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