



CHENFAN ELECTRIC

PRODUCT & CAPABILITY CATALOGUE
2026 EDITION • EN

TRANSFORMER CORES / CRGO / GOES

Transformer cores. Built around your drawing.

CRGO slitting, step-lap cutting, pre-stacking and core assembly to 100 t —
one controlled manufacturing sequence in Xiongxian, Hebei, China.

CORE GEOMETRY • PER APPROVED DRAWING



100^t

SINGLE-CORE
CAPABILITY

890^{mm}

MAX CUT-TO-LENGTH
WIDTH

< 0.02^{mm}

BURR
HEIGHT

> 97[%]

STACKING
FACTOR

~ 3,000^t

CRGO IN
REGULAR STOCK

WHO WE ARE

Steel in. Cores out.

Transformer cores and CRGO for manufacturers worldwide. From stocked electrical steel to finished cores up to 100 t, our production covers material preparation, precision cutting, assembly and export packing.



FIG 01 XIONGXIAN, HEBEI — PRODUCTION HALLS



FIG 02 OFFICE & TECHNICAL COORDINATION

Xiongxian Chenfan Electric Power Technology Co., Ltd.

manufactures transformer cores and supplies grain-oriented electrical steel from Baoding, Hebei, China — CRGO coils, slit coils, precision-cut laminations, pre-stacked packets and complete core assemblies.

Longitudinal slitting, automatic cut-to-length processing, step-lap production and pre-stacking feed an assembly operation capable of single finished cores up to 100 t.

Every order begins with an approved drawing and a defined material specification. Nothing enters production before both are fixed.

EXPERIENCE	15 years in the industry
ANNUAL SALES	~USD 30 million
SCOPE	Cores · CRGO supply & processing · SKD / CKD
QUALITY	ISO 9001:2015
LANGUAGES	English · Chinese

WHAT THAT MEANS FOR A TRANSFORMER OEM

01	02	03	04
No trading layer	Material on the floor	Records as standard	Drawings stay private
You talk to the people who set the blade clearance and the step-lap offset — not to a broker.	~3,000 t of CRGO in regular stock keeps lead time short when a project moves.	MTC, dimensional records and production photographs are produced with the order.	Customer drawings and project data are never used in public marketing.



2026 EDITION

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qualification pack

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Twelve inputs for a complete
quotation

CAPABILITY

Manufacturing strength, in hard numbers.

Material readiness, precision processing and heavy-core assembly — the figures a transformer OEM screens a core supplier on.

100_t

SINGLE-CORE CAPABILITY

Heavy-core stacking, clamping and controlled turning on a hydraulic tilting table.

~3,000_t

REGULAR CRGO INVENTORY

Across grades and gauges — a confirmed drawing does not wait for a mill schedule.

~1,500_{t / month}

PROCESSING CAPACITY

Slitting, cut-to-length, pre-stacking and core assembly throughput.

890_{mm}

MAX CUT-TO-LENGTH WIDTH

Automatic CRGO lamination processing. Slit-coil widths follow the purchase specification.

<0.02_{mm}

BURR HEIGHT

Cut-edge condition checked during production against the agreed method.

>97_%

STACKING FACTOR

Measured on the assembled stack and recorded per order.

~7_{days}

REGULAR-PRODUCT LEAD TIME*

Stock material and in-house processing shorten the path from drawing to dispatch.

15_{years}

INDUSTRY EXPERIENCE

Transformer-core manufacturing and CRGO processing for OEMs at home and abroad.

~USD 30_{million}

ANNUAL SALES

Industrial-scale processing behind competitive pricing.

MANUFACTURING ENVELOPE

CORE WEIGHT

Up to 100 t per single core

MATERIAL

CRGO / GOES — conventional, Hi-B, laser-scribed

THICKNESS

0.18 / 0.20 mm standard · 0.23 / 0.27 / 0.30 mm by project specification

JOINT

Multi-step-lap

STRUCTURES

3-phase 3-limb · 3-phase 5-limb · single-phase · custom geometry

SUPPLY FORMATS

Slit coil · cut laminations · pre-stacked packets · stacked / assembled core · SKD / CKD

EXECUTED REFERENCES

330 kV EHV class · 125 MVA five-limb · railway traction · reactor cores

* REGULAR PRODUCTS. SUBJECT TO MATERIAL GRADE, QUANTITY, DRAWING APPROVAL AND PRODUCTION SCHEDULE.





SECTION 01

Company & Manufacturing

An integrated operation: material control, precision processing, assembly records and export execution under one roof in Xiongxin, Hebei.

SHEET 06

Manufacturing route — six controlled stages

SHEET 07

Facility & processing equipment

SHEET 08

Supply footprint, references & CRGO sources

SHEET 04

Capability in numbers

01.1 MANUFACTURING ROUTE

One operation. Six controlled stages.

Material preparation, precision slitting, step-lap cutting, pre-stacking, assembly and inspection run as one sequence inside our own facility. Every stage closes with a checkpoint before the next one starts.

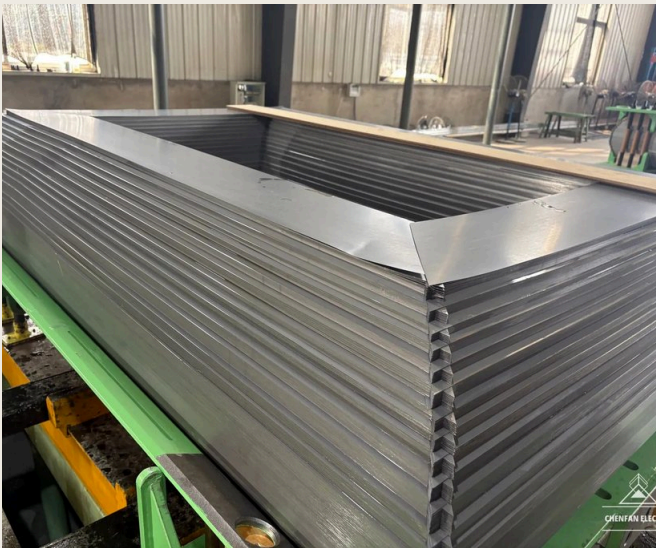
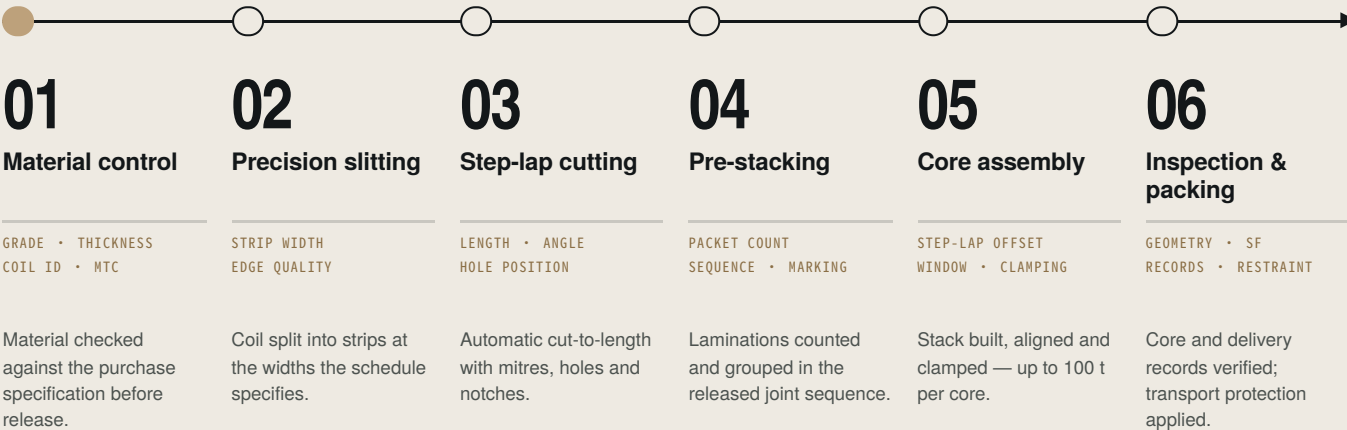


FIG 03 STAGE 03 — STEP-LAP LAMINATIONS, CUT AND STACKED IN SEQUENCE



FIG 04 STAGE 04-05 — STACKED LIMB ON THE ASSEMBLY CRADLE

Factory-direct accountability

No trading layer between the drawing and the production line. Material readiness, documentation and supply format are agreed before the order is released.

01.2 FACILITY & EQUIPMENT

Equipment aligned with the drawing.

From coil processing to heavy-core assembly: automatic lines run the lamination schedule, and dedicated handling equipment covers single cores up to 100 t.



FIG 05 AUTOMATIC CUT-TO-LENGTH PROCESSING LINE — GUARDED PRODUCTION AREA

EQUIPMENT	FUNCTION	CAPABILITY / CHECKPOINT
Longitudinal slitting line	Master coils slit to customer-specified strip widths	WIDTH & CUT-EDGE CHECKS
Automatic cut-to-length lines (SDRI)	Lengths, mitres, holes and notches in step-lap sequence	UP TO 890 MM • BURR <0.02 MM
Pre-stacking stations	Laminations aligned, counted, grouped and identified	PACKETS IN RELEASED JOINT SEQUENCE
Core assembly & clamping	Stack build-up, alignment and clamping to the approved geometry	UP TO 100 T • SF >97 %
Hydraulic tilting table	Controlled turning of large cores during assembly	HEAVY-CORE HANDLING
Automatic packaging line	Independent, fully automatic packaging of slit coils	PROTECTED FOR HANDLING & STORAGE

CTL WIDTH	THICKNESS	BURR	STACKING FACTOR	THROUGHPUT	SINGLE CORE
890 mm	0.18–0.30	<0.02 mm	>97 %	~1,500 t/mo	100 t

01.3 SUPPLY FOOTPRINT

Built in China. Supplied across regions.

One manufacturing origin, a regional supply footprint and a single drawing-led approach — from Xiongxian, Hebei to transformer plants in six regions.



01 • Origin

China

Manufacturing base, domestic supply and technical coordination.

CORES • CRGO PROCESSING
• LAMINATIONS • LARGE
POWER CORES

02

Southeast Asia

Supply supporting transformer OEM production and project requirements.

CORES • CRGO • CUT
LAMINATIONS

03

Africa

Supply for distribution and power transformer manufacturing.

CORES • PROCESSED CRGO •
EXPORT PACKING

04

Middle East

Project-oriented supply for transformer makers and the power sector.

POWER CORES • LARGE-CORE
PROJECTS

05

Europe

Technical and quality-focused supply for transformer manufacturing.

PRECISION CORES • CRGO /
GOES • DOCUMENTATION

06

South America

Export supply for transformer manufacturing and electrical steel.

CORES • CRGO •
LAMINATIONS

CUSTOMER REFERENCES

BTW | **XD** | **CEE**

Supply experience includes large state-owned and international power-equipment businesses.

BTW — Baoding Tianwei · XD — Xi'an XD · CEE — China Electrical Equipment Group Co., Ltd.

CRGO MATERIAL BASE

Baosteel | **Shougang** | **Hongwang** |
Baotou Weifeng | **Nippon Steel** | **POSCO** |
thyssenkrupp

CRGO sourced from these producers and selected for the required grade, thickness and transformer design.

MARKERS INDICATE REGIONS, NOT CUSTOMER ADDRESSES.



SECTION 02

Materials & Precision

Grain-oriented electrical steel held in stock and processed on automatic slitting and cut-to-length lines to a controlled burr and stacking factor.

SHEET 10

CRGO material — grades, gauges, sources

SHEET 11

Slitting, step-lap cutting & pre-stacking

SHEET 12

Burr, step-lap joints & stacking factor

SHEET 19

Slit coils & cut laminations

02.1 CRGO MATERIAL

Specification first. Then steel.

Grade selection follows the transformer design — the no-load loss target, flux density and the agreed project specification. Not the other way round.

~3,000^t

REGULAR CRGO INVENTORY

Stock covers the common grades and gauges, so a confirmed drawing does not wait on a mill rolling schedule. Industrial-scale inventory and in-house processing combine competitive pricing with controlled material quality. Non-stock grades are procured against the project specification.



FIG 06 CRGO MASTER COILS IN THE MATERIAL STORE

MATERIAL	Grain-oriented electrical steel (CRGO / GOES)
GRADES	Conventional GOES · high-permeability Hi-B · laser-scribed (domain-refined)
STANDARD THICKNESS	0.18 mm · 0.20 mm
PROJECT OPTIONS	0.23 · 0.27 · 0.30 mm — by project specification and material availability
SUPPLY	Original coils or longitudinally slit strip at the widths your production requires
COATING	Mill-applied insulating coating; handling controlled to protect it through every operation
IDENTIFICATION	Grade · thickness · coil ID · mill test certificate (MTC), kept with the production batch
REFERENCE STANDARDS	GB/T 2521.1 · IEC 60404-8-7 — grade confirmed per project specification

Why grade matters

Hi-B and laser-scribed grades reduce specific core loss at the same flux density, lowering no-load loss against efficiency-class targets.

Why gauge matters

Thinner laminations reduce eddy-current loss but lower the stacking factor for a given window — a trade-off settled at design review, not in production.

MTC vs finished-core performance

The mill certificate supports material acceptance. Core geometry, joints and assembly also shape the finished magnetic circuit; a core test needs its own agreed conditions.

02.2 SLITTING, CUTTING & PRE-STACKING

Built for precision. Equipped for volume.

From strip width to lamination sequence, every operation is driven by the approved drawing — and checked before the material moves on.

890_{mm}

MAXIMUM AUTOMATIC CUT-TO-LENGTH WIDTH

01 Precision slitting

Master coil slit to the specified strip widths. Blade clearance and tension are set to hold edge condition. Slitting and cut-to-length are separate operations.

CHECKPOINT — STRIP WIDTH & CUT-EDGE CONDITION

02 Step-lap cutting

The cut-to-length line produces lengths, mitres, notches and holes in the sequence the lamination plan defines, with multi-step-lap joints.

CHECKPOINT — LENGTH, ANGLE, HOLE POSITION, BURR

03 Pre-stacking

Laminations are aligned, counted and grouped so the approved joint sequence stays identifiable through handling and transport.

CHECKPOINT — PACKET COUNT, ORIENTATION, IDENTIFICATION



FIG 07 SLITTING LINE — STRIP COILS IN PRODUCTION

PROCESS CONTROL POINTS

Strip width

± TOLERANCE PER DRAWING

Burr height

< 0.02 MM

Length / angle

CHECKED PER BATCH

Hole position

PER DRAWING

Lamination count

VERIFIED BEFORE STACKING

02.3 BURR, STEP-LAP JOINTS & STACKING FACTOR

Precision that protects transformer performance.

< **0.02** mm

BURR HEIGHT — CUT EDGES

Protects the coating and limits interlaminar current paths and local hot spots.

> **97** %

STACKING FACTOR — ASSEMBLED STACK

Holds the effective core cross-section the design assumed, so flux density stays where the designer put it.

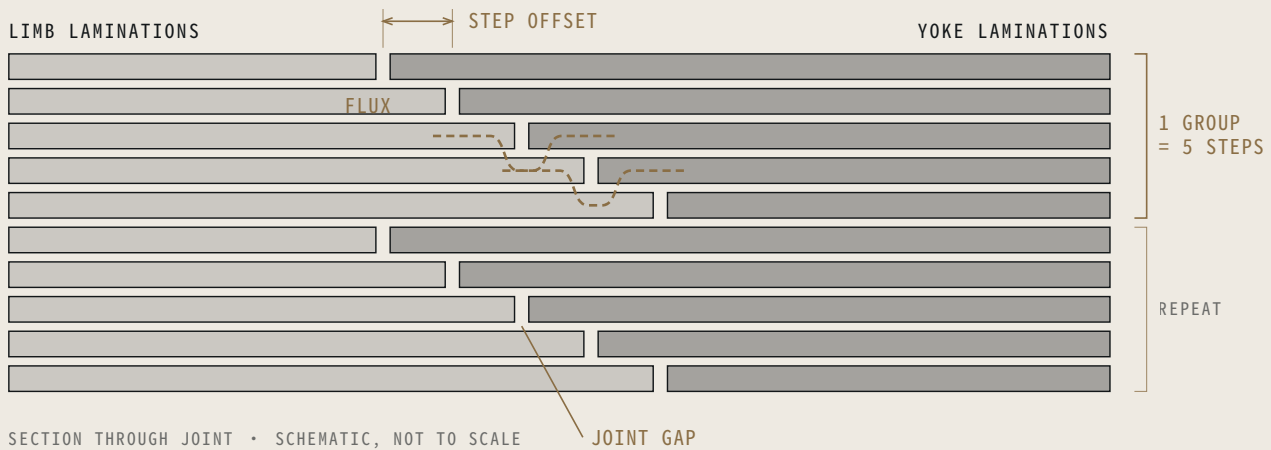


FIG 08 CUT LAMINATIONS — EDGE CONDITION AND STEP GEOMETRY

Low burr

Limits coating damage and interlaminar bridging, reducing circulating-current paths.

Stable stacking factor

Keeps the effective cross-section constant from core to core.

Accurate step-lap joints

Controls flux transfer at the joint — a major source of additional core loss, excitation current and noise.

Repeatable inspection

Checks at fixed stages keep batch-to-batch variation inside the tolerance the design assumed.

The commercial consequence

No-load loss is a guaranteed value, and most tender evaluations capitalise it over the transformer's service life. Core geometry and joint quality are where that guarantee is won or lost.



03

SECTION 03

Cores & Supply Formats

Oil-immersed and dry-type cores for distribution and power transformers, heavy cores to 100 t, and material supplied at the stage of completion your line needs.

SHEET 14

Core range & structures

SHEET 17

Large power cores to 100 t

SHEET 18

Drawing review — eight dimensions

SHEET 21

Specification summary

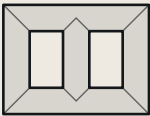
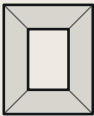
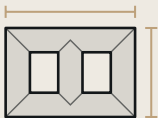
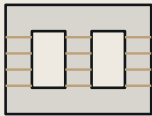
03.1 CORE RANGE & STRUCTURES

One core. Two ways to classify it.

Distribution and power describe the application. Oil-immersed and dry-type describe the transformer design. They are overlapping views of one core — not separate product types.

	DESIGN Oil-immersed	DESIGN Dry-type
APPLICATION ↓ DESIGN →	Coordinated with the winding, tank and clamping design. — Sheet 15	Coordinated with cast-resin or VPI winding and clamping. — Sheet 16
APPLICATION Distribution Utility and industrial distribution transformers.	Three- and five-limb cores in batch production to customer drawings. 3-PHASE 3-LIMB3-PHASE 5-LIMBSINGLE-PHASEBATCH SUPPLY	Window geometry and joint offset held for the downstream winding process. 3-LIMB5-LIMBCAST RESINVPI
APPLICATION Power Large-core projects with defined assembly and handling interfaces. — Sheet 17	Heavy stacked or assembled cores, planned as projects. TO 100 T330 KV CLASS125 MVA 5-LIMBSTACKED / SKD / CKD	Complete dry-type cores supplied with the clamping structure fitted. ASSEMBLED CORECLAMPING FITTEDPER DRAWING

CORE STRUCTURES & SPECIAL CORES

					
3-phase 3-limb Stacked, multi-step-lap mitred joints	3-phase 5-limb Reduced yoke height for large ratings	Single-phase Project-specific window arrangement	Custom geometry Built from the customer's drawing	Laminated reactor cores Executed for Mexico and Brazil	Wound cores Batch lot for a Chinese utility project

ALSO EXECUTED: RAILWAY TRACTION TRANSFORMER CORES — SEE PROJECT REGISTER, SHEET 24.

03.2 OIL-IMMERSED TRANSFORMER CORES

Oil-immersed transformer cores.

Core assemblies for distribution and power transformers, coordinated with the winding, tank and clamping design — built to the approved specification and released against a dimensional record.



FIG 09 CLAMPED CORE ASSEMBLY — LIMB AND YOKE DETAIL



FIG 10 COMPLETED CORE ON THE ASSEMBLY PLATFORM

Structures

Three-phase three-limb and five-limb, single-phase windows; custom geometry to drawing.

Manufacturing control

Lamination sequence, step-lap joint offset, window dimensions and clamping interfaces held to the approved revision.

Supply flexibility

Stacked and clamped cores, pre-stacked packets, or SKD / CKD sets where transport or local content requires it.

TYPICAL ENVELOPE

APPLICATIONS

Distribution & power

JOINT

Multi-step-lap

MATERIAL

CRGO · Hi-B · laser-scribed

MAX WEIGHT

100 t single core



03.3 DRY-TYPE TRANSFORMER CORES

Dry-type transformer cores.

Window geometry, joint consistency and overall dimensions coordinated with the dry-type winding and clamping arrangement — for cast-resin and VPI assembly.



FIG 11 DRY-TYPE CORE WITH CLAMPING STRUCTURE — ASSEMBLY INTERFACE

Geometry

Specified window and overall dimensions maintained through stacking and clamping.

Joint consistency

Cutting and lamination sequence controlled so the joint offset repeats across every limb.

Supply condition

Assembled with clamping fitted, stacked, or in kit form — confirmed before production starts.
Reference: dry-type core supplied to XD.

TYPICAL ENVELOPE

APPLICATIONS	STRUCTURES	THICKNESS	INTERFACES
Cast resin & VPI	3-limb · 5-limb	0.18 / 0.20 mm	Per approved drawing

03.4 LARGE POWER CORES

Up to 100 t. Handled as projects.

Drawing-based manufacturing for large power transformer cores.
Geometry, assembly stability, lifting, temporary support, packing and transport are reviewed as one project before the build begins.



FIG 12 LARGE FIVE-LIMB TRANSFORMER CORE WITH CLAMPING FRAMES — ASSEMBLED IN THE WORKSHOP

- | | | | | |
|---|---|---|---|--|
| <p>01</p> <p>Assembly stability</p> <p>Build supported and sequenced to hold limb alignment and window geometry under the core's own mass.</p> | <p>02</p> <p>Controlled turning</p> <p>Hydraulic tilting table for stacking, clamping and turning heavy cores.</p> | <p>03</p> <p>Planned lifting</p> <p>Lifting points, temporary bracing and movement route agreed before relocation.</p> | <p>04</p> <p>Transport restraint</p> <p>Packing, restraint and handover planned around the finished structure and route.</p> | <p>05</p> <p>Winding access</p> <p>Winding installation access and any upper-yoke opening agreed before production.</p> |
|---|---|---|---|--|

PROJECT HANDLING

SINGLE-CORE WEIGHT

Up to 100 t

CLASS REFERENCE

330 kV EHV

FIVE-LIMB REFERENCE

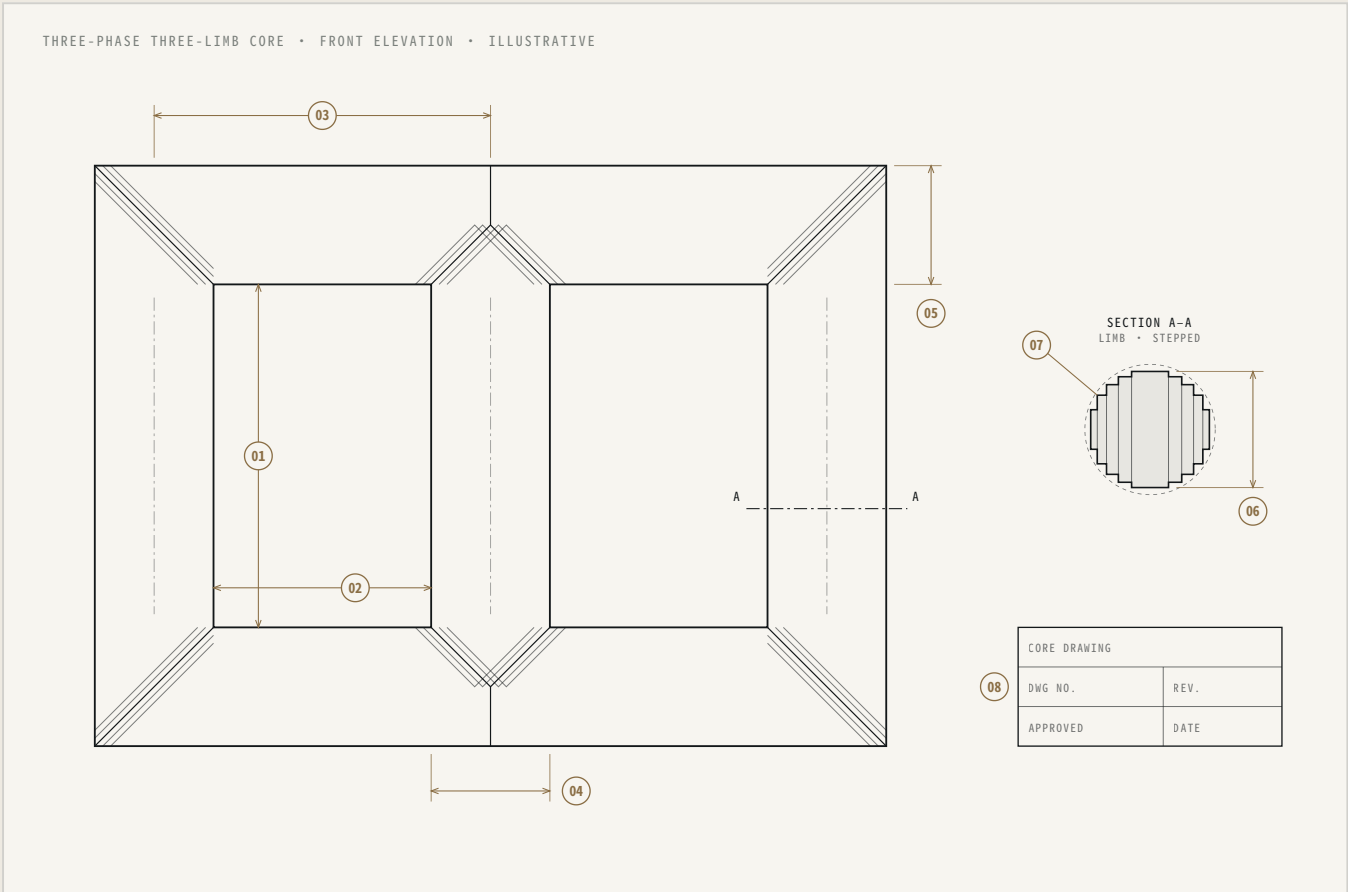
125 MVA

SUPPLY

Stacked · SKD · CKD

Define the core before cutting.

The drawing must describe the same physical product for the transformer designer and the core factory. Eight dimensions are resolved before the cutting schedule is released.



- 01 Window height

Usable clearance checked against winding, insulation and clamping.
- 02 Window width

Clear width — not interchangeable with centre distance.
- 03 Limb centre distance

Centre-to-centre spacing of the limbs.
- 04 Limb width

Complete stepped section or a controlled lamination schedule.
- 05 Yoke width

Stepped section defined to match the limb and joint design.
- 06 Stack thickness

State the condition: net steel build, physical or under compression.
- 07 Step geometry

Packet widths, lamination quantities, orientation and joint sequence.
- 08 Drawing revision

Fixes which combination is approved for production.

STEP 1

Drawing review

STEP 2

Manufacturing definition

STEP 3

Weight confirmation

STEP 4

Production planning

03.6 SLIT COILS & CUT LAMINATIONS

Slit coils. Cut laminations.

If you cut or stack in-house, take the material one stage back. The format is chosen to fit your existing line, not ours.



FIG 13 CRGO COILS — PROTECTED IN THE MATERIAL STORE

CRGO slit coils

Specify grade, thickness and strip widths. We slit the selected CRGO and prepare protected coils on independent, fully automatic packaging equipment.

WIDTH	To your width schedule & tolerance
THICKNESS	0.18 – 0.30 mm
IDENTIFICATION	Coil tag + MTC
PACKING	Automatic line, protected coils

EDGE & COATING PROTECTION

Slit edges and lamination coating are the two things that survive or fail in transit. Handling method, interleaving and restraint are specified per format and route.

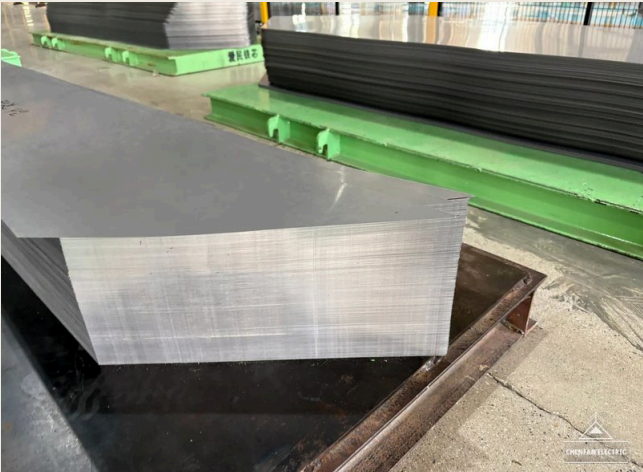


FIG 14 CUT LAMINATIONS — MITRED ENDS, STACKED SEQUENCE

Cut laminations

Limb and yoke shapes follow the stepped section and joint sequence of your design; holes and notches where specified. Grouped or pre-stacked for your assembly.

CUT WIDTH	Up to 890 mm
JOINT	Multi-step-lap, released sequence
BURR	< 0.02 mm
PACKING	Counted, marked, sequenced sets

Damaged coating creates interlaminar shorts; a bent edge changes the effective cross-section. Both show up later as no-load loss that cannot be recovered.

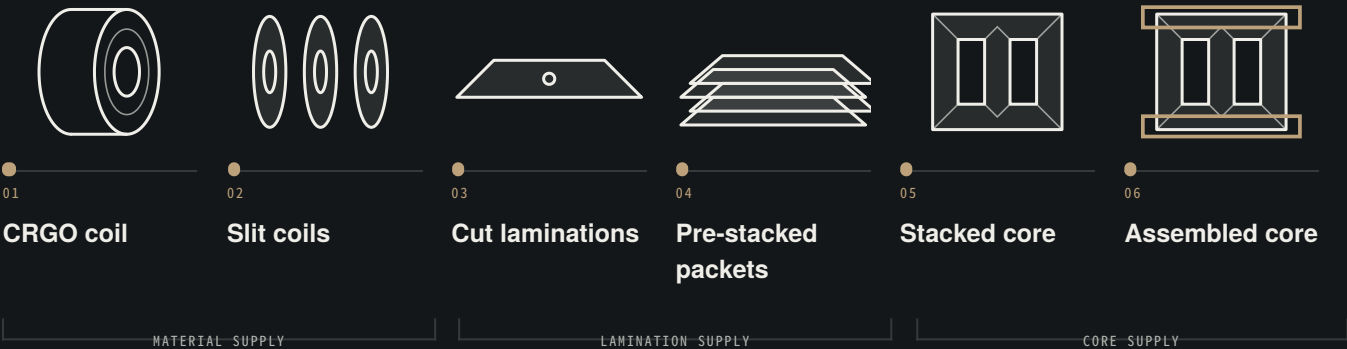
ORDERING INFORMATION REQUIRED

01 Grade, thickness & coating	02 Strip widths + tolerance	03 Coil ID / weight limit	04 Lamination drawing & schedule	05 Quantity & schedule	06 Packing & handling
----------------------------------	--------------------------------	------------------------------	-------------------------------------	---------------------------	--------------------------

03.7 STAGE OF COMPLETION & SKD / CKD

Choose the stage of completion.

From CRGO coil to clamped core: the handover point — and with it the split of work and responsibility — is fixed per order.



FORMAT	WORK AT YOUR SITE	SHIPPED VOLUME	TYPICAL USE
Stacked / assembled core	Winding fit-up and final assembly	HIGHEST	Low local labour input; clamping fitted where ordered
Pre-stacked packets	Core stacking from counted, marked packets	REDUCED	Plants with their own stacking line
SKD — semi-knocked-down	Final assembly of partially completed sets	REDUCED	Large or oversize cores; transport limits
CKD — completely knocked-down	Full stacking from identified lamination kits	LOWEST	Local content requirements

DEFINED PER ORDER

The split of work, packet identification, clamping components, assembly map and packing condition are written into the order before production starts.

KITS TRAVEL WITH INSTRUCTIONS

Where local stacking is required by content rules or transport limits, lamination identification and stacking instructions are supplied with the kit.

03.8 KEY SHEET FOR RFQ SCREENING

Specification summary.

Values describe manufacturing capability, not a product datasheet — binding figures are those confirmed on your approved drawing and order.

MATERIAL TYPE Grain-oriented electrical steel (CRGO / GOES) GRADES Conventional · Hi-B · laser-scribed THICKNESS, STANDARD 0.18 / 0.20 mm THICKNESS, BY PROJECT 0.23 / 0.27 / 0.30 mm SUPPLY Original coils · slit coils · laminations REFERENCE STANDARDS GB/T 2521.1 · IEC 60404-8-7 TRACEABILITY Grade · thickness · coil ID · MTC	PROCESSING MAX CUT-TO-LENGTH WIDTH 890 mm SLITTING Longitudinal, to customer width schedule CUTTING Automatic CTL (SDRI) · multi-step-lap BURR HEIGHT < 0.02 mm STACKING FACTOR > 97 % CAPACITY ~1,500 t / month SLIT-COIL PACKING Independent automatic packaging line
CORE APPLICATIONS Distribution · power · oil-immersed · dry-type STRUCTURES 3-phase 3-limb · 5-limb · single-phase · custom JOINT Multi-step-lap MAX SINGLE-CORE WEIGHT 100 t EXECUTED REFERENCES 330 kV EHV · 125 MVA five-limb SPECIAL CORES Reactor · wound · railway traction GEOMETRY BASIS Customer-approved drawing (PDF / DWG / DXF)	SUPPLY & DELIVERY FORMATS Slit coil · laminations · packets · core · SKD / CKD REGULAR INVENTORY ~3,000 t CRGO LEAD TIME, REGULAR PRODUCTS ~7 days* PACKING Moisture barrier · edge protection · restraint RECORDS MTC · dimensional report · photos · CoC TERMS EXW · FOB · CIF QUALITY SYSTEM ISO 9001:2015

SEND WITH YOUR ENQUIRY

01

Core drawing
PDF / DWG / DXF

02

Grade & thickness
or loss target

03

Supply format

04

Quantity &
schedule

05

Destination port

* REGULAR PRODUCTS AND STOCK GRADES. SUBJECT TO MATERIAL GRADE, QUANTITY, DRAWING APPROVAL AND PRODUCTION SCHEDULE.





SECTION 04

Project References

Thirteen executed references — EHV and large power cores, railway traction, distribution, wound and reactor cores, and pre-stacked export supply — each produced to the customer's drawing.

SHEET 23

330 kV EHV transformer core

SHEET 24

Project register — 13 references

SHEET 08

Supply footprint & customer references

SHEET 28

Supplier qualification

FLAGSHIP REFERENCE • PRJ-01

330_{kV}

EHV transformer core

Three-phase core with multi-step-lap joints for an EHV transformer project, built to the customer's approved drawing. Lamination plan, step-lap arrangement, clamping interfaces and lifting provisions were reviewed together before the first cut was made.

VOLTAGE CLASS	330 kV
APPLICATION	EHV power transformer
STRUCTURE	Three-phase
JOINT	Multi-step-lap
MATERIAL	High-permeability CRGO
SUPPLY FORMAT	Assembled core

ALSO IN THE LARGE-CORE RANGE

125_{MVA} Five-limb core · assembled PRJ-02

63_{MVA} Pre-stacked laminations · export PRJ-04

40_{MVA} 3-phase 3-limb · frames fitted PRJ-09

Handled as a project

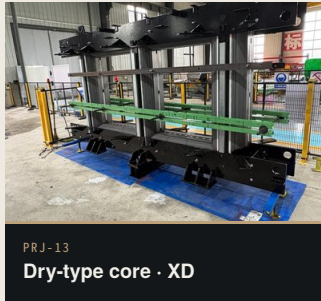
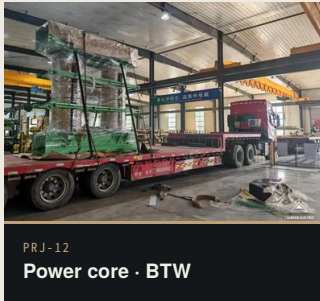
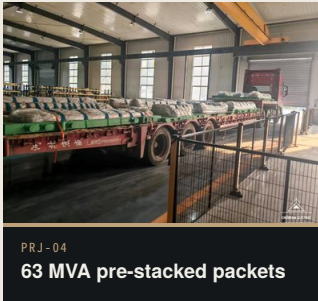
Assembly sequence, temporary bracing, lifting points and transport restraint were planned before the core left the floor.



FIG 15 330 kV TRANSFORMER CORE IN THE WORKSHOP

04.2 PROJECT REGISTER

13 executed references. One drawing-led method.



REF.	PROJECT	STRUCTURE / SUPPLY FORMAT	MARKET / CUSTOMER	PHOTO
PRJ-01	330 kV EHV transformer core	Three-phase, multi-step-lap · assembled core	—	p.23
PRJ-02	125 MVA five-limb transformer core	Five-limb core · assembled core	—	p.17
PRJ-03	Railway traction transformer core	To customer drawing	CHINA	
PRJ-04	63 MVA pre-stacked core laminations	Pre-stacked packets · export project	EXPORT	
PRJ-05	Laminated reactor core	Custom geometry to project drawing	MEXICO	
PRJ-06	Distribution transformer cores	Batch core production	SOUTHEAST ASIA	
PRJ-07	Wound transformer cores	Wound core · batch lot, utility project	CHINA	
PRJ-08	Laminated reactor cores	Batch reactor core production	BRAZIL	
PRJ-09	40 MVA power transformer core	3-phase 3-limb, step-lap · frames fitted	—	
PRJ-10	31.5 MVA power transformer core	Stepped limb, multi-step-lap · assembled	—	
PRJ-11	25 MVA power transformer core	3-limb step-lap · frames fitted	—	
PRJ-12	Power transformer core	Power-core supply	BTW	
PRJ-13	Dry-type transformer core	Assembled dry-type core, clamping fitted	XD	

MVA and kV identify the transformer application; each core is supplied to its own drawing and specification. Customer drawings and project-specific technical data remain confidential.

PHOTOGRAPHS & DETAIL →
CHENFANELECTRIC.COM/PROJECTS



SECTION 05

Execution & Qualification

Inspection placed through the manufacturing flow, export packing built as the last manufacturing operation, and the document pack supplier-quality teams request first.

SHEET 26

Quality control & records

SHEET 27

Packing & delivery

SHEET 28

Supplier qualification

SHEET 30

RFQ checklist & contacts

05.1 QUALITY CONTROL

Checked in process. Recorded by order.

Inspection is placed where a defect can still be corrected — not at the end, where it can only be discovered.

01	Incoming material	REJECT / RELEASE
	Grade, thickness, coil ID and mill test certificate verified against the purchase specification; certificate kept with the batch.	
02	In-process control	BATCH RECORD
	Strip width, length, angle, hole position, burr height and coating condition checked per batch.	
03	Stacking & assembly	DIMENSIONAL CHECK
	Lamination count, step-lap offset, window dimensions and clamping interfaces verified during the build.	
04	Final verification	RELEASE NOTE
	Overall geometry, stacking factor, surface condition, identification and packing readiness.	
05	Project records	HANDOVER PACK
	Dimensional records, production photographs and the agreed supporting documents compiled per order.	

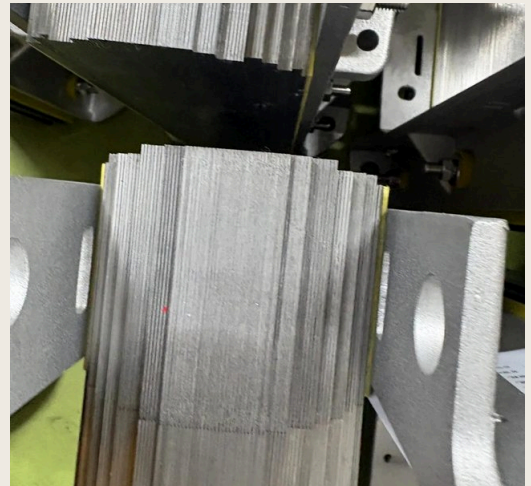


FIG 16 STEPPED LIMB SECTION — PACKET EDGES CHECKED IN ASSEMBLY

BURR HEIGHT	STACKING FACTOR
<0.02 mm	>97 %

RECORDS AVAILABLE PER ORDER

Mill test certificate

Per coil — grade and thickness

Dimensional report

Window, limb, yoke and overall geometry

Production photographs

Defined stages through assembly

Packing record

Case numbering and handling instruction

Certificate of conformity

Against the approved drawing

ISO 9001:2015 certificate

Quality management system

WITNESS & INSPECTION

HOLD POINTS

REMOTE LIVE-VIDEO REVIEW

THIRD-PARTY INSPECTION

Agreed before production. State the drawing revision, acceptance criteria, required records and any witness point in the enquiry.

FINISHED-CORE TESTING

Arranged on request at drawing review: core condition, excitation arrangement, frequency, flux density, measurement method and acceptance criteria are confirmed before ordering. Material loss data and finished-core results are separate records.

05.2 PACKING & DELIVERY

Packing is the last manufacturing operation.

A core that arrives deformed or with damaged coating is a rejected core. Protection, restraint and loading are specified for the geometry, mass and route.



01 Protection

Moisture barrier, desiccant and edge protection selected for the product, the season and the sea route.



02 Restraint

Supports, pallets, cases and lashing sized to hold core geometry and protect lamination edges under load.



03 Loading

Lifting method, loading sequence and container or flat-rack selection planned against mass and centre of gravity.

EXPORT EXECUTION

PACKING	Fumigation-free plywood export case · steel-strapped pallet
MOISTURE CONTROL	VCI or aluminium-foil barrier with desiccant, sealed
MARKING	Case number · gross / net weight · centre of gravity · lifting and handling marks
FREIGHT	Sea freight · air freight when required · destination-specific restraint
DOCUMENTS	Packing list · commercial invoice · certificate of origin · MTC set
INCOTERMS	EXW · FOB · CIF — state the named place or port; other terms confirmed in the quotation

Identify. Coordinate. Deliver.

Package identification, handling method, loading sequence and export documentation are planned against the receiving site's unloading capability — confirmed before the shipment is booked.

05.3 KEY SHEET FOR SUPPLIER QUALITY

Ready for supplier qualification.

The documents a supplier-quality team asks for in the first week — ready before you ask.

SUPPLY REFERENCES

BTW

Baoding Tianwei — power transformer core supply

XD

Xi'an XD — dry-type transformer core supply

CEE

China Electrical Equipment Group Co., Ltd.

QUALITY MANAGEMENT SYSTEM

ISO 9001:2015

CERTIFICATE NO.	3050260312122Q
ISSUED	12 March 2026
VALID UNTIL	11 March 2029
CERTIFIED ENTITY	Xiongqian Chenfan Electric Power Technology Co., Ltd.

FACTORY AUDIT

On-site or remote during qualification.
Production sequence, measuring equipment and record system are open to review.

TECHNICAL CREDENTIALS

Utility model patents relating to core processing and assembly; certificates available for supplier evaluation.



QUALIFICATION PACK — CONTENTS

☐ Business licence	☐ ISO 9001:2015 certificate	☐ Patent certificates
☐ Equipment list	☐ Material supplier list	☐ Sample MTC set
☐ Sample dimensional report	☐ Reference project list	☐ Packing standard



Before you place an order.

CAPABILITY

What is your maximum single-core weight?

Up to 100 t per single core. Geometry, assembly stability, lifting, temporary support, packing and transport are reviewed as one project.

CAPABILITY

Can you manufacture large EHV transformer cores?

Yes. Executed references include transformer cores up to the 330 kV class.

CAPABILITY

Can you manufacture from our drawing?

Yes. Production is released against the approved drawing, material specification, joint sequence, supply scope and acceptance criteria. PDF, DWG and DXF accepted — with drawing number, revision and units.

MATERIAL

Which CRGO / GOES thicknesses are available?

Standard 0.18 / 0.20 mm. 0.23 / 0.27 / 0.30 mm by project specification and material availability.

MATERIAL

Can you process Hi-B and laser-scribed GOES?

Yes — conventional GOES, Hi-B, or laser-scribed and domain-refined GOES, subject to the project specification and material confirmation.

PROCESSING

What burr height and stacking factor do you hold?

Burr below 0.02 mm on cut edges, checked during production. Stacking factor above 97 % on the assembled stack, measured with the agreed method.

SUPPLY

Can you supply pre-stacked laminations or SKD / CKD?

Yes. Packets are counted, marked and kept in the approved joint sequence. For SKD / CKD, split of work, clamping components, assembly map and packing are defined in the order.

QUALITY

Can finished-core loss testing be arranged?

Request it at drawing review. Confirm core condition, excitation arrangement, frequency, flux density, measurement method and acceptance criteria before ordering.

QUALITY

Can inspection be witnessed?

Yes. Hold points, remote live-video review and third-party inspection can be agreed before production.

COMMERCIAL

Which Incoterms are available?

EXW, FOB and CIF. State the named place or port; other terms are confirmed in the quotation.

COMMERCIAL

How are customer drawings protected?

Customer drawings and project-specific technical information remain confidential and are not used in public marketing.

TECHNICAL LIBRARY

Engineering notes for buyers

MATERIAL SELECTION

0.20 mm vs 0.23 mm GOES

LOSS EVALUATION

Building factor

MATERIAL & TESTING

MTC vs finished-core performance

ENGINEERING DEFINITION

8 dimensions before CRGO cutting

JOINT GEOMETRY

Multi-step-lap geometry

PROCESS CONTROL

Burr control

CORE ASSEMBLY

Stacking factor

PACKING & DELIVERY

Protecting cores for sea shipment

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/TECHNICAL-LIBRARY

05.5 KEY SHEET — PRINT AND COMPLETE

Twelve inputs. One complete quotation.

Mark unknown items as open — we return the technical questions before production release. A firm release still requires an approved drawing or a complete dimensional definition.

☐ 01 Core drawing PDF, DWG or DXF — drawing number, revision, units and assembly interfaces	☐ 02 Lamination schedule Joint sequence, holes, notches and piece identification, if available
☐ 03 Application Transformer type and rated power (kVA / MVA)	☐ 04 Voltage Primary and secondary voltage; insulation level where specified
☐ 05 CRGO grade Specified GOES grade — or request a recommendation	☐ 06 Thickness Nominal material thickness
☐ 07 Loss requirement Target or acceptance limit, with its test basis	☐ 08 Supply format Slit coil · cut laminations · pre-stacked packets · stacked / assembled core · SKD · CKD
☐ 09 Quantity Number of cores, sets or repeat batches	☐ 10 Destination Port, country and named delivery point
☐ 11 Packing Route, storage, lifting, unloading and marking requirements	☐ 12 Schedule Required date — fixed or indicative

WHAT THE REVIEW RETURNS

Manufacturing review

Manufacturability and open drawing points

Material & scope

Confirmed material, handover point and assembly responsibility

Commercial response

Quotation and schedule against the confirmed scope

Documents

MTC, dimensional report, photographs or conformity documents as agreed



TECHNICAL REVIEW

Send the drawing. We return the review.

The first reply carries manufacturing feasibility, supply scope, price and schedule. Around 3,000 t of CRGO in stock is why regular products ship in about a week.

Frank

BUSINESS / TECHNICAL COORDINATION

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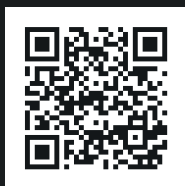
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WHATSAPP

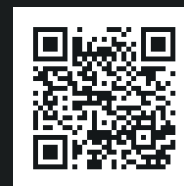
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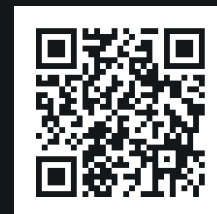
Baoding City, Hebei Province, China

WEB & LANGUAGES

www.chenfanelectric.com

Working languages: English · Chinese.

Website in EN · ES · DE · FR · PT · TR · TH · VI · ZH · RU.



ONLINE RFQ FORM

SEND WITH YOUR ENQUIRY

01

Core drawing — PDF /
DWG / DXF

02

CRGO grade & thickness

03

Supply format

04

Quantity & schedule

05

Destination port



CHENFAN ELECTRIC

Steel in. Cores out.

TRANSFORMER CORES • CRGO PROCESSING • SKD / CKD SUPPLY

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