



*Vilas Transcore Limited*

*Your Power, Our Component.*

SINCE 1996

EMPOWERING  
**ELECTRICAL INDUSTRY**  
WITH QUALITY TRANSFORMER COMPONENT



[www.vilastranscore.com](http://www.vilastranscore.com)

# CERTIFICATION

MADE IN  
*india*

CERTIFICATE • CERTIFICATE • СЕРТИФИКАТ • CERTIFICATO • CERTIFIKAT



## CERTIFICATE

This is to Certify that the Quality Management System of  
**VILAS TRANSCORE LIMITED**

UNIT I:- 283-285, G.I.D.C. N.H NO.-8, POR-RAMANGAMDI IND. ESTATE,  
DIST-VADODARA-391243, GUJARAT (INDIA)  
UNIT II:- 435 TO 437, 440, 453, 457, N.R. GALAXY HOTEL, N.H NO. 08, VILL POR,  
DIST-VADODARA-391243, GUJARAT (INDIA)  
UNIT III:- BLDCK NO.-419-420, VILLAGE-GANPATPURA, TAL. KARJAN,  
DIST-VADODARA-391220, GUJARAT (INDIA)

has been audited and found to comply with the requirements of:

**ISO 9001:2015**  
**Quality Management System**

For the scope of activities described below:  
PROCESSING AND EXPORT OF COLD ROLLED GRAIN ORIENTED STEEL / COLD  
ROLLED NON-GRAIN ORIENTED ELECTRICAL STEEL (CRGO / CRNGO) COILS,  
CUT TO SIZE LAMINATION, SLIT COILS, TOROIDAL CORES, NANO CRYSTALLINE  
CORES, WOUND CORES, YOKE SHEET & TANK SHELLS, STACKED ASSEMBLED  
CORES, TRANSFORMER CORE COIL ASSEMBLY, AMORPHOUS CORES,  
COPPER & ALLIED ITEMS, RADIATORS, TRANSFORMER COMPONENTS.

IAF Code: 19 & 29

Certificate Number: **EGQ/2410VS/2682** 1st Surv. Due on: **09.09.2025**  
Initial Date of Certification: **10.10.2024** 2nd Surv. Due on: **09.09.2026**  
Date of Certificate: **10.10.2024**  
Date of Expiry: **09.10.2027**

Director:  Date: **10.10.2024**



Validity of this certificate is subject to successful completion of surveillance audit on or before the date, in case surveillance audit  
not conducted this certificate shall be suspended/cancelled.  
For verification and updated information concerning the present certificate visit to [www.thehawk-eye.com](http://www.thehawk-eye.com)  
This Certificate is the property of Hawk Eye Certifications Pvt. Ltd. and shall be returned immediately when demanded.

Hawk Eye Certifications Private Limited  
Hawkestar Tower, Shop No. 424, 4th Floor, Sector-18, Kirti Nagar, New Delhi-110016  
www.thehawk-eye.com  
email: [admin@thehawk-eye.com](mailto:admin@thehawk-eye.com)

पॉवर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड  
(भारत सरकार का उपक्रम)

**POWER GRID CORPORATION OF INDIA LIMITED**   
(A Government of India Enterprise)

कंपनी कार्यालय : "सीडामिनी" फ्लोर नं. 2, वीरमंगल, मुद्रांक-122,001, वडोदा  
फोन : 2571700 - 719, फैक्स : 2571760, 2571761, 079-2571762  
Corporate Office : "Seedamini" Flat No. 2, Sector-29, Gujarat-392 001, Vadodra  
Tel. : 2571700 - 719, Fax : 2571760, 2571761, 079-2571762

Ref: C/QA&I/VA/Toroidal Core COPY COPY Date: 16.06.2011  
20-6-11

M/s. ABB Limited,  
Maneja Works,  
Maneja, Vadodara-390013

Kind Attention: Shri. Himanshu Gandhi  
Subject: Approval of M/s. Vilas Transcore Private Limited, Vadodara for sourcing Toroidal Core  
for Current Transformers (CTs) upto 400 kV class for POWERGRID projects.

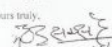
This has reference to your submission of documents for the subject matter. Based on the documents  
submitted by you and visit of our representatives at M/s. Vilas Transcore Pvt. Ltd., having works  
situated at 283-285, GIDC, NH-8, POR-Ramangamdi Industrial Estate, Vadodara-391243, Gujarat.  
We are agreeable to your request for sourcing Toroidal core for CTs upto 400 kV class for  
POWERGRID projects. However, following have to be ensured by you and M/s. Vilas Transcore.

- Traceability should be maintained from raw material stage to the final stage.
- CRGO should be procured from POWERGRID approved sources.
- Installation of new furnace (Latest by March 2012) for annealing CRGO toroidal core as per the  
undertaking letter dated 09.06.2011 from M/s. Vilas Transcore Pvt. Ltd.
- Supervision by POWERGRID Inspection Office (IO- Vadodara) for first two lot production of  
Toroidal Cores.

Please note that item sourced from them meets the requirement of POWERGRID technical specification,  
approved drawing/data sheet including type testing, if any. In case of any abnormality in this regard is  
observed, we reserve the right to withdraw this approval with immediate effect.

This however does not absolve your of liabilities as per the contract.

Thanking you,

Yours truly,  
  
(Mahendra Saxena) 28/6  
CM (QA & I)

CC: 1) M/s. Vilas Transcore Pvt. Ltd., 283-285, GIDC, NH-8, POR- Ramangamdi Industrial Estate,  
Vadodara-391243, Gujarat  
2) DGM (IO - Vadodra)

विलास ट्रांसकोर प्राइवेट लिमिटेड, सीडामिनी फ्लोर, 424 नंबर - 110016, कृती - 4540121, फोन - 011-4540039, ईमेल - [admin@thehawk-eye.com](mailto:admin@thehawk-eye.com)  
एच.टी.ओ. - 4-9, कृती इन्स्टीटयुशनल एरिया, कान्हावा सारंग, न्यू देहली - 110018, टेली - 6560121, फेक्स - 011-4560039, ग्रुप - "NATGRID"

## CHAIRMAN'S VISIONARY NOTE

A fairy tale story of Indian electrical industry continues to amaze the world and so does our diversity, integrity and loyalty. With all the opportunities that lie ahead for electrical industries, there still remains a significant skill gap to meet the requirements.

At NJ Group, we are committed to bridge this opportunity and provide consistent quality and adequate quantity, produced by skilled & professionally trained workforce. As an upcoming leader, NJ group has an advantage of leveraging its one and half decade legacy of industrial expertise, its diverse reservoir of technical insights and its in-house skilled resource pool of talent with own technology. NJ Group groom young minds with path breaking knowledge-ware and thereby helping them gain a firm foothold in their chosen sphere and have a flourishing and promising career.

It has been our experience with sharper focuses on products & related activities help us to achieve greater success.

We have a vision to make India one of the most powerful electrical equipment producing country in the globe.

Having been felicitated with prestigious national awards, the ISO certification is another feather in our cap. With our dedicated team, we shall continue to perform and enrich our contribution to the society. Look forward to see the NJ Group at the new horizon of industry.

“ LET'S MOVE AHEAD WITH  
PRIDE, PASSION AND PERFORMANCE. ”



**Nilesh Patel**  
Chairman & Managing Director

# ABOUT US

Company was established in the year 1996, as Vilas Transcore, which is part of NJ Group, run under guidance of Mr. Nilesh Patel, a pragmatic and experienced personality, the company has garnered a significant reputation in the market today.

Vilas Transcore Ltd. has remained steadfast in the business of Transformer Lamination, Toroidal Cores & CRGO slitted Coils for over 28 years.

Mr. Nilesh Patel is the man behind the hugely successful company Vilas Transcore. Under his dynamic leadership & in a short span of a time, Vilas Transcore is reached to newer heights of success and has now become a name to reckon with, in today's business world.

Through reliable products & services, talented people, a responsible approach to business & collaboration with our suppliers & customers, Vilas Transcore is pioneering innovative directions globally. At Vilas Transcore, our products, our people, and our approach to business are held to only the highest standard so that we can more effectively contribute to a better world.

The Company boasts a class workforce and robust team of experts who are passionately dedicated to their assignment. Vilas Transcore places a strong emphasis on Quality production and values client satisfaction a cornerstone in nurturing long-term relationships with customer & vendor alike.





## INFRASTRUCTURE

### UNIT 1

283-285, GIDC, Por-Ramangamdi, N.H.No.8,  
Dist.: Baroda - 391 243 (Gujarat) INDIA

- 6 X Batch Annealing Furnaces
- 3 zone Continuous Roller Heat Annealing Furnaces,
- 2 x EOT Cranes (2MT to 10 MT)
- Modern Tool Room Set up
- Automatic Core Winding Machines
- Slitting Machine with Carbide Cutters(1200 & 1000mm)
- Toroidal Core Automatic Winding Machine
- Toroidal Core – Testing Panel
- Coil Wrapping Machine
- Our products are approved by PGVCL, reflecting our commitment to quality, safety, and industry standards.

### UNIT 2

Plot No. 435 to 437,440,453,457, Near Galaxy Hotel N.H. No. 8,  
Village: Por, Dist. Vadodara. 391 243 Gujarat, India

- Automatic cut to length Machine: 250mm, 400mm, 600mm & 900mm with Auto Stacking Facilities Slitting Machine with Carbide Cutters (1200 & 1000mm)
- Wound Core Machine
- CNC X- shear Machine
- CNC Rectangle Strip Machine with hole punch
- 10 X EOT Cranes (5 MT to 10 MT),

### UNIT 3

**Block No: 419-420, Ganpatpura Village, Karjan,  
Dist :-Vadodara- 391440, Gujarat, India**

- Spanning 3 Lac Sq. Ft. of Excellence
- State of Art CRGO Slitting Lines - 2nos. of 1250mm
- CRGO Cut to Length Machine = 2nos. of 1000mm, 1nos. of 600mm and 5nos. of 400mm with Auto stacking
- Fully dust Proof with positive air pressure: Ensuring clean and high quality manufacturing environment
- Boasts a well-equipped Testing Lab, featuring state of the art Brockhaus Testing Machine.
- Our high-grade radiator products are manufactured using an advanced automated painting booth, oven and conveyor system ensuring consistent quality and super finish.
- Well-equipped with advanced machinery for producing high-grade Nanocrystalline Cores to meet global standards of efficiency and reliability.

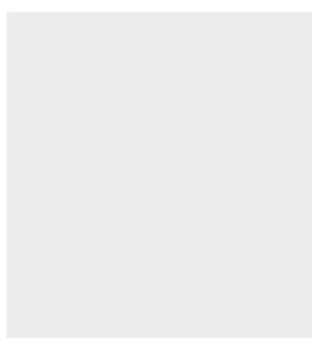
# CRGO TESTING LAB - BROCKHAUS

Excellence through Stringent Standards. Our commitment to excellence is evident through rigorous quality checks and audits from material procurement to packaging. We adapt to market dynamics, ensuring consistent delivery of high-quality products within set timelines for customer satisfaction.



## Flux Density v/s Losses (values are in watts / Kg. @50 Hz)

F.D.(T)	23CG110	27CG110	27CG120	30CG120	23HP95	27HP100	30HP105	27HP90D	23HP85D	23HP80D
1.30	0.560	0.510	0.574	0.605	0.466	0.504	0.560	0.470	0.449	0.412
1.35	0.606	0.580	0.624	0.653	0.505	0.545	0.610	0.510	0.485	0.450
1.40	0.654	0.650	0.675	0.713	0.547	0.590	0.660	0.560	0.524	0.500
1.45	0.706	0.690	0.732	0.760	0.592	0.639	0.700	0.590	0.565	0.530
1.46	0.717	0.710	0.743	0.784	0.601	0.650	0.720	0.610	0.573	0.560
1.48	0.740	0.730	0.768	0.803	0.621	0.671	0.740	0.620	0.591	0.570
<b>1.50</b>	<b>0.764</b>	<b>0.770</b>	<b>0.794</b>	<b>0.840</b>	<b>0.641</b>	<b>0.693</b>	<b>0.780</b>	<b>0.660</b>	<b>0.608</b>	<b>0.610</b>
1.52	0.789	0.790	0.819	0.863	0.662	0.716	0.790	0.670	0.627	0.620
1.54	0.815	0.800	0.848	0.883	0.686	0.740	0.800	0.680	0.646	0.640
1.56	0.842	0.840	0.889	0.923	0.710	0.796	0.840	0.710	0.666	0.650
1.58	0.871	0.860	0.923	0.943	0.735	0.820	0.850	0.720	0.686	0.660
1.60	0.902	0.900	0.958	0.983	0.763	0.845	0.890	0.750	0.709	0.690
1.62	0.935	0.930	0.996	1.012	0.793	0.871	0.900	0.760	0.731	0.700
1.64	0.970	0.970	1.039	1.052	0.827	0.899	0.940	0.800	0.756	0.740
1.66	1.009	1.000	1.088	1.090	0.861	0.923	0.960	0.810	0.783	0.760
1.68	1.052	1.050	1.143	1.144	0.901	0.962	1.010	0.850	0.813	0.780
<b>1.70</b>	<b>1.097</b>	<b>1.100</b>	<b>1.200</b>	<b>1.200</b>	<b>0.942</b>	<b>0.999</b>	<b>1.050</b>	<b>0.880</b>	<b>0.845</b>	<b>0.800</b>
1.72	1.147	1.140	1.270	1.253	0.990	1.040	1.070	0.890	0.881	0.820
1.74	1.202	1.200	1.344	1.332	1.039	1.088	1.130	0.940	0.924	0.870
1.76	1.262	1.250	1.425	1.392	1.070	1.144	1.180	0.970	0.975	0.900
1.78	1.328	1.320	1.509	1.492	1.155	1.211	1.260	1.020	1.033	0.950
1.80	1.400	1.370	1.601	1.572	1.220	1.289	1.340	1.060	0.103	1.000



Standard Tolerance - Cut to Size Lamination

Sr.No	Characteristics	Acceptance Limit/ Criteria
1	Width (mm)	0 to 100 (± 0.15)
		100 to 130 (± 0.20)
		230 to 380 (± 0.25)
		380 to 580 (± 0.40)
		580 to Above (± 0.50)
2	Thickness (mm)	± 0.03 mm
3	Edge Burrs (Micron) Thickness (mm)	Up to 0.23
		Up to 0.23
		0.35
		20
4	Length (mm)	Up to 350 (+0.00 / -0.30)
		350 to 1000 (+0.00 / -0.60)
		1000 to 2000 (+0.00 / -1.00)
		2000 and Above (+0.00 / -2.00)
5	Edge Chamber	For a material with a width greater than 150 mm, edge chamber shall not exceed 0.8 mm for a length 1.5 meter
6	Wave Factor (i.e., Deviation from Flatness)	For a material of width greater than 150 mm the deviation from flatness expressed as a percentage shall not exceed 1.5%
7	Angel	± 5 Minutes
8	Stack Thickness of individual stack except centre step unclamped	+1 -0 mm

Testing Parameter for Toroidal Core

Grade of Material	Reluctance - Toroidal Core			
	AT 0.5 Tesla AT/CM	AT 1.0 Tesla AT/CM	AT 1.5 Tesla AT/CM	AT 1.7 Tesla AT/CM
0.23 ZDMH/HPDR	0.06	0.10	0.20	0.30
0.23 ZdKH	0.07	0.12	0.22	0.32
0.23 MoH	0.08	0.15	0.26	0.35
0.23 M3	0.09	0.18	0.30	0.45
M4	0.12	0.22	0.32	-
M5	0.15	0.28	0.40	-

Reluctance - Toroidal Core

Grade of Material	AT 0.5 Tesla AT / CM	AT 1.0 Tesla AT / CM	AT 1.5 Tesla AT / CM	AT 1.7 Tesla AT / CM
0.23 HPDR / ZDMH	0.06	0.10	0.20	0.30
0.23 ZdKH	0.07	0.12	0.22	0.32
0.23 MoH	0.08	0.15	0.26	0.35
0.23 M3	0.09	0.18	0.30	0.45
M4	0.12	0.22	0.32	-
M5	0.15	0.28	0.40	-

Flux Density v/s Losses (Values are in watts / kg. @60Hz)

F.D.(T)	23CG110	27CG110	27CG120	30CG120	23HP95	27HP100	30HP105	27HP90D	23HP85D	23HP80D
1.30	0.690	0.710	0.760	0.810	0.620	0.690	0.760	0.560	0.580	0.650
1.35	0.730	0.760	0.810	0.870	0.660	0.740	0.810	0.600	0.610	0.710
1.40	0.800	0.840	0.890	0.950	0.730	0.810	0.880	0.660	0.680	0.760
1.45	0.850	0.900	0.960	1.010	0.770	0.860	0.940	0.700	0.720	0.820
1.46	0.880	0.920	0.990	1.030	0.790	0.890	0.970	0.720	0.740	0.830
1.48	0.890	0.950	1.010	1.050	0.810	0.910	0.990	0.730	0.750	0.850
<b>1.50</b>	<b>0.940</b>	<b>1.000</b>	<b>1.060</b>	<b>1.100</b>	<b>0.850</b>	<b>0.950</b>	<b>1.040</b>	<b>0.770</b>	<b>0.790</b>	<b>0.880</b>
1.52	0.960	1.020	1.090	1.130	0.870	0.970	1.060	0.790	0.810	0.900
1.54	0.980	1.040	1.120	1.150	0.880	0.990	1.080	0.800	0.820	0.930
1.56	1.030	1.090	1.170	1.200	0.920	1.030	1.120	0.840	0.860	0.950
1.58	1.060	1.120	1.200	1.230	0.940	1.060	1.140	0.850	0.880	0.980
1.60	1.110	1.170	1.250	1.280	0.980	1.100	1.190	0.890	0.910	1.000
1.62	1.150	1.200	1.290	1.310	1.010	1.130	1.210	0.910	0.930	1.040
1.64	1.210	1.260	1.350	1.360	1.050	1.180	1.260	0.950	0.970	1.070
1.66	1.260	1.290	1.400	1.410	1.080	1.210	1.290	0.970	1.000	1.100
1.68	1.340	1.360	1.480	1.470	1.130	1.260	1.340	1.010	1.040	1.140
<b>1.70</b>	<b>1.420</b>	<b>1.420</b>	<b>1.560</b>	<b>1.550</b>	<b>1.180</b>	<b>1.320</b>	<b>1.390</b>	<b>1.050</b>	<b>1.090</b>	<b>1.170</b>
1.72	1.480	1.460	1.620	1.600	1.220	1.360	1.420	1.070	1.120	1.210
1.74	1.580	1.540	1.720	1.700	1.300	1.430	1.490	1.120	1.180	1.260
1.76	1.670	1.600	1.800	1.770	1.370	1.500	1.550	1.160	1.220	1.310
1.78	1.770	1.680	1.910	1.890	1.480	1.590	1.650	1.240	1.290	1.360
1.80	1.870	1.750	2.000	1.990	1.580	1.670	1.750	1.270	1.360	1.430

# CRGO PRODUCTS

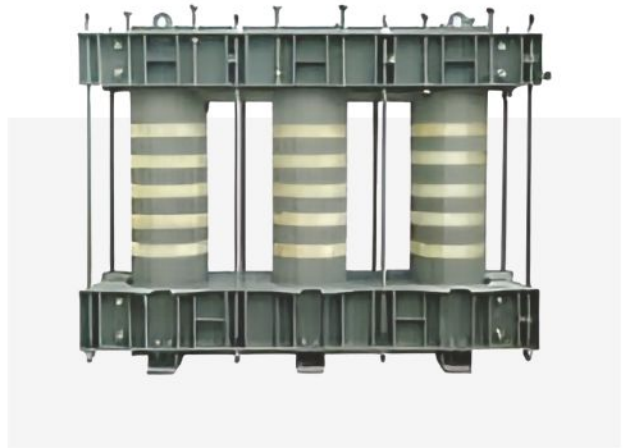
## MOTHER COIL

Cold rolled grain oriented electrical steel (CRGO) is a specialized type of electrical steel used in the cores of transformers, particularly those for electrical power distribution systems.



## CORE ASSEMBLY

The stacked laminations are assembled and clamped together using mechanical pressure to ensure firm contact and minimize gaps between the laminations. In some cases, the assembled core may undergo a process of vacuum impregnation with varnish or resin to further enhance mechanical strength and insulation properties.



## SLIT COIL

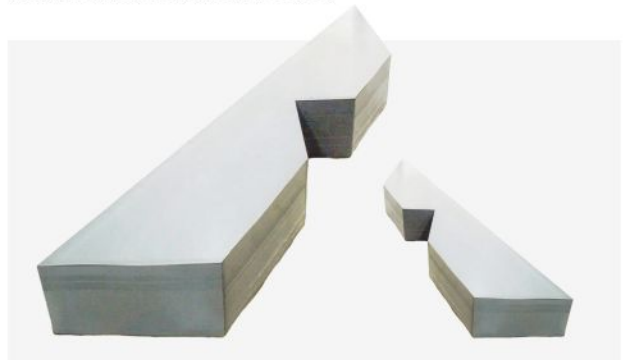
A Cold Rolled Grain Oriented Electrical Steel (CRGO) slit coil refers to a coil of CRGO steel that has been processed to smaller widths from its original mother coil. Slitting is a process where a large coil is cut into narrower strips or coils, which are then rewound into smaller coils for distribution or further processing.



## CUT LAMINATION

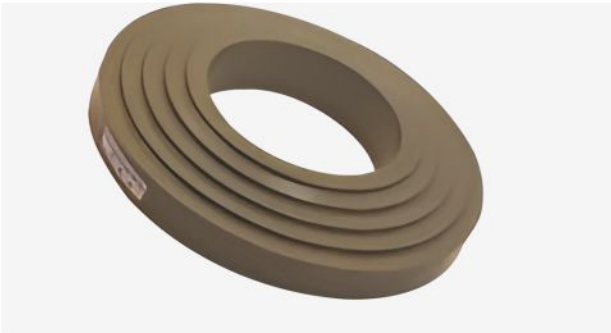
The Step lap CRGO Transformer Lamination design leads to low no-load losses and a low noise level, lateral step lap enables a favourable assembly for the upper yoke. Every type of CRGO transformer Cores can be produced in a form of step lap, overlap, 45 degree, with hole or without hole from every required quality electrical steel up to 1000mm width.

Vilas Transcore Ltd. Uses the latest version of Cut to length Machines in order to produce step lap CRGO Transformer Lamination Cores.



## STEP CORE

Our Step Cores are specially engineered to deliver high efficiency, precision, and reliability in compact transformer applications. Manufactured using premium CRGO and nanocrystalline materials, these cores are ideal for use in current transformers, measuring instruments, and space-constrained environments. With a focus on low losses, high permeability, and superior frequency response, our miniature cores ensure optimal performance in even the most demanding electrical systems.



## TOROIDAL CORE

Vilas Transcore Ltd. specializes in manufacturing Toroidal Cores in C.R.G.O. materials for low, medium and high frequency, CTs, PTs and various types of Transformers. Vilas Transcore is devoted to the development of high-efficiency energy-saving and excellent performance magnetic cores. As a reward of its continuous efforts, the company has been the leader of magnetic core manufacture in India. Quality is the priority issue in Vilas Transcore's philosophy; it was certified to TUV ISO 9001 quality assurance system in 2008.



## WOUND CORE

Vilas Transcore Ltd. is today one of India's reliable and most respected core manufacturers. VTL has been manufacturing Single Phase and Three Phase, Wound Cores for the past many years for Transformer Manufacturers. High grade CRGO steel, having low core loss is used for making circular cores. Thereafter inner core mandrels are inserted and correct shape is achieved by hydraulic jacks. These formed wound cores are annealed in an inert environment which ensures that the original characteristic of the magnetic steel are retained.



## CORE COIL ASSEMBLY

The stacked laminations are assembled into a coil shape. This can be done manually or using automated equipment depending on the size and complexity of the transformer core. Clamping mechanisms or fixtures may be used to hold the laminations together during the assembly process to ensure proper alignment and minimize gaps.



## EXTERNAL COATING PROCESS

### **Robust & Reliable Protection HDG Process (Advanced & Precise)**

Our Hot-Dip Galvanizing (HDB) process is expertly designed to eliminate distortion, even in 1mm thick radiators. This ensures long-lasting protection. HDG-coated radiators can also be painted for enhanced corrosion resistance, complying with ISO 12944 and SSPC standards.

### **Grit Blasting: Perfect Surface Preparation**

VILAS radiators undergo a fully automated shot blasting process to clean the entire surface. After pressure testing under water, grit blasting removes contaminants like oil or rust and ensures perfect paint adhesion. Achieving a Sa 2 /2 surface cleanliness, as per ISO 8501 or SSPC-SP-10 standards, ensures optimal paint performance.

### **Internal Coating: Uncompromised Quality & Performance Perfect Internal Cleaning**

Radiators undergo meticulous wire brushing and dry air purging to ensure a dust-free internal surface. An electromagnet is inserted to guarantee zero metallic contamination inside the header pipes.

### **Global Compliance: Standards You Can Trust**

VILAS offers various paint systems in strict compliance with ISO 12944-2: 2018 guaranteeing world-class corrosion protection.

### **Premium Coating Systems: Tailored for Durability**

■ Epoxy-based primers, intermediate MIO primers, and customized topcoat paints provide maximum corrosion protection.

■ Alternatively, choose from Zinc-rich base primers + Epoxy MIO primers + PU topcoat paints, designed to meet your unique specifications.

■ HDG-only radiators are available for customers who prefer no 'additional coatings.

### **Two Option for Internal Coating**

Alkyd Phenolic Varnish: Hot-oil resistant with a temperature tolerance of 120°C (ELMOLUFT 1A FD by Dr, Beck's).

Single Pack Primer: High-temperature resistant (up to 200°C) Interprime-741 by AkzoNobel International.

## STRINGENT QUALITY ASSURANCE

### **Precision at Every Step ISO 9001:2015 Certified**

VILAS upholds the highest standards of quality through our ISO 9001:2015 QMS accreditation. Our thorough quality plan controls every stage from incoming materials to final inspection.

### **Routine Inspections to Guarantee Perfection**

■ Full Dimensional Checks: Ensure all specifications are met.

■ Pressure Testing: Individual radiators undergo rigorous water pressure tests [2kg/cm for 1mm thickness, 2.5kg/cm for 1.2mm).

■ Paint Thickness Measurement: Ensures uniform application with SPC techniques.

■ Paint Peel-off Test: Conducted per ASTM 3359-83 on randomly selected radiators.

■ Packing Inspection: Guarantees safe delivery to the customer.

### **Type Tests: Rigorous Performance Testing**

■ Leakage Test: Radiators are tested with hot transformer oil at 105°C for 12 hours under 1kg/cm<sup>2</sup> Pressure.

■ Vacuum Test: Radiators endure a vacuum of 55mm Hg absolute for one hour with no permanent deflection exceeding 0.5mm.

**Material Traceability:** Full Transparency

### **Unique Identification Number**

Every VILAS radiator is tagged with a unique serial number, allowing us to maintain comprehensive records—from the workmen involved units production to the raw materials used.

### **Robust Packaging: Secure, Reliable Delivery Superior Packaging for Safe Transit**

Radiators are packed in road-worthy and sea-worthy wooden pallets, crates, or cases made from natural rubber, pine wood, or jungle wood. We manufacture all packaging in-house to ensure durability.

### **Sealed for Safety**

All vehicles and export containers are sealed in the factory, ensuring secure, safe delivery to your site.



# RADIATOR INFRASTRUCTURE

HANGING  
CONVEYOR



SEAM WELDING  
CONVEYOR

MULTI SPOT  
WELDING



## WHY VILAS RADIATOR ?

- TOP-NOTCH CORROSION PROTECTION THROUGH ADVANCED COATING SYSTEMS.
- CUSTOMIZED COATINGS TAILORED TO MEET YOUR SPECIFICATIONS.
- STRINGENT QUALITY ASSURANCE WITH INTERNATIONAL CERTIFICATIONS.
- TRACEABLE MANUFACTURING PROCESS FOR COMPLETE TRANSPARENCY.
- ROBUST PACKAGING FOR DAMAGE-FREE DELIVERY, EVERY TIME.

# RADIATOR PRODUCTS



## HEADER TYPE RADIATOR

Header Type Radiator to DIN 42559/ BSEN 50216-6/ IEC 60076-22-2/ IEEMA 9 [With or without flange & with or without/ Offset of 131 mm and 180 mm

**Centre Distance:** 1000- 3600 mm Elements width: 226, 300, 380, 400, 450 & 520 mm wide

**No. of Elements:** 1to 51

**Pitch:** 40, 45, 50mm 9 ( with or without flange & with or without/ Offset of 131 mm and 180 mm )

**Center Distance :** 1000-3600 mm  
Elements width : 226, 300, 380, 400, 450 \$ 520 mm

**No. of Elements:** 1to 51

**Pitch:** 40, 45, 50mm

## 304 OR 316 GRADE STAINLESS STEEL RADIATOR

304 or 316 Grade Stainless Steel & Integral Type Radiator to DIN 42559 & BSEN 50216.6 (with or without flange & with or without Offset by 131 mm and 180 mm)

We can also offer special grade stainless steel with High\*Molybdenum\* for extremely corrosive environment.

**Centre Distance:** 500mm-360mm

**Elements Width:** 226,300,380,400 & 520mm width

**No. of Elements:** 1 to 51

**Pitch:** 40,45,50





### SWAN NECK TYPE RADIATOR

In 42559/BSEN 50216-6/IEC 60076-22-2/IEEMA 9  
(With or without flange & with or without/ offset of  
131mm & 180mm)

**Centre Distance:** 1000-3600 mm

**Elements with:** 226,300,380,400,450 & 520 mm

**No. of elements:** 1 to 51

**Pitch:** 40, 45 & 50



### GRADED PANEL & CHAMFERED PANEL

Type-DIN 42559/BSEN 50216-6/ IEC 60076-22-2

**Elements Width:** 520 mm wide

**No. of Elements:** 1 to 51

**Pitch:** 40, 45,50



### INTEGRAL HEADER TYPE RADIATOR

BSEN 50216-6 [ Flange offset by 13Tmm)

**Centre Distance:** 500- 1600 mm

**Elements Width:** 300, 380 & 520 mm

**No. of Elements:** 2-14

**Pitch:** 40 mm

## NANO CRYSTALLINE



### HIGH-PRECISION CURRENT TRANSFORMER CORES IN ELECTRONICS (NC-M)

**Features :** High Saturate magnetic induction BS High initial permeability, High linearity, High Accuracy, Low phase and amplitude error for CT. Applying for transformer class grade: 0.5-0.05 Class Less weight, low cost Good temperature stability - 55°C-130°C

**Applications:** High precision current and voltage transformer, Current leakage circuit breakers Electronic Watt hour meter, Precision power meter, Current control in automation industry.

### EMC COMMON MODE CHOKE CORES

**Features :** High initial permeability and high AL value High effective insertion loss and excellent noise suppression, Wide frequency range, large adjustable range for permeability (wo) from 20000-250000 Low core loss, small choke size for volume and weight - with epoxy coating.

**Applications:** Switched-mode Power supplies, Uninterruptible Power Systems, Pulsed welding equipment, Power inverter, Wind generators, Frequency Converter.



### DC CURRENT IMMUNITY COMPOSITE CORES (NA-DC)

**Features:** DC current immunity composite cores is combined with amorphous and nano crystalline cores together Magnetic features: Strong DC current immunity. Applicable Current range 5-200A Good temperature stability with competitive price and good quality.

**Applications:** DC current immunity transformers in electronic energy meter / watt-hour meter Metering transformer in electronic power system.



## CURRENT TRANSFORMER CORES IN POWER SYSTEM (NC-P)

**Features:** High permeability ---- minimized current measuring error in CT, Low core loss - small size and light weight, Substitute of permalloy Lower weight, smaller size- -cost saving greatly than permalloy Excellent Temperature stability---operation temperature 55 ~ 130°C for long time.

**Applications:** Bushing current transformer for Epoxy resin cast, Gas insulated or oil-immersed switchgears, LV, MV and HV switchgear, Metering and protective relaying in the power plants and substations. Other apparatus in electric power transmission and distribution system.



## NANOCRYSTALLINE CORES FOR LEAKAGE CIRCUIT BREAKERS

**Features:** High initial permeability, High output voltage, core size saving. Low core loss, Good tolerance ability for large current impulse, Good ability to detection of small current High Cuire temperature, Good temperature stability (-55°C-13°C) Competitive price

**Applications:** Electronic Leakage Circuit Breakers  
Electromagnetic Leakage Circuit Breakers

## AUTOMATIC TESTING MACHINE

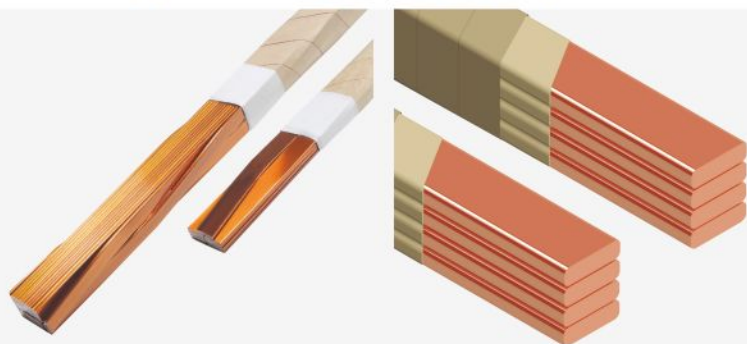


## AUTOMATIC CORE COATING MACHINE

# AMORPHOUS CORE



## COPPER CONDUCTOR



### Continuously Transposed Conductor (CTC)

Number of Strands: 5-71

Dimensions of Single Strip:

Width: 3.00 to 12.50 mm

Thickness: 1.00 to 3.50 mm

Enamel increase : 0.080 - 0.180 mm

Proof stress (0.2) : 60 - 260 N/mm

Transposing Pitch length: 35 - 225 mm

Cross Over length : 20 mm Min.

Axial Width CTC : 6-26 mm Max.

Radial Height CTC : 5.5-80 mm Max.

### Continuously Transposed Conductors:

Continuously Transposed Conductors are used in Large Power Transformers, Furnace Transformers, and Traction Locomotive Transformers. The current production range of CTC is between 5 to 72 strands with a variety of different insulating materials.

### Material Specifications:

■ Copper : ASTM B49/1998 & IS:12444-88 Copper ETP (CWO04A, En1977)

### Paper Insulation Options

IEC: 60554-3-5, IEC:60641-3-2 Type P.2.1.A, IS:8570 - 1977

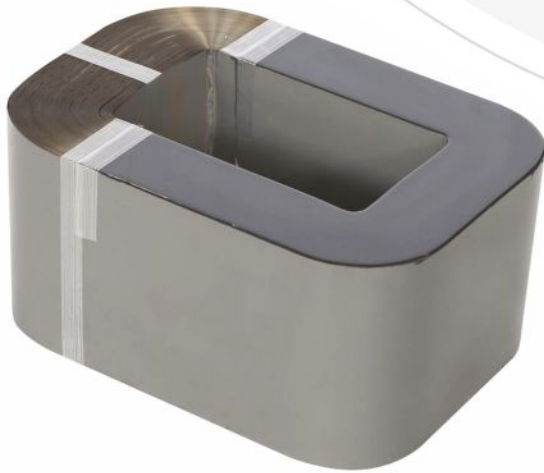
- Kraft paper :- Munjso Paper AB, Sweden, Wermland Amotfors, Sweden.
- Thermally upgraded paper :- Munjso Paper AB, Sweden
- Nomex paper
- Dennison 22 HCC thermally upgraded crepe paper (0.076mm thickness)
- High Density Calendered Crepe Paper :- EHV - Weidman Industries, Inc., Switzerland. Cindus, USA
- Cottrell Kraft Tu125
- Presspahn : Krempel GmbH & Co., Germany

### Strip Enameling Machine Technical Parameters

- Total Lines: 4 (8)
- Single Mode: 4
- Duplo Mode: 8
- Range of Strip Conductor:  
Width: 3.00 to 12.50 mm  
Thickness: 1.00 to 3.50 mm
- Cross-sectional area:  
Duplo Mode: 3.0 - 25.5 mm<sup>2</sup>  
Single Mode: 3.0 - 60 mm<sup>2</sup>
- Proof stress (0.2) : 60 - 260 N/mm.
- Enamel increase : 0.080 - 0.180 mm
- Number of Passes: 12+2 (PVA + Epoxy)

### Insulation:

- Polyvinylacetal (PVA) enamel, Class : 120°C
- PVA + Epoxy Semi-polymerized, Class : 120°C
- Polyester (PO), Class: 130°C
- Polyesterimide Single Coat, Class: 180°C
- PEI+PAI [Polyesterimide+Palyamide-Imide], Class: 200°C
- Altana Electrical Corporation, Italy. Elantas Beck India, India



#### Amorphous Cut Cores

Facilitated assembly of coils, excellent ability of anti-OC bias. High Permeability, Low Connectivity, Component Efficiency increased and Size Reduction. Low Loss, Lowering Temperature Rise.

#### Advantage

Good Temperature Stability, Long Time Work under -50-130c.

#### Application

For Solar Inverter  
Power & Distribution Transformer  
High Frequency Inductor & Reactor

Enamelled Rectangular Winding Wires  
Enamelled Rectangular Copper Wires are used in low and medium voltage electrical machines such as motors, generators and transformers

#### Enamelled Rectangular Winding Wires

Enamelled Rectangular Copper Wires are used in low and medium voltage electrical machines such as motors, generators and transformers

#### Rolling Mill and Wire Drawing Integrated Machine

GB/T 5584 Rolling Mill

■ Size Range:

Width : 2.2to 14.0mm

Thickness : 0.5to 4.0mm (R Angle:0.5to 1.0mm)

Cross Section : 3.0 to 25 mm<sup>2</sup>

■ Features: Built-in cleaning and polishing device & Online measuring device with auto correction of dimensions for width and thickness with measuring accuracy of +/-0.0001mm

#### Paper Insulated Copper/Aluminium Conductor (PICC)

(Single Double & Triple Bunching Conductor)

■ Specifications :- IEC, IS, DIN, BS

■ Single Line Paper Covering:

■ Minimum Width: 4.00mm

■ Maximum Width: 25.00mm ( Max. 50 mm )

■ Minimum Thickness: 1.00mm

■ Maximum Thickness: 8.00mm

■ Insulating Thickness : 0.3 mm to 6 mm

#### Paper Insulation Options

Kraft Paper, Thermally Upgrade paper ( Green Colour )  
Nomex Paper, Crepe paper.

#### Type of Lapping

Butt lapped, 30-50% overlapped, Interlocked, in various combinations Of paper and tape widths and as per customers Specification.

#### Extrusion Range | TLJ300H Extruder

■ Cross-Section Range: 5 to 150 mm

■ Size Range:

Maximum Width: 30mm

Minimum Thickness: 0.8mm

■ Standard Compliance: IEC 60317-0:2013 6B85584.1

#### Copper Bus Bars (IS 1897:2008)

##### Drawbench: 100T, 6-12 Meter

■ Nominal Drawing Force: 100T

■ Effective drawing length: 10Meter

■ Range:

Width: 30-300mm

Thickness: 03-20mm

#### Extrusion Range | TLJ400H Extruder

■ Cross Section Range: 75 to 2000sqmm

■ Size Range: Maximum Width: 170mm

■ Minimum Thickness: 1mm

■ Standard Compliance: IEC 60317-0:2013 6B85584.1



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WOMEN EMPOWERMENT - "EMPOWERED WOMEN, UNSTOPPABLE FUTURE!"



CELEBRATING WITH DEVOTION AND SEEKING BLESSINGS FOR SUCCESS AND PROSPERITY



CRICKET TOURNAMENT - "TEAM SPIRIT, ONE GAME, ENDLESS PASSION!"

# NJ GROUP COMPANIES

**ATLAS**

ATLAS TRANSFORMER INDIA LTD



**nanocryst**  
transcore pvt. ltd.  
(A Unit of Vilas Transcore Limited)

**ATLAS**

ATLAS COMPOSITES PVT. LTD.



*Vilas Transcore Limited*

*Your Power, Our Component.*

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**Unit 2**  
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Dist.-Vadodara-391243. Gujarat, INDIA.

**Unit 3**  
Block No: 419,420, Ganpatpura Vilage, Karjan  
Dist.-Vadodara-391440, Gujarat, INDIA.