










	Cover Page Page 1
	Product Range Page 2
	Design Automation Page 3
	Core Building Page 4
	Winding Page 5
	Assembly Page 6
	Tanking Page 7
	Automated Testing Page 8
	Production Bay Page 9
	Final Product Page 10
	Manufacturing Plant Page 11
	Contact Address Page 12



ESENNAR®

TRANSFORMERS













An ISO 9001, ISO 14001 & OHSAS 18001
Certified Company

Technically Honest Transformers™



The Best choice and we believe
the Correct choice too...



	Cover Page Page 1
	Product Range Page 2
	Design Automation Page 3
	Core Building Page 4
	Winding Page 5
	Assembly Page 6
	Tanking Page 7
	Automated Testing Page 8
	Production Bay Page 9
	Final Product Page 10
	Manufacturing Plant Page 11
	Contact Address Page 12



ESENNAR[®]

TRANSFORMERS

MILESTONES:













- Founded in 2000 with a manufacturing range from 250KVA, 11kV class to 3000KVA, 11kV class with workforce of 30 people.
- Achieved ISO: 9001 certification in 2002.
- In 2002 manufacturing upgrade to 16MVA, 33kV Class with a workforce of 60 people.
- 2008, plant capacity was further increased to manufacture up to 31500KVA, 132kV class with a workforce of then 150 people.
- Opened regional offices in New Delhi, Mumbai, Bangalore, Coimbatore, Chennai and Raipur between 2012-13.
- Certified for ISO: 14001 in 2014.
- Certified for OHSAS : 18001 in 2014.

*'Quality' is not an obsession But a profession at **ESENNAR***

We do not highlight 'Quality' in our Product Characteristics because it is embedded in our processes.

PRODUCT RANGE

- | | | |
|----------------------------------------|---------------------------------|-------------------------------|
| • Upto 31,500 KVA of 132 kV class | • Furnace Transformers | • Mining Transformers |
| • 250 KVA to 16 MVA in 33 kV class | • Rectifier Transformers | • Earthing Transformers |
| • 250 KVA to 3150 KVA upto 11 kV class | • Package / Compact Substations | • Converter Duty Transformers |
| • Special Purpose Transformers | • Solar Power Transformers | • Dry Type Transformers |

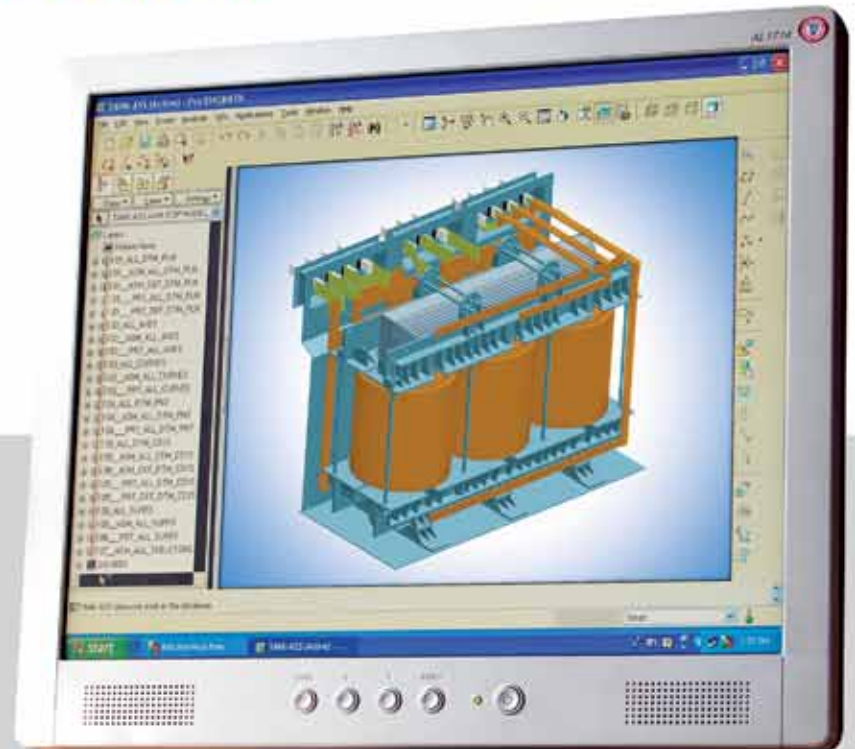
	Cover Page Page 1
	Product Range Page 2
	Design Automation Page 3
	Core Building Page 4
	Winding Page 5
	Assembly Page 6
	Tanking Page 7
	Automated Testing Page 8
	Production Bay Page 9
	Final Product Page 10
	Manufacturing Plant Page 11
	Contact Address Page 12

Design Automation with ERP

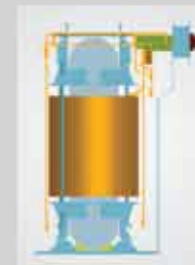
Gives us precise build specifications and guaranteed quality.

It enables testing of the transformers throughout the manufacturing process.

Health and Safety is inbuilt within everything we do.



3D Drawings generated by Software



Pro-e generated 3 Dimensional Drawings

ERP

Simulated Benefits















Given the parameters, how the Transformer looks once the assembly is completed can be simulated.

Any 3D view is possible through the Pro-e Software.

It can be predicted how the machine will behave under electromechanical stresses, under short circuits and overloads.

At every stage, every important activity is viewed through ERP Software – from the raw material to the dispatch of the Transformer to the customer.

Operational continuity and compatibility of processes ensured throughout software simulation.

	Cover Page Page 1
	Product Range Page 2
	Design Automation Page 3
	Core Building Page 4
	Winding Page 5
	Assembly Page 6
	Tanking Page 7
	Automated Testing Page 8
	Production Bay Page 9
	Final Product Page 10
	Manufacturing Plant Page 11
	Contact Address Page 12

Unique methods of manufacturing Transformers

CORE BUILDING

Received core material is tested for magnetic losses to ensure its grade and conformity to every order.

Core loss meter is the simple equipment giving enormous confidence to the manufacturer.

We conduct core loss tests which are comprehensive and after the completed core assembly. The performance can then be predicted as a part of the verification of design calculations.













The core lift table enables us to safely handle the precision core assembly and to avoid injury to workmen. We believe safe handling further enhances quality and process efficiency.



Core Tilting Table



Core Loss Test

	Cover Page Page 1
	Product Range Page 2
	Design Automation Page 3
	Core Building Page 4
	Winding Page 5
	Assembly Page 6
	Tanking Page 7
	Automated Testing Page 8
	Production Bay Page 9
	Final Product Page 10
	Manufacturing Plant Page 11
	Contact Address Page 12

WINDING



Collapsible Former – Helps to shorten the winding process















90° Start Bend Tool - Easier bending operation on conductors eliminating cracked surfaces



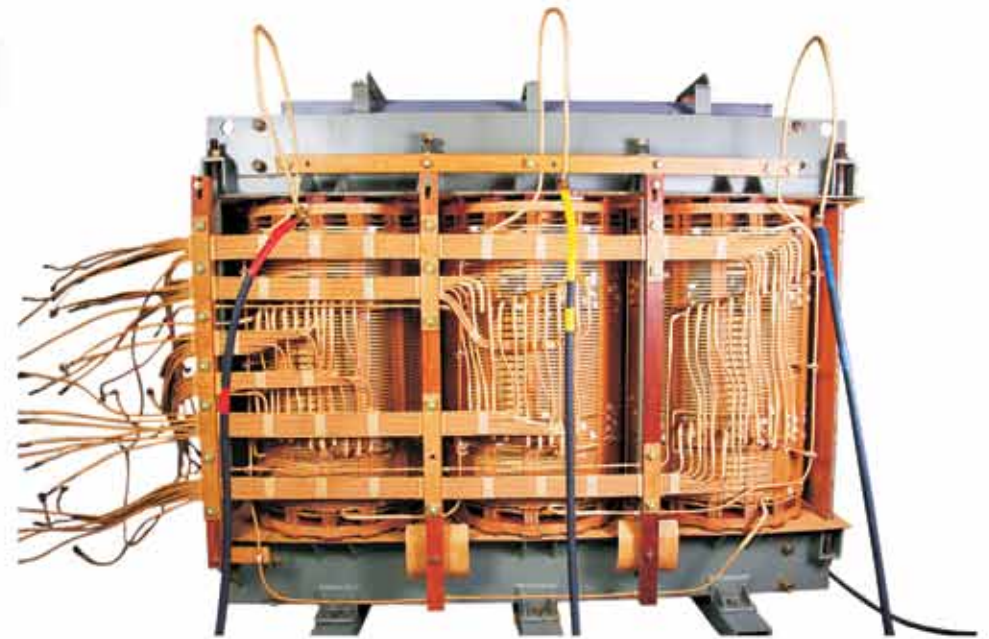
S Bend Tool – Intricate S or Z bends can be achieved easily and smoothly



Insulation Components – Machined components & engineering methodology to improve the reliability leading to higher short circuit withstandability of the transformer.

	Cover Page Page 1
	Product Range Page 2
	Design Automation Page 3
	Core Building Page 4
	Winding Page 5
	Assembly Page 6
	Tanking Page 7
	Automated Testing Page 8
	Production Bay Page 9
	Final Product Page 10
	Manufacturing Plant Page 11
	Contact Address Page 12

ASSEMBLY



Stage wise Load losses and Impedence test before tanking



Coil tightening to the designed pressure with a hydraulic system















Cutting, Bending & Hole Punching Press



Fully Automated Brazing

Pre compression of coils with hydraulic system
– to withstand equivalent electrical short circuit forces.

No _ burrs due to Hydraulic cutting, punching and bending,
No_ undulation ... simple and effective technology
to reduce losses.

	Cover Page Page 1
	Product Range Page 2
	Design Automation Page 3
	Core Building Page 4
	Winding Page 5
	Assembly Page 6
	Tanking Page 7
	Automated Testing Page 8
	Production Bay Page 9
	Final Product Page 10
	Manufacturing Plant Page 11
	Contact Address Page 12



Our soft handling of assemblies whilst tanking enhances the life of the transformer eliminating fouls and injuries.

Tandelta tests give the DNA Print of the transformer's life activity and is a non destructive test. It is indirectly an efficiency test of the entire manufacturing process at **ESENNAR**.



High Vacuum Filtration Machine

TANKING

A Vacuum Oven run with pre-programmed logic control eliminates any moisture present within the insulated coils and assemblies.













While Tanking, Ultra high vacuum filtration supports oil and paper media to reach the correct balanced moisture status uniformly without degradation and detriment. Oil is then filled under-controlled vacuum conditions.



PLC operated Vacuum Oven



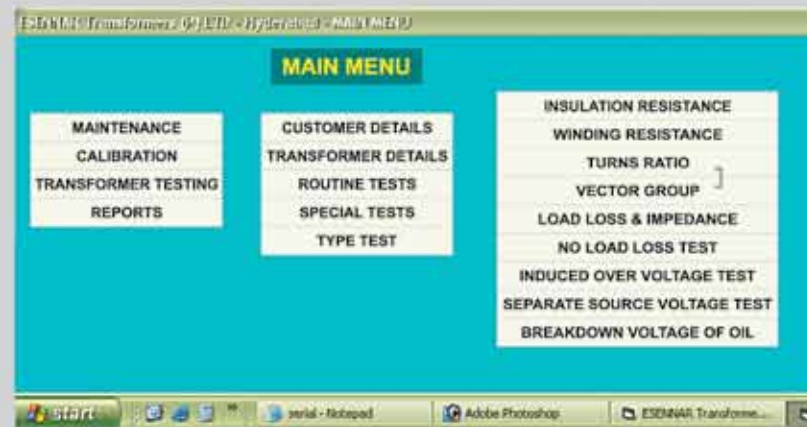
Tandelta Test Under Vacuum

	Cover Page Page 1
	Product Range Page 2
	Design Automation Page 3
	Core Building Page 4
	Winding Page 5
	Assembly Page 6
	Tanking Page 7
	Automated Testing Page 8
	Production Bay Page 9
	Final Product Page 10
	Manufacturing Plant Page 11
	Contact Address Page 12

COMPUTERISED FULLY AUTOMATED TESTING















Accurate computerised test lab for accuracy in results



Automatically Generated Heat Run Test Report

Authentic recording of essential parameters and readings on Internationally validated test equipment in accordance with the World's leading electrical equipment manufacturers.

	Cover Page Page 1
	Product Range Page 2
	Design Automation Page 3
	Core Building Page 4
	Winding Page 5
	Assembly Page 6
	Tanking Page 7
	Automated Testing Page 8
	Production Bay Page 9
	Final Product Page 10
	Manufacturing Plant Page 11
	Contact Address Page 12



Pre delivery painting in process



Our dust free production Bay















Our Safe Storage Area for finished Goods

We welcome visitors to our Head office / plant to witness the processes and tests as described first hand.

We are also able to provide further information to you by visiting you at your convenience and location, or with an online demonstration.

Tell us what you would like, tell us when and where ?

Give the opportunity we will deliver !

	Cover Page Page 1
	Product Range Page 2
	Design Automation Page 3
	Core Building Page 4
	Winding Page 5
	Assembly Page 6
	Tanking Page 7
	Automated Testing Page 8
	Production Bay Page 9
	Final Product Page 10
	Manufacturing Plant Page 11
	Contact Address Page 12

FINAL PRODUCT



OFF CIRCUIT



ONLOAD



PACKAGE / COMPACT SUBSTATION



Cover Page
Page 1



Product Range
Page 2



Design Automation
Page 3



Core Building
Page 4



Winding
Page 5



Assembly
Page 6



Tanking
Page 7



Automated Testing
Page 8



Production Bay
Page 9



Final Product
Page 10















Manufacturing Plant
Page 11



Contact Address
Page 12

Partial views of our manufacturing plant



	Cover Page Page 1
	Product Range Page 2
	Design Automation Page 3
	Core Building Page 4
	Winding Page 5
	Assembly Page 6
	Tanking Page 7
	Automated Testing Page 8
	Production Bay Page 9
	Final Product Page 10
	Manufacturing Plant Page 11
	Contact Address Page 12



ALL INDIA NETWORK

HYDERABAD	098488 66344	ap@esennar.com
COIMBATORE	090031 90009	coimbatore@esennar.com
MUMBAI	072087 09194	mumbai@esennar.com
RAIPUR	077479 96568	raipur@esennar.com
CHENNAI	086080 00796	chennai@esennar.com
BANGALORE	099645 48400	bangalore@esennar.com
DELHI	085100 99494	delhi@esennar.com
EXPORTS	099123 47103	vp.exports@esennar.com

INTERNATIONAL

UK	+44 7710 133406	uk@esennar.com
SAUDI ARABIA	+966 504240408	saudi@esennar.com

Esennar Transformers Pvt. Ltd.

Office : Plot No.12, Flat No.4, Aravinda Apartments,
Sunder Nagar, Erragadda, Hyderabad - 500 038.

Ph: 040 - 23810926

E-mail: marketing@esennar.com

Works : IDA, Phase-1, Pashamallaram, Near Patancheru,
Medak (Dist) - 502 307.

Ph: 08455 - 224203/04/05/06, Fax: 08455 - 224173

www.esennar.com



National Award
for Outstanding Entrepreneurship
from the Government of INDIA



ESENNAR[®]
TRANSFORMERS

An ISO 9001, ISO 14001 & OHSAS 18001
Certified Company

Technically Honest Transformers™