





























Nakoda is a INR 100Crore turnover group with it's varid interes in electrical transformers, transformers tank, solar module mounting structure, medium-heavy engineering works, PEB with specialisation in C-Z Purlin & Ded Plates & Sub Station Structure.

Nakoda Products has been in the business of manufacturing Power and Distribution transformers in Vadodara, Gujarat, India since 2004. An ISO 9001:2008 company today, Nakoda as it is more popularly known, is proud to have executed a number of prestigious orders.

## The Promoter

The Man behind the organization, the founder Partner of the Company Shri. Govindraj S. Mehta .In 1988 he started steel business M/s. Nakoda Steel as a supplier of Mild Steel and Stainless Steel. Through perseverance and dedication, he envisaged Nakoda Products in 2004 for manufacturing of Power and Distribution Transformers and Sub Station structures.



G. S. Mehta

# Quality Control

Nakoda Products is an ISO 9001:2008, ISO 14001:2015, ISO 18001:2007 certified company. We provide transformers of highly reliability through a process of continual improvement and there by benefiting the society.

Our transformers are designed by a design team headed by prominent and experienced design engineer with experience of more than 20 years in design, manufacturing and testing of transformers are deigned to with stand short circuit & Impluse test in accordance to IEC (International Electro Technical Commission), ANSI (American National Standard Institution), BS (British Standards), IS (Indian Standards)

Nakoda Products total quality program is based on the philosophy of prevention and not just on the detection and correction of problems after occur.

## VISION



"We strive to be a chosen company by our Stakeholders as The manufacturer of Energy Efficient, Superior Quality & Cost Competitive Transformers ...ALWAYS"

We shall attain to be one of the best Transformer manufacturing company through

- Continuous Innovation
- Customer Centric Policies
- Employee Skill Development
- Investment in top –level resources
- Utilise our capability, expertise and experience



## SINGLE PHASE DISTRIBUTION TRANSFORMERS

At Nakoda we manufacture - From 5 KVA to 25 KVA aluminum and copper wound. (Energy Efficient transformers from 1 Star to 5 Star, BIS Level 1,2 & 3)

Single-phase distribution transformers are widely used by utilities to provide 24hour electricity supply in rural areas.

Modern manufacturing techniques ensuring quality of product

Robust build designed to withstand electric impulses, thermal and dynamic stress

Designs through Computer Aided Design (CAD) Software System

Trouble free performance

Customized design and specification demand



#### **Standard Fittings**

- Pole Mounting Brackets
  Lifting Lugs
  Pressure Relief Device / Self Venting Top Cover
- Tank Grounding Provision Rating and Diagram Plate Primary Bushings
- Secondary Bushings Oil Level Gauge Bird Guard

#### **Optional Fittings**

- Lightning Arrester / Arcing Horns High Voltage Neutral Bushing
- Tap changer for external operation Cable Terminations HV Fuse
- Complete Self Protection feature Internal Circuit Breaker/External MCCB

#### Maximum Total Losses in (watts) Upto 11 KV Class, I Phase Transformers

Sr. No.	Rating in KVA	Impedance In Percentage	Energy Efficiency Level I		Energy Efficiency Level 2		Energy Efficiency Level 3	
			50 %	100 %	50 %	100 %	50 %	100 %
ı	5	2.5	40	115	35	95	30	75
2	10	4.0	70	190	60	170	55	150
3	16	4.0	95	265	82	224	63	190
4	25	4.0	125	340	110	300	95	260

\*We also manufacture Transformers of 22kv & 33kv Class, Oil Cooled, Alu. & Cu. Wound

## THREE PHASE DISTRIBUTION TRANSFORMERS

Nakoda make three phase distribution transformers are available in stack core / wound core up to 2500kVA. (Energy Efficient transformers from 1 Star to 5 Star up to 200 KVA, BIS Level 1,2&3). They are made available in aluminium / copper as per requirement. On demand higher rating can also be offered. We manufacture Three Phase distribution transformers up to 2500 kva, 1 lkv, 22kv & 33 kv class. Our transformers have following features.

Highest purity of aluminum/copper winding material

Entire range 10KVA to 2500 KVA

**ERDA** tested for star ratings

Vendor approval from SEB's

Conformity with ISI180 specifications

More than 50000 transformers working successfully in field.

Entire range of distribution transformers is produced by us .Wide range of such transformers are accommodated as different SEB's have varied technical specifications. Self protected transformers with Lightning arrestors, MCBs / MCCBs in load side, internal tripping device etc can be used for the same.



#### **Standard Fittings**

- Tanks Base Channels / With Rollers
  Lifting Lugs
  Drain Valve
  LV Cable Box / Bus Duct
- Tank grounding Provision
  Rating and Diagram Plate
  Silica-gel Breather
  Filter Valve
- Conservator
  Primary Bushings
  Arcing Horns (As Applicable)
  Secondary Bushings
- Marshalling Box (As Applicable) Oil Level Indicator Arcing Horns
- Off Circuit Tap Changer/ On Load Tap Changer/ with Remote Type Changing Control & Automatic Voltage Regulator

#### **Optional Fittings**

- HV cable box
  Oil Temperature Indicator (with Alarm and Trip contacts)
- Winding Temperature Indicator (with Alarm and Trip contacts)
- Buchholz Relay (for ratings above 1000 KVA) (with Alarm and Trip contacts)
- Magnetic Oil Level Gauge (with Alarm contacts) Neutral CT
- Pressure Relief Device / Explosion Vent (with Alarm contacts)

#### Maximum Total Losses in (watts) Upto 11 KV Class, 3 Phase Transformers

Sr. No.	Rating in KVA	Impedance In Percentage	Energy Efficiency Level I		Energy Efficiency Level 2		Energy Efficiency Level 3	
			50 %	100 %	50 %	100 %	50 %	100 %
121								
	16	4.5	150	480	135	440	120	400
2	25	4.5	210	695	190	635	175	595
3	63	4.5	380	1250	340	1140	300	1050
4	100	4.5	520	1800	475	1650	435	1500
5	160	4.5	770	2200	670	1950	570	1700
6	200	4.5	890	2700	780	2300	670	2100
7	250	4.5	1050	3150	980	2930	920	2700
8	315	4.5	1100	3275	1025	3100	955	2750
9	400	4.5	1300	3875	1225	3450	1150	3330
10	500	4.5	1600	4750	1510	4300	1430	4100
11	630	4.5	2000	5855	1860	5300	1745	4850
12	1000	5.0	3000	9000	2790	7700	2620	7000
13	1250	5.0	3600	10750	3300	9200	3220	8400
14	1600	6.25	4500	13500	4200	11800	3970	11300
15	2000	6.25	5400	17000	5050	15000	4790	14100
16	2500	6.25	6500	20000	6150	18500	5900	17500



#### Works

1102/1103 G.I.D.C Waghodia Dist. Vadodara Gujarat (India) Ph : 91-2668-263686, 91-9925043847

Web: www.nakodaproducts.com

#### Office



At NAKODA we manufacture Three Phase Power Transformers Stack Core Type – Copper wound, outdoor/ indoor type, Step Down/ Step Up, Completely Self Protected – LV & HV transformers, connection options of Delta & Star Type as per Vector group ref. Dyn I I with rating range of 1000 kVA to 10000 kVA. Nakoda make power transformers have been installed at coal fields, power projects, housing projects, national level business houses, and individual manufacturing units.

Ratings	Three Phase CRGO - Upto 10000 kVa	
Applicable Standards	IS, IEC, ANSI, JIS, DIN, BS Etc.	
Cooling	ONAN, ONAF	
Insulating Fluid	Mineral Oil to specification	
Frequency	50 Hz, 60 Hz	
Primary voltage	Upto 33000 V	
Secondary Voltage	22000, I 1000, 6600, 3300 V (Other Voltages as required)	
Winding material	Copper	
Taping range	Off circuit and On load tap changers as per customer specification	

#### Maximum Total Losses In (kilo Watts) of 3 Phase Power Transformers

Sr. No.	Rating In MVA	Impedance in Percentage	No Load Losses	Load Losses
1	3.15	6.25	3	16
2	5	7.15	4	23
3	8	8.35	6.1	44
4	10	8.35	8.5	54

#### **Standard Fittings**

- Lifting Lugs
  Skid Base / Roller Arrangement
  Rating and Diagram Plate
  Earthing Terminals
  Primary
  Bushings
  Secondary Bushings
  Conservator
  Oil level Guage
  Silica gel Breather
  Drain / Filter Valves
- Thermometer Pockets Marshalling Box Inspection Cover Terminal Connectors Buchholz Relay

#### **Optional Fittings**

• Magnetic Oil Level Guage • Winding Temperature Indicator • Buchholz Relay • Pressure Relief Device / Explosion vent • Off circuit Tap Switch / On load Tap Changer with RTCC & AVR • Siphon Thermo Filter



We have complete range of LT distribution boxes to cater the needs of electrical power distribution. We manufacture and export a wide assortment of LT Distribution Box for 63Kva/100Kva/200Kva transformers. The offered product is used in overhead transmission line with transformers for controlling flow of electricity and is also used for monitoring of the variations in voltages. The offered box is manufactured by our skilled professionals using supreme grade components and latest technology. Offered LT Distribution Box undergoes rigorous tests in ahead of dispatching the delivery from our end to ensure its flawlessness.

Moreover, we also manufacture Electrical Control Panels which are used in various industrial application Our panels are supplied to the requirements of various industries across the globe. The organization has gained huge appreciation in the industry because we have an impeccable infrastructure with a mixture of appropriate manpower and latest machines. Quality checks on different parameters are carried out by our experienced staff and match the international standards. Use of high quality raw material is the mainstay of our organization.

The main features of these Electrical and Distribution products are...

Durability	
Reliability	
High performance	
Compact designs	
Corrosion resistance	
Cost- effectiveness	











#### Works

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E-mail: info@nakodaproducts.com



# STRUCTURALS



#### I Ikv and 33 KV Cross Arms

In line with clients' variegated requirements, we bring forth a distinguished collection of Fabricated SteelStructural Steel Items like V Cross Arm, Top Hamper, Back Clamps, Guarding Channel Cross Arm, LT Cross Arm, HT Cross Arm, DO Fuse Mounting Channel, HG Fuse Mounting Channel, Belting Angle, Bracing Angle, Transformer Mounting Structure etc. All structures are manufactured at our avant-garde manufacturing unit using the superb quality raw materials and progressive technology in conformance with defined quality norms. Being a quality-oriented firm, we assure our clients that this hardware is exceptional on counts of durability and quality.

Features: • As per Indian Standard (IS:2062 or relevant)

Sturdy structure

Durability

Fine Finish



#### 'C' Clamp

By utilizing skills of our adroit workforce, we are offering a comprehensive assortment of Back Clamp. We manufacture this clamp by employing best quality raw materials and sophisticated technology in adherence to the set industrial quality standards. It is used for the purpose of fastening and fitting of pipes in several industrial utilities. Owing to features like high strength and best quality, our offered range clamp has been able to earn a lot of popularity in the market.

Features: • Sturdiness • Easy installation • Rust proof



#### **Double Pole Transformer M.S. Structure**

Based on the skills of our adroit professionals and creative workers, we bring forth an extensive range of Double Pole Transformer Structure (DP Structure). Owing to features like durability and high quality, the offered structure is widely demanded in the market. A team of our skilful professionals, with hard-earned knowledge manufacture the offered structure using high grade raw materials. The offered structure is available with us in different sizes, shapes and other related specifications.

Features: • Precisely design • Durability • Anti corrosive



#### **Earthing Pipe**

Being a client-centric organization, we are engaged in offering a distinct collection of Earthing Pipe. Our deft professionals manufacture this pipe using well-tested raw material and advanced technology. In addition to this, our offered pipe is meticulously tested by our quality controllers against various parameters in order to deliver a flaw-free range at clients end. Moreover, the offered pipe is widely appreciated by our clients for featuring variegated attributes like easy installation and

Features: • Sturdiness • Corrosion-resistance • Enhanced durability



#### **Gi Earthing Flat**

Under the strict supervision of our experienced professionals, we are offering an innovative collection of GI Earthing Flat. Our offered flat is availed in a variety of sizes and other such specifications to choose from. The offered flat is precisely designed at our highly developed manufacturing unit following industry defined guidelines. The offered flat can also be availed from us at the industry leading prices.

Features: • Sturdiness • Durability • Compact design



#### **Hot Dip Galvanised Steel Strucutres**

We feel immensely pleased to offer an exclusive gamut ofHot Dip Galvanized Fabricated Steel Structures for Electrical. Our offered components are manufactured by utilizing finest quality raw materials and highly developed technology by our deft professionals. In order to ensure quality, these components are meticulously tested on different parameters. In tune with international quality standard, we provide the entire range of components in different sizes, shapes and thickness as per the ever-evolving need of our clients.

**Features:** • As per relevant specifications and approved drawings.

- As per relevant Indian Standards (IS:)
- Can accommodate huge number branch lines

Used For: Installation of small and controlled cables

- Durable
- Rugged construction
- High load bearing capacity



#### **General Structural**

We have the latest german technology machinery for manufacturing C-Z purlin. We have postpunching operation installed in the machine for faster production speed.

With monthly production capacity of more than 1000 metric tons, we are one of the biggest names in C-Z purlin manufacturers in gujarat.

We also manufacturing and supply mild steel hot dip galvanised structural and all kind of customized fabrication works.



#### Works

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#### Office



# ONE STOP SOLUTION FOR ALL YOUR TRANSFORMERS REQUIREMENTS

With the support of our highly sophisticated infrastructure facility, we the Nakoda Products have been able to cater to various requirements of our clients pertaining to Power & Distribution Transformers accessories. These products are available in various standards specifications that can also be customized to suit the specific requirements of the clients.

Presenting our wide range of Accessories for Power & Distribution Transformers including CGRO cut core lamination, Core-Coil assembly, Insulation Papers, Transformer Brass Metal Parts, Transformer Tanks, HV & LV Bushings, Cork-Gasket Components, Hardware and fasteners, Pressure Relief Valves, Radiator Valves, Magnetic Oil Level Gauges, Prismatic Oil level Gauges, Silica Gel Breathers, Buchholz Relays, etc...

We can supply above accessories as per required standards and approved manufacturers. We have tie ups with the manufactures where you can get the best quality with manufacturers price.





#### Works

I I 102/I I 103 G.I.D.C Waghodia Dist. Vadodara Gujarat (India)

Ph: 91-2668-263686, 91-9925043847 Web: www.nakodaproducts.com

#### Office



A dedicated division with specialized team of engineers and workmen handle our TRAFO REPAIRS & SERVICES. We are at the forefront for providing Power Distribution Transformer Repairing Services in India. We are backed by team of proficient employees and engineers, who possesses vast knowledge of Repairing Transformers. We are in association with many reputed companies, who avail our world class Power Distribution Transformer Repairing Services.

We undertake site overhauling / servicing work for any type and make of Transformers up to and including 100MVA, 220KV Class. Overhauling is a scheduled preventive maintenance activity mentioned in IS 10028. Overhauling involves inspection of its parts and accessories, oil level, testing and monitoring of electrical characteristic of transformers and its parts and accessories. Depending on the reports of inspection and tests conducted necessary servicing, rectification, replacement activities are carried out. It reduces chances of breakdown and enhances life of transformers. We have adequate team of site engineers, supervisors, and skilled labors for providing site services all over India.

#### **Special on-site Tests**

DGA & PPM Tests pre and post filtration of oil.

Tan Delta & capacitance Test for condenser bushings.

Tan delta & capacitance Test for windings.

Degree of Polymerization Test for winding lead insulation.

Furan Series test or PIBP (Paper insulation breakdown products) test.

#### **Trafo Repairs & Services Technical Specification**

Ĭ	Ratings	UPTO 100 MVA		
2	Voltage Class	UPTO 220 Kv		
3	No of Phases	UPTO 3 Phase		
4	Frequency	50/60 Hz		
5	Applicable Standards	IS 2026, IEC 76, ANSI, IEEE		
6	Tap Changer	OCTC, OLTC, as per customer requirement		



#### Works

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E-mail: info@nakodaproducts.com



#### Why Us

Nakoda Solar is a part of an ISO 9001 & ISO 14001 certified company with a vast experience of over 12 years in the field of energy products and services.

WE PROVIDE efficient rooftop solar solutions that are easy to install, operate and offer cost effective access to solar energy.

#### **Own Your Solar System**

Nakoda Solar is a part of an ISO 9001 & ISO 14001 certified company with a vast experience of over 12 years in the field of energy products and services.

WE PROVIDE efficient rooftop solar solutions that are easy to install, operate and offer cost effective access to solar energy.



No electricity price hikes



Sell extra power to govt. (Through net metering)



One time investment



Avail accelerated depreciation and tax benefits



Get free power for lifetime



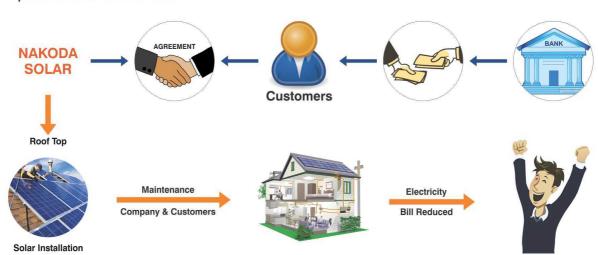
Start generation in just two weeks from order



Maintenance by trained professional at low cost



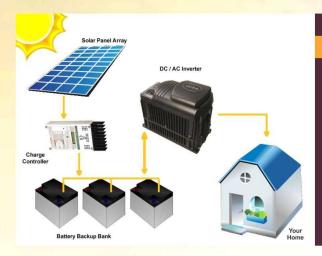
Increases monthly money savings



#### **Grid - Tie Systems Without Battery Backup**

- Suitable for areas with power cuts of less than
  2 hour
- Operates as long as GRID available
- Transfer excess energy to grid & earns money
- Reduces your electricity bill.
- Save more money with NET METERING



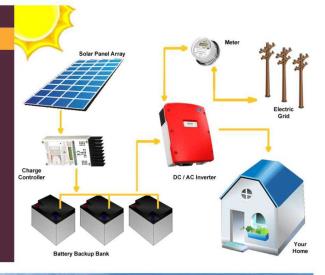


#### Off-Grid Systems / Solar Energy Storage Systems

- Suitable for places where there is NO GRID is highly unstable.
- Battery supported systems with charge controller to charge batteries
- Offsets your energy demands
- Power your home at night
- Reduced dependency on **DG** sets

#### **Hybrid System**

- Suitable for areas with power cuts of more than 2 hours.
- Combines the best of GRID TIED AND OFF GRID PV SYSTEMS.
- Continuous supply of electricity.
- Operates like grid connected system with energy storage capabilities.
- Best described as "OFF GRID SYSTEM WITH GRID BACKUP" OR GRID TIED SYSTEM WITH BATTERY STORAGE.







#### Works

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#### Office





Distribution Transformers



Power Transformers



Solar System Integrators & Developers



Structural Steel Items



Distribution Box & Pannels



Transformer Accessories



Trafo Repairs & Service

### SECTIONAL VIEW OF TRANSFORMER

- I. Core
- 5. WTI/OTI
- 9. Porcelain Bushing

- 2. Corrugated Panel
- 6. Silicagel Breather
- 10. Base Channel

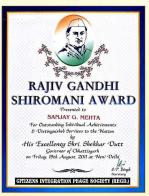
- 3. M. S. Tank
- 7. H.T. & L.T. Coils
- 11. Oil Drain Valve

- 4. Tapping Switch
- Switch 8. Conservator Drum

















#### Works

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