

Where customers are our partners.....

Manufacturer & Exporter :

### **Guru Teg Bahadur Metal Works**

Regd. Office: 1621, Street No.: 4, Kwality Road, Ludhiana - 141003

Works : Gurudwara Somasar Road, Rural Focal Point, Village : Tibba, Sahnewal Dehlon Road, Distt Ludhiana : 141120 (Punjab)

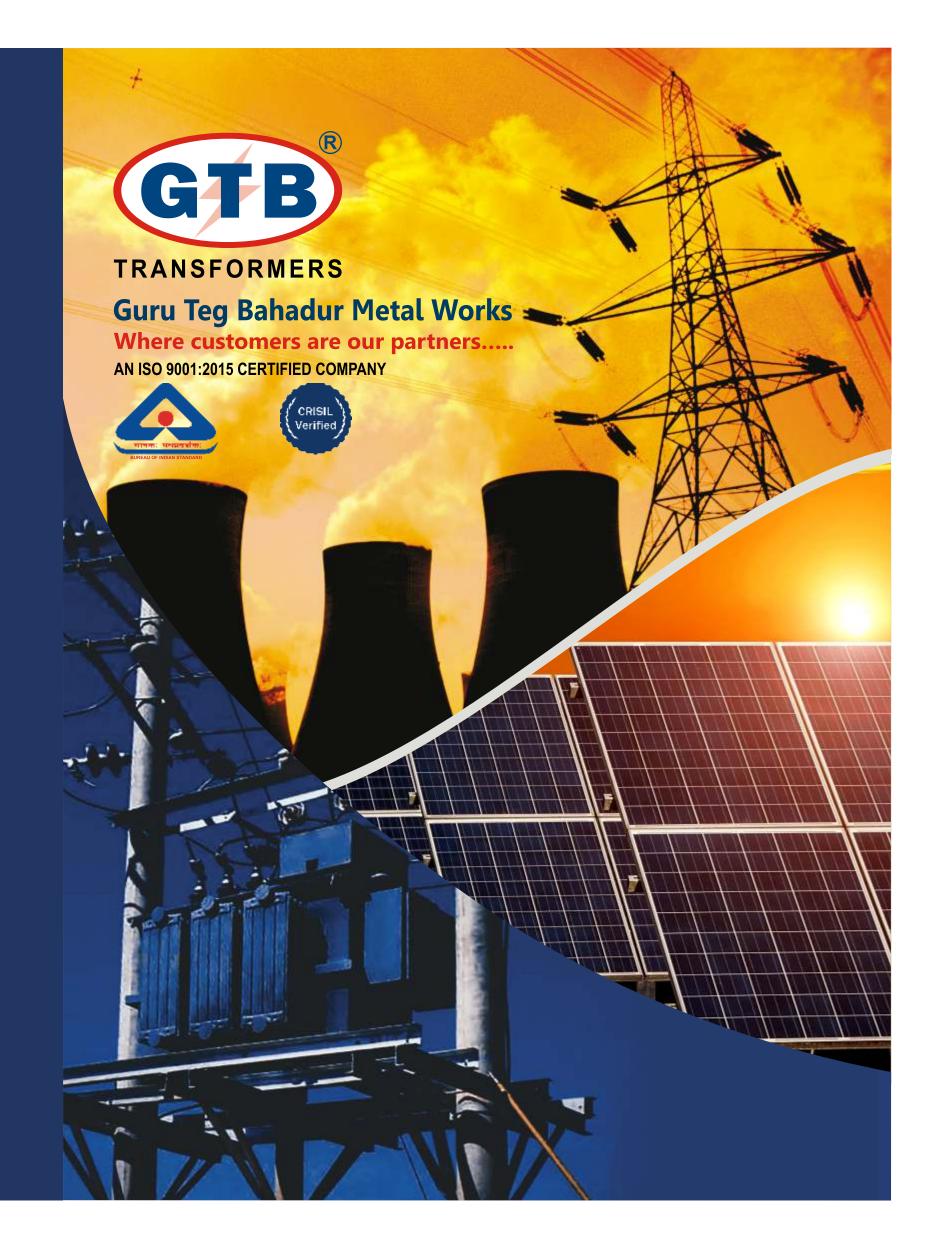
Mobile: +91 - 99141-92600

Email: office@gtbtransformers.com

Website: www.gtbtransformers.com

### **Branch Offices:**

Agra, Aurangabad, Burdwan, Delhi, Faridabad, Haridwar, Indore, Lucknow, Ranchi, Varanasi, Yamuna Nagar





### **About Us**

GTB Group has been providing solutions for energy management for the last 25 years & professionally managed by professionals and technocrats with more than 30 years of experience. We are an ISO 9001:2015 certified company & are based at Ludhiana (Punjab) under brand name of "GTB".

GTB Group was founded in the year 1992 by Mr. Harjot Singh as Guru Teg Bahadur Metal Works which focused primarily on manufacturing high quality copper and aluminium conductors used in Electric Distribution/Power Transformers, Welding Machines, Servo Voltage Stabilizers. By keeping very high standards of quality GTB got the attention and recognition of the state electricity boards. Soon it was the time for diversifying the establishment and that led to the association of Mr. Harjot Singh with Mr. Pradeep Sharma and Mr. Munish Gupta. The year 2000 was the one when the relatively young establishment became a partnership firm concerned with manufacturing of High Quality Distribution transformers. Opening up new markets and growing at a fair pace in the process. But the growth was by no means linear. Time and again, GTB had to get through difficult periods and adapt its strategies to new market realities. In GTB All the major components and raw materials are procured as per IS standard and from standard reputed sources like copper from Hindalco, Core (CRGO) imported from Japan, Transformer oil from Apar/Savita from Silvasa, Steel from SAIL/TATA.



### **Our Vision**

"We work to become a collaborative partner to our customers in their journey of growth through our values of integrity and continuous innovation."

> All the in house arrangements are available, right from Copper, Aluminum wire & strip drawing, annealing & insulation, core cutting, tank fabrication etc. A separate quality control department is always having a check on these parameters to ensure proper quality of the products manufactured by us. The Design and testing facilities available, are at par with best available in the industry to perform all routine test, strictly as per IS:2026 /IS:1180 and with calibrated meters before. we have complete testing lab for transformer oil also. Today GTB is one of the leading manufacturers of Distribution transformers from 10 KVA to 5000 KVA up to 33 KV Class, having different voltage ratios. The transformers are type tested for impulse test and short circuit test from Govt. approved testing houses like NTH Ghaziabad, CPRI Bhopal, & ERDA Vadodara. GTB is approved vendor of Department of Atomic Energy. (DAE) & TATA Projects Ltd. for supply of Transformers. We are also registered under the quality making scheme of Punjab Government. We are regular supplier to PSPCL (Punjab State Power Corporation Ltd).

> Being an engineering company that to driven by its customers- where customers are not only the responsibility of a single sales department but company-wide undertaking that drives the company's vision, mission and strategic planning. Success depends when we work towards the customer goal- when finance furnishes right amount of funding, purchasing buys the right materials, production makes the right product in the right time horizon, and a constant R&D is done to make the product better and better.

> > Such interdepartmental harmony can only build not customers but partners.

In GTB we build relations -Where customers are our partners.....

### **About Partners**



Harjot Singh Managing Partner

Mr. Harjot Singh started the establishment in 1992. He graduated from college of agriculture engineering PAU where he did his engineering in the year 1985. Being a visionary he started an establishment from scratch which has now become reliable

transformer manufacturing industry in India. With great ideas and innovative management concept he build the company which has achieved great heights and is one of the most recognised brands in electrical engineering industry in India. Mr. Harjot Singh emphasized on core values of business such as credibility and good relationship with customers be it vendors/ suppliers. Started out as Guru Teg Bahadur Metal Works organizations which was initially

Mr. Singh build the firm having an initial sale turnover of Rs At the moment, with the commendable experience of 33 15 lakh to a Group now having Sale turnover of Rs 30 crore and above.

Mr. Singh always laid stress on creating and becoming a customer focused and customer oriented company. Having a well and clearly defined Quality Policy and Quality Objective.



### **Our Values**

- Candidness
- Oneness (Humility/Unity)
- Partnership

(Value creation across entire distribution channel)

Integrity



Pradeep Sharma Partner Technical

Mr. Pradeep Sharma is working as a prestigious asset with Guru Teg Bahadur Metal Works. He grabbed his education from Polytechnical, Chandigarh. At a very young age of just 19, he started out with his career. Later on, in 2001, In order to direct his experience and passion in the right direction, he joined hands with GTB metal works with an optimistic vision and mind set to take the company to the next level with confidence in his potential, and visionary streak. Take a look at the company's previous records and you will come to know that he has always laid stress on the quality, efficiency and effectiveness, yet not compromising with the environment. His commitment to work with passion, making involved in manufacturing of DPC/TPC AL/CU wires and him something with great force which drives him to innovate in terms of new technology.

> years, he is someone the customers and company can rely upon. His first priority has always been and always will be the customer satisfaction.



Leadership (Ownership & Accountability)

- Up-gradation
- Relationship & Networking
- Adaptability



### **Management**



### "Management Team, Then, Now and where we Aspire to be..."

GTB Group has so far got itself vendor approved from various state electric utilities, PSUs and has successfully supplied Transformers to PSPCL, J&K PDD, OPTCL, JBBNL, RDSO, NHPC, IOCL to name a few. Apart from this we have supplied transformers to reputed corporate/turnkey project clients such as KEI, ITC, Schneider, Mankind, Dawat Rice and many more. Together GTB group has a satisfactory client base of 2000+no. across India and around the Globe.

GTB Group has also ventured into EPC business where the main focus is on installation and commissioning of industrial scale solar projects. Thereby achieving a Holistic Position as far as the Energy/Power sector is concerned.

GTB's vision is to become a growth partner to it's clients by helping them with their power and energy demands and hence live by the motto "Where Customers are our Partners".





# **Certifications and Test Certificates**





ISO 9001:2015 CERTIFICATION

CRISIL RATING CERTIFICATION

### **ERDA / ERTO TEST REPORTS**









16 KVA - EEL2

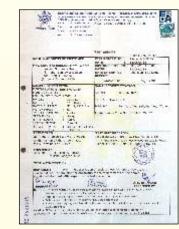
100 KVA - EEL2

250 KVA - EEL2









315 KVA - EEL2

400 KVA - EEL2

500 KVA - EEL2

1000 KVA - EEL2



### **Testimonials**



ACME FORMULATION PVT. LTD.



ALLIED LEATHERS FINISHERS PVT. LTD.



BRIJAX ENGINEERING PVT. LTD.



ANURAG MATRA SADAN AND INFERTILITY CLINIC

2000



ZOETIS ENGINEERING



SCHNIEDER ELECTRIC INDIA



CHOUBAY & CHOUBAY PVT. LTD



SUNRISE THEROWARE PVT. LTD



PUNJAB STATE POWER



MAHINDRA HOLIDAYS &



ESSEL MINING & INDUSTRIES LTD.



RUNGTA MINES LTD.

THE PUBLISH LIGHT WOYDS

PUNJAB DAIRY UDYOG

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JANTA LAND PROMOTERS PVT. LTD



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SWASTIK CITY PLANNER



NHPC LIMITED

A Company of the Comp



RESORTS INDIA LIMITED

200 -20 - 10 200 - 10





Trough Street -

JAI PRAKSH MUKUND LAL INNOVATIVE

ENGINEERING & TECHNOLOGY INSTITUTE

F 44. PARABOLIC DRUGS LIMITED and many more ....





V GUARD INDUSTRIES LTD



NHPC LIMITED

JAYCO RUBBER PVT. LTD



MEDITECH GASES PVT. LTD



MAYA INSTITUTE OF



# **Prestigious Clients**

















































































## **Manufacturing Facilities**



Core Slitting



Winding



Baking



Final Assembling



Core Assemblina



Assembling



Tanks up



### **Distribution Transformers**

The transformer are manufactured in accordance with IS 1180/2014, IS 2026/1977, IEC 60076 or as per customer's custom requirement. Unless or otherwise specified the transformers will be connected as per Vector Group reference DYn 11 in accordance with International practice. The core used is best quality cold rolled gain oriented and laser processed silicon steel sheet. They provide low iron loss, low noise, compact size and have the best performance for high efficiency transformers. We use high quality conductor of copper/aluminium in our products. Round or rectangular copper/aluminium wires/strips ribbed with thermally upgraded insulating

paper are applied in oil immersed transformers. The winding have a compact size, excellent heat transmission, low load loss, high lighting impulse resistivity and outstanding anti-short-circuit strength.

#### **RANGE OF TRANSFORMER**

5 KVA – 5000 KVA (6.6 KV , 11 KV , 22 KV, 33 KV)

#### **VECTOR GROUP**

Unless or otherwise specified, the transformers will be connected as per Vector Group reference DYn 11 in accordance with International practice.

#### CORE

The core used is best quality cold rolled grain oriented and laser processed silicon steel sheet. They provide low iron loss, low noise, and compact size and have the best performance for high efficiency transformers.

#### /INDINGS

We use high quality conductor of copper aluminium in our products. Round or rectangular copper/aluminium wires ribbed with thermally upgraded

insulting paper are applied in oil immersed transformers. The winding have a compact size, excellent heat transmission, low load loss, high lighting impulse resistivity and outstanding anti-short- circuit strength.

#### INSULATION

Our oil-immersed transformers are insulated by electrical grade insulated press board and thermally upgrade insulating Kraft paper.

#### TAPPINGS

Tapings + 5% to -15% in steps of 1.25% or as per customer's requirement.

#### OIL

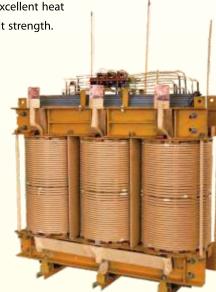
Dehydrated EHV-Grade transformers oil as per IS 355 (1993) with latest amendments is used for proper insulation and cooling after testing for all the parameters viz a viz resistivity, tan delta, BDV, neutralization, flash point etc.

#### BUSHINGS

HV/LV Bushings: The quality porcelain bushings are used on the high voltage terminals/low voltage terminals. Optional bushing wells, inserts

and elbows are available upon request.

High voltage cables are inserted directly and show no live parts outside.



500 KVA Distribution Transformer

11/0433 Ky Class

Inner View of Distribution Transformer



#### ACCESSORIES

The accessories include an oil filling hole, oil drain valve, safety valve, standard thermometer, oil level gauge, skid wheel, jacking pad, breather, earthling terminal.

#### OPTIONAL ACCESSORIES

Buchholz relay, cooling fan, HV & LV cable box, cable duct, bus bar duct, dial-type thermometer, oil level gauge, on-load type tap changer, protective fuse and lightening arresters are available upon customer's request at extra cost.



## **Distribution Transformers with OLTC**

On load tap changer (OLTC) is used with higher capacity transformers where HT side voltage variation is frequent and a nearly constant LT voltage is required. OLTC is coupled with the transformer itself. Multiple tapings from HV windings are brought to the OLTC chamber and connected to fixed contacts. Moving contacts rotates with the help of rotating mechanism usually a Geneva mechanism having a spindle. The spindle can be rotated manually as well as electrically with a motor. Motor is connected in such a way that it can rotate in both the directions such as to rotate the OLTC moving contacts clockwise and anti clockwise. Two push buttons are fitted on the LCP (lowcontrol panel) to rotate the motor and hence the OLTC contacts. This movement of contacts thus controls the output LV voltage of the transformer. So rotating of the OLTC contacts with spindle or push button in this way is manual process. In case this process of rotating the OLTC contacts and hence controlling the LV side voltage is to be done automatically then a RTCC (remote tap changer controller) is installed with the transformer ht panel. The RTCC panel which has sensors which

sense the output voltage and accordingly sends signal to LCP and LCP in turns rotates the motor as per signal received from the RTCC.

GTB

3200 KVA Distribution Transformer with OLTC





250 KVA Distribution Transformer with OLTC



- OLTC Transformers are used in :-
- 1.) Chemical plant, Bottling plant.
- 2.) Paper mills, Sugar mills,
- Rolling mills, Steel mills.
- 3.) Industries which rely heavily on automation, where electronic cards, PLC and VFDs are used in operations and actuation.



## **Distribution Transformers**

### **Specification for Transformers:**

		I																				
SL. NO.	Technical Specification	100 KVA			160 KVA			200 KVA			250 KVA			315 KVA			400 KVA			500 KVA		
		Level 1	Level 2	Level 3	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
1.	Rated Input	11000V																				
2.	Rated Output	433 V																				
3.	Frequency	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
4.	Input Configuration	Delta																				
5.	Output Configuration	Star																				
6.	Vector Group	Dyn 11																				
7.	Current LV (amp)	133.3	133.3	133.3	213.3	213.3	213.3	266.7	266.7	266.7	333.3	333.3	333.3	420.0	420.0	420.0	533.3	533.3	533.3	666.7	666.7	666.7
8.	Current HV (amp)	5.25	5.25	5.25	8.40	8.40	8.40	10.50	10.50	10.50	13.12	13.12	13.12	16.53	16.53	16.53	20.99	20.99	20.99	26.24	26.24	26.24
9.	Losses at 50% Load (w)	520	475	435	770	670	570	890	780	670	1050	980	920	1100	1025	955	1300	1225	1150	1600	1510	1430
10.	Losses at 100% Load (w)	1800	1650	1500	2200	1950	1700	2700	2300	2100	3150	2930	2700	3275	3100	2750	3875	3450	3330	4750	4300	4100
11.	% Impedance at 75% c	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
12.	Core	Prime																				
		CRGO																				
13.	Winding	AL/CU	CU	CU	CU	CU	CU	CU														
14.	Cooling	ONAN																				
15.	Max. ambient Temperature	50° C																				
16.	Max. oil Temperature Rise	35° C	40° C																			
17.	Max. Winding Temperature Rise	40° C	45° C																			
18.	HV side High voltage withstand test	28 KV																				
19.	LV side High voltage withstand test	3 KV																				

SL.	Technical Specification	630 KVA			800 KVA			1000 KVA			1250 KVA			1600 KVA			2000 KVA			2500 KVA		
NO.		Level 1	Level 2	Level 3	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
1.	Rated Input	11000V	11000V	11000V	11000V	11000V	11000V	11000V	11000V	11000V	11000V	11000V	11000V	11000V	11000V	11000V						
2.	Rated Output	433 V	433 V	433 V	433 V	433 V	433 V	433 V	433 V	433 V	433 V	433 V	433 V	433 V	433 V	433 V						
3.	Frequency	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
4.	Input Configuration	Delta	Delta	Delta	Delta	Delta	Delta	Delta	Delta	Delta	Delta	Delta	Delta	Delta	Delta	Delta						
5.	Output Configuration	Star	Star	Star	Star	Star	Star	Star	Star	Star	Star	Star	Star	Star	Star	Star						
6.	Vector Group	Dyn 11	Dyn 11	Dyn 11	Dyn 11	Dyn 11	Dyn 11	Dyn 11	Dyn 11	Dyn 11	Dyn 11	Dyn 11	Dyn 11	Dyn 11	Dyn 11	Dyn 11						
7.	Current LV (amp)	840.0	840.0	840.0	1066.7	1066.7	1066.7	1333.3	1333.3	1333.3	1666.7	1666.7	1666.7	2133.4	2133.4	2133.4	2666.7	2666.7	2666.7	3333.4	3333.4	3333.4
8.	Current HV (amp)	33.06	33.06	33.06	41.99	41.99	41.99	52.48	52.48	52.48	65.60	65.60	65.60	83.98	83.98	83.98	104.97	104.97	104.97	131.22	131.22	131.22
9.	Losses at 50% Load (w)	2000	1860	1745	2459	2287	2147	3000	2790	2620	3600	3300	3220	4500	4200	3970	5400	5050	4790	6500	6150	5900
10.	Losses at 100% Load (w)	5855	5300	4850	7300	6402	5837	9000	7700	7000	10750	9200	8400	13500	11800	11300	17000	15000	14100	20000	18500	17500
11.	% Impedance at 75% c	4.5	4.5	4.5	4.5	4.5	4.5	5.0	5.0	5.0	5.0	5.0	5.0	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25
12.	Core	Prime	Prime	Prime	Prime	Prime	Prime	Prime	Prime	Prime	Prime	Prime	Prime	Prime	Prime	Prime						
		CRGO	CRGO	CRGO	CRGO	CRGO	CRGO	CRGO	CRGO	CRGO	CRGO	CRGO	CRGO	CRGO	CRGO	CRGO						
13.	Winding	CU	CU	S	CU	CU	CU															
14.	Cooling	ONAN	ONAN	ONAN	ONAN	ONAN	ONAN	ONAN	ONAN	ONAN	ONAN	ONAN	ONAN	ONAN	ONAN	ONAN						
15.	Max. ambient Temperature	50° C	50° C	50° C	50° C	50° C	50° C	50° C	50° C	50° C	50° C	50° C	50° C	50° C	50° C	50° C						
16.	Max. oil Temperature Rise	40° C	40° C	40° C	40° C	40° C	40° C	40° C	40° C	40° C	40° C	40° C	40° C	40° C	40° C	40° C						
17.	Max. Winding Temperature Rise	45° C	45° C	45° C	45° C	45° C	45° C	45° C	45° C	45° C	45° C	45° C	45° C	45° C	45° C	45° C						
18.	HV side High voltage withstand test	28 KV	28 KV	28 KV	28 KV	28 KV	28 KV	28 KV	28 KV	28 KV	28 KV	28 KV	28 KV	28 KV	28 KV	28 KV						
19.	LV side High voltage withstand test	3 KV	3 KV	3 KV	3 KV	3 KV	3 KV	3 KV	3 KV	3 KV	3 KV	3 KV	3 KV	3 KV	3 KV	3 KV						



## **Special Purpose Transformers**

### **Compact Substation**

GTB's Compact Substation is used for feeding power form high voltage to low voltage in open cast mines, construction sites, metro cities etc. The substation is compact in size, suitable for frequent shifting and for use in indoor / outdoor locations. The substation is installed and mounted on skid frame or wheels or channels and is provided with lifting hooks



#### **Salient Feature**

- Easy to operate, safe.
- Compact portable & ready to install
- Designed for better cooling
- Transformer dry type or oil cooled
- Low maintenance
- Customer made design
- Superior aesthetics
- Suitable for all weathers
- Design Combinations

#### **HT COMPARTMENT**

- Ring Main Unit
- Vacuum Circuit Breaker
- Load Break Switches

#### TRANSFORMER COMPARTMENT

- Oil Cooled Transformer or Cast
- VPI dry Type
- Low Losses Design
- Tap Changer

#### LT COMPARTMENT

- Air circuit breaker
- Molded case circuit breaker
- Fuse units
- Fuses



HT COMPARTMENT



TRANSFORMER COMPARTMENT



LT COMPARTMENT



# **Special Purpose Transformers**

#### **Furnace Transformer**

We are providing arc/induction furnace transformers that have the capability to withstand short-circuits. Further, its superior features like low noise, economical operation, compact design etc, have made the range highly popular in the market.

We also have ability to customize the range as per the specific requirements of the customers.

We offer a qualitative range of furnace transformers that are designed and manufactured using cutting edge technology. These furnace transformers are widely used in steel plants, aluminum industries , gas factories, calcium carbide and various other industries.



## **Dry Type Transformers**

An intrinsic byproduct of the transformation process is heat, specifically, the "I²R" (I=Current, R=Resistance) heating that occurs when current runs through a conductive wire. Heat breaks down transformer composition materials and insulation, resulting in less efficiency and shorter service life. Transformer heat is best controlled by the oil filled transformers, which conducts the heat away from the heat-producing parts while protecting other internal transformer workings.

But with proper sizing and placement, as well as fans when appropriate, dry type transformers which cool by air ventilation, provide excellent, low-heat service in tight enclosures and indoor situations where oil leakage could cause a fire or significant environment hazard. Clearly, a system without these threats offers enhanced safety for indoor applications. A dry type transformer will typically incorporate a design with greater internal clearances to allow for better heat dissipation. No fireproofing, oil catch basins or venting of toxic gasses are required and the transformer can be close to the load, minimizing secondary line losses. But a dry type transformer also reduces maintenance with no need to replace transformer oil while avoiding the contaminant and composition checks necessary for proper oil insulation and cooling.



#### **Application**

Dry type transformers are widely used in indoor situations where oil leakage could cause a fire or significant environment hazard. For example in places such as schools, institutions, hotels, malls and commercial buildings where reliability and safety are mandatory. Relative ease in maintenance of the transformers explains why GTB dry type transformer is often the choice of the customer.



## **Solar Rooftop Plants**



## **Our Projects**



## "Solarize Your Business"

"GTB Energy LLP is a concern of GTB Group which was founded in the year 1992. The Group is one of the pioneers in developing efficient power distribution products. Being a key player in the power sector for more than 25 years now, and having served 2000+ clients Pan India and across the globe, rest assured the fundamental business practices in GTB are based on values of trust, integrity, innovation. Customer focus is always the centre of our delivery, irrespective of the product or service we render. Thus GTB Energy LLP was set up in 2016 with the primary focus of offering alternative source of clean and green energy, there by expanding the portfolio of energy and power solutions within the brand GTB.

We design solar plant in a way that not only maximize the return on investment but also ensure its client a hassle free power experience for a large lifespan of 25+ years.

We have a dedicated team of technicians, we tightly monitor quality of our services right from procurement of material up til execution of the project.

We are striving to become energy Partner to our customer and hence become a prefered choice of brand in the field of energy and power solutions.



20 KW Citizen Enclave Ldh.



20 KW Yamunanagar



30 KW Doraha



20 kw Inder Memorial Hospital Gurdaspur



10 KW Faridabad

and many more...