

# Company

Profile & Catalogue

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

বাছাড়



TM

ISO 9001:2015 Certified

## BACHAR ENGINEERING LTD.

Transformers & Sub-Station Equipment Manufacturer

# About Us



Bachar Engineering Ltd. is an ISO 9001:2015 Certified company specializing in Transformers and Electrical Substation Equipment manufacturing. Since 2010, We have been providing Electric Service to the industrial, commercial, and residential sectors under the banner of Bachar Electric Service. Since Starting the journey of Bachar Engineering Ltd. in 2018, the company has been undergoing constant expansion. Bachar Engineering Ltd. follows its founder's principles that have been the key to the development of its industry standards in Sub-Station Equipment manufacturing, supply & service. Bachar Engineering Ltd. is an electrical power solution and manufacturing company offering a range of Bangladesh and specialist electrical contracting work. We are Manufacturing, Assembling, Importing, Supplying, Testing & Commissioning all kinds of Transformer Sub-Station Equipment, such as Power & Distribution Transformers (Oil & Dry), H.T Switchgear (VCB & LBS), LT Switchgear, PFI plant, Generators, BBT, Solar system, Industrial Voltage Stabilizer, Online UPS, DB Board & much other electrical equipment.



# Message from **Founder**



***“We have a clear focus to advance in the Energy Technology sector and contribute to the mutual development of itself and all its partners and stakeholders.”***

Our team of individuals and personalities are united to achieve common success together, we create a conducive environment that enhance to performance, develops professionalism and enterprising spirit. With our all rounded employers, we build extensive network, across in Bangladesh, expanding our clientele base and develop strategic relationships with all our stockholders. With excellent technical and organizational expertise, we will definitely be available for our customers to fulfill their expectation promptly.

**Ujjal Kanti Bachar**  
Founder & Managing Director  
**Bachar Engineering Ltd.**

# Why Choose Us



## *A choice that makes* **The difference**

We committed to design, manufacture and give timely support of all type switchgear, distribution and power Transformer with professionalism and dedication to achieve the complete satisfaction of our clients.



**Quality** is our first priority.



We are a **Reliable** product manufacturer and service provider.



**24/7** hours service facilities.



Up to 36 months **Warranty** from the date of delivery of our Transformer.



We work with most of the **Top quality** supplier brands for raw materials.



We have one of the **Best Factory** in the country with Top Notch Testing Facility.



## VISION

**“ To be the industry leader in the electrical industry and the leading provider of delivering safety.”**



## MISSION

**“ To create a client centric team that would perform a high quality service in meeting the needs and exceeding expectations of our clients. “**



## VALUES

- Customers first
- Evolve and adapt
- Get it done
- Do the right thing
- Build for durability
- Develop our people
- Operate with transparency



# Why Choose Us

*Bachar Engineering Ltd. gives its customer the option to choose components from various world-class manufacturers.*

## Transformers

- ◆ Copper Wire / Strip: RR, India / BRB, Bangladesh / SQ, Bangladesh
- ◆ CRGO Core : Norex, Russia / Posco, Korea / Gnee, China
- ◆ Transformer Oil : Hyrax, Malaysia / Savita, India / Thar, Dubai



## Switchgears:

- ◆ Busbar : Meghna, Bangladesh / Coppertech, Bangladesh
- ◆ Panel Paint : Berger, Bangladesh / Elite Paint, Bangladesh
- ◆ Breakers : ABB, Italy / Schneider, France / Hyundai, Korea
- ◆ PLC & Meters : Siemens, India / LS, Korea / Selec, India



## PFI Plants:

- ◆ Capacitor Banks : Schneider, France / Epcos, India / Havells, India
- ◆ PFC Relay : Mikro, Malaysia / Shizuki, Japan
- ◆ Breakers : ABB, Italy / Hyundai, Korea / Chint, China
- ◆ Magnetic Contacts: Schneider, France / Hyundai, Korea / Daco, Korea



*Bachar Engineering Ltd. assures quality by testing, inspecting and supervising on every step of production.*



Supervision on winding



Supervision on coil assembly



Supervision on panel fabrication

## Formula to calculate Perfect Substation for your project

$$\text{Transformer: KVA} = \frac{\text{KW}}{\text{Power Factor} \times \text{Efficiency}}$$

$$\text{Breaker Rating: A} = \frac{\text{KVA}}{\sqrt{3} \times \text{KV}} \times \text{Safety Factor}$$

$$\text{PFI Plant: Required KVAR} = \text{KVA} \times 60 \%$$



# Our Products



## Bachar Transformers

- ◆ Distribution and Power transformers according to IEC, ANSI rating from 100 KVA to 20,000 KVA having system voltage 11 KV or 33 KV.
- ◆ Designed according to International standards.
- ◆ Accurate Measurements.
- ◆ Made with Top Quality own imported Core and Coppers.
- ◆ All Standard Accessories Such as High-Quality Tap Changer, Imported Bushing, Temperature Gauge, Oil, Level Indicator, Buchholz Relay, Silica Gel Breather, Radiator, Radiator Valve & Pressure Relief Device Are Provided in The Transformer of the Highest Quality for Safety, Monitoring Smooth Operation & Maintenance.





## Bachar Switchgears

Bachar Switchgear panels are made with original imported circuit breakers and high quality busbars. Available in These categories:

- ◆ 33KV and 11KV Switchgear Panel
- ◆ HT & LT Switchgear panel
- ◆ MV & LV PFI Panel
- ◆ Distribution Panel Boards
- ◆ Transformer RTCC Panel
- ◆ ATS Panel
- ◆ Control Panel

# Bachar Transformers

## Distribution Transformers

Bachar Transformers are manufactured in accordance with the requirements of an individual customer's requests to one or more internationally recognized standards including IEC-76, BSS-171, ANSI-C, VDE-0532, etc. Bachar Engineering Ltd. manufactures top-quality conventional or scaled Oil-immersed, naturally cooled three-phase distribution transformers with are suitable for outdoor and indoor installation.

- ◆ Power Range : 50KVA to 5000KVA
- ◆ Rated Voltage : 11/415 kV
- ◆ Vector Group : Dyn 11
- ◆ Frequency : 50 Hz
- ◆ Cooling : ONAN
- ◆ BIL : 75 kV



## Power Transformers



Bachar Power Transformers are Low Loss and High Efficient because of the use of cold rolled grain oriented (CRGO) silicon high permeability steel. The high coil-to-coil and low coil-to-ground capacitance ratio provide distribution of surge voltage over the entire coil, smartly outlined by the latest methods of automatic machining. Copper, due to its inherent high conductivity, ductility, and strength has always been the ideal material for conducting electricity. That's why all Bachar transformers are manufactured with pure electrolytic copper only.

- ◆ Power Range : 2.5MVA to 20MVA
- ◆ Rated Voltage : 33/11 kV
- ◆ Vector Group : Dyn 11
- ◆ Frequency : 50 Hz
- ◆ Cooling : ONAN / ONAF



# Transformer Ratings

## 11/415 kV Distribution Transformers

KVA	No Load Loss (Watt)	Full Load Loss (Watt)	% Imp
50	200	950	3.50%
100	320	1250	3.50%
150	450	1800	3.70%
200	500	2500	3.70%
250	650	2800	4.00%
315	820	3500	4.50%
400	900	3800	4.50%
500	950	4500	5.00%
630	980	6000	5.00%
750	1000	7500	5.50%
800	1050	8000	5.50%
1000	1150	8500	6.00%
1250	1500	9500	6.00%
1500	1700	10500	6.50%
1600	1800	11000	6.50%
2000	2100	13000	7.00%
2500	2300	15000	7.00%
3000	2500	17000	7.50%
3500	2800	21000	7.50%
4000	3000	25000	8.00%
5000	3500	29000	8.50%



## 33/11 KV Power Transformer.

KVA	No Load loss (watt)	Full Load loss (watt)	Impedance	Total Weight Kg (Approx)	Size (L x W x H)(mm)(Approx)	Primary current (A)	Secondary current (A)
2500	2150	22500	6.00%	9800	Peta Radi(L=4100 W=2300 H=2420) mm	43.73	131.21
3000	2450	24300	6.00%	11500	Peta Radi(L=4220 W=2350 H=2500) mm	52.48	157.46
3500	3050	26500	6.50%	12500	Peta Radi(L=4300 W=2400 H=2620) mm	61.23	183.7
4000	3900	29250	6.80%	14500	Peta Radi(L=4440 W=2500 H=2750) mm	66.98	209.95
4500	4200	31250	6.80%	15200	Peta Radi(L=4550 W=2700 H=2820) mm	78.73	236.19
5000	5600	38700	7.00%	16000	Peta Radi(L=4700 W=3000 H=3100) mm	87.47	262.43
6500	6400	48800	7.00%	18800	Peta Radi(L=5500 W=3200 H=3280) mm	113.72	341.17
7500	6950	47700	7.00%	20500	Peta Radi(L=6000 W=3500 H=3350) mm	131.21	393.65
10000	8100	55800	7.50%	24000	Peta Radi(L=6500 W=3800 H=3500) mm	174.95	524.87
12500	9000	74000	7.50%	32000	Peta Radi(L=7200 W=4000 H=3600) mm	218.69	656.09
15000	10500	62500	8.80%	38000	Peta Radi(L=7500 W=4600 H=3800) mm	262.43	787.31
20000	12500	69650	9.50%	45000	Peta Radi(L=8200 W=5000 H=4200) mm	348.91	1048.75

# Bachar Switchgears

## HT Switchgear



Bachar Engineering Ltd's High tension switchgear comprises of The VCB, LBS, SF6 circuit breaker, etc. The HT Switchgears have compact design, sturdy construction and simple in operation with a tested motorized spring operation mechanism and optimized designs depends on the needs of the clients. . The design ensures ease of operation, low cost maintenance and higher longevity. The panels are fully compartmentalized and extendable on both side consisting of busbar chamber with adequate air clearance, compartments for breaker, pt, ct and cable termination and metering chamber.

## LT Switchgear



Bachar low-tension Switchgears are specially designed to control and distribute power for diverse installation such as power stations, industries, mills, factories and other different loads. Switchgear panels are designed and manufactured for indoor and outdoor fixed or fully draw out type with frame structure of modular construction for easy extension & coupling depending on the condition of installation. The low-tension Switchgears comprises of Air Circuit Breakers, Molded Case Circuit Breakers, Fuse switch units, Disconnectors etc. to meet individual requirement.

## PFI Panel



Bachar Engineering Ltd's Power Factor Improvement Plants are designed to meet the needs of all power factor correction by capacitor banks from small units to large plants. PFI Plant is preferable designed to eliminate the penalties for consumption of reactive power, reduction of voltage drops, increase in transformer capacity with same losses (load), reduction of line losses. The PFI Plant is supplied in cubicles of sheet metal dust & vermin proof, free-standing, and floor mounting (wall mounting in special cases).



## Solar Panels

Bachar Engineering Ltd. is a systems integrator & installer of solar solutions and a one-stop service provider for all kinds of solar solutions. We provide best quality inverter for our On-grid solutions and best quality Battery pack for our Off-grid Solar solutions to meet individual requirement. The capacity range is 3 KWp - 500 KWp.



## 33kV Breaker

Bachar Engineering Ltd imports 33kV Outdoor breakers which are designed and type tested as per IEC 62271-100. The breaker has porcelain clad construction suitable for outdoor substations that ensures protection from hazardous conditions Long electrical life with proven vacuum interrupters that utilize the excellent arc quenching and insulating properties of vacuum technology.



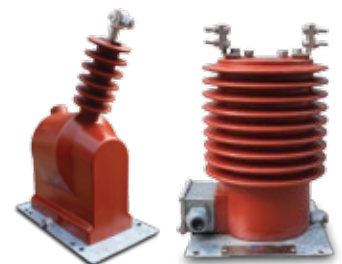
## ACR

Bachar Engineering Ltd. introduce a Solid Insulated Vacuum Recloser encapsulated with Hydrophobic cycloaliphatic epoxy materials from Korea. The Solid Insulated Vacuum Recloser is designed for inherently reliable, intelligent automation and environmentally friendly, completely oil-free, and gas-free. We provide the ACRs as a part of the 33kV Substation Package.



## CT & PT

Bachar Engineering Ltd. provides the best quality 11 and 33kV Outdoor Current and Potential Transformers made by TS Transformers which is approved by all of the Electricity Providers of Bangladesh. Bachar Electric Service is a sister concern of Bachar Engineering Ltd. which is an authorized dealer of TS Transformers, Bangladesh.



# Production Facility



Transformers Winding



Transformers Assembly



Transformer Heat Chamber



Oil centrifuge machine



Transformer Tank Fabrication



Core Cutting



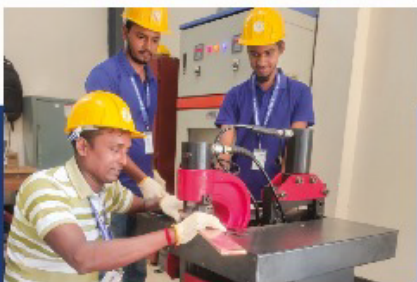
Panel Fabrication



Powder Coating



Powder Coating Oven



Busbar Bending & Punching



33/11 KVA Power Transformer

Bachar Engineering Ltd. has been manufacturing and assembling the precisely engineered and designed products at their fully sustain advanced production facility which is situated at Ashulia, Savar, Dhaka.





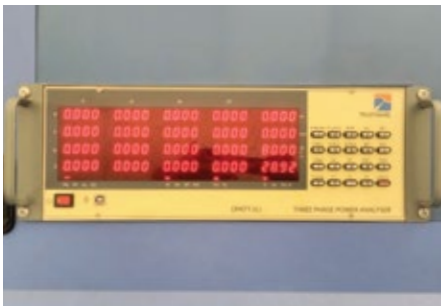


Transformer Test Bench



Transformer Oil Test

According to IEC-76 & BS-171 standards, Our factory is equipped with the following testing Instruments:



Power Analyzer



Winding Resistance Meter



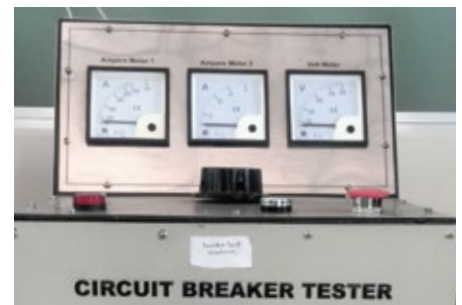
ATRI-3 AUTOMATIC TURNS RATIO INSTRUMENT



High Voltage Tester



Variac AC Power Supply



CIRCUIT BREAKER TESTER

According to IEC-76 & BS-171 standards, the following measurement & tests are carried out on every Transformer prior dispatch from the factory:

- ◆ Winding Resistance Test
- ◆ Ratio Test
- ◆ Vector Group Test
- ◆ Open Circuit Test
- ◆ Short Circuit Test
- ◆ Insulation Resistance Test
- ◆ Dielectric Test
- ◆ Temperature Rise Test
- ◆ On-Load Tap-Changer Test
- ◆ High Voltage Test
- ◆ Zero Sequence Impedance Test
- ◆ Noise Level Test
- ◆ Double Voltage & Double frequency Test
- ◆ Impulse Voltage Test



# Our Certification



Trade License

Manufacture Certificate



ISO Certificate



Environment Certificate



Fire Certificate



Oil Certificate



Tin Certificate



Factory License



Vat Registration Certificate



# Our Clients



NAVANA  
GROUP



NASSA GROUP



Since 2007  
ASSURE  
GROUP  
ISO 9001: 2015 QMS Certified



DUREEN<sup>®</sup>



Bengal Group of Industries

PRAGATI



NEW ASIA GROUP



## Garments

- Southern Knitwear Ltd.
- EFE Textile Limited Ashulia
- Akib Textile Mills Limited
- Sadia Textile Mills Limited
- Magpai Knitwear Limited
- P & O Attires Limited
- Hot Dress Limited
- Tori Knitwears Ltd.
- Tex Mark Knitwears Limited
- R S N Knit Limited
- Tarque Fashions Limited
- E S E Knit Wear Limited
- Zon Ron Sweater Limited
- Ocean Sweater Ind. (PVT.) Ltd.
- Natural Group.
- Aurum Sweater Limited
- Knit Asia Ltd (Unit-2)
- Torque Apparels
- M.S. Knit Wear.
- A.J. SuperGerments Ltd.
- Blessing Knitwears Ltd.
- Fashion Syndicate BD.
- AdmiarTex Ltd.
- Denim Asia
- S.G.Apparels Ltd.
- Fardin Fashion Ltd.
- Collar Knitting.
- Rising Tex Fashion Ltd.
- Shipra Fashion Ltd.
- Mother Textile Ltd.
- KAC Fashions Ltd.

## Industries

- D-Shade Food Limited
- Ahmed Food Products Limited
- Sun Computer Limited
- Baraka Engineering Limited
- Rongfar Leaning Ind. Pvt. Ltd.
- Five Dragon Papers Mills Ltd.
- Zeng Tho Ltd.
- Nadia Shoes (Pvd). Ltd.
- Divine Group
- Domino Technical Resources
- Linda Accessories Ltd.
- Global Electrode,
- Panda Shoes Ind.Ltd.
- Ashutosh Bhowmik Auto Rice Mill

## Residential

- Naif Holding Limited
- Sadman Tower
- model Tower
- Star SikderVew
- Swiss Builders Ltd.
- Green Garden
- The Grand Placid Hotel
- Assure Builders Ltd.
- Real Assets Ltd.
- Wintech Development 2000 Ltd.
- Sopno Chaya Tower
- Navana Real Estate Ltd.
- Sharmano Properties Ltd.

**Hotline: +88 09678 338844**

## Our Locations:



### **Head Office:**

House 17, Road 04, Sector 12,  
Uttara, Dhaka.

### **Factory:**

Yearpur, Zirabo, Ashulia,  
Savar, Dhaka.

### **Ashulia Office:**

Razia Plaza, Noroshingpur,  
Ashulia, Savar, Dhaka.  
Mobile: 01799 611391-94

### **Chattogram Office:**

863/1106, Dhanialapara,  
D.T. Road, Chattogram.

### **Sylhet Office:**

G7, Al Marjan Shopping Centre,  
Zindabazar, Sylhet.

### **Rajshahi Office:**

Rokeya Villa, 221,  
Boalia Thana, Rajshahi.

### **Madaripur Office:**

Amana Market, Takerhat,  
Rajoir, Madaripur.  
Mobile: 01799 611399

*Safety & Quality  
are our main priorities*