

Company Profile

Name of the Company: AB Power Engineering Ltd.

Nature of the Company: Private Limited Company

Corporate Head Office:- House Name # Ashtha, House No # 4/6, Road # 9, Block # J
Baridhara, Dhaka-1212, Bangladesh

Factory Address:- Pakunda, Jampur, Sonargoan, Narayangonj (On the Asian High Way)

Functions: Manufacturing, Supply & Installation of Electrical Sub-Station ranging 33/11KV (3MVA to 20MVA) & 11/0.415KV (100KVA to 4000KVA)

Services: All sorts of Electrical Design, Consultancy, Installation & Maintenance Services.

Specialty: Low Cost & high-quality Electrical Sub Station Equipment & Controlling Components.

Service Area: One point service for all sorts of electric connection (Electrical Design, All kinds of consultancy, Load Sanction, Line & Sub-Station Construction, Electrical Connection) all over Bangladesh & abroad.

Engineers & Technical Personnel: A team of skill Engineers & Technicians trained from country & abroad work together.

Tools & Equipment: Most modern tools and machinery makes AB Power rich. Sufficient tools available to the maintenance crews.

After Sales Service: We have a strong service team which serves the clients in the whole Bangladesh.

Vision of the Company: AB Power Engineering Ltd. works to serve people with high quality and low cost electrical equipment & services in the form of Social Work.

Mission of the Company: AB Power Engineering Ltd. possessing sufficient capacity of 3Ms (Men, Machinery & Money) to achieve the goals and target as per the vision of the company.

A brief History and Introduction Of AB Power Engineering Ltd.:-

AB Power Engineering Ltd. is a reputed Electrical Company that has been providing service in the country since the year 2007 as a proprietorship firm with a very good name and fame. It deals with the sales of sub-station equipment, BBT, generators including all sort of electrical components and accessories. It has been playing a significant role in mitigating power crisis in Bangladesh since its birth.

Now, AB Power Engineering Ltd. is counted as a leading company among all Electrical Companies working in Bangladesh. However, it had to pass a long way to reach at today's position. The background of the company is actually a history of hard working, sincerity and honesty. The condition of Electricity & Electrical Equipment in this country was beggar description. The situation was about to spin out of control day by day. In this context, AB Power Engineering Ltd. was established to serve the nation in the electrical sector and to generate employment facility that was, even now, nightmare for an ordinary civilian.

At the very beginning, AB power Engineering Ltd. realized that it would not be wise to be dependent on begging any longer to others rather it must stand on its own feet. For that reason, sincerity & hard working was a must. Quality Equipment & materials are essential in the electrical sector to avoid any electrical hazard and to make confirm lives & dependability. With this view, AB power Engineering Ltd. went in contact with some famous electrical brand to collect world famous electrical components & electrical Accessories. From that time, AB Power Engineering Ltd. is exclusively collecting European Brand BBT system, switch, sockets, Circuit Breakers, Dimmers, motor-starters and all sorts of Electrical accessories.

Engr. Md. Anisuzzaman S/O – Mr. Md. Amir Hossain, Present Address: 379 Naya Nagar, Vatara, Dhaka – 1212, Bangladesh, Permanent Address: Barashalghor, Debidwar, Comilla, Bangladesh & Mr. Md. BurhanUddeen , S/O Late Md. RamizUddin, Present & Permanent Address: 379 Naya Nagar, Vatara, Dhaka – 1212, Bangladesh started this business journey in 2007. From that time, the necessary advice & instructions are received gladly from Mr. Manirul Islam Mazumdar, who was a former REB/PBS GM & founder Managing Director of AB Power Engineering Ltd.

In 2014, Mr. A G M Mortuza, S/O # Late Saidul Hoque, Present & Permanent Address: House # 15,16 Flat # B-6, Block # C, Road # 5A, Bashundhara R/A, Dhaka, Bangladesh joined in AB Power Engineering Ltd. as Chairman on the request of Mr. Md. Monirul Islam Mazumdar, Engr. Anisuzzaman & Mr. Md. Burhan Uddeen. **He converted this business institute to a Private Limited Company named AB Power Engineering Ltd. in 27th August, 2014.** The office of 2 small rooms is now a nice decorated office of two floors & its registered address is House Name # Ashtha, House No# 4/5, Road # 09, Block # J, Baridhara, Dhaka-1212. The dynamic leadership of our Honorable Chairman, Mr. Mortuza (Ex Senior General Manager, REB/PBS & 03 times best GM of Power World & Ex-Director of RPGCL Board) & with the support of our 02 Directors Mr. Md. Anisuzzaman & Mr. Md. Burhan Uddeen, helped us reach at that height.

Now, AB Power Engineering Ltd. Manufacture, Supply & Installation of Electrical Sub-Station ranging 33/11KV (3MVA to 20MVA) & 11/0.415KV (100KVA to 4000KVA) & the Solar System.

Our ability to successfully manage technology from the earliest bright ideas to full delivery is vital for the company's future. Working closely with the divisions and our external partners, it has become our responsibility to secure the Company's future in a competitive and global environment. We are delivering the innovations and breakthroughs that are driving forces for the growth of AB Power's businesses and revolutionizing the markets.

ISO 9001:2015 Certified: We have been awarded an ISO 9001:2015 on Manufacture, Sales, Installation, Testing, Commissioning of electrical Sub-station & power plant equipment. Our all products are manufactured under AB Power's Brand as per Bangladesh & International Standards. Our all products pass through various quality testing stages following IS/IEC standards to produce state of the art technology product. Our equipments designed for producing high efficiency at lower costs with lesser payback period for the customers. We help our customers to use electrical power effectively and to increase industrial productivity in a sustainable way.

Registration Certificates:

AB Power Engineering Ltd. is registered with the following:-

- ⇒ NBR
 - ⇒ VAT
 - ⇒ DHAKA CHAMBER & COMMERCE
 - ⇒ JOIN STOCK COMPANIES
 - ⇒ BANGLADESH ELECTRICAL MOTOR PUMPS IMPORTERS ASSOCIATION
- etc.

Turnover Data for last 05 (Five) to 10 (Ten) years:-

The company started its endeavor with a small capital which has now crossed a turnover of 100 cores and expecting a turnover of 500 Cores in next 2-3 years which simply shows the achievement and working capability of AB Power Engineering Ltd.

Financial Associate:

- ⇒ **Standard Chartered Bank Ltd.**
- ⇒ **AB Bank Ltd.**
- ⇒ **Prime Bank Ltd.**
- ⇒ **Bank Asia Ltd.**
- ⇒ **Brac Bank Ltd.**
- ⇒ **Al-Arafah Islami Bank Ltd.**

Board of Directors: -

Here, in every month a Board Meeting is arranged for the quick decision & accountability. The Board members are as follow: -

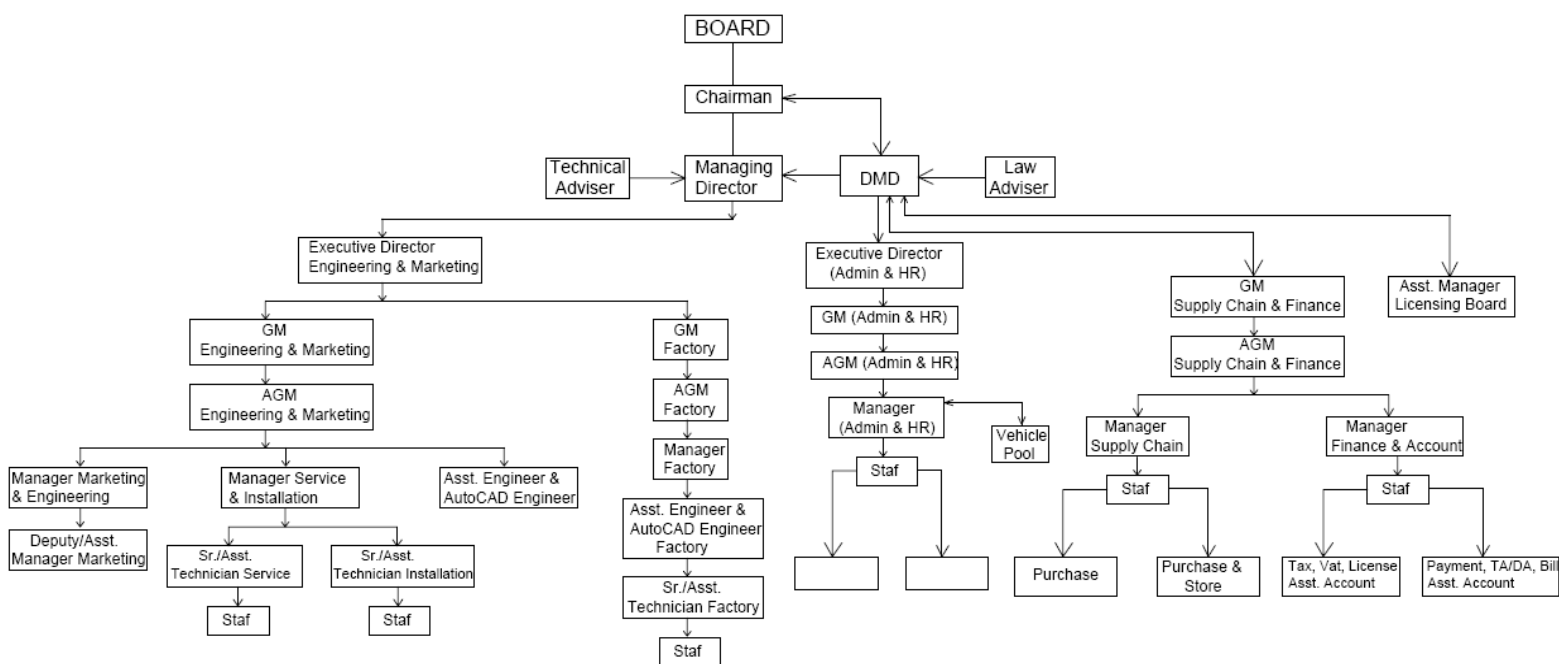
Name	Designation
Mr. A G M Mortuza	Chairman
Mr. Engr. Md. Anisuzzaman	Managing Director
Mr. Md. Burhan Uddeen	Director
Mrs. Laily Akter	Director
Mrs. Tahmina Akter Pinky	Director

***** Technical Adviser – Mr. Md. Manirul Islam Mazumder (Founder MD & Ex. REB & PBS GM)**



Meeting of the Board of Directors of AB Power Engineering Ltd.

Organizational Chart: -



Executive Body:

- ⇒ **Chairman:** Mr. Golam Mortuza (Ex. Sr. GM, REB/Palli Bidyut & Ex. Director(RPCL Board)
- ⇒ **Technical Adviser:** Mr. Md. Manirul Islam Mazumder (Founder MD & Ex REB/PBS GM)
- ⇒ **Managing Director:** Mr. Engr. Md. Anisuzzaman
- ⇒ **Deputy Managing Director:** Mr. Md. Burhan Uddeen
- ⇒ **Executive Director:** Mr. Md. Abdul Warid (Ex Sr. GM, REB/Palli Biduyat)
- ⇒ **Chief Executive Officer (CEO):** Md. Mahbub Rahman ((Ex Sr. GM, REB/Palli Biduyat)

AB Power Factory:

AB power Engineering Ltd. had a manufacturing unit over the land of 5 Acres in Jampur, Mohjampur, Sonargaon, Narayanganj with most modern tools & plants. In the factory, **ABPEL** manufacture transformers and assemble switchgear panels and the plant is well equipped with its own testing facility. **ABPEL** has planning to offer a complete range of power and distribution transformers designed to grant the reliability, durability, and efficiency required in utility, industrial, and commercial applications.

To provide all kinds of power solution, ABPEL plan to extend their manufacturing unit to meet the present and future demand in power sector of Bangladesh. For extension, ABPEL already acquired 120 decimal land in beside of factory area for 2nd unit to manufacture Power Transformer & CT/PT.

Current activities in the factory are manufacturing of distribution transformers and related substation equipment, supply of generators from reputable sources from around the globe and all related support services, thus enabling ABPEL to provide complete Power Solutions to their valued customers.



Factory of AB Power Engineering Ltd.

List of Electrical Substation Equipment:

1. Lightning Arrestors:



Rated arrested voltage(rms) :	9.6KV/28.8KV
Rated frequency :	50Hz
Maximum spark over (rms) :	14KV/40KV
Maximum impulse spark (crest)	
Withstand test voltage (peak) :	45KV/95KV
Power frequency Dry 1 minute :	28KV/70KV
Power frequency Wet 10 sec :	24KV/74KV
Discharge 33KV (crest) :	14kA
Impulse current withstand :	14kA

Capacity:	: 11KV/33KV
Type	: LA9
Rated voltage	: 11KV/33KV
Rated maximum voltage	: 12KV/36KV

The lightning arresters can be considered as the first ever components of a substation. These are having a function of protecting equipment of substation from high voltages and are also limiting the amplitude and duration of the current's flow. These are connected amid earth and line i.e. connected in line with equipment in the substation. These are meant for diversion of current to earth if any current surge appears hence by protecting insulation as well as conductor from damages. These are of various types and are distinguished based on duties.

2. Drop out Fuse:



Capacity:	: 11KV/33KV
Rated voltage (Nominal)	: 11KV/33KV
Rated maximum voltage	: 15KV/36KV
Rated current (cont.) RMS	: 100A/200A
Rated fuse rating	: 50A
Rated frequency	: 50 Hz
BIL	: 75KV
Interrupt. Current RMS	: 10KA
Withstand test voltage	
Dry 1 minute	: 35KV/95KV
Withstand test voltage	
Wet 10 sec	: 30KV/75KV

The Dropout (swing out) fuse is an expulsion type and its main function is to protect Transformers on rural distribution network. It is also particularly useful for inaccessible Sub-stations where indication of fusing is of advantage

3. Transformer:



Capacity : 100KVA to 20MVA
Voltage
Ratings:33KV/11KV/0.415KV/0.240KV
Silicon Steel Sheet (Core): Sweden
Insulating Materials : Russia
Copper Strip : RR Cable/
Coppertech
Transformer Oil : Savita, India
Super Enameled Copper Wire: RR Cable/
BRB
Manufactured & Assembled in Bangladesh
by AB Power Engineering Ltd, a sister
concern of AB Group.

A transformer is a static electrical device that transfers electrical energy between two or more circuits. A varying current in one coil of the transformer produces a varying magnetic flux, which, in turn, induces a varying electromotive force across a second coil wound around the same core. Electrical energy can be transferred between the two coils, without a metallic connection between the two circuits. Our manufacturing capacity for 11KV & 33KV line starting from 100KVA to 20 MVA. Distribution Transformer, Oil immersed ONAN cooled type, 3-phase 50 Hz, complete with 3 Nos. of porcelain indoor type 33KV/11KV Bushing mounted on tank cover with arching horns and bimetallic connector including first filling of Transformer oil as per BSS/ VDE/ EC/ JIS standard and off-load type tap changer for de-energized operation with external manual operating mechanism with locking arrangement for each tap position complete with transformer tank, radiator & conservator with necessary painting furnished with stand of value, oil level indicator, valves for filter rests inlet and oil drum/oil sampling valve and dehydrating breather, lugs for lifting and lowering complete unit earthing terminals, thermometer pocket with thermometer primary and secondary marking name plate etc. suitable for operation at ambient temperature of 40°C & at an altitude not exceeding 1000meter. Routine tests are carried out on each transformer before dispatching in our well-equipped factory. Each transformer is issued with an official test certificate with NEMA/AEC/VDE/BS/HS Standards.

4. LT Switchgear:

With the help of our professionals, we are capable in offering high quality LT Switchgear. These LT Switchgear are broadly admired for their quality, longer life and hassle free performance. Available in standard range, these LT Switchgear can be availed in customized forms as required by clients. We offer these LT Switchgear within the stipulated time frame at very affordable pieces. AB Power Brand, Sheet steel clad (14/16 SWG), dust and vermin proof, free standing, floor mounting, L.T Switchgear, 415V, 50Hz, Indoor type, complete with all wiring provisions for bottom / top entry, grounding points with electrolytic copper Bus-bars TP & NE, painted with electro coated and wet (electrostatic) epoxy resin powder coated paint in an automat painting & drying chamber with a color type RAL7032/7040. In accordance with IEC

298, the LT switchgear is manufactured, assembled & tested by AB Power.



5. PFI (Power Factor Improvement)

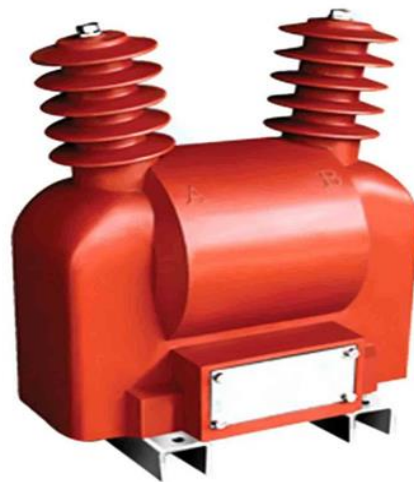
Plant : Power Factor of the system is degraded due to inductive load of different industries and big apartments.. Power-Sonic manufactures PFI (Power Factor Improvement) Plant for improving the degraded Power Factor of the system. We have microprocessor-based PFC (Power Factor Correction) relay up to 24 stages. The Capacitors we use are of different ratings (2.5, 5, 10, 20, 25, 50 KVAR.... Etc.)and corresponding Magnetic Contactor for suitable stepping of the Capacitor bank. Sometimes we also use detuned Reactor with the Capacitors for harmonic filtration of the system.



We must follow international standard and testing method to ensure quality, service and life of the equipment. AB Power Brand, Sheet, Steel Clad (14/16 SWG), dust and vermin proof free standing floor mounting Power factor Improvement (PFI) Plant, 415V, 50Hz indoor type complete with all wiring provisions for bottom / top entry, Grounding points and 800A hard copper bus bars TP & NE painted with electro coated and wet (Electrostatic) Epoxy resin powder coated paint in an automatic painting and drying chamber with a color type RAL7032/7040. In accordance with IEC 298, the PFI Plant is manufactured, assembled, tested in Bangladesh by AB Power.

6. Current Transformer (CT):

A current transformer is a gadget utilized for the transformation of higher value currents into lower values. It is utilized in an analogous manner to that of AC instruments, control apparatus, and meters. These are having lower current ratings and are used for maintenance and installation of current relays for protection purpose in substations. We are supplying CT for 11 KV & 33KV substation.



7. Potential Transformer (PT):

The potential transformers are similar in characteristics as current transformers but are utilized for converting high voltages to lower voltage es for protection of relay system and for lower rating metering of voltage measurements. We are supplying PT for 11 KV & 33KV substations.



PT

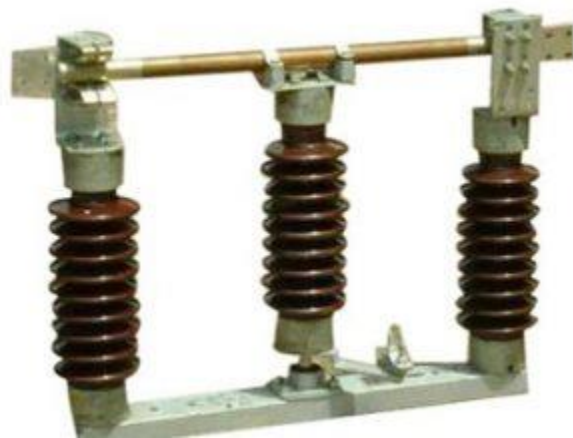
8. Conductors: Conductors are the materials which permit flow of electrons through it. The best conductors are copper and aluminum etc. The conductors are utilized for transmission of energy from place to place over substations.

9. Insulators:



The insulators are the materials which do not permit flow of electrons through it. Insulators are resisting electric property. There are numerous types of insulators such as shackle, strain type, suspension type, and stray type etc. Insulators are used in substations for avoiding contact with humans or short circuit.

10. Isolators:



The isolators in substations are mechanical switches which are deployed for isolation of circuits when there is an interruption of current. These are also known with the name of disconnected switches operation under no-load conditions and are not fortified with arc-quenching devices. These switches have no specific current breaking value neither this has current making value. These are mechanically operated switches.

11. Busbar:



The busbar is among the most important elements of the substation and is a conductor which carries current to a point having numerous connections with it. The busbar is a kind of electrical junction which has outgoing and incoming current paths. Whenever a fault occurs in the busbar, entire components connected to that specific section should be tripped for giving thorough isolation in a small time, for instance, 60ms for avoiding danger rising due to conductor's heat. These are of different types such as ring bus, double bus, and single bus etc.

12. LBS



Rated Insulation	
Voltage RMS/PEAK	: 28kV/75kV
Rated Current	: 630A
Rated Frequency	: 50Hz
No. of Phase	: 3
No. of Break / Pole	: Single
Rated Short Circuit	
Withstand Current	: 25kA
Rated Short Circuit Peak	
Withstand Current	: 63KA
Rated Short Circuit	
Making Capacity RMS/PEAK	: 20kA/50kA

Rated Voltage : 11kV

AB Power Brand, Sheet steel clad (14/16 SWG), dust and vermin proof, free standing, floor mounting, HT Switchgear, 11KV, 50Hz, Indoor type, complete with all wiring provisions for bottom / top entry, grounding points with adequate hard drawn electrolytic copper Bus-bars TPN&E, painted with electro coated and wet (electrostatic) epoxy resin powder coated paint in an automatic painting & drying chamber with a color type RAL7032/7040. In accordance with IEC 298, the HT switchgear is manufactured, assembled & tested by AB Power Engineering Ltd.

13. VCB Panel

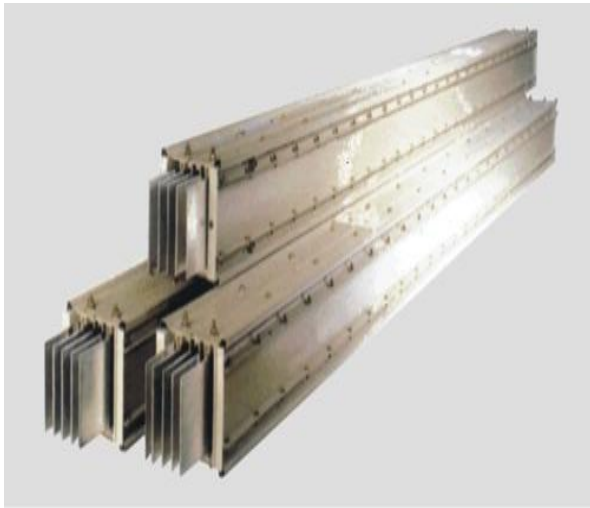


Type of Breaker : VCB
Rated Voltage : 11KV Rated Voltage
: 11KV/33KV
Rated Current : 630/1250A
Poles Number : 3 Pole
Frequency : 50 Hz
Short Time
Withstands Current : 16Ka, 26.3Ka/25Ka-
40Ka,

Vacuum offers the utmost insulating strength. So it has extreme superior arc quenching properties than any other medium. The vacuum circuit breaker has a long life. Unlike Oil Circuit Breaker (OCB) or air blast Circuit Breaker (ABCB), the explosion of VCB is avoided. This enhances the safety of the operating personnel. No fire hazard. The vacuum CB is fast in operation so ideal for fault clearing. VCB is suitable for repeated operation. Vacuum circuit breakers are almost maintenance free. No

exhaust of gas to the atmosphere and Noiseless operation. AB Power Brand, Type Tested Assembled 50Hz, 3-Phase Fixed type Metal enclosed, High Tension Switchgear confirming to IEC298 with fixed type vacuum circuit breaker (VCB), made of 14/16SWG sheet steel clad, dust and vermin proof, freestanding floor mounting complete with all wiring provisions for bottom/top entry, grounding points and 800A hard drawn electrolytic copper bus-bars TP & N painted with electro coated and wet (electrostatic) Epoxy Resin powder coated paint in an automatic painting and drying chamber with a color type RAL7032 / 7040. In accordance with IEC 298, the HT switchgear is manufactured, assembled, tested by AB Power Engineering Ltd.

14. Busbar Trunking System (BBT)



We are offering bus bar trunking system:

- Compact size and easy installation
- Flexibility leading to reduced costs
- Polarity errors are totally eliminated
- Low impedance hence low voltage drop
- Improved thermal characteristics
- Provides distribution protection through Plug-inpoints
- Low cost, flexible safe distribution system eliminates the requirement of separate distribution
- Compact size and easy installation - Unmatched reliability - Flexibility leading to reduced costs

Product Specification:

Brand : Power Plug Busduct, Graziadio

Type : Manual, Fully Automatic

Application: Power Distribution, Lighting, Transformer to LV Panel, Industrial, Residential Buildings

Power (Wattage) : 10A to 6300A

Temperature (deg. Celsius) : 55

Dielectric Str. (Kv/Cm) : 36

Enclosure : GI, Aluminium, Epoxy

Voltage (V) : 690

Frequency (Hz) : 50

Number of Pin : 3P+N+E, 1P+N+E

Length (m) : 1/3/5/6 Meters

Insulation : Air, Mylar, Epoxy

15. Diesel Generator: Made in Italy**DIESEL GENERATING SETS 10KVA to 2250KVA, 68dB to 70dB at 7mtr**

These generating sets are with diesel engine Perkins, Kohler, Fpt, Volvo, Doosan, Deutz, Yanmar, Cummins, and Mitsubishi electric starting with battery, directly coupled by means of plate coupling, fixed on a bedframe with vibration dampers, fuel tank mounted on bedframe. Alternator brand is MECC ALTE/STAMFORD. Manual control panel (mounted on generator) with: automatic circuit breaker, voltmeter, 1 or 3 ammeters (depending from the size of generator), hour meter, frequency meter, starting key, indication lights for low oil pressure, high water temperature, low fuel level with automatic stop for engine faults, sockets or terminal box. We are also prefer customized weather-proof canopy, sound-proof canopy and special set ups



Transformer



33/11KV, 10/14 MVA Sub-Station



11 KV Sub-Station (Single Line Diagram)