FLORA
Innovated Technology

Flora Technology

Flora Power & Innovated Technology

www.floratechbd.com

WELCOME TO FLORA TECHNOLOGY

Flora Technology is a specialized engineering industry and service companies that offer a large and diversified portfolio of products and end-to-end custom solutions to its customers in Bangladesh. Founded in 2013. Since its creation, we have built a long standing relationship based on trust. Flora Technology focused on offering top quality products and services that have made its reputation and ensured customer satisfaction and success for more than 9 years. We strive to preserve a high level of business ethics characterized by integrity and honesty in all our business actions and throughout all our companies.

FLORA TECHNOLOGY'S BUSINESS

Flora Technology's Business a Part from its core industries. Flora Technology's also monitors opportunities in different sectors, where it has a potential to create value with its unique know-how and experience. We have built a strong and loyal client base across both the public and private sectors and we will continue to innovate and expand for the continuous satisfaction of our existing and future clients.

OUR VISION

To create employment for honest, skilled and patriotic citizens with the aim of building a prosperous Bangladesh free from unemployment and poverty.

OUR MISSION

We provide our customers with superior and innovative solutions based on state-of-the-art technology and consistent excellence in service execution, ultimately delivering sustainable growth and profit.

Top Management

Board of Directors

Alhaz Md. Maharram Ali, Chairman
Ex-Teacher, MA (Masters)

Engr. Md. Gaziur Rahman, CEO & MD
Kamil MA (IU) & B.Sc in EETE (DIU)

Md. Fazlur Rahman, Executive Director
Freedom Fighter & Ex-Director, BPDB

Md. Kamrul Bari, Director
BA (Hon's), MA (Masters)

Engr. Md. Tuhinur Rahman, Director
B.Sc in CSE

Advisors

Engr. Nirmal Kumar Saha, Chief Advisor & Consultant
Ex-Teacher Dept. of EEE (DUET) & Consultant, BREB

Dr. Md. Moshiur Rahman, Senior Advisor
Chief Instructor (Electrical), Pabna Polytechnic Institute

Badrul Alam Pasha, Advisor
Convenor Member of Jubolig, Gazipur Mohanogor

Engr. Kazi Md. Jasim Uddin, Advisor
AGM (O&M), Bangladesh Rural Electrification Board (BREB)

Get more advantages from Flora Technology

- Faster delivery according to customer demand.
- Standard references to match most of your applications.
- General Arrangement and Schematics drawings available.
- Delivery included to all area of Bangladesh.
- Available Guaranty and Warranty from installation and lifetime service (whichever comes first).

FLORA TECHNOLOGY'S PRODUCTS

Flora Technology's business Co-operations span a range of 6 Core.

Industries:

- Electrical Sub-Station (Transformer, HT Switchgear, LT Switchgear & PFI Plant)
- Control Panel, DB, SDB, BBT, Transformer Oil Centrifuge.
- Solar Plant, Passenger Lift/Elevator, Diesel/Gas Generator Supply & Installations.
- Rice Mill Machine, Paddy Drier, Par-Boiling & Boiler.
- Pre-fabricated Steel Structures & Buildings, Sandwich Panel.
- IT Infrastructure of Software & Web Development, Mobile Apps.

Electrical Substation

A substation is a part of an electrical generation, transmission, and distribution system. Substations transformer voltage from high to low, or the reverse, or perform any of several other important functions.

Transformer

A transformer is a device used in the power transmission of electric energy. The transmission current is AC. It is commonly used to increase or decrease the supply voltage without a change in the frequency of AC between circuits. The transformer works on basic principles of electromagnetic induction and mutual induction.

Standards	: IEC-76, BS-171, ANSI C57.12, VDE 0537
Frequency	: 50 Hz, on request 60 Hz
Ratings	: For rating higher than 10/14 MVA & above according to customers demand.
Primary Voltage	: For valuses above 24 KV and up to 36 KV. Double high voltages (example 15-20 KV) can be offered.
Secondary Voltage	: 400-430 V other values may be offered. Double low voltages with 7 LV bushings can be offered with full rating or both voltages or with teduced rating 75% or lowest voltage.
Standard Tappings	: +2.5%, +5% or +2x2.5%, 7.5% and others on request.

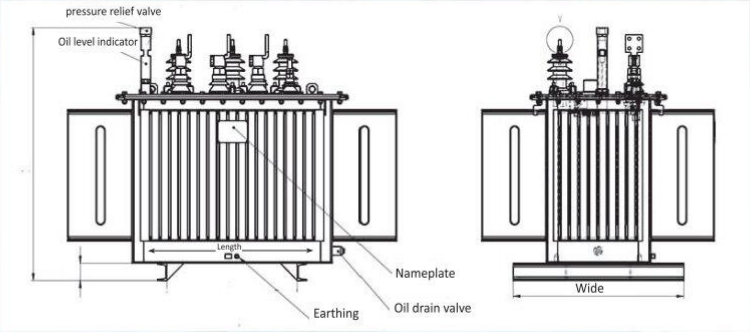
R E M A R K S

Special designs may be studied on request. We offer transformers with reduced noise levels and no losses. If after reading this brochure you have any questions, our engineers will gladly provide you with further information.

Physical Dimensions of Transformers

Rating (KVA)	100	150	200	250	315	400	500	630	750	800	1000	1250	1500	2000	3000	5000	10000
Weight (Kg)	650	760	1000	1150	1369	1400	1795	2540	2800	2875	3000	3900	4800	5650	9400	13500	28500
Height (mm)	1350	1450	1600	1550	1600	1600	1650	1750	1990	1990	2050	2150	2250	2500	2650		
Width (mm)	900	1050	1000	1000	1230	1230	1530	1630	1600	1650	1850	1950	2050	2200	2450		
Length (mm)	1200	1230	1320	1420	1300	1300	1570	1670	1650	1650	1870	1970	2070	2220	2540		

L = Length, H = Height, W = Width (All dimensions are shown including radator and conservator tank.)
Above dimensions and weight can be changed upto = 5% subject to change of design-data, thought improvement is the part of our everyday activities.



Use of Major Component (Transformer)

Core : Nippon, Japan/Cosco, Korea
Insulating Materials : Wiedmann, Switzerland
Copper Strip : Koria/India
Transformer Oil : Savita India/Bino, Australia
Super Enameled Copper Wire : BRB Ltd./RR Ltd., Bangladesh
Off Load Tab changer 17 Position: CTR, India
Off Load Tab changer5 Position : Italy
Manufactured by : Flora Technology

Testing for HT Switchgear

Test Before Assembly	Test After Assembly
1.VCB/LBS/SF6/MOCB	1. Wiring Test
2. CT Test	2. Overall Performace Test
3. PT Test	3. Continuity Test
4. IDMT Relay Test	4. Insulation Resistance Test
5. Ammeter Test	5. Final Check up
6. Volt meter Test	
7. Insulator Test	

Note : All testing are examined in factory test lab which is directly monitored by our quality controller and R&B officer.

HT Switchgear, LT Switchgear

HT panels are installed both outdoor and indoor as well, while mostly used in substations for controlling the electricity flow. LT Panels are used with low tension cables to obtain power from the generator or transformer and distribute electricity to various electrical devices and distribution boards. Switchgear is an integral part of an electric power system. Switchgear includes fuses, switches, relays, isolators, circuit breaker, potential and current transformer, indicating device, lightning arresters, etc. that protects electrical hardware from faulty conditions.

PFI Plant

The power factor of a load is defined as the ratio of active power to apparent power, i.e. KW:KVA and is referred to as cos ϕ. The closer cos ϕ is to unity, the less reactive power is drawn from the supply.

Use of Major Component(HT & LT Switchgear & PFI Plant)

VCB	: ABB, Italy, India/Scooper, German//Hyundai, Koria/Chint, Taiwan
LBS	: F & G, German
ACB	: ABB, Italy/India/Hyundai, Koria/Chint, Taiwan
MCB	: ABB, Italy/India/Hyundai, Koria/Chint, Taiwan
MCCB	: ABB, Italy/India/Hyundai, Koria/Chint, Taiwan
Capacitor	: MKS, German, Aner, Spain, Epcos, India
Magnetic Contact	: ABB, Italy, India/Daco, Koria/Chint, Taiwan/Dunga, Koria
PFC Relay	: Mikro Malaysia, Suzuki, Japan
IDENTY Relay	: ABB, Italy, India/ Entes, Turkey/Omron, Japan
CT, PT	: Siemens, Germany/Gewiss, Italy
Multimeter	: Sico, India
Indicating Lamps	: Risesun, Taiwan
Dropout fuse	: Pakisthan/China/England
Lighting Arrestor	: Pakisthan/China/England
Assembled by	: Flora Technology

Why PFI is Necessary?:

* A reduction in the overall cost of electricity can be achieved by improving the power factor to a more economic level.
* The supply will be able to support additional load which may be of benefit for an expanding company.
* Reducing the load on distribution network components by power factor improvement will result in an extension of their useful life.

Application: Any installation, including the following types of machinery or equipment is likely to have a low power factor, which can be corrected incorporating a suitable PFI plant, with a consequent saving in charges:

a) Induction Motor of all types.
b) Power Thyristor installations for DC motor control & electro-chemical processes.
c) Power transformer and voltage regulators.
d) Welding machines.
e) Electric-arc and induction furnaces.
f) Choke Coils and Magnetic systems.
g) Neon signs and fluorescent lighting.

Single Line Diagram of an Electrical Substation

The single line diagram of the substation is shown in the figure below.
The connection of the substation is divided as

- Incoming or power feeder connection
- Outgoing feeder for feeding the other subsequent substations or switchgear.
- Power transformer connection.
- Voltage transformer connection for control and metering.

The circuit breaker is connected between the bus-bar and each incoming and outgoing circuit. The isolator is provided on each side of the circuit breaker. The current transformer is used for measurement and protection. The current transformers are placed on both sides of circuit breaker so that the protection zone are overlapped and cover the circuit breaker.

FT Power Transformer Electrical Specification

Type FT-1
11/0.415 kv, 3 Phase, 50 Hz

Rated Power (KVA)		50	100	150	200	250	315	400	500	630	750	800	1000	1250	1600	2000	2500	3000
Model No. (FT)		FT-50	FT-100	FT-150	FT-200	FT-250	FT-315	FT-400	FT-500	FT-630	FT-750	FT-800	FT-1000	FT-1250	FT-1600	FT-2000	FT-2500	FT-3000
No Load Loss (W)		155	235	330	380	460	550	640	770	900	920	980	1180	1350	1650	1890	2250	2900
Load Loss at 75°C (W)		820	1340	1790	2100	2540	2970	3530	4190	5050	6350	6700	8150	9850	12200	14500	17700	24400
Imped volt at 75°C (%)		4	4	4	4	4	4.5	4.5	4.5	6	6	6	6	6	6	6	6	6
Regulation at p.f=1 (%)		1.75	1.41	1.3	1.10	1.08	1.04	0.987	0.941	0.987	0.9	1.03	1.00	0.98	0.95	0.93	0.90	0.83
Regulation at p.f=0.8 (%)		3.54	3.36	3.29	3.17	3.16	3.41	3.37	3.34	4.2364	4.27	4.33	4.31	4.30	4.28	4.26	4.24	4.23
Efficiencies at p.f=1	At load 100% (%)	98.00	98.42	98.6	98.79	98.81	98.89	98.95	99.00	99.05	99.04	99.03	99.06	99.09	99.12	99.15	99.19	99.09
	At load 75% (%)	98.31	98.68	98.82	98.98	99.00	99.00	99.06	99.12	99.20	99.20	99.21	99.23	99.25	99.28	99.31	99.34	99.26
	At load 50% (%)	98.52	98.85	98.98	99.11	99.13	99.29	99.23	99.27	99.31	99.34	99.33	99.35	99.38	99.40	99.43	99.46	99.41
	At load 25% (%)	98.30	98.71	98.83	98.98	99.02	99.08	99.13	99.17	99.22	99.31	99.29	99.32	99.36	99.39	99.42	99.46	99.41
Efficiencies at p.f=0.8	At load 100% (%)	97.50	98.03	98.26	98.48	98.51	98.61	98.68	98.75	98.81	99.8	98.78	98.83	98.86	98.90	98.94	98.99	98.87
	At load 75% (%)	97.89	98.34	98.53	98.72	98.75	98.83	98.89	99.95	99.00	99.01	99.00	99.03	99.07	99.10	99.11	99.13	99.08
	At load 50% (%)	98.15	98.56	98.72	98.88	98.91	98.98	99.04	98.09	99.13	99.18	99.16	99.19	99.23	99.25	99.29	99.32	99.25
	At load 25% (%)	97.88	98.38	98.55	98.73	98.77	98.85	98.91	98.97	99.02	99.14	99.12	99.15	99.21	99.24	99.28	99.32	99.26
Total Weight (KG)		400	590	750	1000	1140	1350	1400	1790	2540	2800	2880	3000	3880	4910	5660	7450	9380

Type FT-2
11/0.415 kv, 3 Phase, 60 Hz

Rated Power (KVA)		50	100	150	200	250	315	400	500	630	750	800	1000	1250	1600	2000	2500	3000
Model No. (FT)		FT-50	FT-100	FT-150	FT-200	FT-250	FT-315	FT-400	FT-500	FT-630	FT-750	FT-800	FT-1000	FT-1250	FT-1600	FT-2000	FT-2500	FT-3000
No Load Loss (W)		200	320	510	550	640	750	900	1120	1280	1350	1400	1690	2070	2550	2700	2950	5200
Load Loss at 75°C (W)		920	1550	2000	2450	2800	3500	4100	4800	4700	6600	7620	9500	12200	15000	19500	24000	27000
Imped volt at 75°C (%)		4.35	4.75	4.75	4.75	4.75	4.75	4.75	4.75	6	6	6	6	6	6	6	6	6
Regulation at p.f=1 (%)		1.94	1.68	1.50	1.36	1.29	1.23	1.16	1.10	1.06	0.94	1.14	1.15	1.16	1.16	1.16	1.16	0.93
Regulation at p.f=0.8 (%)		4.15	3.98	3.88	3.79	3.75	3.71	3.67	3.63	3.60	4.3	4.41	4.42	4.42	4.43	4.43	4.43	4.43
Efficiencies at p.f=1	At load 100% (%)	97.74	98.09	98.30	98.47	98.55	98.63	98.71	98.78	98.84	98.93	98.86	98.85	98.85	98.85	98.88	98.89	98.92
	At load 75% (%)	98.20	98.27	98.52	98.69	98.75	98.82	98.89	98.96	99.01	99.09	99.04	99.04	99.03	99.04	99.08	99.10	99.90
	At load 50% (%)	98.46	98.54	98.62	98.82	98.87	98.94	99.00	99.06	99.10	99.19	99.16	99.17	99.17	99.18	99.23	99.27	99.20
	At load 25% (%)	98.13	98.27	98.25	98.57	98.63	98.72	98.79	98.86	99.92	99.04	99.04	99.06	99.07	99.09	99.21	99.28	99.08
Efficiencies at p.f=0.8	At load 100% (%)	97.19	97.61	97.89	98.09	98.19	98.28	98.38	98.48	98.55	98.67	98.57	99.56	98.56	98.56	98.60	98.62	98.56
	At load 75% (%)	97.76	97.97	98.15	98.36	98.44	98.53	98.61	98.69	98.76	98.87	98.80	99.80	98.79	98.80	98.85	98.88	98.80
	At load 50% (%)	98.10	98.18	98.28	98.52	98.59	98.67	98.75	98.82	98.88	98.99	98.95	98.96	98.96	98.97	99.04	99.09	99.00
	At load 25% (%)	97.72	97.83	97.82	98.21	98.29	98.40	98.48	98.57	98.65	99.80	99.80	99.83	99.84	99.86	99.01	99.10	98.86
Total Weight (KG)		400	590	750	1000	1140	1350	1400	1790	2540	2800	2880	3000	3880	4910	5660	7450	9380

Generator

Electric Generator, also called Dynamo, any machine that converts mechanical energy to electricity for transmission and distribution over power lines to domestic, commercial, and industrial customers. Generators also produce the electrcal power required for automobiles, aircraft, ships, and trains. Mostly we are supply Perkins, Cummins, Ricardo, Lambert Brand Generators.

Solar Plant

Solar energy is any type of energy generated by the sun. Solar energy can be harnessed directly or indirectly for human use. These solar panels, mounted on a rooftop in Germany, harvest solar energy and convert it to electricity.

Lift/Elevator

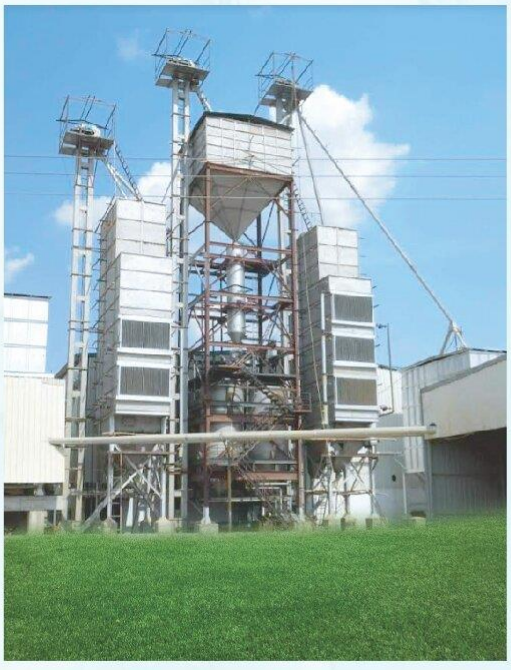
Elevator, also called lift, car that moves in a vertical shaft to carry passengers or freight between the levels of a multistory building. Most modern elevators are propelled by electric motors, with the aid of a counterweight, through a system of cables and sheaves (pulleys). Mostlywe are supply Fuji, Sigma, Sunny, Volk Lift Brand Lift/elevators.

Auto Rice Industries

Continuous/Base Process system World -classified automatic paddy Online (Continuous) Par-Boiling & Drier company Photons Food Processing Engineers.

The main features of Par-Boiling & Drier:

1. High efficiency
2. Steam takes less
3. 100% automated
4. PLC controlling system
5. Strong & Durable
6. Suction System



SUPPORT & MAINTENANCE CONTRACT

Flora Technology offers technical support to more than 1000+ clients all over Bangladesh. Also, as we are keen on helping our clients with round-the-clock assistance, we have created a 24X7 call center, and 10 support teams which are fully equipped with the knowledge and the necessary tool and trained by our international partners.

Contact Us

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FLORA Innovated Technology 24 7 Emergency Services

FLORA Innovated Technology