

ISO CERTIFIED
TRANSFORMER
SUB-STATION
MANUFACTURER
SUPPLIER
SERVICE PROVIDER



EURO TECH BANGLADESH
technology solution partner
www.etbgroupbd.com

HIGH TENSION (HT) SWITCHGEAR

ETB High Tension Switchgear conform to IEC, BS, VDE, DIN & ANSI standard and equipped with Minimum Oil Circuit Breaker (MOCB), Vacuum Circuit Breaker (VCB) & Load Breaking Switch (LBS). They are designed in co-ordination to over voltage due to lightning & transients for highest system voltage of 12KV & current rating from 400A to 1250A.

the panel boards are made of strong sheet steel (Minimum 16 SWG) at all sides with iron angles & channels welded together. They are painted in accordance with general practice and recognized methods to meet the tropical conditions at site. Potential Transformer (PT), Current Transformer (CT), Earthing Switch, the main unit & other components are imported from america, Germany, France, Italy, UK, Japan & Taiwan of as per the choice of the valued Customers.



LOW TENSION (LT) SWITCHGEAR

ETB Low Tension Switchgear (415V, 3-50Hz) conform to IEC - 947-2, BS, DIN & ANSI standard and equipped with Circuit Breaker, Hard Drawn Electrolytic Copper Busbar, Ammeter, Voltmeter, Selector Switch & indicating Lamps. Totally enclosed panels are designed to withstand the mechanical & thermal stress produced by current. All live minimum cross sectional area of 0.75mm² is accomodated in plastic conduits.

The LT panel board are also designed that the caleles are fed in and silt and removable type to facilitate cable enry having cable grommet.

The LT panel components are imported from America, Germany, France, Italy, UK, Japan & Taiwan or as per the choice of the valued Customers.

POWER FACTOR IMPPOVENT (PFI) PLANT

ETB Power Factor Improvement Plant conforming IEC-439-2, VDE, DIN & ANSI standard is of sheet steel clad, dust & vermin proof, free, standing, floor mounting indoor type. The centrally controlled automatic PFI plant is or compact design and suitable for operation in 6/12 steps in the system for automatic control of the reactive power.

The control unit is an integral part of the PFI plant comprising of Cuttent Transformer of adequate rating. Automatic Power Factor Correction Relay to keep the power factor almost constant at 0.98 & independent of load fluctuations having in built digital power factor meter, indication lamps, ON/OFF switches, switching step indicators etc. are included.



WARRANTY

We provide warranty on the performance of our manufactured equipment for any defect of design, workmanship and materials for a period of 12 months from the date of dispatch from our factory.

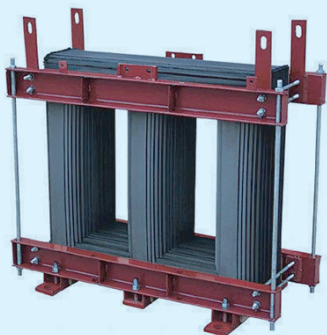
AFTER SALES SERVICE

Under the philosophy of TQM the service of ETB are extend to the premises of customrs. ETB has a strong team of dedicated members to supervise installation, testing, commis-sioning and provide after sales service.

ETB boasts of modern design and production technique supported by latest technology and experience. The manufacturing facilities of the production of distribution transformer have been extended up to 5000 KVA. Instrument transforming dry and oil immersed for indoor/out door types. Pole type transformer, mainly designed for rural electrification. Isolation transformer for sophisticated application. Furnace transformer, oil immersed with cooling tube or water exchange type, 200KVA to 500KVA rating, having system voltage of 11KV or 33KV. Auto transformer for stabilizer. Auto transformer of motor starting or industrial use, air cooled types, with or without control panel. Buck boost transformer designed and built according to customer's requirement or use or special equipment having voltage other than standard, **ETB** transformer's are designed according to the requirement of individual customer confirming to one or more internationally organized standard.

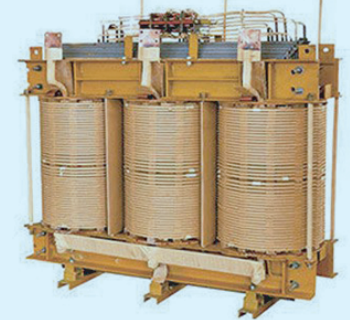
DISTRIBUTION TRANSFORMER

Our product satisfy requirement of Bangladesh Power Development Board (BPDB), Dhaka Power Distribution Company (DPDC), Dhaka Electric Supply Company (DESCO) Rural Electrification Board (REB) ETB is equipped with all necessary manufacturing and testing facilities. We constantly monitor quality, reliability and services of our products and thus enjoy the patronage of many quality conscious customers.



CORE is made of high permeable cold rolled grain oriented (CRGO) non aging, highly permeable silicon steel sheet with thickness of 0.23 to 0.27mm. steel sheet insulated on both side insulated core clamping bolts, channels and supports ensures low iron losses and magnetizing current and reduces.

WINDINGS of high voltage and low voltage are made of high conductivity electrolytic copper, other paper insulated pin hole free enamel wire, free from scale burr and silver. Ducts are provided both in the HV & LV windings for oil to circulate freely to keep the transformer sufficiently cool. Every transformer is designed to meet the BIL (Basic Insulation Level) requirements fulfilling all the short circuit requirements.



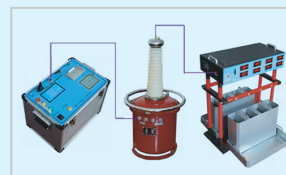
TANK are fabricated from electrically welding mild steel sheet. Each tank is tested under pressure of 5Kg/cm² for detecting any leakage. Standard tank fitting are pulling eye's, oil sampling & drain valve, earthing bolts, name plate & individual phase & neutral markings. tank cover are provided with anti magnetic materials.

INSULATING OIL & COOLING: All the transformers up to 10000 KVA are ONAN cooled (self cooling) i.e natural circulation of both oil & air. Forced cooling is arranged for higher capacities. Mineral oil used is of moisture free high dielectric strength confirming to IEC-296 or BS-148 standard.

SURFACE FINISH: The inside of the tanks are painted with corrosion & chemical resistant paint. the external surfaces are painted with two undercoats high quality primers and one top weather resistant coating of synthetic enamel paint.

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

- ▲ Ratio and polarity
- ▲ Resistance balance
- ▲ Insulation resistance
- ▲ High tension withstand
- ▲ Induced voltage withstand
- ▲ Iron losses and no load current
- ▲ Copper losses
- ▲ Impedance voltage
- ▲ Vector group
- ▲ Dielectric strength of oil.



ETB offers you a specialized service for installation of SUB-STATION equipment. We have a group of skilled personnel backed by experience commissioning engineers with most upgrade working tools, device and commissioning test instrument, we also cover prompt and efficient after sales service by qualified engineers either at customer's premises or at our work station. Our every transformer covers 18 months manufacturing warranty.

TECHNICAL SPECIFICATION

1) Three phase, 11/0.415KV

Model	Capacity (KVA)	% Impedance	No Load Loss (W)	Full Load Loss (W) at 75.C	% regulation		% Efficiency		Dimension LxWxH(cm)	Wt.of Oil (kg)	Total Wt (kg)
					At Unity PF	At 0.8 PF	At Unity PF	At 0.8 PF			
ETB 314025	25	3.5	75	55.0	2.24	3.40	97.56	96.97	70x40x110	80	400
ETB 314050	50	3.5	125	1200	2.43	3.45	97.42	96.79	80x50x128	100	600
ETB 314100	100	4.0	230	1600	1.67	3.50	98.20	97.76	83x76x128	130	750
ETB 314150	150	4.0	300	2000	1.40	3.35	98.49	98.12	98x82x128	170	830
ETB 314200	200	4.0	340	2200	1.17	3.22	98.75	98.44	95x83x135	200	920
ETB 314250	250	4.0	420	2800	1.19	3.23	98.73	98.42	100x85x140	220	1030
ETB 314315	315	4.0	500	3400	1.15	3.20	98.78	98.48	105x90x140	250	1250
ETB 314400	400	4.0	610	4260	1.14	3.19	98.80	98.50	106x94x140	280	1400
ETB 314500	500	4.0	700	4900	1.05	3.14	98.89	98.62	120x100x145	350	1550
ETB 314630	630	4.5	800	5600	0.99	3.40	98.99	98.75	125x100x150	390	1760
ETB 314750	750	5.0	850	6000	0.92	3.66	99.09	98.87	135x105x160	460	2150
ETB 314800	800	5.5	950	6200	0.92	3.96	99.11	98.90	140x120x170	500	2340
ETB 31401M	1000	5.5	1100	8000	0.95	3.98	99.10	98.88	170x120x205	640	2660
ETB 31412M	1250	6.0	1300	9000	0.90	4.24	99.18	98.98	200x120x210	750	3080
ETB 31415M	1500	6.0	1650	11500	0.94	4.27	99.13	98.92	210x120x215	800	3200
ETB 31416M	1600	6.0	1800	12600	0.96	4.29	99.11	98.89	214x125x220	840	3500
ETB 31402M	2000	6.5	2100	15000	0.96	4.58	99.15	98.94	225x130x250	970	4000
ETB 31425M	2500	6.5	2500	18000	0.93	4.56	99.19	98.99	228x136x250	1140	5700
ETB 31403M	3000	7.0	3000	21000	0.91	4.48	99.24	99.06	234x140x225	1260	7000
ETB 31405M	5000	7.5	2500	29000	0.86	5.10	99.33	99.17	250x150x270	1450	8500
ETB 31410M	10000	8.0	8000	48000	0.80	5.53	99.44	99.30	270x180x310	2800	16000

2) Three phase, 33/0.415KV

Model	Capacity (KVA)	% Impedance	No Load Loss (W)	Full Load Loss (W) at 75.C	% regulation		% Efficiency		Dimension LxWxH(cm)	Wt.of Oil (kg)	Total Wt (kg)
					At Unity PF	At 0.8 PF	At Unity PF	At 0.8 PF			
ETB 334100	100	4.0	260	1650	1.72	3.52	98.13	97.67	96x58x140	190	540
ETB 334200	200	4.5	350	2800	1.49	3.72	98.45	98.078	120x95x150	350	1150
ETB 334500	500	5.0	950	6500	1.41	3.92	98.83	98.17	150x112x180	600	2050
ETB 33401M	1000	6.0	1400	11500	1.32	4.53	98.73	98.41	190x130x210	650	2900

3) Single phase, 6350/0.240KV

Model	Capacity (KVA)	% Impedance	No Load Loss (W)	Full Load Loss (W) at 75.C	% regulation		% Efficiency		Dimension LxWxH(cm)	Wt.of Oil (kg)	Total Wt (kg)
					At Unity PF	At 0.8 PF	At Unity PF	At 0.8 PF			
ETB 162005	5	2.5	25	115	2.3	1.42	98.28	96.62	35x35x50	20	115
ETB 162010	10	3	50	160	1.63	2.81	97.94	97.44	40x35x50	30	135
ETB 162015	15	3	65	210	1.43	2.72	98.2	97.76	50x35x50	40	170
ETB 162025	25	3	80	320	1.32	2.8	98.43	98.04	52x36x52	50	230
ETB 162375	37.5	3	120	420	1.16	2.58	95.58	98.23	55x40x58	65	320
ETB 162050	50	3.5	140	550	1.15	2.89	98.64	98.3	58x42x60	80	420
ETB 162075	75	4	200	1000	1.48	2.52	98.4	98.01	65x45x70	140	620
ETB 162100	100	4	225	1400	1.4	3.35	98.43	98.33	69x45x80	200	650
ETB 162150	150	4.5	320	1800	1.29	3.6	98.61	98.26	72x46x110	210	690

4) Single phase, 11/0.24KV

Model	Capacity (KVA)	% Impedance	No Load Loss (W)	Full Load Loss (W) at 75.C	% regulation		% Efficiency		Dimension LxWxH(cm)	Wt.of Oil (kg)	Total Wt (kg)
					At Unity PF	At 0.8 PF	At Unity PF	At 0.8 PF			
ETB 112010	10	3	50	160	1.63	2.81	97.94	97.44	45x33x70	30	130
ETB 112015	15	3	60	300	1.58	2.98	97.66	97.08	46x34x65	40	180
ETB 112025	25	3.5	75	400	1.65	3.16	98.14	97.68	48x35x85	50	240
ETB 112375	37.5	4	110	600	1.67	3.5	98.14	97.69	52x40x90	70	250
ETB 112050	50	4	130	850	1.76	3.55	98.8	97.61	60x42x95	80	415

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📍 Factory: Tetuljhora, Rajfulbaria, Savar, Dhaka, Bangladesh