



Power Technologies – Customer Support & Training: 31.05.2013

Training centre facilities Vadodara, India

Training Centre Facilities

Demo Room

- Demo-room with operating models

Practice

Benches

- Practice benches for hands-on training

Demo

Switchyard

- Outdoor switchyard with high and medium voltage switchgear, power and distribution transformers and other power technology products

Learning Aids

Class Rooms

- Sophisticated learning aids such as, simulations, product cut-outs and multimedia presentations
- Well-equipped classrooms with an instant access to ABB group e-learning sites

Training Centre Facilities

Demo Room – Product Cutouts

Demo Room

Practice
Benches

Demo
Switchyard

Learning Aids

Class Rooms



**72.5 kV Plug &
Switch system**

**145 kV Capacitor
Voltage
Transformer**

**245 kV Circuit
Breaker Arc
chamber type
LTBE**

**145 kV Circuit
Breaker Arc
chamber type
LTBD**

**72.5 kV Circuit
Breaker pole
type EDF**

**66 kV Current
Transformer type
IMB**

Training Centre Facilities

Demo Room

Demo Room

Practice
Benches

Demo
Switchyard

Learning Aids

Class Rooms



**Generator Circuit
Breaker – Type
HECS -130L**

Training Centre Facilities

Demo Room

Demo Room

Practice
Benches

Demo
Switchyard

Learning Aids

Class Rooms



Generator Circuit
Breaker – Type
HECS -130L

On Load Tap
Changer – Type
UC

Training Centre Facilities

Demo Room

Demo Room

Practice
Benches

Demo
Switchyard

Learning Aids

Class Rooms



- **72.5kV PASS (Plug & Switch System) Module**
- **Breaker Pole for 145 kV SF6 Circuit Breaker Type – ELF**
- **Breaker Pole for 145 kV SF6 Circuit Breaker Type – LTBD1**
- **Breaker Pole for 72.5 kV SF6 Circuit Breaker Type – EDF**

Training Centre Facilities

Demo Room

Demo Room

Practice
Benches

Demo
Switchyard

Learning Aids

Class Rooms



- Breaker Operating Mechanism Type – BLG
- Breaker Operating Mechanism Type – BLK222
- Breaker Pole for 145 kV SF6 Circuit Breaker Type – ELF
- Breaker Operating Mechanism Type – FSA

Training Centre Facilities

Demo Room

Demo Room

Practice
Benches

Demo
Switchyard

Learning Aids

Class Rooms



- On Load Tap Changer (with Cutout)
- Polymer Insulator Surge Arrestors
- 11 kV – HPA – SF6 Circuit Breaker

Training Centre Facilities

Demo Room

Demo Room

Practice
Benches

Demo
Switchyard

Learning Aids

Class Rooms



- Relay panels with numerical relays (Relion®, SPACOM & RE_ series)
- SCADA for control & monitoring of Switchyard

Training Centre Facilities

Demo Room

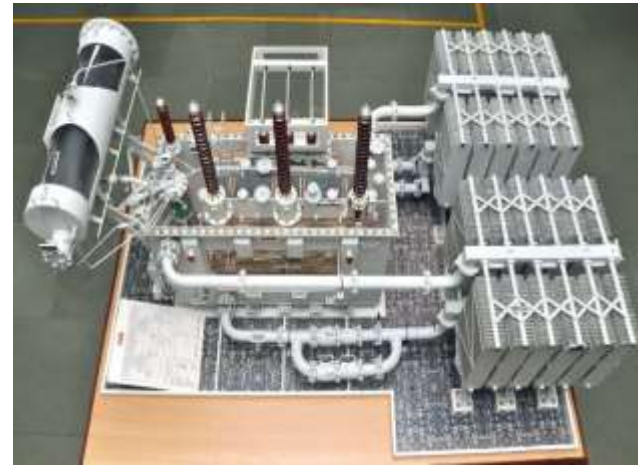
Demo Room

Practice
Benches

Demo
Switchyard

Learning Aids

Class Rooms



- **Power Transformer Cut Model**

Training Centre Facilities

Demo Room

Demo Room

Practice
Benches

Demo
Switchyard

Learning Aids

Class Rooms



- Unisafe Panel with 12 kV CB type VD4 & REF542plus Relay
- 12 kV Ring Main Unit (RMU) with REJ603 Relay
- Safesix Panel – Type VHA with 12kV CB type HPA, REF542plus Relay & HV Cable Accessories fitted inside the panel

Training Centre Facilities

Demo Room

Demo Room

Practice
Benches

Demo
Switchyard

Learning Aids

Class Rooms



**Unigear Panel - Type ZS1 with
11 kV Circuit Breaker type VD4
(40kA) & REF615 Relay**

**12kV Ring Main Unit – SafeLink
CVC**

Training Centre Facilities

Demo Room

Demo Room

Practice
Benches

Demo
Switchyard

Learning Aids

Class Rooms



**33kV Gas Insulated Switchgear -
Type ZX2**

Training Centre Facilities

Demo Room – Product Components

Demo Room

Practice
Benches

Demo
Switchyard

Learning Aids

Class Rooms



- Compressor cut out
- Circuit Breaker components & cutout model
- Transformer Accessories

Training Centre Facilities

Practice Room

Demo Room

**Practice
Benches**

Demo
Switchyard

Learning Aids

Class Rooms



**Hands on
Practice of
assemblies**

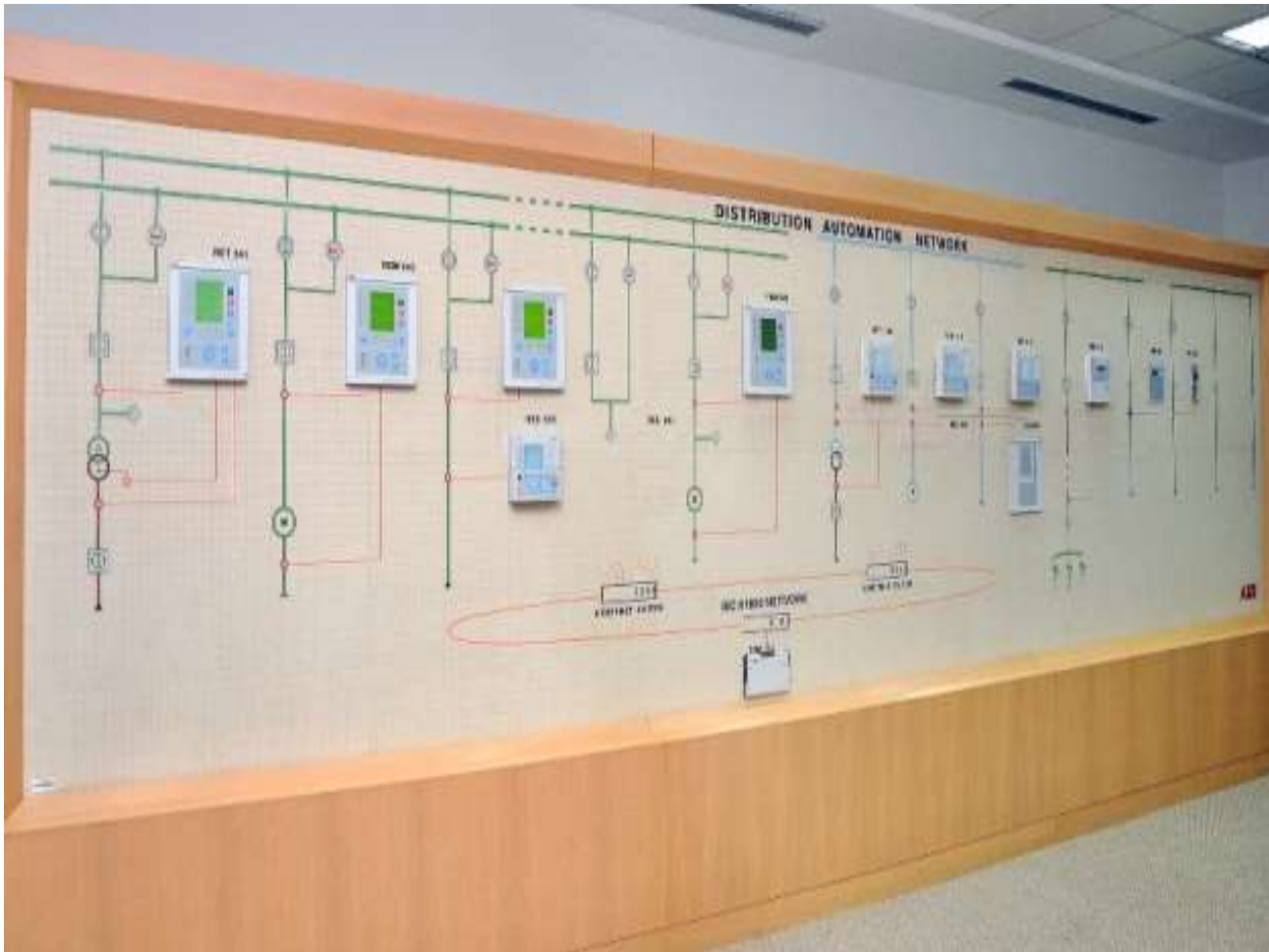
**Circuit Breaker
Pole**

**Pneumatic
Drives**

Spring Drives

Power Technologies Training Centre

Class Room with Protection Relay Demonstration Panel



Training Centre Facilities

Demo Switchyard

Demo Room

Practice
Benches

**Demo
Switchyard**

Learning Aids

Class Rooms



Training Centre Facilities

Demo Switchyard

Demo Room

Practice
Benches

**Demo
Switchyard**

Learning Aids

Class Rooms



420 kV

SF6 Circuit Breaker

Type – LTB420E2

Training Centre Facilities

Demo Switchyard

Demo Room

Practice
Benches

**Demo
Switchyard**

Learning Aids

Class Rooms



245 kV

SF6 Circuit Breaker

Type - ELF SL 4 -1

Training Centre Facilities

Demo Switchyard

Demo Room

Practice
Benches

**Demo
Switchyard**

Learning Aids

Class Rooms



245 kV

SF6 Circuit Breaker

Type – LTBE1

Training Centre Facilities

Demo Switchyard

Demo Room

Practice
Benches

**Demo
Switchyard**

Learning Aids

Class Rooms



145 kV

SF6 Circuit Breaker Type –
LTB145D1/B with FSA
operating mechanism

Training Centre Facilities

Demo Switchyard

Demo Room

Practice
Benches

**Demo
Switchyard**

Learning Aids

Class Rooms



145 kV

SF6 Circuit Breaker

Type – LTB145D1/B with
BLK222 Operating Mechanism

Training Centre Facilities

Demo Switchyard

Demo Room

Practice
Benches

**Demo
Switchyard**

Learning Aids

Class Rooms



72.5 kV

Circuit Breaker

Type – EDF SK 1-1

Training Centre Facilities

Demo Switchyard

Demo Room

Practice
Benches

**Demo
Switchyard**

Learning Aids

Class Rooms



Disconnecter

Type – SGF – Center Break

Training Centre Facilities

Demo Switchyard

Demo Room

Practice
Benches

**Demo
Switchyard**

Learning Aids

Class Rooms



Disconnecter

Type – SGF – 145kV –
Double Break

Training Centre Facilities

Demo Switchyard

Demo Room

Practice
Benches

**Demo
Switchyard**

Learning Aids

Class Rooms



245 kV
Capacitor Voltage Transformer

245 kV
Current Transformer Type IMB

66kV
Current Transformer Type TMBR

145 kV
Composite Insulator Current
Transformer Type IMB

Training Centre Facilities

Demo Switchyard

Demo Room

Practice
Benches

**Demo
Switchyard**

Learning Aids

Class Rooms



- 145 kV Transformer Bushing
- 50 MVA 11kV/145kV Power Transformer with accessories
 - Conservator
 - Radiator Bank
 - MOLG
 - PRV
 - OCTC
 - Bucchohz Relay
 - Oil Surge Relay
 - Breather

Training Centre Facilities

Demo Switchyard

Demo Room

Practice
Benches

**Demo
Switchyard**

Learning Aids

Class Rooms



**33 kV Vacuum
Circuit Breaker
Type VBF**

**11 kV Circuit
Breaker
(Magnetic drive)
Type SDB**

Training Centre Facilities

Demo Switchyard

Demo Room

Practice
Benches

**Demo
Switchyard**

Learning Aids

Class Rooms



**Outdoor
Capacitor Bank
with 6 units
Each of 333.33
kVAr capacitor**

Training Centre Facilities

Demo Switchyard

Demo Room

Practice
Benches

**Demo
Switchyard**

Learning Aids

Class Rooms



Outdoor Capacitor Bank with
3 units

Each of 200 kVAr capacitor

Training Centre Facilities

Demo Switchyard

Demo Room

Practice
Benches

**Demo
Switchyard**

Learning Aids

Class Rooms



Single Phase Distribution
Transformer

25kVA, 6.3kV/240V

Training Centre Facilities

Motor and Generators

Demo Room

Practice
Benches

**Demo
Switchyard**

Learning Aids

Class Rooms



- **Motor Cut Models and motor accessories**

Training Centre Facilities

Motor and Generators

Demo Room

Practice Benches

Demo Switchyard

Learning Aids

Class Rooms

Wind Generator Cut Model



Training Centre Facilities

Learning Aids

Demo Room

Practice
Benches

Demo
Switchyard

**Learning
Aids**

Class Rooms

- Class Room Presentations
- Demonstrations & Hands on Practice at Demo room & switchyard
- Demonstration of Pre-commissioning testing
- Multimedia animations
- Factory visits for physical demonstration of best assembly & testing practices of products
- e-Library

Training Centre Facilities

Class Room

Demo Room

Practice
Benches

Demo
Switchyard

Learning Aids

**Class
Rooms**



- Two Air Conditioned Class Rooms fully equipped with
 - Instant access to ABB Group e-learning
 - Wi – fi access
 - Sophisticated learning aids such as, simulations and multimedia presentations

Training Centre Facilities

Class Room

Demo Room

Practice
Benches

Demo
Switchyard

Learning Aids

**Class
Rooms**



- Air Conditioned auditorium

Power and productivity
for a better world™

