

ABB

Authorized System Integrator
Medium & Low Voltage Switchgear



Bush Electromech & Engineering Pvt. Ltd.

POWERING RELIABILITY, ENGINEERING TRUST



COMPANY OVERVIEW

Bush Electromech & Engineering Pvt. Ltd. is a trusted name in power distribution and switchgear solutions, delivering innovation, reliability and performance.

Backed by over three decades of Industry expertise our company is driven by seasoned professionals and supported by state-of-the-art manufacturing facilities. From design and testing to precision manufacturing, our expert teams ensure every product meets the highest benchmarks of quality, safety and efficiency.

Our people are our biggest strength with experience gained from various national and international leading organizations. Our workforce blends global best practices with local agility - delivering dependable solutions tailored to customer needs.

Since our establishment in 2010, we have steadily evolved from a specialized switchgear manufacturer into comprehensive power solutions provided, recognized for reliability, innovation and engineering excellence in low voltage and medium voltage switchgear solutions. Our strategic association with ABB Ltd. has further strengthened our capability to delivers advanced, future ready power solutions.

The company has earned customer confidence through consistent performance, timely delivery and uncompromising quality.

Driven by innovation and customer focus, we continuously raise the bar to deliver high quality switchgear and automation solutions that Power Industries Infra Projects EPCs, utilities and so on.

Our Business Process

At Bush Electromech we follow well-defined and Industry compliant business processes that enables to consistently deliver high quality of low voltage and solutions, backed by extensive research, hands-on-experience, and continuous improvement, our processes are designed to meet and exceed client expectation.

Before initiating any project, we undertake "detail planning and analysis" to ensure efficiency and timely execution. Each stage of our workflow is carefully monitored to achieve optimal results and longer term reliability.

Key Stages of Our Process

Design and Development :

Innovative and customized solutions engineered to clients requirement.

Systematic Process Flow :

Structured work-flow ensuring smooth and error-free order execution.

Efficient Work Allocation :

Skilled man power deployment for best quality and productivity.

Strategic Sourcing :

Highest quality materials are being provide from trusted vendors.

Standardized Operating Methods :

Proven practices ensuring, consistent and quality products.

Customer Centric Approach :

Client feedback integrated at every stage.

One Time Delivery :

Commitment for meeting project deadlines without compromise. With our proven systems and disciplined execution, we successfully complete projects within stipulated time lines while maintaining the highest quality standards.



OUR VISION

To get recognition as a trust worthy company from our customers and associates.



OUR MISSION

To become preferred switchgear manufacturer by winning confidence of our customers by delivering quality products and services and to achieve sustainable business growth.



CORE VALUES

Quality : Commitment to excellence in every product & service.

Integrity : Ethical practices & transparent business operations.

Innovation : Continuous improvement through technology & design.

Customer Centric : Delivering value & satisfaction to all clients.

Team Work : Integrated teamwork for dependable engineering outcomes.

QUALITY POLICY

M/s. BUSH ELECTROMECH AND ENGINEERING PVT. LTD. Chhatrapati Sambhajinagar India commits to satisfy their customers by manufacturing consistent quality products at the optimum cost to meet their requirements, conforming to national and international standards.

We as an organisation, shall strive for enhancing company's reputation by continually improving the effectiveness of the quality management system.

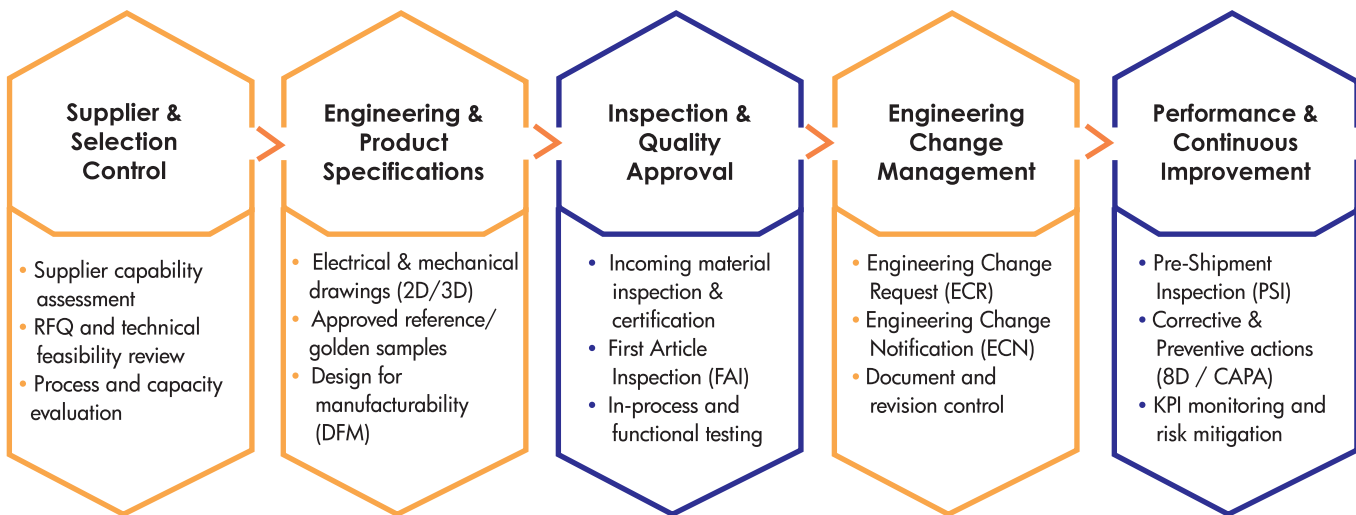
Why Us?

- State of the art manufacturing facilities with CNC Laser and CNC bending.
- Eco-Friendly powder coating using Nano-Technology pre-treatment for superior surface finish.
- IEC/IS Compliant type tested products.
- Flexibility in designing the products in line with customer requirements and inline with National & International standards.
- Safety standards and certifications are being followed to produce Quality Products.
- Always try to give and deliver cost effective solutions to meet the customer demands.
- Fast response to the customer enquiries, queries and services and very flexible to suit their project targets.
- Numerous product range from low voltage switchgear such APFC, PCC Panels to Substation equipment's Viz. 11kV, 22kV & 33kV PCVCBs, 11kV, 22kV & 33kV RMUs, 11/22/33kV Control and Relay Panel. 11/22/33kV Indoor and Outdoor metal clad VCB Panels.
- "Concept to commissioning support" to help our customer hassle-free. Services on site.
- Very flexible onsite service for any emergency needs of the customer. Which is the need of the day.
- "One stop solution" to many of our clients for their project requirements.
- Sourcing and using only high standard components, used in the switchgears viz CTs/PTs, Relays, meters strictly evaluating vendor development process.

Quality Assurance / Research & Development

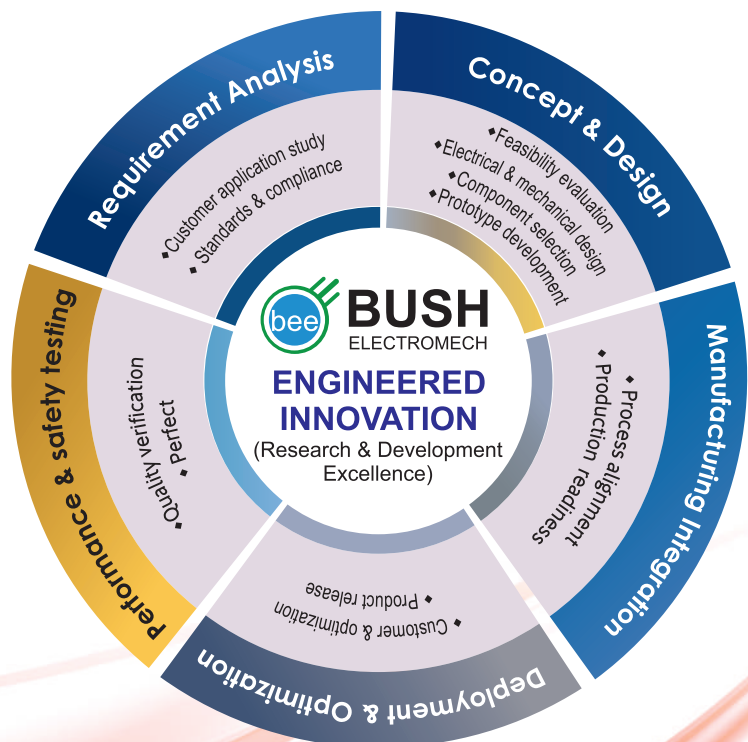
At **Bush Electromech and Engineering Pvt. Ltd.**, quality is engineered into every stage of our operations. Our robust Quality Management System, aligned with ISO 9001:2015, ensures consistent performance, safety, and long-term reliability of all electromechanical solutions delivered to our customers.

Quality Assurance - Process Flow



Research & Development

At **Bush Electromech, Research & Development** is the backbone of innovation and product excellence. Our dedicated R&D ecosystem integrates engineering expertise, field insights, and advanced technology to deliver reliable, future-ready electrical solutions. Our structured development approach ensures every product meets stringent performance, safety, and compliance standards-right from concept to commissioning.



Industry Applications

We are a prominent and trusted name in the industry, delivering a comprehensive range of high-quality electrical products. Our solutions are engineered to meet stringent performance standards and cater to the diverse requirements of multiple sectors.

Our products are widely used across the following industries:

- ◆ Power Generation & Distribution
- ◆ Engineering & Manufacturing
- ◆ Information Technology & Software Facilities
- ◆ Telecommunications
- ◆ Textile Mills
- ◆ Solar & Wind Energy Projects
- ◆ Sugar Mills
- ◆ Cement Plants
- ◆ Paper & Pulp Industry
- ◆ Dyeing & Processing Units
- ◆ Oil & Petrochemical Industry
- ◆ Religious & Institutional Infrastructure (Temples)
- ◆ Electrical Substations

Our Product Portfolio

- ◆ 12kv up to 3150A, up to 40kA Indoor/Outdoor AIS VCB Panels.
- ◆ 22kV, up to 2000A, 31.5kA Indoor/Outdoor AIS VCB Panels
- ◆ 33kV, up to 2000A, 31.5kA Indoor/Outdoor AIS VCB Panels.
- ◆ 12kV, 1250A, 25kA Fixed Type VCB Panels.
- ◆ Control and Relay Panel (Indoor/Outdoor)
MSEDCL / MPEB Approved.
- ◆ LV/MV Fixed / Automatic Power Factor Control Panel.
- ◆ IEC-61439 Compliant Low Voltage Panels.
- ◆ IEC-61439 Compliant (ABB-ArTu-k-proposed)
- ◆ LV Static VAR compensator.
- ◆ LV/MV Variable Frequency Drive Panels.
- ◆ LV/MV Soft Starter for Pumping Application



12kV, 3150A, upto 44kA Indoor / Outdoor AIS VCB Panel Board

Salient Features of VCB panels

- Panels are designed in accordance with ABB's guidelines and as per IEC/IS standards.
- Compact and Robust design with high electrical and mechanical life.
- Fully compartmentalized construction with IP4X (Indoor) and IP55 for outdoor type.
- Compliant to latest IEC-62271-200 standard.
- Highest standards of safety interlocks for operator safety.
- Lockable Automatic Safety shutters for Circuit Breaker Compartment. such that live parts are covered by shutters when Circuit Breaker is racked out.
- Anti-pumping relay to prevent multiple breaker closures.
- Versatile and powerful ABB make VD 4 Circuit Breaker ideal for various applications Viz, Capacitor bank switching, marine environments.



**12kV VD4 CB
ABB - Make**

Indoor



Outdoor

Technical Specification

Sr.No.	Parameter Description	Unit	22/33kV IAS Vacuum Circuit Breaker Panel	
			Indoor	Outdoor
1	Type	Drawout/ Fixed	Drawout	Drawout
2	Rated voltage	kV	12, 17.5	12, 17.5
3	Rated frequency	Hz	50	50
4	Main busbar	Cu. / Al.		
5	Rated current	A	Upto 3150A	Upto 3150A
6	Rated short-time withstand current	kA / 1sec	Upto 44	Upto 44
7	Rated break withstand current	kA	2.5 times of rated SC	
8	Mechanical life	Times	10000	
9	Power Frequency withstand -1min	kV rms	28/35	
10	Lightning impulse withstand	kV peak	75/95	
11	Secondary circuit 1 min P.F. with stand voltage	kV rms	2kv	
12	Compact dimension (WxDxH) approx.	mm	600x1300x1800	

22kV-33kV, upto 2500A, 31.5kA Indoor / Outdoor AIS VCB Panel Board

Salient features of 22 & 33kV remains same as specified for 11kV VCB Panels.

Engineered for Reliability, Built for Performance.

Key Features of ABB make VD4 Circuit Breaker.

- ABB make VD4 Circuit Breaker is Powerful and Versatile ideal for various applications like capacitor bank and marine environments.
- The VD4 circuit Breakers feature vacuum Interrupters embedded in poles, which protect against humidity and reduces the risks of failure due to contamination, tracking or partial discharge.
- Prevent incorrect and hazardous operations thanks to the special interlocks in the operations mechanism and in the truck.
- Extremely reduced and simple maintenance.
- Mechanical anti-pumping device provided as standard.



Indoor



Outdoor



**33kV VD4 CB
ABB - Make**

Technical Specification				
Sr.No.	Parameter Description	Unit	VD4 Vacuum Circuit Breaker	
			12kV	22/33kV
1	Rated & Insulation voltage	kV	12	36
2	Withstand voltage (1min)	kV (50Hz)	28	70
3	Impulse withstand voltage	kV	75	170
4	Rated frequency	Hz	50	50
5	Rated normal current	A (40°C)	630-1250 - 2000-3150	150-1600 - 2000-2500
6	Rated breaking capacity and rated short-time withstand current (3s)	kA	26.3 / 40 (3) Sec	31.5 (3) Sec
7	Making capacity	kA	65.75/100	80
8	Operating sequence		0-0.3-CO3min-CO	
9	Opening time	ms	35...60	35...60
10	Arc time	ms	10...15	10...15
11	Total interruption time	ms	45...75	45...75
12	Closing time	ms	50...70	60...80
13	Weight	Kg	90	290
14	Withdrawable	Yes/No	Yes	Yes

Fixed Type VCB

- Fixed type switchgear (cost effective solution). Compact design (W*D*H) W 600mm, D 1100mm H 2000mm.
- Can be used as multipanel switchboard / RMU System.
- Proven spring / spring mechanism and hence reliable.
- Motorized operation with local & remote options.
- Live line indicator for incoming supply indication.
- Comes with Earth Fault/Over Current and all transformer protections.
- Eco friendly as arc interruption takes place in vacuum.



33kV Control & Relay Panels Approved By



33kV C & R for Transformer Differential protection.
33kV C & R for Transformer without Differential protection.
33kV C & R Panel for Feeder protection.
For various ongoing & upcoming MSEDCL Projects.



11kV Control & Relay Panels Approved By



11kV C & R Panel for 1 Incomer & 3 Outgoing.
11kV C & R Panel for 1 Incomer & 1 Outgoing.
11kV C & R Panel for 2 Outgoing.
For various ongoing & upcoming MSEDCL Projects.



LT Panels



ABB Make Emax ACBs



MCC Panel



Outdoor 800V ACDB Panel For Solar Application



PCC Panel

Technical Specifications :

Indigenous type tested as per IEC-61439.
ABB ArTu-k LV Panels (Proposed)
Rated Services Voltage: 1000V.
Rated Impulse Voltage: 8kV.
Wall/Floor Mounting Options.
Rated Current: 6300A.
Rated Short Circuit Current Withstand: 100kA
Degree Of Protection-IP/33/4X/IP55
Mechanical Impact Resistance: IK 09/KO

ABB Emax-2 Specification :

Air Circuit Breaker are versatile compact power managers as per IEC/UL applications, rating up to 6300A-100kA with advanced microprocessor LSIG protection with smart features like Energy metering, communication and touch screen, Standard IEC 60947-2.

State of the Art Manufacturing Facility



Corporate Office & Unit - I



Unit - II

We operate from the advanced State-of-the-art manufacturing facilities built to deliver superior quality products.

Our infrastructure is equipped with modern CNC Laser and bending machines, automated fabrication systems with in house 7-tank Powder coating facility enabling efficient production, which meets the manufacturing standards.

Backed by 25+ qualified engineers and skilled work force of 100+ professionals, we ensure consistent quality innovation and dependable performance.



Partnering as Distributor ABB for Medium Voltage Products & Systems

**11kV/22kV/33kV Outdoor
SF6 Ring Main Unit**



**11kV/22kV/33kV Outdoor
Compact Substation**



CSS Internal Arrangement



**11kV/22kV/33kV Indoor
SF6 Ring Main Unit**



**11kV/22kV/33kV, 2000A, 31.5kA
Outdoor Porcelain Clad VCB**



Our Esteemed Clients



Bush Electromech & Engineering Pvt. Ltd.

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