

Prabhu

®



**EQUIPMENT FOR
MINING & INDUSTRIAL**

www.prabhuelectricals.in

COMPANY PROFILE

A key personnel of Prabhu who was in fabrication work for engineering goods had a vision of setting up a manufacturing unit for flameproof and non-flameproof switchgear products. Some time passed and soon dream become reality. The Company, Prabhu Industrial Udyog Pvt.Ltd in 1986, was formed and led by the dynamic founder Mr.Ramjeelal Agarwala. Manufacturing activities started in 1986 of Flame Proof & Non Flameproof low Tension & high-Tension Switchgear upto 6.6KV whose applications are mainly in Coal Mines and Industries.

Volga Engineering Co.Pvt. Ltd. was formed in the year 1978 by Mr. Chakraborty. Our management decided to take over the company Volga Engineering Co Pvt. Ltd as it was facing financial crisis and in 1992 it was taken over.

The Company, Prabhu Switchgear Pvt. Ltd. was formed in 1997 with the objective for manufacturing of high value items like FLP Transwitch Unit, Vacuum Circuit Breakers, Vacuum Contactors, Field Switch, Transformers etc. The vacuum Contactor & Vacuum Circuit Breaker are tested and certified by Central Power Research Institute. Power transformer been tested from ERDA.

"Prabhu" consists of aforesaid companies and the aforesaid companies manufacture wide range of electric control panels, industrial/ flameproof mining panels, Transformers, Vacuum Circuit Breakers etc which are used in opencast and underground coal mines and other industries too.

Today the company serves Coal India and its subsidiaries, The Singareni Collieries Co.Ltd, OEM clients and many other private clients.

A skillful and professional team is employed for commitment of quality products and providing service to its customers. The company is proud of its hardworking and friendly team who are readily available to answer any questions that one may have.

With changes in technology and in the nature of the business, one thing that is constant since inception is the quality of products and services to the customers which makes "Prabhu" unique from its competitors.

For Managerial effectiveness and to achieve growth Volga Engineering Co Pvt Ltd & Prabhu Switchgear Pvt Ltd has been merged/amalgamated into Prabhu Industrial Udyog Pvt Ltd but by keeping brand "VOLGA" & "PRABHU SWITCHGEAR" intact.



TESTING

The testing department is fully equipped to carry out all the routines tests as per IS/IEC: 60079-12014[latest].



Flameproof test

- Hydraulic Pressure Test.
- Flame path and clearance test.

Electrical test

- Operation Test.
- High voltage test.
- Insulation test.
- Overload test.
- Ammeter test.
- Voltmeter reading test.

MISSION

To introduce new products regularly, maintain products quality and providing services to customer till they are satisfied.

VISION

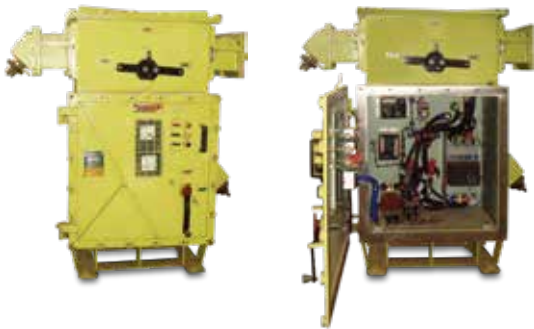
To be the leader in the industry in which the Company compete.

FLP PRODUCTS FOR UNDERGROUND COAL MINING

All FLP products are CIMFR tested, DGMS approved and BIS marked suitable for use in Gas Group I as per IS/IEC: 60079-1:2014, IS/IEC: 60079-0:2011 & IS/IEC 60079-0:2017.

Common features of FLP Panels

- Skid mounted enclosures fabricated from thick steel plate.
- Compartmentalized enclosures.
- Triple pole isolators mechanically and electrically interlocked with front cover.
- Triple pole throughgoing copper busbar of suitable capacity.
- Earth leakage relay, Over load, single phase, short circuit etc for protections.
- CBCT operated E/L relays, CTs for O/L and ammeter, and auxiliary transformer having suitable tapings of primary voltage and secondary voltage.
- Incoming/Throughgoing/outgoing with cable sealing box or plug & socket as per customer choice.
- Mining type double conical brass cable glands.
- Provision for intrinsically safe 12V remote circuit with terminals.
- Suitable scaled ammeter, voltmeter and other instruments or measurement.
- Indications-On/Off/Trip etc and push buttons Start/Stop/E/L test, reset etc.



ACB- Designed to protect electrical circuits and related equipments from overload and short circuit over current.

- Upto 400Amps, 1100 Volts. • MCCB operated.
- Easy accessibility of components for inspection and maintenance.



Drill Panel- Designed for safe and efficient operation of underground drilling equipment.

- Upto 1.5HP, 125 volts. • Transformer upto 2.5kVa.
- Suitable to connect one drill machine.
- Restrained type plug & socket of 30amps on the outgoing side



HT & LT Starters- Specially designed to reduce the heavy starting current and provide various protections for motors.

- High tension starters upto 400Amps, 6.6kV with Vacuum Contactors.
- Low tension starters upto 600Amps, 500Volts with Air Break Contactors.
- DOL starter for 1 motor.
- Auto reversing starter with 2 contactors.
- Two-in-one DOL starter/ Star Delta Starter.
- Starter with standby arrangement.





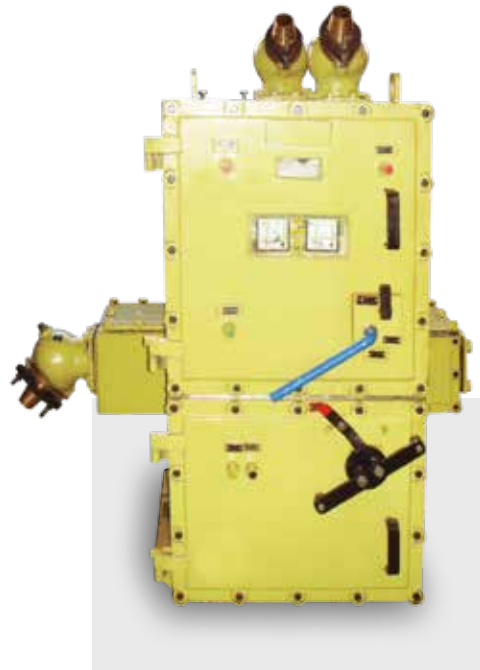
Lighting Transformer- Specially designed to provide power for a variety of devices.

- Upto 10kVa, 550 Volts.
- Mining type brass conical gland for incoming and outgoing side.



Gate End Box- Manufactured for control and protection of underground machines like SDL, LHD, shuttle cars etc.

- Upto 400Amps, 1100 volts.
- Outgoing side restrained type CI plug & socket.
- Fitted with Air Break or Vacuum Contactor.
- Intrinsically safe pilot panel for remote.
- Power wiring for incoming and outgoing.



Vacuum Circuit Breaker Panel- Designed for breaking high current at high system voltage.

- Breaker upto 630Amps, 6.6kV.
- Glass windows on the top chamber for reading measurements.
- Push button for electrical closing and mechanical trip. Lifting lugs and shackles provided.
- Connected upto one machine or as a multi panel with throughgoing side.
- Cable sealing box or plug & socket in incoming/throughgoing as per customer choice.



Transwitch Unit- Designed for safety and distribution of power to machines for varied application in mining.

- Accurate monitoring, control and protection.
- High short circuit breaking capacity.
- Compact size providing economy of space and cost.
- Distinguished and sleek design.
- Range upto 1000kVa, 6.6kV.
- Secondary side upto 1140Volts.
- Incoming with VCB, intermediate with transformer and Outgoing with MCCB.
- Supply upto 2 machines.



Transwitch Unit with Load Centre - Designed for saving cost, cabling and space for feeding power to Continuous Miner package, Long wall package and road header package, etc.

- Low height to suit both Low & Standard U/G mines.
- Range upto 2500KVA, 3.3kV-6.6kV.
- Secondary dual 415V-1140V.
- Incoming VCB, intermediate with transformer and Outgoing upto 12 drives+ 2 for pump/fan.
- HMI interface with LED display for individual drives resulting in easy monitoring, control and program setting(SCADA)
- Operational control of the load centre can be done from Remote/ Surface through remote communication protocol(RS 485, FO Cables) Eg: Start, Stop, Setting parameters, etc.
- Corrugated tank for extra cooling of the Power transformer.
- Plug & Socket interchangeability between Machine IC side and Load Centre OG side.
- Continuous duty operational equipment enhancing productivity.

NFLP PRODUCTS

FOR OPEN CAST/SURFACE MINES

/INDUSTRIAL APPLICATIONS



ACB- The NFLP ACB panel has been developed for use in surface areas offering high breaking capacity to protect low voltages application in high power circuits.

- Upto 500Volts, amps as per customer choice.
- Can be used to connect one machine.
- Can be coupled together as a multi panel formation.



Auto Transformer Starter- Designed to reduce starting currents.

- Upto 400Amps, 6.6kV.
- Air break for LT or Vacuum Contactors for HT.
- Good starting torque and current performance.
- Transformer can be oil cooled or dry type as per customer choice.
- Protections against short circuit, over/under voltage etc.



HT & LT Starters- Manufactured for providing various protections for motors.

- High tension starters upto 400Amps, 6.6kV with Vacuum Contactors.
- Low tension starters upto 600Amps, 500Volts with Air Break Contactors.



Gate End box- Manufactured to handle power effectively and reliably.

- Upto 420 Amps, 550Volts.
- Can be used to connect one or two motors.
- GEB is transportable, free standing and controlling.
- Restrained type CI plug & socket on outgoing side or Aluminum push pull type plug & socket(for metal mines).

Unitised Substation/TSS- Manufactured for safety and distribution of power.



- Range upto 11kV, load as per customer choice.
- IP-54 enclosures.
- Multiple incoming and outgoings as per customer choice.
- Intermediate Dry type or Oil cooled transformer as per customer choice.



VFD Starters- Specially designed for controlling & varying speed of motors.

- Range upto 550V, amps as per customer choice.
- Single or Two in one panel.
- DOL by pass arrangement.
- Separate remote control panel.
- Alarm annunciator with hooter.
- In built thruster brake arrangement.
- Exhaust fan for venting and POT for speed control.



Vacuum Circuit Breaker Panel- Manufactured with the objective of breaking high current at high system voltage fitted with various protections for safety of personnel and machines.

- Range upto 12kV, 1250Amps, 26.3kA.
- Type tested panel. • Trip free operating mechanism.
- Fixed type or drawout type breaker.
- Can be connected upto one machine or multiple.
- panels can be inter trunked for multiple outgoings.



PCC/MCC/Distribution panel- These panels have been made for accurate monitoring, control & protection of incoming thereby ensuring reliability in the chain of power system.

- Range upto 550Volts, amps as per customer choice.
- Available in single door or double door.
- IP-54/55 degree protection. • Compact design.
- Customised single or multi panel formation.
- Combined Starter and VCB panel, Multi VCB panel,
- Multi ACB-MCCB panel etc.
- Safety of humans against electrical shock.
- Protection of electrical machines.



Junction Box- Specially designed for containing wiring and protections of wiring at various junctions.

- Range upto 11kV. • IP-54 degree protection.
- Square design. • Canopy type with lifting lugs.
- Safety of humans against electrical shock.



Field Switch- Manufactured for effectively distributing power for various loads like drill machines, shovels, pumps etc suitable for dust laden and humid atmosphere.

- Range upto 11kv, 1250A.
- Two cubicles or three cubicles.
- Outgoing plug & socket.
- Off load isolator or On load switch.
- Castle type interlock.
- Hinged type door with wire mesh.
- Lifting hooks and skid base for transportation.
- Outdoor type.



Combined NGR-E/F- Neutral Monitoring System- Manufactured for limiting ground fault currents to safe levels so that all the electrical equipment in a power system is protected.

- Available for systems upto 6.6kV, 50 amps.
- Safety for personnel. • Life of equipment by limiting damage.
- Prevention of additional faults. • Service Reliability.
- Stainless steel wire wound Resistor, quoted with high temperature non-flammable resin.
- Solid state Neutral earth leakage relay with variable current settings and time settings with indications and push buttons.
- Solid state Fail Safe Relay with indications.
- Integrated power pack supply with panel.

OTHER PRODUCTS

Vacuum Contactor- Designed for convenience, safety and reliability.

- Range upto 7.2kV, 400A, ps.
- AC-4 duty contactor.
- 1 million mechanical and electrical life operation.
- Type tested.
- Compact design and light weight.
- Excellent dielectric recovery allowing high switching frequency.
- Pilot control fitted on board.
- Chopping current low.
- High interrupting ability.
- Magnetically held mechanism.
- Economised DC coil operation.
- Minimal maintenance required.



Vacuum Circuit Breaker- Withdrawable type circuit breakers rated upto 7.2kV and 12kV specially designed to break the circuit so that energy cannot continue flowing preventing fires and other problems that may arise due to some technical fault.

- Upto 630A, 7.2kV, 13.1kA.
- Upto 1250A, 12kV, 26.3kA.
- Type tested breaker.
- Short circuit for 3 secs.
- Making current of 32.75kA for 7.2kV breaker & 62.5kA for 12kV breaker.
- Insulation level of 20kv rms/60kVp for 7.2kV breaker and 28kv rms/75kVp for 12kV breaker.
- Components and assemblies so arranged for reliability and stability of breaker.
- Protection against short circuit and overload.

Non-Sealed Power Transformers(ONAN) upto 33kv.

- Product range: upto 5MVA upto 33kV class.
- Power transformers of range 33/11kV, 33/22kV, 33/3.3kV, 33/6.6kV, 11/3.3kV etc.
- Type tested and approved from NABL accredited lab.
- Rating as per clients requirement.



Non-Sealed Distribution Transformers(ONAN) upto 33kv.

- Distribution transformer as per IS 1180: Part 1 upto 2500KVA primary voltage of 3.3kV, 6.6kV, 11kV, 22kV & 33kV & secondary voltage of 433V or 415V.
- Rating as per clients requirement.

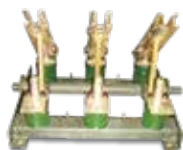


Booster Transformer.

- Booster transformer to boost the voltage to compensate for voltage drop due to transmission line away from source.
- Rating as per clients requirement.

Dry Type Transformers.

- Transformers upto primary voltage upto 11kV and secondary as per customer choice.
- These transformers benefit reliable electric performance, reduced copper loss and low maintenance with environment protection.
- Type tested and approved from NABL accredited lab.
- Rating as per clients requirement.



Isolators

- Forward-off-Reversing isolators upto 600A, 550V.
- Type tested F-O-R isolator upto 400A, 6.6kV.
- Isolators can be housed in steel sheet enclosure.



FACTORY AND OFFICE

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