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Perfect
Control



D. B. ELECTRICALS PVT. LTD.

: Factory :

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D. B. ELECTRICALS PVT. LTD.

State-of-the-art LT CONTROL PANEL
technology that puts you in Total Control

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Commitment takes on a new meaning

We are D. B. ELECTRICALS PRIVATE LIMITED. We are one of the leading manufacturers of Low Tension System Power and Control Panels for construction, manufacturing and service industries, commercial, institutional, residential and service complexes in private and Government sectors.

We launched operations in Mumbai in the year 1995. Fuelled by the need to fulfill the fast growing demands for our products, we established a modern facility at Goa in the year 2001 to boost the manufacturing of Power Distribution & Control Panels.

Our panels are type test approved as per CENTRAL POWER RESEARCH INSTITUTE (CPRI) standards for:

- Short circuit strength withstand test of 75kA, 6300A
- Temperature rise test up to 4000A
- Ingress protection test for both indoor and outdoor type panel (IP-53, IP-65)

In addition, our facility in Goa enjoys special tax benefits which are extended to our valued customers.

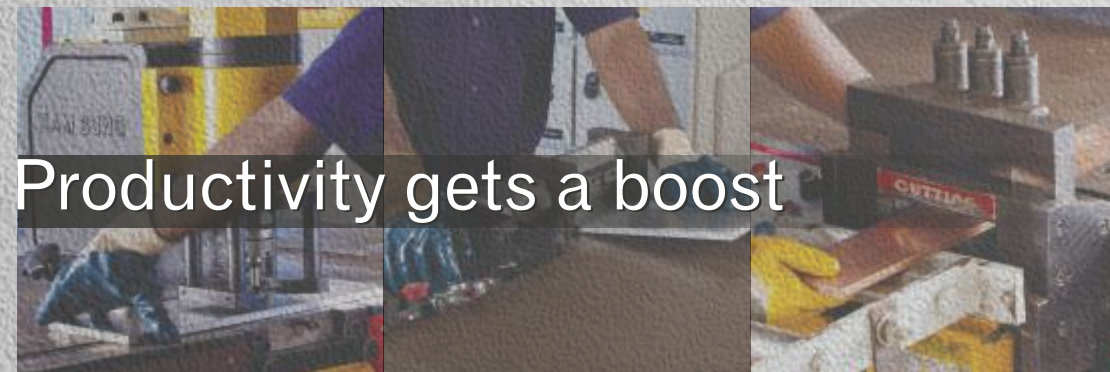


DBEPL Factory Unit: II Pernem, Goa



DBEPL Factory Unit: I Pernem, Goa






Productivity gets a boost

Products

We manufacture Power Control Centers up to 6300A rating, suitable for operating on 3 phase, 4 wire, 433V, AC systems. Our PCC's conforms to IS 8623 with a short circuit withstanding capacity of 75 kA for 1 sec.

We also provide a high degree of protection such as IP: 53, IP: 65 for the enclosures. The switchboards are offered in the fixed and semi draw-out type configuration with Single Front / Double Front design.

- Power Control Centers (PCC) 100 to 6300 Amps
- Motor Control Centers (MCC)
- Automatic Power Factory Control Panels (APFC) in both types i.e. contactor and thyristor based control system
- DG set AMF & Auto Synchronization Panels
- Bus duct of rating up to 4000 Amps



Where cutting edge work is the norm

We persistently implement progressive technology in our manufacturing process to enhance quality standards and provide reliable products.

Estimation and Design

We have a full fledged Design Center at our Mumbai office, equipped with the high speed computers and advanced designing software. Estimation of the panel is submitted to the client along with the drawings for approval

The drawing inter-alia includes the following data:

- General arrangement of the Panel comprising of dimensions, instruments, locks, feeders, cable alley and bus bar alley arrangement (Front, Side, Rear and Top Views)
- Form & IP requirement of the client / consultants (Forms 1 to all types of Form 4 panels are designed)
- Single line diagram of the panel with details of switchgear, Phase, Neutral & Earth bus bars, instrument transformers, instrument indication lamps etc
- Meter wiring diagram and Control schematic diagram with wire numbers, device designations of switchgears, instruments, relays and control wiring
- Terminal details for control panels
- Bill of Quantities

Receipt of the drawing approval initiates fabrication process of the panel

Cost

Combining in-depth knowledge of customer needs and an advanced manufacturing process, our products continue to retain their competitive price benefits.

Schedule

Our modern production facilities and skilled work team enable us to meet the restricted schedules of our clients. In fact, we have consistently achieved 100% timely delivery on numerous projects.



Fabrication

Our fabrication unit utilizes the latest machineries and is under the constant supervision of our production manager.

The fabrication of the panels is done with meticulous care:

- The body of the panel is fabricated out of 14 SWG CRCA sheet steel while 16 SWG CRCA sheet steel is used to fabricate the doors
- A channel measuring 40mm x 50mm is fixed in the busbar alley to support the busbar
- A proper support system of strips is provided to tie the cables securely
- Proper arrangement for mounting conical support is made so that links connected to MCCBs can be fixed on the support & cable load doesn't come on the MCCBs or other switchgears
- Proper angle is provided on the top for mounting panel lifting studs
- Wherever possible, partitions between vertical sections are provided with perforated sheet of 3mm holes, 16SWG for better cooling of the panels
- The fabricated part is finally reviewed by the expert technicians

State-of-the-art Methodology

The blue print of the Panel design determines the manufacturing process. Cutting, punching, bending and welding are programmed and executed using state-of-the-art CNC machines and other automated machines. This ensures speedy completion, high accuracy and eliminates human error.



The major machineries used in the process:

- Turrent Punch Vipro 255, Amada Make (CNC)
- Press Brake RG-80, Amada Make
- Hydraulic Shearing Machine
- Hydraulic Bending Machine
- CO2 Welding Machine, Lorch Make
- ARC Welding Machine
- Shearing, Punching & Bending Machine, Namsung Make
- Portable Grinder
- Bench Grinder
- Pedestal Drill Machine
- Hand Drill Machine
- Pedestal Tapping Machine
- Hand Trolley
- Bench Vice
- Manual Press Machine

Powder coating

Powder coating, an essential stage in the manufacturing process, consists of the following steps:

- 7 Tank process of the panels
- Spraying of Ferrocoat, Marpol, Berger powders on the panels
- Heating in the Oven
- Inspection of the powder coating before forwarding panel to shop floor for wiring and assembling

Bus bar & Wiring Process

Assembling and wiring work is carried out in separate and independent unit which is totally isolated from the fabrication and paint shop to ensure that the work is done in a clean atmosphere.

The below procedures are followed during the process:

- Bus bars are covered with heat shrinkable sleeves maintaining the color codes
- All control wiring is done as per standard wiring practice
- Instrument labels, feeder labels, safety and danger decals are properly fixed on the panel
- All earth links are provided between panel body and doors
- After finishing assembly and wiring, panel is cleaned with blower & cloth pieces
- Quality Supervisor finally checks the wiring once it's done

Equipments used:

- NAMSUNG's Shearing, Punching & Bending machine
- Hydraulic Bus bar bending machine
- Hydraulic Cable jointing tool up to 400 mm²
- Fitters hand tool kit
- Electric hot air blower
- Electric oven
- Panel label engraving machine
- Hylem Cutting machine (electrical)
- Bench type hydraulic bus bar bending
- Hydraulic wire cutting





Testing

Our facility is well equipped with modern apparatus to carry out quality tests during the manufacturing process and also before the products is dispatched.

Testing comprises the following:

- In house testing including Insulation Resistance test with 1000V Megger
- Functionality test of the panel
- Working of control and logic as per requirement
- Indication & functioning of the instrument
- Inspection of the panel before dispatch includes:
 1. Physical check (Dimension, P/C Check, Switchgear Rating)
 2. IR test with 1000V Megger
 3. HV test at 2kV for 1 minute using (0 to 5kV) HIPOT

Testing equipments:

- | | |
|------------------------------|-------------------------------|
| • Multi meter | • Phase sequence meter |
| • Current injection test kit | • Micro gauge |
| • Clip on multi meter | • High volt tester up to 5 kV |
| • CT polarity tester | • Coating thickness gauge |
| • Insulation tester | • Thermal Imaging Camera |
| • Vernier caliper | • Scratch tester |

Thermal Testing with advanced IR-Visual Imager

We also provide our customers with infrared thermal testing facility with the help of advanced FLUKE Make, Ti125, thermal imager to understand the hot spots mainly caused by loose connections, overheating etc. at any section in the panel. Any abnormality even not visible to the human eyes can be easily detected in both the form of images viz. IR and Visual which clearly shows the temperatures at any desirable point. What's more, the infrared thermal imager can save a blended infrared and visual image with every image capture instantly. As a result, customers get the complete picture and can compare the readings of different dates, which save their valuable time and ultimately money.





Safety touches a firm ground here

A stringent health and safety policy governs our functioning at every step. Only qualified and authorized personnel are permitted to perform electrical works for the best results. Whenever possible, all circuits or equipment are de-energized before beginning the work. We have installed safety equipment such as ELMCB to prevent any mishaps due to electricity. It is also mandatory for each member of the work force to follow:

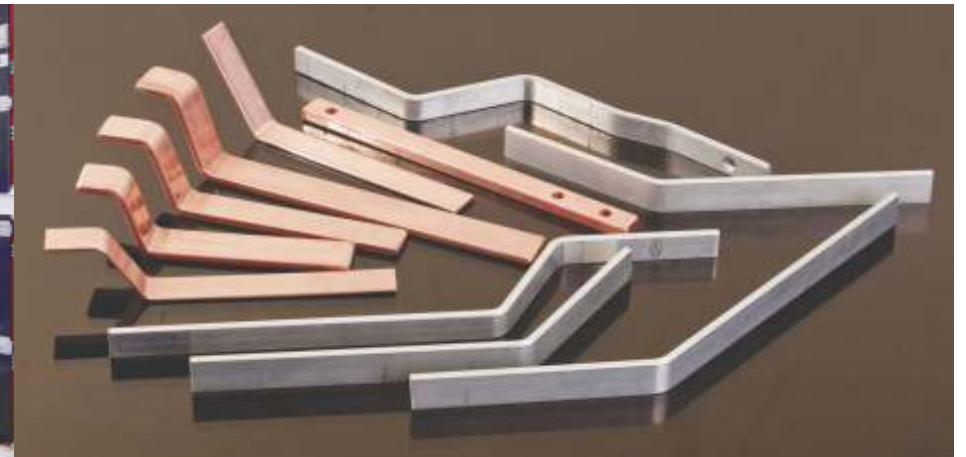
- Appropriate design
- Proper fabrication process
- Standard installation process
- Certified documentation techniques
- Effective operational and maintenance procedures
- Adequate electrical equipment calibrated by nationally recognized testing laboratory
- Useful personal protective equipment during the execution

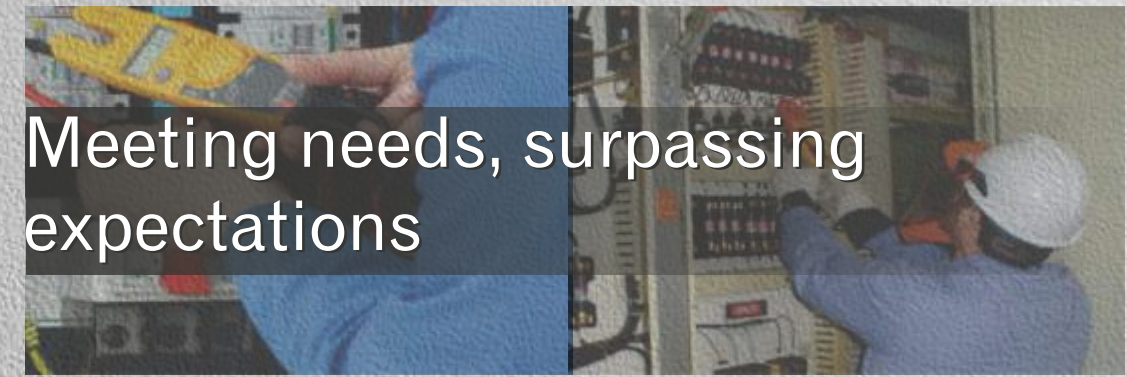
In case of any pre-identified hazards our workers report to their seniors who in turn do the following:

- Anticipate potential electrical problems and hazards
- Do not rush to finish a job, never bypass approved procedures
- Plan and analyze for safety during each step of any electrical work
- Keep accurate records (e.g. Panel drawings and other documents)
- Have significant safety-related work
- Use properly rated test equipment and verify its condition and operation before and after use
- Know applicable emergency procedures

Peace of mind, guaranteed

Our trained and expert engineers are available 24 hrs a day, 365 days a year for on-site repairs and breakdowns. We provide a flexible and responsive level of service that maximizes efficiency and minimizes downtime.





Meeting needs, surpassing expectations

Through consistently high-quality workmanship and coordinated services, we have built a market reputation for meeting the fast-track schedules of several growing industries as herein under:

- Software & IT centers
- Commercial and industrial build-outs
- Academic institutions
- Entertainment production studios
- Healthcares
- Financial institutions and Government agencies
- High profile residences
- Industrial infrastructures
- Government undertakings





Requirements turn into recognitions

Software / Corporate Offices

- 1 Tata Motor Finance Ltd.
- 2 Tata Capital Ltd.
- 3 TCS, TCE
- 4 Aditya Birla Minacs World Wide Ltd.
- 5 Aditya Birla Financial Services
- 6 Aditya Vikram Birla - Museum
- 7 Reliance Communication Ltd.
- 8 Godrej Properties Ltd.
- 9 G.V.K.
- 10 J.P. Morgan
- 11 WNS Global Services Pvt. Ltd.
- 12 Tech Mahindra Ltd.
- 13 Accenture Services Pvt. Ltd.
- 14 ICICI Direct Ltd.
- 15 Maersk India Pvt. Ltd.
- 16 Capgemini Ltd.
- 17 Angel Broking Ltd.
- 18 Kingfisher Airways Ltd.
- 19 Yahoo India Ltd.
- 20 Team Global
- 21 British Council
- 22 DSP Black Rock
- 23 India First Life Insurance, Mumbai
- 24 Vodafone, Pune
- 25 V.J. Core Soft Pvt.Ltd., Hinjewadi-pune
- 26 Volvoline Cummins, Ambarnath, Mumbai
- 27 Jardine Lloyd Thompson India Pvt. Ltd., Powai-Mumbai
- 28 Foton Motors Ltd.
- 29 Leberly Videocon
- 30 News Express Bhopal
- 31 MSCI Services Pvt. Ltd., Goregaon - Mumbai
- 32 ICICI Lombard Insurance
- 33 Sify Technologies Ltd. Mumbai
- 34 Times of India, Mumbai
- 35 Aegon-Reliagre, Goregaon-Mumbai

Infrastructure Projects

- 1 Bharat Forge Ltd.
- 2 Gujrat Pipavav Port Ltd., Gujarat
- 3 Maersk India Ltd., Chennai
- 4 Hind Terminals
- 5 Daund Sugar Mill
- 6 Dyckerhoff & Widmann Ag
- 7 CMA CGM Pvt. Ltd.
- 8 Allcargo CFS Pvt. Ltd.
- 9 International Metro Civil Contractor
- 10 Seabird Marine Services Pvt. Ltd.
- 11 Gammon India Ltd., Mumbai

- 12 Kirloskar Ferrous Industries Ltd., Hospit Karnataka
- 13 Donear Industries Ltd., Mumbai
- 14 Crusher Plant for Myanmar Railways
- 15 Milroc at Kadamba-Goa
- 16 Pandit Jawaharlal Nehru Stadium, Fatorda-Goa
- 17 Dhanalaxmi Infrastructure Pvt. Ltd.
- 18 J.B.C.N. School at Oshiware, Mumbai
- 19 JKT Nut Enterprises Pvt. Ltd., Mangaon
- 20 Ambuja Cement Limited, Guragaon
- 21 K Raheja Group, Pune/ Mumbai
- 22 Flair Writing Instruments, Daman-Gujarat
- 23 Kalpataru Properties Pvt. Ltd., Mumbai
- 24 Boxtrans Logictics (India) Services Pvt. Ltd., Sonapat
- 25 Constro Solutions Pvt. Ltd., Nasik
- 26 Ambalika Sugar Mill, Daund, Pune
- 27 Praj Tower, Pune
- 28 Lusofonia Games, Goa
- 29 Kellogg India Pvt. Ltd.
- 30 Goa State Infrastructure Development Corporation Ltd.

Banks

- 1 State Bank of India
- 2 Yes Bank Ltd.
- 3 HDFC Bank Ltd.
- 4 ICICI Bank Ltd.
- 5 Development Credit Bank Ltd.
- 6 ING Vaisya Bank Ltd.
- 7 Axis Bank
- 8 Indusind Bank Ltd.
- 9 Shamrao Vithal Bank, Pune
- 10 Cosmos Bank Ltd., Pune
- 11 City Bank
- 12 Standard Chartered Bank, Malad-Mumbai

Entertainment

- 1 Whistling Wood International Ltd.
- 2 INX Media Pvt. Ltd.
- 3 Big 92.5 Fm
- 4 Zapak Ltd.
- 5 Big Tv Ltd.
- 6 Big Flix Ltd.
- 7 Pixion Animation Studio
- 8 Prana Animation Studio, Mumbai
- 9 Crest Animation Studio
- 10 Inox Leisure Ltd., Lucknow, Manipal/noida
- 11 M Media India Pvt. Ltd.
- 12 Ravindra Bhavan, Goa

Marine

- 1 Divya Electricals
- 2 Waterways Shipyard Pvt. Ltd.
- 3 Bharti Shipyard Ltd.
- 4 Mandovi Dry Docks
- 5 Vijay Marine Services
- 6 Vipul Shipyard Pvt. Ltd.
- 7 Shoft Engineering Pvt. Ltd.
- 8 Tolani Maritime Institute
- 9 Dempo Ltd.

Malls

- 1 Infinity Mall, Malad Mumbai
- 2 Mall De Goa, Porvorim-Goa

Chemical, Petroleum & Pharmaceuticals Projects

- 1 Cipla, Mumbai
- 2 Glenmark, Mumbai
- 3 Hindustan Lever Ltd. (research Center)
- 4 Emcure Pharmaceuticals Ltd.
- 5 Meyer Organics Pvt. Ltd.
- 6 Fermanta Biotech Ltd., Dahej -Gujarat
- 7 Research Specialties International Limited
- 8 Watson Pharma
- 9 L'Oreal
- 10 BASF Chemicals Ltd.
- 11 Asian Paints Limited
- 12 Indian Oil Corporation Limited, Goa
- 13 Ongc Manglore Petrochemicals Ltd., Mangalore

Gems & Jewellery Units

- 1 Global Jewellery Ltd.
- 2 Ideal Jewellery Pvt. Ltd.
- 3 Kaprisa International Ltd.
- 4 Infinity Jewellery Ltd.
- 5 Dinu Diamond
- 6 Shankar Jewels Ltd.
- 7 Mohit Diamond
- 8 Chintamani Jewellers Dadar Mumbai

Hospital And Medical Center

- 1 Prince Aly Khan Hospital
- 2 D.Y. Medical College
- 3 Godrej Remote Services Ltd.
- 4 Sancheti Hospital
- 5 Nitin Pandurang Mhatre Hospital

Electrical Consultants

- 1 Potential Consultants Pvt. Ltd.
- 2 N.K. Jain Consulting Engineers
- 3 Cotech Consulting Engineers Pvt. Ltd.
- 4 R.H. Rangwala Consulting Engineers
- 5 Consultancy Consortium - Mr. Kishor Barai
- 6 Chandrashekar Atre & Associates, Thane
- 7 Pharmadeep Consultants
- 8 D.R. Bellare Consulting Engineers
- 9 Eshwarya & Company
- 10 Power-webs Electricals
- 11 Electro Consultants - Mr. Sanjay Kaushik
- 12 S.N. Joshi Consultantd Pvt. Ltd.
- 13 Riddhi Consultants
- 14 R.D. Bhide, Goa
- 15 Girish Sardesai, Pune.
- 16 Varun Hydrotech Consultants Pvt. Ltd. Thane
- 17 Architechtural Energy Solutions (p) Ltd.
- 18 Urja Building Services Consultat Pvt. Ltd.
- 19 Unique Consultants & Services Sangli
- 20 ABM Architechs Pvt. Ltd., Mumbai
- 21 Pankaj Dharkar & Associates
- 22 Kapse Consulting Engineers Pvt. Ltd.
- 23 Meptek Consultants
- 24 Anil Verma Consutants
- 25 Avinashraj & Associates, Mumbai
- 26 Vision Electromechanical Consultants Pvt. Ltd.
- 27 Spectrum Pharmatech Consultant Pvt. Ltd.
- 28 Kikons Ltd. Pune
- 29 Frischmann Prabhu Pune
- 30 Intertek Architects & Consultants Pvt. Ltd. Goa.

Hotels & Spa

- 1 Palm Groves Beach Hotels Pvt. Ltd., Pune
- 2 Ramesh Hotels & Resorts Pvt. Ltd., Goa
- 3 GHV Hotel India Pvt. Ltd., Hyatt
- 4 Whispering Palm Beach Resort, Goa
- 5 Milroc Hotel & Spa
- 6 Main Land China
- 7 OH Calcutta DLF, Mumbai
- 8 Fishcher Island, Goa
- 9 Paradisso, Anjuna, Goa.

Research / Scientific Centre

- 1 National Institute Of Oceanography, Goa
- 2 International Gemological Institute (I) Pvt. Ltd., Mumbai

