

# About Us

## Welcome to Electrical Controls & Switchgear Ltd (ECS)

### Mission Statement

**We at Electrical Controls & Switchgear Ltd (ECS)** are committed to bring better, safer, economically sustainable yet effective electrical services and energy conservation systems mindful of our Industrial development, our environment and human prosperity and sustainable manufacturing.

### Our Vision

**Our Vision** is to establish and maintain the position as a leading Engineering Company Supplier of Industrial Electrical Switchgear, transformer and Panel Builders in Uganda. That vision is to be realized through offering Total Engineering Solutions and continuously developing the co-operation with our customers into partnerships.

### Our Goal

**Our goals** are to achieve both Quality Engineering Products and Solutions and to offer our customers real competitive advantages through a close partnership in the development of products, services and organization.

### Our Strength

Our strength is Innovation, Quality, Flexibility and Team Work.

### Our Policy

Customer Satisfaction through Quality management, Continuous Technology sourcing timely deliveries and Cost effectiveness.

### Establishment

Since being founded in 1983 ECS has grown to become a leading local manufacturer and supplier of Distribution Transformers and low Voltage Distribution Panels Main Switchboards (the heart” of the Industrial installation), Power Distribution & Control Systems for the Manufacturing Industry and Commercial installation in Uganda.

With our modern, fully equipped manufacturing workshop and staff expertise, we work closely with our customers to develop quality products at competitive prices, hence taking effort to meet the diverging needs of the manufacturing Industry and commercial installations.

All ECS products are designed, developed and manufactured to ISO9001:2015 quality control and carry a warrant.

# The Establishment-about us

---

In the late 90s, the company started manufacturing its own Enclosures (specifically designed for electrical industry) which are now widely accepted by Contractors and Consulting Engineers as good products manufactured to the specifications and design acceptable by International Standards up to External Protection Degree: IP65.

Our panels Boards are made from 2.0/2.5mm-thickness sheet steel up to IP65 protected against corrosion by a phosphate treatment, epoxy powder finish paint, RAL 7032 colour (other colours on request). This type of finish provides a good and tough cover against scratches and corrosion under normal working environment.

Our panels are also designed and built with help of software (provided by our suppliers) which automatically selects the matching components to the latest international standards to meet the needs of diverse and challenging Manufacturing Industries and commercial buildings electrical requirements in this part of the World.

Components for our panels are fully tested with current injections and high voltages up to 4 times the working voltage.

ECS has expanded into Distribution Transformer Manufacturing, Repairs, Servicing and Maintenance. The current range is 11KV/33KV, up to 1000KVA Oil Cooled type. Equipped with mobile servicing equipments, ECS can carry out Transformer Servicing on site, in any part of Uganda.

Over & above what others can provide, we offer;

- To design to your special requirements (paying for only what you need)
- Flexibility, modification, exchange or add extra devices.
- Produce custom made electrical enclosures for those wishing to assemble own products.
- Access to free technical advice/ detailed Data sheet on any product carrying out Energy Audits
- Option of different Engineering solutions & a range of accessories
- To enjoy warranty on all our products
- Choose from a wide range of reliable source of technical products
- To supply as “ loose items” or fully assembled, giving choice
- Generators Silencing with Caustic Canopy
- Thermal imaging
- Electrical analysis (Mini Audit)
- Electrical load analysis
- Power factor analysis and improvement

The Company believes in providing the latest and the best technology to the manufacturing Industries. Currently ECS is the leader in the manufacture of Motor Control Panels, Distribution Panel Boards and many related engineered products.

# Location

---

The Company is located in Kawempe Plot 332/333 Tula Road, where we have our Head Office and manufacturing site and our Town office is at the UMA Show Ground, plot 20-34, Coronation Street.

In the area of sheet steel fabrication the Company also manufactures Cable trunking, Feeder pillars and Computer Racks, all finished in attractive powder coating finishes.

In the field of Panel Building and Distribution Boards, ECS works closely with consulting, Engineers and Electrical Contractors to establish the exact needs of the client and to recommend the most suitable options.

With a policy of continuing product development and keeping abreast with latest technology, ECS strives to offer the best at all times. This is one of the reasons why ECS products have gained popularity among quality conscious customers.

We at Electrical Controls & Switchgear Ltd (ECS) adhere to the principles that quality must be taken in a global sense within our organisations, covering not only the product and service but also all aspects of management practice, including ethics as a basic reference.

We therefore commit ourselves to the following ten precepts of global quality and will do all we can to promote these precepts both within and outside our own organisations.

1. We shall seek our profit or surplus in a sustainable way and within a competitive environment.
2. We shall report on our past Performance and likely outlook in a timely and transparent fashion, covering both the financial and the none financial aspects.
3. We shall complete in the marketplace in a fair and open manner.
4. We shall employ staff according to the best labor standards and human rights, treating them as individuals in their personal fulfilment, career progress and expression of their wishes on organizational matters.
5. We shall respect the environment, seeking to do no damage and to exploit its resources in a sustainable way.
6. We shall be socially responsible, going beyond our purely business activities to contribute to the field of education, culture and sports.
7. We shall do all that we can to discourage corruption within and outside our organisation.
8. We shall develop our employment policy to overcome discord between people and groups and promote better mutual understanding.
9. We shall develop our relationship with our partners, both suppliers and customers, with a view to developing long-term relationships.
10. We shall do all we can to promote business as a worthwhile career and a major contributor to the wealth of our nation and the region as a whole.  
We invite all leaders of the business community to adhere to these same precepts and thereby promote global quality.



# ECS DISTRIBUTION TRANSFORMERS

We take pleasure in introducing ourselves as one of the emerging manufacturers of state of the art TRANSFORMERS in Uganda, with specific skills in Design & Manufacturing of Distribution Transformers.

ECS has expanded into Distribution Transformer Manufacturing, Repairs, Servicing and Maintenance. The Current range is 11KV/33KV, up to 2.5 MVA Oil Cooled type. Equipped with mobile servicing equipment, ECS can carry out transformer servicing on site, in any part of Uganda.

Distribution Transformers for:

- Industrial & Engineering Installations
- Commercial buildings
- Schools
- Hospitals
- Hotels

## MANUFACTURED TRANSFORMER RANGE

25KVA 11KV/433V  
25KVA 11KV/433V  
50KVA 11KV/433V  
100KVA 11KV/433V  
200KVA 11KV/433V  
315KVA 11KV/433V  
500KVA 11KV/433V  
1000KVA 11KV/433V  
1500KVA 11KV/433V  
2000KVA 11KV/433V  
2500KVA 11KV/433V

25KVA 33KV/240V  
25KVA 33KV/433V  
50KVA 33KV/433V  
100KVA 33KV/433V  
200KVA 33KV/433V  
315KVA 33KV/433V  
500KVA 33KV/433V  
1000KVA 33KV/433V  
1500KVA 33KV/433V  
2000KVA 33KV/433V  
2500KVA 33KV/433V



## TRANSFORMER TEST BENCH



### TESTING

Once the transformer is tanked up and the tank sealed, then the testing of the transformer commences. The ECS test laboratory is accredited by UNBS

# TRANSFORMER TEST LAB

The routine transformer tests carried out include:

1. Transformer winding resistance measurement.
2. Transformer ratio test.
3. Transformer vector group test.
4. Measurement of impedance voltage/short circuit impedance (principal tap) and load loss (Short circuit test).
5. Measurement of no load loss and current (Open circuit test)
6. Measurement of insulation resistance.
7. Dielectric tests of transformer.
8. Tests on on-load tap-changer.
9. Oil pressure test on transformer to check against leakages past joints and gaskets.



**BEFORE YOU  
INSTALL A  
TRANSFORMER,  
GET TO KNOW  
ITS EFFICIENCY  
OR LOSS FACTOR  
FIRST.**

## Transformer servicing

After a certain period, distribution transformers absorb moisture into their oil and windings. This moisture creates faults and eventually failure of the transformer. Transformer maintenance is therefore necessary to increase life of a transformer.



Onsite service: Mobile oil filtration Equipment



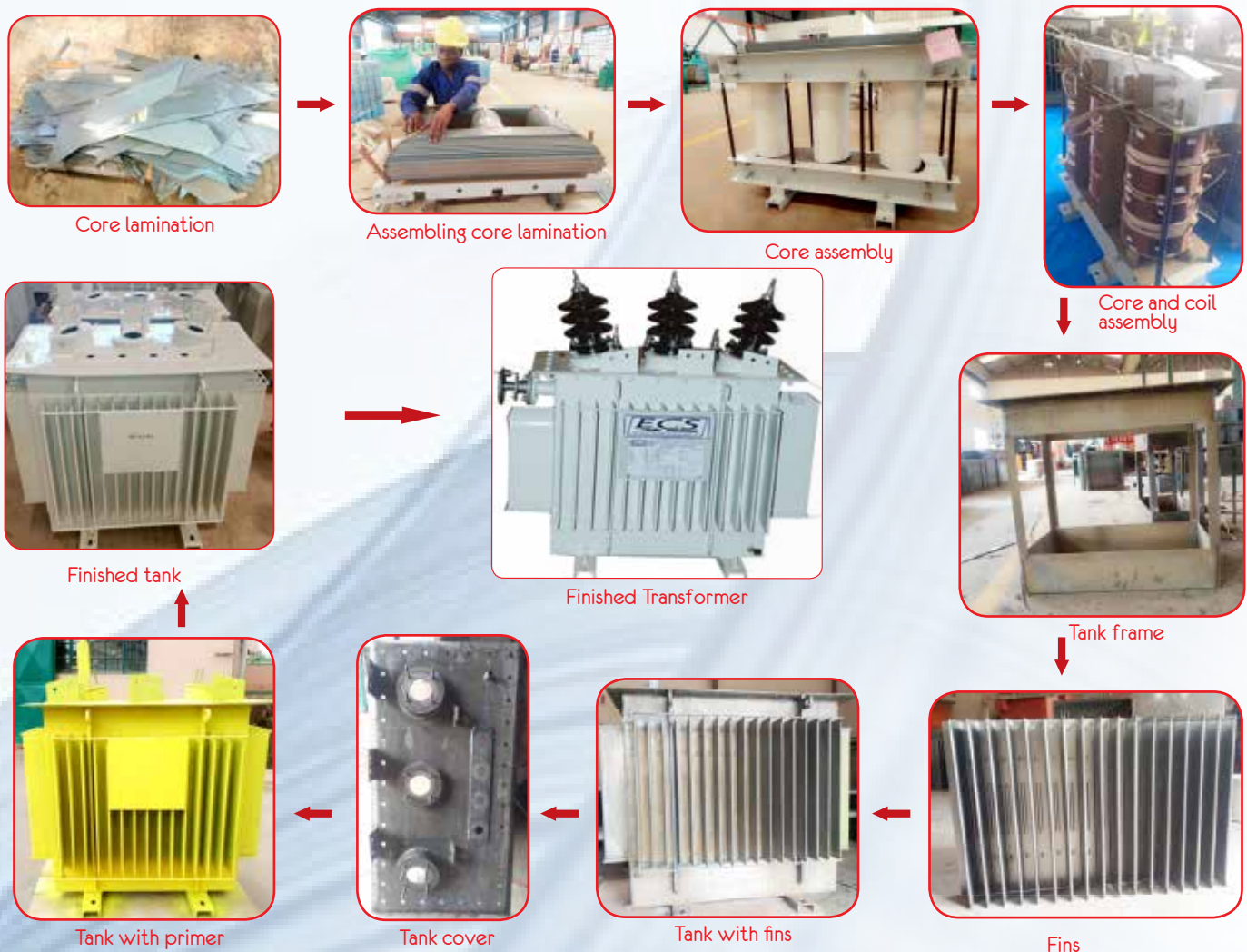
# ELECTRICAL CONTROLS & SWITCHGEAR TRANSFORMER MANUFACTURING PROCESS

Electrical Controls & Switchgear Ltd (ECS) is driven by the commitment to quality. The complete in house manufacturing process helps us to ensure optimum quality of the transformer. We have complete testing facility to test and check all the major raw-materials used in manufacturing the transformer. CRGO laminations are cut and annealed in house to achieve minimum magnetic flux distortion. To ensure the best quality of the Coils of the transformer, winding wires and strips are also wound in house. Fabrication section ensures the robustness, quality and fine finish of the tank and radiators of the transformer.

The manufacturing processes of Distribution Transformers covers the following departments:-

1. Core Assembly
2. Coil Winding
3. Core-Coil Assembly
4. Transformer Tank
5. Painting & Finishing
6. Tank-up

## *The manufacturing processes of Distribution Transformers*



# CORE COIL ASSEMBLY

---

- The components produced in the coil winding and core assembly stages are then taken into core-coil assembly stage.
- The core assembly is vertically placed with the foot plate touching the ground and the top yoke of the core is removed. The limbs of the core are tightly wrapped with cotton tape and then varnished.
- Cylinder made out of insulating press board/ press pan paper is wrapped on all the three limbs.
- Low Voltage Coil is placed on the insulated core limbs.
- Insulating block of specified thickness and number are placed both at the top and bottom of the L.V coil.
- Cylinder made out of corrugated paper or plain cylinder with oil ducts are provided over L.V coil.
- H.V. Coils are placed over the cylinder.
- Gap between each section of H.V. Coils including top & bottom clearances is maintained with the help of oil ducts, as per the design/drawings.
- The Top Yoke is refilled. Top core frame including core bolts and tie rods are fixed in position.
- Primary and secondary windings are connected as per the requirements. Phase barrier between H.V. phases are placed as per requirement.
- Connections to the tapping switch (if required) are made.
- Finally, the core coil assembly is placed in the oven for drying.



Transformer tank Fin corrugating machine



# ENCLOSURES FOR ELECTRICAL INDUSTRY

ECS produces powder coated metal enclosures made from a continuous length of sheet steel double folded at the front, with back welded to the frame. Both externally and internally protected with polyester epoxy resin grey paint to RAL-7032 texturized.

Features in ECS panel enclose

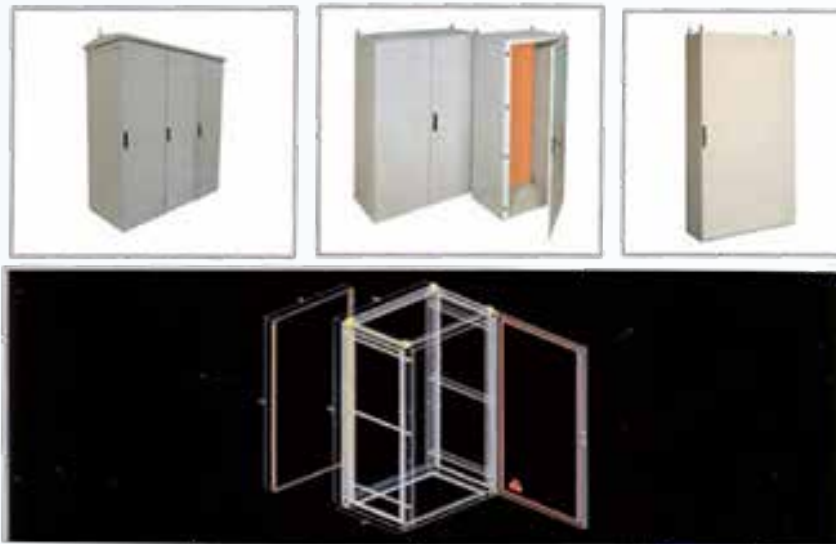
- With transparent security glass door.
- Welded studs on the back for direct fixing of mounting plate or other accessories.
- Perforated door reinforcement profiles allowing fixing of equipment.
- Concealed and easily removable hinges narrowing over 1200 door opening.
- Foamed in polyurethane gasket and front rain gutter ensures high degree of protection.





# Extendable Enclosures, IP 54

Outdoor  
substation  
Enclosures of  
upto IP65



## GENERATOR CANOPIES /ACOUSTIC ENCLOSURES



Epoxy powders finish paint, RAL 7032 color (other colors on request).

External protection Degree: up to Ip55.

This type of finish provides a good and tough cover against scratches and corrosion under normal working environment

### Specifications

Compact, Modular construction and sleek design with low noise level 70-75db Fabricated from 2.0mm MSP and finished in Powder Spray Paint.

### Generator Canopies /Acoustic Enclosures

Acoustic & Sound proof Materials.

### Special Features

- Compact, Modular construction and sleek design with low noise level 70-74db - just whisper - soft
- Conforms to mandatory NEMA residential sound levels.
- Soundproof, weatherproof and environment friendly enclosure.
- Ready-to-use canopy eliminate need for any foundation or grouting and is vibration free.
- Option for mobile, stationary, manual, AMF, room acoustic, basement and rooftop installation.

# DISTRIBUTION BOARDS AND PANELS

ECS assembles Switchboards that comply with BS 5486, IEC the Machinery and Occupational Safety Act 1983 and Local Authority's requirements. Switchboards are of free standing type with front and rear access. The degree of protection shall be IP31 minimum to IEC 144 with gasketed front doors for internal locations, IP65 for external locations

## **Provision for Expansion.**

All distribution boards shall be of ample size to accommodate the specified switch gear and not less than 30% additional space for future switch gear shall be provided, unless otherwise specified. All specified external dimensions for distribution boards shall conform to IEC standards. If the clearances specified cannot be adhered to as a result of restricting external dimensions the we (Contractor) shall consult the Engineer before manufacturing of distribution boards.



LV  
Distribution  
boards of  
upto 4000A

## **Moisture and Vermin**

All distribution boards shall be moisture, vermin proof and adequately ventilated. Distribution boards at all times shall be protected against damage, moisture, dust and vermin.

## **Doors**

1. All distribution boards shall be equipped with doors unless otherwise specified in the Detailed Specification.
2. The doors shall be of a smooth flat finish suitably braced to ensure stiffness and when in the closed position shall be flush with the architrave frame.
3. The doors shall be of sheet steel and on all four sides be bent inwards to ensure stiffness.
4. The corners shall be welded and smoothed.
5. All doors shall be fitted with rubber or neoprene seals.





Panel Exterior



Panel Interior

## METERING BOARDS

---

ECS assembles metering distribution boards for apartments and clients using prepaid metering



# FEEDER PILLARS

Feeder pillars provide local isolation to your electrical distribution equipment, protecting both the cabling and the transformer from faults. Feeder pillars allow simple and local maintenance to your equipment, reducing site downtime and reducing overall maintenance costs.



Feeder pillars can be fully customised to the customer's request.

## Customized Distribution Boards



ECS distribution boards are customized to the client's requirement to ease works during installation and functionality. Our clients decide the direction of cable entry and the dimensional size of the distribution board in limited space areas where possible. ECS has also built well protected distribution boards for hazardous areas over the years.





# ECS LOW VOLTAGE INDUSTRIAL MOTOR CONTROL CENTERS

ESC assembles MCCs that shall consist of vertical sections made of welded side-frame assembly formed from a minimum of 12 gauge steel. Internal reinforcement structural parts shall be of 12 and 14 gauge steel to provide a strong and rigid construction

## MCC FINISH

All steel parts shall be provided with acrylic/alkyd baked enamel paint finish or Powder Coat, except plated parts used for ground connections. All painted parts shall undergo a multi-stage treatment process, followed by the finishing paint coat.

### Pre-treatment shall include:

Hot alkaline cleaner to remove grease and oil.

Iron phosphate treatment to improve adhesion and corrosion resistance.

The paint shall be applied using an electro-deposition process to ensure a uniform paint coat with high adhesion.

Paint color shall be epoxy medium light gray. Unit interior saddles shall be painted orange.



Typical  
Motor  
Control  
Centre

## TYPICAL UNIT CONSTRUCTION

All conducting parts on the line side of the unit disconnect shall be shrouded by a suitable insulating material to prevent accidental contact with those parts.

A lever handle operator must be provided on each disconnect. With the unit stabs engaged onto the vertical phase bus and the unit door closed, the handle mechanism shall allow complete ON/OFF control of the unit. All circuit breaker operators shall include a separate TRIPPED position to clearly indicate a circuit breaker trip condition. It shall be possible to reset a tripped circuit breaker without opening the control unit door. Clear indication of disconnect status shall be provided, by adhering to the following operator handle positions:

Handle "On" position must be up or to the left and within 45 degrees of being parallel to the face of the equipment.

Handle "Off" position must be down or to the right and within 45 degrees of being parallel to the face of the equipment.

The minimum separation between the "On" and "Off" positions shall be 90 degrees.

On Circuit Breaker disconnects, the handle "Tripped" position must be perpendicular to the face of the equipment +/- 30 degrees. Minimum separation between "On" and "Tripped" shall be 30 degrees. Minimum separation between "Tripped" and "Off" shall be 45 degrees.

A mechanical interlock shall prevent the operator from opening the unit door when the disconnect is in the ON position. It shall be possible for authorized personnel to defeat these interlocks.

## COMPONENTS FOR TYPICAL UNITS

### a. Combination Starters

All combination starters shall use NEMA/ EEMAC rated contactors. Starters shall be provided with a three-pole, external manual reset, overload relay with thermal overload units.

When provided, control circuit transformers if utilized, shall include two primary protection fuses and one secondary fuse (in the non-ground secondary conductor). The transformer shall be sized to accommodate the contactor(s) and all connected control circuit loads. The transformer rating shall be fully visible from the front when the unit door is opened.

When a unit control circuit transformer is not provided, the disconnect shall include an electrical interlock for disconnection of externally powered control circuits.

Auxiliary control circuit interlocks shall be provided where indicated. Auxiliary interlocks shall be field convertible to normally open or normally closed operation.





### **b. Terminal Blocks**

When Type B wiring is specified, all starter units shall be provided with unit control terminal blocks. Terminal blocks shall be the pull-apart type with a minimum rating of 250 volt and 10 amps. All current carrying parts shall be tin plated. Terminals shall be accessible from inside the unit when the unit door is opened. Terminal blocks shall be DIN rail mounted with the stationary portion of the block secured to the unit bottom plate. The stationary portion shall be used for factory connections, and shall remain attached to the unit when removed. The terminals used for field connections shall face forward so they can be wired without removing the unit or any of its components.

### **c. Nameplates**

Shall be engraved phenolic nameplates for each MCC and unit compartment. Shall be gray background with white letters, measuring a minimum of 1.5 in (38 mm) H x 6.25 in (159 mm) W total outside dimensions.

### **d. Pilot Device Panel**

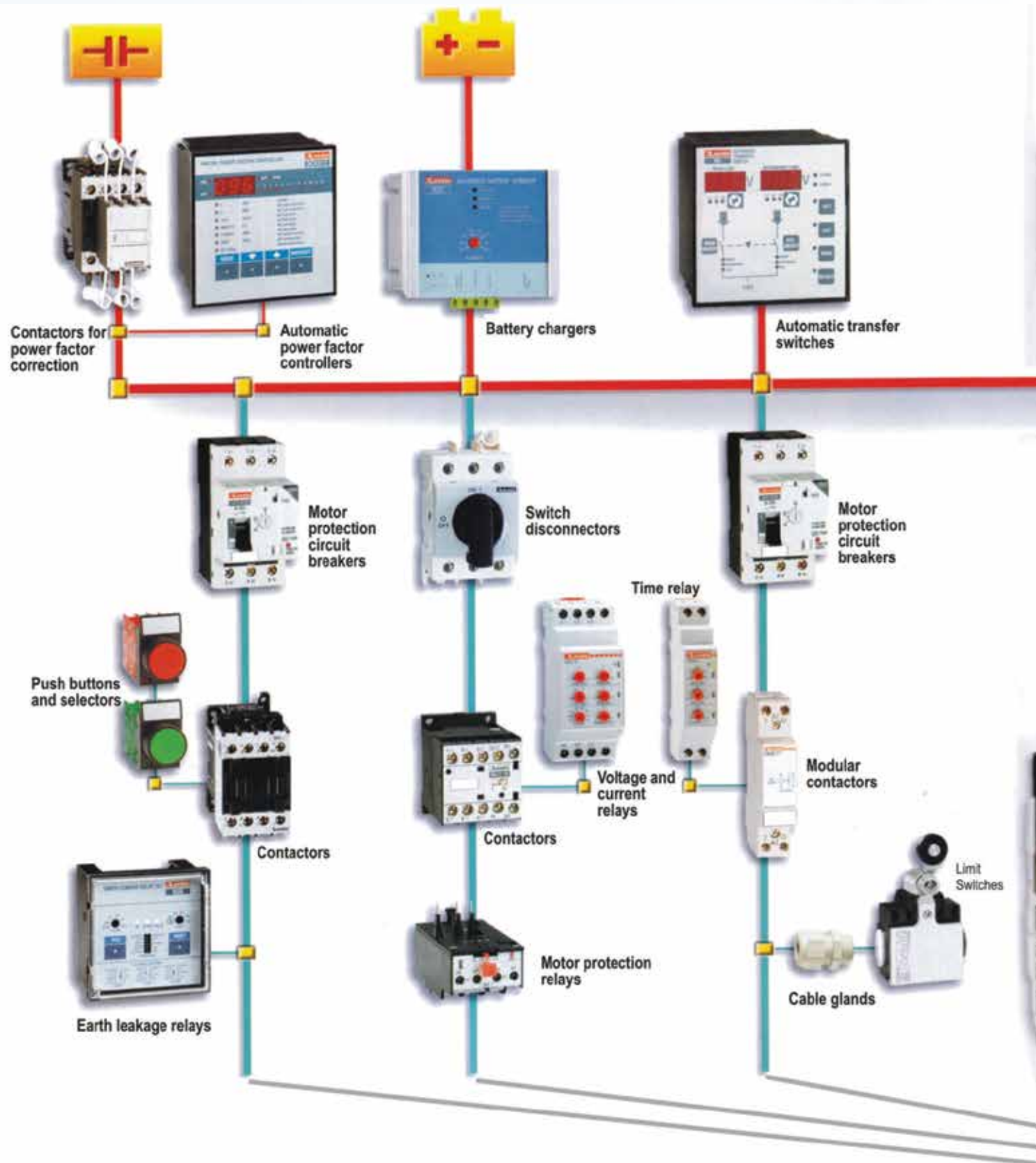
Each starter unit shall be provided with a hinged/removable control station plate, which can accommodate up to five 22 mm pilot devices or three 30 mm pilot devices

## **Soft starter and drive panels**



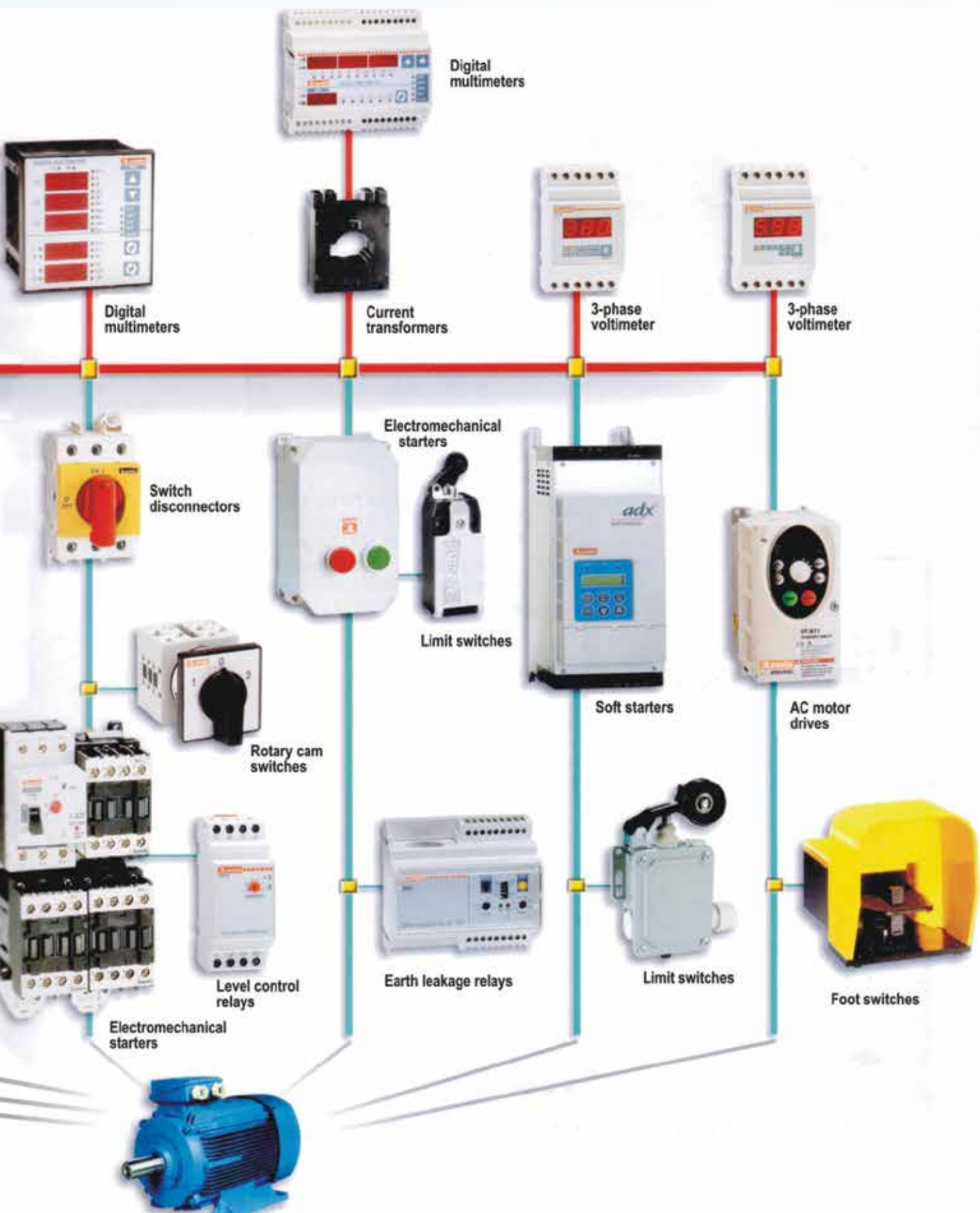
Lovato frequency inverters and speed drives, ECS is the local distributor.

# MOTOR CONTROL -HEART BEAT OF T





# THE MANUFACTURING INDUSTRY



# POWER FACTOR CORRECTION CAPACITOR BANKS

In addition to Active Power, many electrical devices also demand Reactive Power. In industries, motors (the common load) which give valuable work output use Reactive Power to maintain a magnetic Field essential for their operation. This reactive power is extra power but not useful energy, and because of this, power utility (UMEME) imposes additional charges in form of penalties related to the consumption of this energy.

## POWER FACTOR(PF)

Power Factor is a ratio of Active power over apparent power and there is always need to bring this ratio to near unity (1) this helps to avoid excessive penalties by the Power supply providers (UMEME). Industrial consumers therefore pay for the actual energy in Kilo-watt-hour (KWH) plus the above Reactive Energy. It therefore makes economic sense for the power user to reduce this extra bill to a minimum cost.

The most effective way of doing this is to introduce Power Factor Correction Equipment which provides a compensating Reactive power (to reduce the effect of reactive power). And the best way to achieve good results is to employ an Automatic Regulator which increases the power factor without presenting an executive capacitive to the supply.



Are you a manufacturer with induction motors in your production line? Power factor correction can help reduce your energy bill.

## OTHER BENEFITS OF POWER FACTOR IMPROVEMENT

- Reduced Utility Charges
- Increased System Capacity
- Reduced Installation Losses.

## CAPACITOR BANK STANDARD TECHNICAL DATA

**Rated Voltage and frequency:** 440Vac at 50Hz Max over voltage 1.1 Un, Max over current 1.3In.

**Rated Power:** Referred to rated frequency and voltage.

**Voltage of Auxiliary Circuits:** 240Vac or any lower Voltage through a single-phase transformer.

**Cubicle:** 1.5/2.0mm thickness sheet steel, protected against corrosion by a phosphating treatment. Epoxy powder painted, RAL 7032 colour (other colours on request).

**External Protection Degree:** Ip30, Locking System:-by screw for cubicles P and M type-by **Ventilation**

**Switch:** Natural for P types forced for M and G type. Isolating Switch:



Three-pole with door interlocking.

**Contractors:** Each bank of capacitors is controlled by a three-pole contractor. To limit the inrush current peaks, each contractor is provided with insertion resistors. Rated voltage of auxiliary circuits: 240Vac, 50Hz.

**Fuses:** Each bank of capacitors is protected by a set of three fuses (NH type) with high breaking capacity. Also the auxiliary circuits are protected by fuses.

**Capacitors:** Self-healing metalized polypropylene single-phase/three-phase capacitors, equipped with over pressure safety device and discharge resistor.

**Filling:** Biodegradable non toxic dry type, PCB free Delta connection. MFA440Vac series, IMQ approved. Capacitance Tolerance: -5%+10%, Dielectric losses: <0.3W/kvar.

**Temperature Class:** -25/D (55degrees centigrade)

**Regulator:** Varmetric measurement by means of a C.T.(Secondary 5A). Options (on request)

- Digital Voltmeter (M & G types)
- Digital Ampere meter (M & G types)
- Digital P.P Meter (G type)
- Regulator IFC7 with digital P.P meter (G type)
- Protection Degree: Ip40 - IPS4

### Power Factor Correction Recommendations

By offering Power Factor Correction Recommendations, we can help ensure you're getting the most out of your power.

Through careful analysis of your electrical system, we can provide a comprehensive report that includes recommended correction equipment, suitable installation locations and the cost of not correcting your power factor.

### Power Factor Correction Capacitor Bank Panel



### Harmonic Analysis

To help prevent equipment malfunctions in your facilities, we use sensitive power test equipments that analyze the amount of harmonic distortion in a power system and determine its source. Once the problem is identified, we'll recommend the size and location of filtering equipment to mitigate the specific harmonic that is causing the trouble.

### Standard operating features:

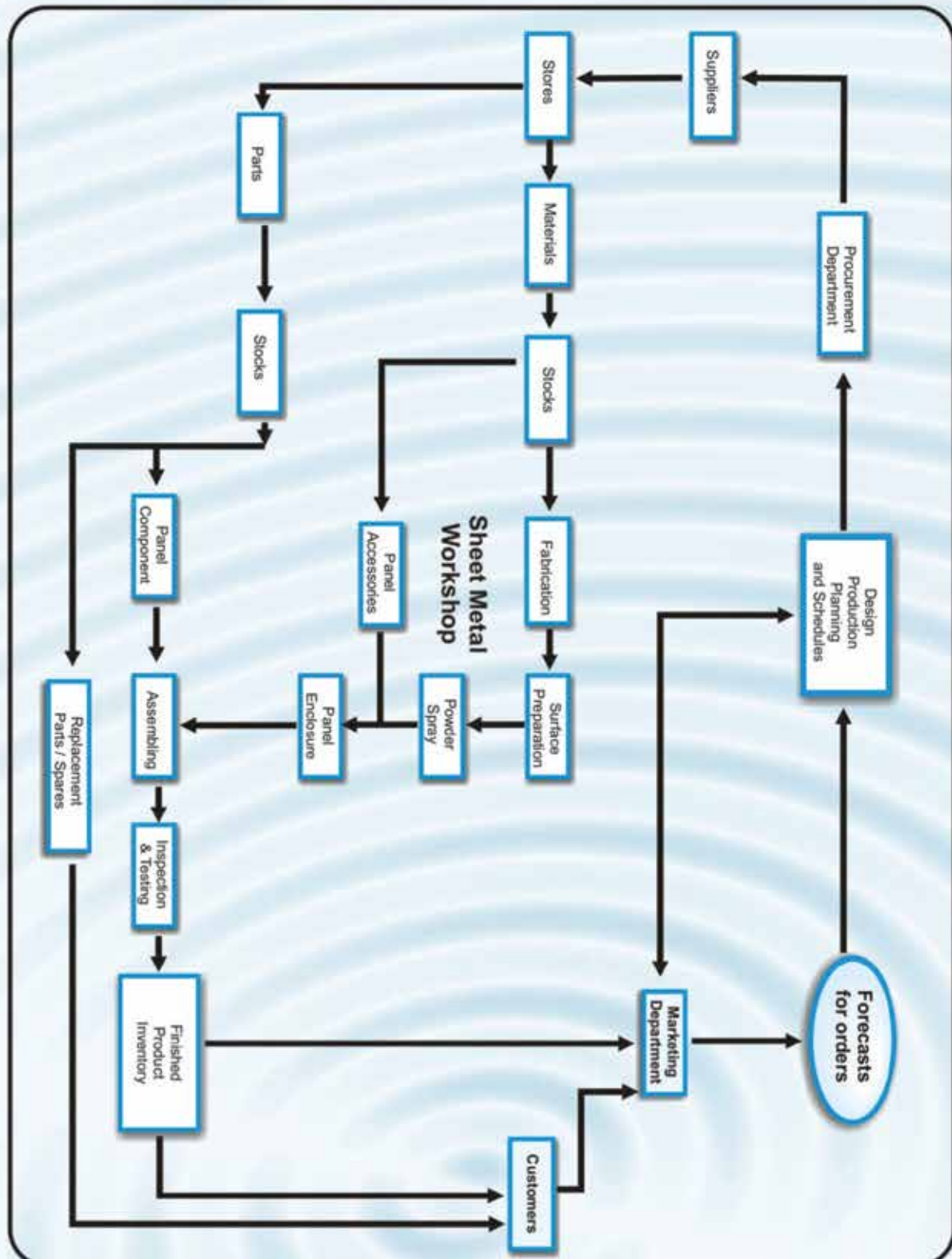
- LED indications with detailed legends
- Voltmeter to indicate input & Output voltage
- Auto manual operation
- Output voltage setting potentiometer
- Plug in control cards

# Enclosure Fabrication planning and Process Flow

## Panel Manufacturing Process Flow

Our Production Process is divided into 5 areas namely;

- Design and CAD section
- Fabrication section
- Paint section
- Assembly section (Electrical)
- Testing section



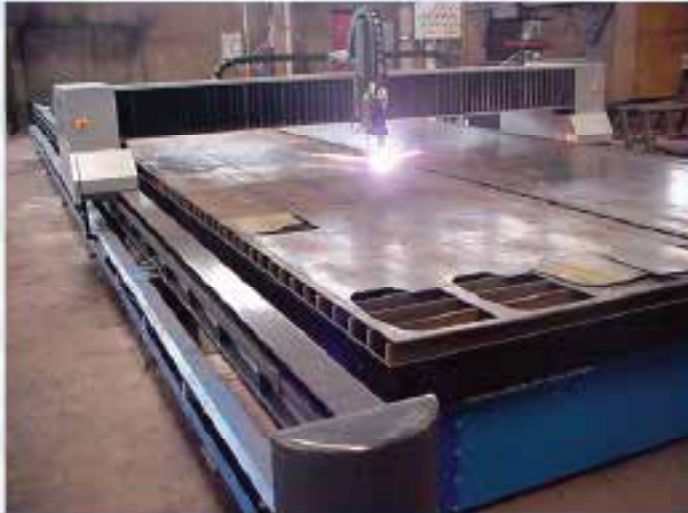


# PROCESS FLOW

---

## ECS using Cutting and Bending CNC Machines for Metal Fabrication

The CNC machines or computer controlled machine are operated with the pre-set computer controlled programs which enable automatic performance of the machine to deliver the specific task. As controlled with computer, these machines enable continuous working and constant operation with better consistency and accuracy



## CNC Manufactured Control Panel Cabinets



## Steel profile manufacturing Panels

# VOLTAGE STABILIZER



## STATIC ELECTRONIC STABILIZER

- Input voltage range: (-15%/+10%)
- Smart voltage regulation software
- High speed voltage regulation (500V/sec.)
- High efficiency (97%)
- Protection against overload, over temperature, high voltage, low voltage and other failures.

- Designed for heavy duty industrial working conditions
- Maintenance free electronic voltage management technology
- Fast voltage correction for sag and swells in voltage
- Built in surge arrester for surges and sags
- Independent phase regulation to correct voltage and load imbalance
- Self test facility
- Parallel connection for special high power applications
- LCD Display for easy monitoring

# OUTDOOR RING MAIN UNITS

## General characteristics:

- SF6 insulated compact switchgear
- Equipped with SF6 switch disconnect
- Equipped with vacuum circuit breaker
- Developed according to international standard IEC 62271-200
- Resistant to environmental conditions
- Modular or compact versions
- Internal arc resistant
- SCADA compatible motorised unit, on request
- Stainless steel tank





# SERVICES FOR ELECTRICAL INDUSTRY

- Comprehensive Energy Audit
- Hire of Test Equipments
- Transformer Services & Repairs
- Energy Cost Reduction
- Lighting, Surge Protection & Earthing

4 IN 1 MULTI-FUNCTION ENVIRONMENT METER	PHOTO/NON- CONTACT TACHOMETER	HAND HELD METERS	INSULATION RESISTANCE TESTER
			
HAND HELD METERS	GROUND RESISTANCE TESTERS	HIGH VOLTAGE TESTING EQUIPMENT TRANSFORMER RATIO Meters	
			

## Transformer Routine Tests

ECS Offers transformer Routine tests:

- Insulation resistance.
- Winding resistance.
- Turns Ratio / Voltage ratio
- Polarity / Vector group.
- No-load losses and current.
- Short-circuit impedance and load loss
- Continuity
- Magnetizing Current
- Magnetic Balance
- Dielectric
- Separate source AC voltage.
- Induced overvoltage.
- Lightning impulse tests.
- Test on On-load tap changers, where appropriate

# About our Business Partners

---



Our in-depth knowledge of your business combined with our unrivaled expertise ensure that you benefit from an innovative range of customized products from schneider. We bring you Logic Controllers, Din Rail mounted timers, pad mounted timers, Control relays, Solid state relays, Solid State, I/O modules, Temperature Controllers, Counter and Rote meters, Can Meters, Machine Safety and Micro - PLCs.

## **LE GRAND-France** **legrand**

We use Legrand switch gears to offer our customers distribution and power equipment system up to 4000A and DMX MCCB's MCB's up to 4000A.

## **LOVATO-Italy Lovato**

Lovato is a company leader in all design and manufacture of octro mechanical and electronic components for industry automation. We offer modern 3D design programming innovative rapid prototype equipment, Contactors, Meter, protection, Gravity breakers, Push Buttons, Soft Starters, Digital Multimeters and Safety Switches are some of the products we offer.

## **Italfaroad (Italy)**

We also provide all types of Capacitors from Comer, Italy for your Meter protection.

## **FLUKE Instruments (USA)**

We collaborate with **FLUKE** to bring our customers: -

- a) The latest Test and Measurement Instruments for electrical and electronic applications, installations, appliance and machinery testers.
- b) Test and Measurement instruments for temperature / climate / environment and digital tachometer.
- c) Test and measurement instrument for telecommunications and cable measurement technology,
- d) Power supplies, electronic loads power analyzer and Residual Current Monitors (RCM).

## **EATON**

We are authorized dealers for their entire range in Medium - Voltage Switchgear, Low - Voltage Switchgear, MCC Control Centers, Transformers, and Bus bar Trunking. EATON is one of the most highly rated innovative electrical engineering & electronic company in the World. Having been associated with EATON from 1985, we are the Principal agents.