





**Your Trusted Partner** 

# Our Founder

▶The late *Cavalier Dr. G.K. Devarajulu* was a visionary entrepreneur an avowed nationalist and a committed philanthropist whose vision transformed Coimbatore. Born in 1911, he started LMW when India was a fledgling nation and through his untiring efforts raised it to great heights as the years passed. The influence of LMW was felt in the field of textile machinery all over India. In fact, it is widely believed that the emergence of Coimbatore as an industrial city is largely on account of his individual efforts as a visionary industrialist.

# The Second-Generation Legend

- A Man with Courage & Determination
- Late *Dr. D. Jayavarthanavelu* distinguished himself in several sectors like industry, education, healthcare and social welfare. He was the former Chairman and Managing Director of Lakshmi Machine Works Limited, He was nominated to the Board of the Reserve Bank of India by the Central Govt. Dr. D. Jayavarthanavelu was conferred with Doctor of Letters (Honoris Causa) by the Pondicherry University and also by the Annamalai University. His focus on CSR was unique and was a pioneering effort in social responsibility.

# MILESTONE



1981 Incorpo
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Collaboration with Sprecher+Schuh, for Manufacture of LV Switchgears

1984 Started Control Panel Building & Injection Molding

1991 Collaboration with OSAI-AB, Italy for Manufacture of CNC Systems

1995 ISO 9001-1994 Certification

SAP ERP ECC 6.0 Implemented

2010 ISO 9001-2008 Up-graded Certification

5 S Certification by M/s. AOTS Alumni 5S Forum of India

2014 ISO 14001:2004 Certification

2019 | IATF TS 16949:2009 Certification



## MILESTONE

1983	Incorporated & Commenced the Operation of Cutting Tool Division
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1987 Commenced SPM Division

1989 Commenced Jigs & Fixtures BU & Diecasting Division

1992 Collaboration with Sandvik for Mfg. of CNC Tool Holders

2001 Commenced Pirn Winder (Textile Ancillary Machine) BU

2004 Business Started with GE worldwide

Technology Transfer tie-up with HOLZ, Germany

Commenced the operation of Sheet Metal BU

5 S Certification by M/s. AOTS Alumni 5S Forum of India

2015 ISO 14001 & ISO 45001 Certification

2018 Launched Textile Machinery Products (DYNADOFF & GLICLEAN)

# MILESTONE



1983 Incorporated

1998 Launch of IE3 Motors

Launch of Special Motors for Renewable Energy Application

2014 Launch of IE4 Motors

2015 Launch of Roller Table Motors

2017 Launch of IE5 Motors

2018

Launch of Crane Duty Motors & IE6 Motors

2019 Launch of NEMA and Flameproof Motors

# Our Partnerships / Collaborations / Tie-ups

1982 Manufacture of LV Switchgears with Sprecher+Schuh, Switzerland



1991 Manufacture of CNC Systems with OSAI-AB, Italy



1992 Manufacture of CNC Tool Holders with Sandvik, Sweden



2006 Technology Transfer tie-up with HOLZ, Germany



2007 Technology Transfer tie-up with REELS, Italy

2007

Technology Transfer tie-up with DEETS, Germany

### About Us: In a Nutshell



- Genesis: EUR 0.6 Bn + from 60 Years old Group in Coimbatore
- Excellent Operational & Financial Track record



- Annual Turnover of EUR 67 Mn and growing rapidly
- Industries: Textile, Machine tool, Wind & Solar Energy,
   EV, Petrochemical, Railways, Agri, Healthcare, Retail,
   Auto, General Engineering, Switchgear, Railway



- ISO-9001-2015, ISO45001-2018, EHS ISO-14001-2015, IATF-16949 Certified Manufacturing Facility
- Products CE Marked, UL Compliant (selectively)
- SAP ERP Full system capability

## Vision, Mission & Values

### Vision:

To be a Premier *Multi-Industry Company* Known for *Manufacturing Excellence* through *Ethical Business Practices and Quality Standards.* 

### Mission & Value:

Create *Superior Value For the Stake Holders* through Our Products & Services to *ensure Sustainable Growth and Operational Excellence* using *Innovative Methods, Process Driven Approaches and Ecofriendly Solutions.* 

# Our Guiding Principle



# Our Capability



Multistage

Engineering

Services





Project
Execution
and
Management
Services



Operational Services

Scalable Delivery - 360 Degree Solutions - Commercial Flexibility

## **Our Associates**

**Textile Machinery Division** 





(Textile Spinning Machine)

**Machine Tool Division** 





(Turning & Milling Centre)

**Foundry Division** 





(SG Iron Castings)





(Steel Castings)

### **Our Associates**

**Engineering & Manufacturing** 





(Tooling)





(Injection Moulding)

**Advance Technology Center** 





(Aerospace & Composite)

# Our Group



**Control Panel & Electrical BU** 



(EV Chargers)







(Switchgear)



(Smart Meters)

(Wire Harness & Cable Kits)



(Tooling & Injection Moulding)

# Our Group



#### **AC Induction Motors**

IE6 & IE4

Ultra-High Efficiency
Motors Meeting IEC
Standards

- 75kW, 66kW, 90kW developed with IE6.
- Regular production motors in IE4 range.
  Over 2,000 motors operational in the market.
- Unique one off requirement.
- □ Developed 4.5 kW, 29 V, 3 phase AC motor.
- Specifically developed for Wind energy application.





**Servo Motors** 

Servo

 Servo motors developed with wide range of torque ratings.



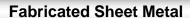
# We, LPT



# Die-Cast Components & Related Sub Assey.

### **Aluminium Die-Casting**

- Aluminium Pressure Diecasting.
- Aluminium Gravity Diecasting.
- Solid Block Machined Parts.
- Fabricated Sheet Metal Structures.
- Electro Mechanical Sub Assembly.
- Complete Welding Capability.
- Automated Line for Powder Coating.





Fabricated Sheet Metal Panels & Structures



Solid Block Machined Parts



Electro Mechanical Sub-Assembly



### Petrochemical

### **Our Market Presence**

Textile Machinery





Solar

Escalator & Elevator





Wind



**Automotive** 



Railways



**Power Grid** 



Healthcare



Pump



**EV Charging** 



Machine Tool





Banking & Finance

## Feed Capability



#### Control & Network

- · Preparation of system architecture
- Preparation of operation and control philosophy
- · Preparation of control narratives
- · Advanced process control reviews
- · Hardware specifications
- I/O lists, drawings
- Installed base assessment and obsolescence study
- · Network design, security assessment
- · IT infrastructure assessment



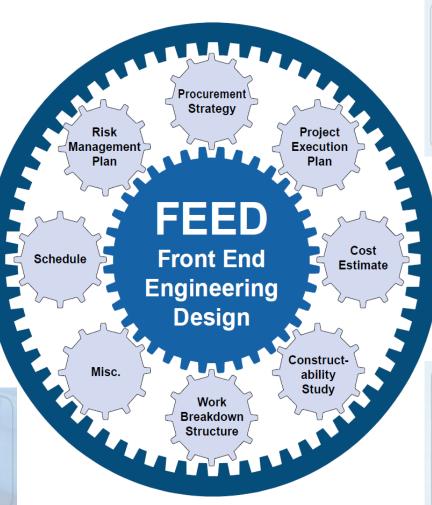
#### Safety

- · Hot safety system migration strategies
- · Risk analysis, HAZID studies
- Safety system design and documentation
- · Preparation of safety philosophy / narratives
- · SIL target determination and analysis
- ATEX (Hazardous Area Classification compliance)
- Machine safety assessments



#### **Packaged Equipment**

- Site-wide standards and specifications for packaged equipment
- Package equipment upgrade specifications
- Packaged equipment integration







- Generation of Process Flow Diagrams (PFD) and P&IDs
- Process modeling
- Technical specification and basis of design development
- · Equipment specification and sizing
- Safety device sizing and selection
- · Full hydraulic calculations
- PFD review, estimate and report of process performance with MPC system



#### Quality

- · GMP risk assessment
- Gap analysis vs current regulation study
- Quality documentation (quality plan, validation master plan, etc.)

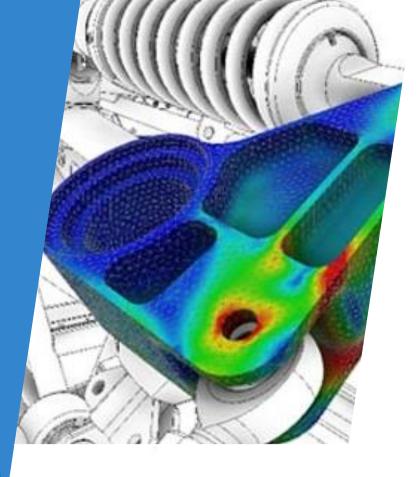


#### Instrumentation

- · Instrument specifications and selection
- Preparation of instrument indexes and I/O lists
- · Preparation of Instrument data sheets
- Cable block diagrams
- P&ID review of instruments required for unit or plant-wide model predictive control (MPC)
- Gap analysis report on optimization instruments

# Our Capability - Engineering

- High speed estimation and tendering capability
- Highly competitive delivery lead times.
- Established Detailed Engg for GA, Cable schedules, Embedded system capability, Bus communication solutions, Marshalling Rack, SCADA, Smart meters, PLC, Instrumentation, 3D & cyber capabilities
- Enhancing capability for Intrinsic safety barriers, and standards, TCP/IP, NBIOT, NFC Communication, Constructability, Operationability, Safety (HazOP, HazAn, HIRA), DCS, IMS &OS



# Our Capability – Design From Art to Part



Simulation

**Kinetics Analysis** 

Thermal Analysis

Stress Analysis

FEA

Material Analysis

**Energy Analysis** 

Manufacturing Methodology

**Problem Solving** 



# Our Capability - Testing

- Radiography Enclosure of 100 Curie class (8.5 m x 14.4 m x 6 m).
- Motors & Panels Tested as per IEC & IP Standards.
- Inspection and testing facilities like Mass Spectrometer and Boroscope for internal inspection (DIN-7168 EN-1991 & IS2102:1993).
- Leak Test under Differential Air Pressure.
- Special Technique to check error profile in Gears.
- In-house Chemical (ASTM A751) & Mechanical testing laboratory (ASTM-D-2794).
- Salt Spray (ASTM-B-117) & Conical Test (ASTM-D-522), Cross Cut Test (IS-101) for Special Processes (ASTM B 1654).
- PMI Alloy Analyser.
- Qualified Level-II & Level-III personnel available to handle all NDT procedures.



# Our Motors Meeting Global Standards

Ultra High Efficiency -IE2, IE3, IE4 and upto IE6

All Enclosures and Cooling Options Horizontal and Vertical Mounting Options

90W up to 200kW

Fully Customized for Special Applications

230V, 380V, 400V, 415V and others

50Hz, 60Hz, 87Hz and others

IS, IEC, NEMA and CE codes

# **Facility Overview**

Panel Building



Tool Room



Panel Integration & Testing



Plastic Molding Shop



# Facility Overview Fabrication



**CNC** Machine Shop



Assembly Area



Die-casting Foundry



# Facility Overview Fully certified and flexible production Line



Winding impregnation with UV curing



Motor test bench



Dynamically balanced rotors for silent performance



### Control Panels Meeting Global Standards



### Capable of building Enclosures complying with NEMA standard,

	Type of Enclosure									
Provides a Degree of Protection Against the Following Conditions		2 *	4	4X	5	6	6P	12	12K	13
Access to hazardous parts	Х	Χ	Χ	Х	Х	Х	Χ	Х	Х	Χ
Ingress of solid foreign objects (falling dirt)		Χ	Χ	Х	Х	Х	Χ	Х	Х	Χ
Ingress of water (Dripping and light splashing)		Χ	Χ	Х	Х	Х	Х	Х	Х	Χ
Ingress of solid foreign objects (Circulating dust, lint, fibers, and flyings **)			Χ	Х		Χ	Χ	Х	Х	Χ
Ingress of solid foreign objects (Settling airborne dust, lint, fibers, and flyings **)			Χ	Х	Х	Х	Х	Х	Х	Χ
Ingress of water (Hosedown and splashing water)			Χ	Х		Х	Х			
Oil and coolant seepage								Χ	Χ	Χ
Oil or coolant spraying and splashing										Χ
Corrosive agents				Х			Х			
Ingress of water (Occasional temporary submersion)			•••			Χ	Х			
Ingress of water (Occasional prolonged submersion)							Х			

### Control Panels Meeting Global Standards



- ➤ Capable of building panels complying with IEC-61439 for control gear assemblies and degree of protection.
- ➤ Our enclosures shall comply IP-42, IP-54 and IP-55 as per IEC 60529.
- Respective state electrical inspectorate rules shall be adhered.
- Conversion from SLD/Specification to Detailed engineering for GA and cable schedule
- Bus communication solutions
- Marshalling Racks
- DCS/ PLC/ SCADA solution

### Control Panels Meeting Global Standards

- Smart meter solution
- > PLC, instrumentation solutions
- > 3D and Cyber capability
- Intrinsic safety barriers and standards
- > Design & Development of embedded Industrial IOT systems
- ➤ D&d of Drones and anti drone systems
- D&d of Smart transmitters and field instrumentation control panels
- Communication: TCP/IP, NVIOT, NFC
- Safety assessment (HazOP, HazAn, HIRA)



### **Energy Solutions**



- We shall Cater Level 1 & Level 2 Charging Stations for Electric Vehicles,
  - Level 1 Home Charging: charging cords are standard equipment on a new EV. Equipped with grounded (three-prong) 120V outlet and can add about 40 miles of range in an eight-hour overnight charge. Overnight Level 1 charging is suitable for low- and medium-range plug-in hybrids and for all-electric battery electric vehicle drivers with low daily driving usage.
  - Level 2 Home and Public Charging: the most common public chargers typically requires a charging unit on a 240V circuit. With a typical 30 amp circuit, about 180 miles can be added during an eight-hour charge. A standard EV connection plug that fits all current vehicles, except for Teslas, which require an adapter.

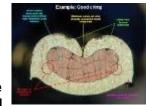


# Our Product Cycle

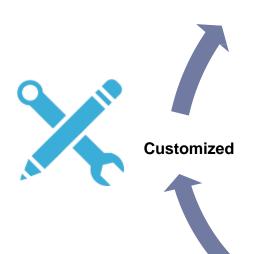
















Indoor / Out door usability

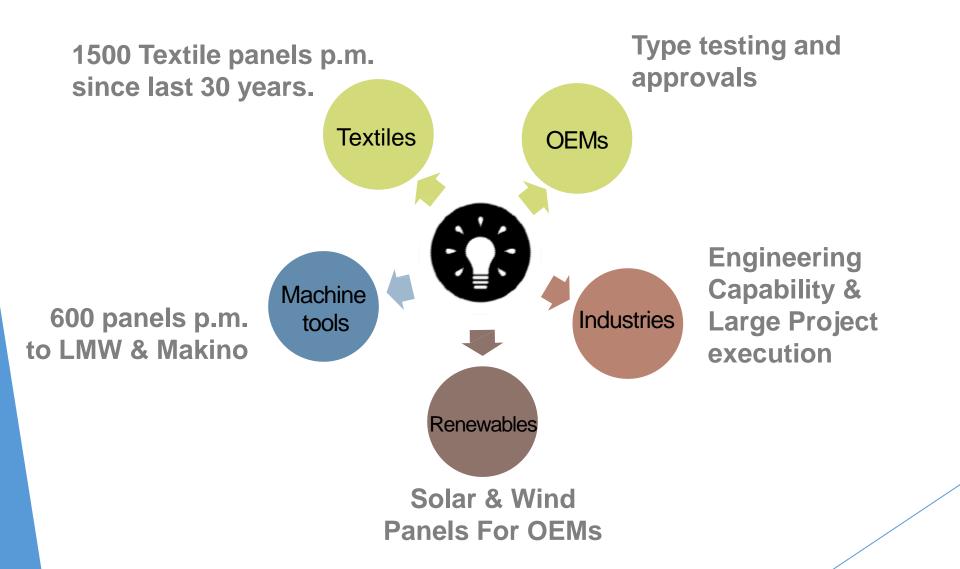






### LECS: Achievements









Aluminium Die-casting (GDC / PDC) & Machined



Machined Gears for Gear Boxes











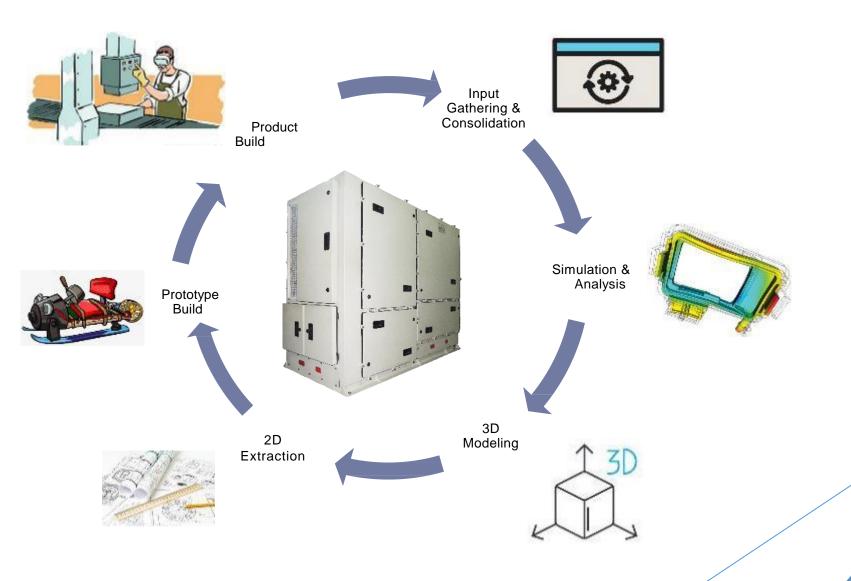
Fabricated Sheet Metal Enclosures & Structures





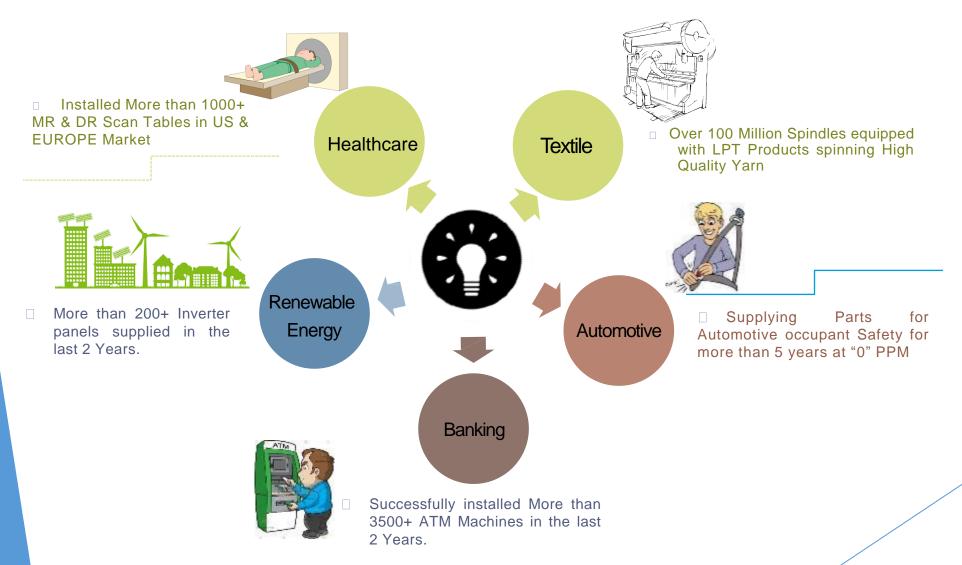
# Our Product Customization Cycle







### LPT: Achievements







### Motors Meeting NEMA Standards

- NEMA motors for the North American market Low-voltage motors are manufactured to the NEMA standard for compliance with the local specifications of the NAFTA markets (USA, Canada and Mexico).
- This includes motors designed in accordance with the US act, EPACT (specified minimum efficiency levels), as well as motors with NEMA premium efficiency levels. The NEMA motor series provide the highest operating reliability for maximum service life



- Execution standard: IEC60034-30 and NEMA MG1
- Energy efficiency grade: IE, IE4, Up to IE6
- Frame size: H80 to H120
- Pole: 2P/4P/6P and 8 Pole on Request
- Rated power: 0.75kW up to 120kW
- Voltage: 380V, 400V, 415V
- Frequency: 50Hz, 60Hz
- Operation mode: S1 (Other operating cycles available upon request)



- Enclosed protect class: IP55 (Other enclosures available upon request)
- Insulation class: F (temperature rise is examined at 80K)
- Cooling method: IC411
- Mounting method: B3, B5, B35, V1 (Other mounting options available on request)
- Ambient conditions: Altitude is lower than 1000m
- Ambient temperature is 15~40deg
- Connection: Star-connection for 3KW or less whereas deltaconnection for 4KW or more.

## **LEDL**: Achievements

Currently under RDSO validation.



Developed for and approved by Liebherr

Germany for tower crane application.

75kW, 66kW, 90kW developed with IE6. Unique one off requirement. Regular production motors in IE4 range. Developed 4.5 kW, 29 V, 3 Over 2,000 motors operational in the phase AC motor. IE6 & IE4 market. Specifically developed for Wind energy application. Pitch Flame Motor Proof Pipeline of complete range of proof motors with □ Motors with circular international certification. developed upto 30 kW without cooling fans. Custom requirement of 250 Roller starts per hour. Servo Heavy duty steel rolling Table Servo motors developed with application. wide range of torque ratings. Radiator Multi Cooling Speed One off custom requirement. Specialized requirement for Railways. Fan Direct drive with 3 speeds in one motor. Dual Speed motor operating at 127 Hz. 24kW and 30 kW developed with VFD. Special external rotor.



## **Contact Us**



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