

Merritt Innovative Solutions India Pvt. Ltd.

Engineering Excellence



Transportation & E-mobility



Consumer Goods



Industrial



Aerospace & Defence



Healthcare



IoT & Analytics

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Introduction, Purpose, Vision, Mission & Values



- Merritt Innovative Solutions India Pvt. Ltd. (Merritt), is an ISO 9001:2015 & ISO 27001 certified Engineering Specialist company having deep down expertise in endto-end product development on a global delivery model
- ➤ Team brings in decades of experiences and knowledge in design and development of electromechanical products for verticals: Transportation, Industrial, Healthcare, Aerospace & Defence, Consumer products, IoT & Analytics
- Have delivered 189 new products involving design, proto build, test & prove out, manufacture and supply
- In last 15 years, Merritt exported products, components, test rigs & fixtures to USA & Europe



Purpose

Delight all our stake holders by helping customers realize high quality products through innovation & expertise in Design & Manufacturing.

Our Value System

- ✓ Integrity
- Ownership
- ✓ Belief & Trust

Vision & Mission

To be a global <u>benchmark</u> company for Product Development & Manufacturing solutions.

We will achieve this by building **partnerships** and creating a great place to work where people are inspired to be the best they can be.

"Merritt is committed to continually improve engineering efficiency and to provide highest Quality Products and Services to meet the expectations of it's customers; staff at all levels recognize this as key corporate responsibility and ensure all activities are aligned"







Kumar Mahalingaiah CEO & Managing Director



Kalidas Surapaneni Director - Boston (US)



Anand Kallannavar VP Technical Support



Ashoka K
Director Manufacturing

- Industry veterans with decades of rich experience in the entire gamut of product development lifecycle
- Created an engineering centre of excellence to deliver solutions to complex global engineering needs

Merritt snapshot



We engineer products that delight our customers

Electromechanical

New Product Development End-to-End Solutions

Engineering
Training &
Staffing



Industrial & Consumer IoT

E-Mobility

Aerospace & Defense

Healthcare

Transportation, Industrial & Consumer



Quality



Cost



Speed of delivery

Deep engineering domain knowledge

"Innovation

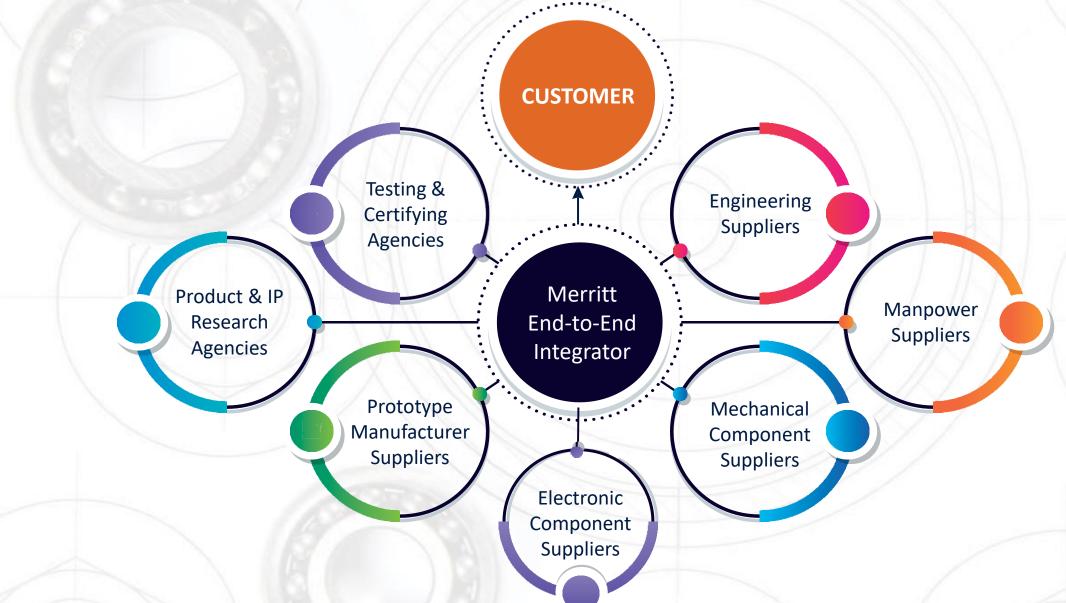


that matters"

189
Products
engineered

Merritt, an engineering integrator – customer centric strategy





Partial list of our delighted customers

































































Product design and development experience



Transportation

2T rear axle for LCV, Gearbox for utility trucks, Garbage compactor

New product design

Construction & mining

Motor grader, GET, Backhoe loader rear axle (hub, brake assembly & shaft), Dust suppression system, Dump truck structure

New product design/development

Material handling

50T trolley, power free & overhead conveyor, lift, & rotary tables, sidearm lifters, Bulk material handling, Ladle cover manipulator

New product design/development

Defence

Pneumatic mast, Flat bed structures, Floating canopy, Trans axle gearbox

New product design/development

Aerospace

Door latches, Hinge assemblies, Pre-charged cylinders, Hoses, Electronic products, Springs

Reverse engineering, CAD support

Vacuum processing & Solar application

Solar thermal absorber coating unit,
DST glass coating unit, Finger print coater, RRE
sputtering chamber

New product design

Consumer, Healthcare

Sewing machine (12 Mechanical and 8 Computerized), O2 concentrator

New product design and development

lloT

IIoT devices (Vibration, noise and temperature), Biogas detector integration, Data collection node, Gateways

New product design and development

SPM, Test rigs and Automation

Chip compactor, Welding manipulator, ER motor test rig, PCB test and programming fixtures,
Automatic door latch test bed, Butterfly valve test rig and Automation

NPD and Automation

Engineering services offerings



CAD

Legacy conversion, migration, design automations, MBD, (SW, Auto CAD, Autodesk Inventor, NX, Catia, Creo,)

Should costing

Excel based costing,
Commodities: Machining, fabrication, plastics,
sintered, castings, etc..

Proto build, test, prove-out & supply

Product compliance

CAE

Motion analysis (MBD)
Structural: Linear, Non linear, Vibrations,
Thermal stress, Impact, Drop. CFD(Flow,
Aerodynamic impacts), Thermal CFD

Teardown, reverse engineering

CT scanning, digital radiography, CMM, 3D scanning, material analysis, surface treatment analysis, gear measurement

Technical documentation

Parts catalogue, Operation and maintenance manual, assembly instructions, product brochures

Product integration

Sensors, PLC, Microcontrollers, HMI, safety interlocks

Re-engineering

Value Analysis, Value Engineering (VAVE) SCM, product commercialization & supply

Electronics product design, automation & controls experience



Automotive electronics

Payload Controller, Instrument Cluster with HMI, FOTA

New product design / development

Defence

Analog Amplifier Development

Reverse engineering & Product development

Aerospace

Ramp and Hatch Actuation System - Motor Control Units, Integrated Control Module, Filter Board, Back plane & Power Supply

New product design and development

Medical electronics

Biwaze cough system, IOT Ventilator

New product design / development

Consumer electronics & IoT

Unmanned Automated vending machine, Automated Coffee Vending machine

New product design

Automation & control systems

PLCs & HMI configuration & programming, DCS & SCADA, Instrumentation & controls, CNC control Systems and standalone servo drives

Services

IoT product development services



Partner support

CAD

Electro-Mechanical Enclosure, Sheet metal, Machined, Plastics, Rubber and Electrical contact, Right material and process selection, DFM & DFT, Product certification compliance

Integration and testing

Electro-Mechanical Product Integration, Functional Testing, and Burn-In

Software Consultancy

Solutions in technology-based, Resource and Support Services

CAE

Motion analysis (MBD)
Structural: Linear, Non-linear, Vibrations,
thermal stress, Impact, Drop. CFD(Flow,
Aerodynamic impacts), Thermal CFD

VAVE, Teardown, Reverse engineering

CT scanning, digital radiography, CMM, 3D scanning, material analysis, surface treatment analysis, gear measurement

Hardware Design & Development

Electronics and Embedded, Cable assembly,
Design Validation, and Testing support,
Mechanical Enclosures

Should costing

Excel-based costing,
Commodities: Machining, fabrication, plastics,
sintered, castings, etc.

SCM, Product commercialization

Logistics and Delivery management

Proto build & Supply

Proto & Pilot batch, Production support Product compliance and Certification











IEC 61010-1:2010 IEC 60079-0:2017 IEC 60079-7:2015

Design and developed products





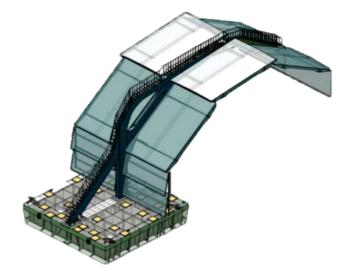








CHAKKI MACHINE DESIGN & OPTIMIZATION



FLOATING CANOPY



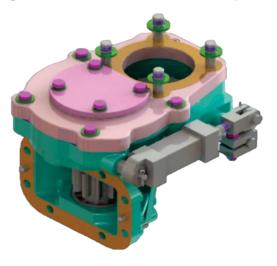
RICE TRANSPLANTER

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Design and developed products





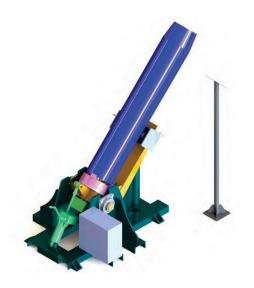
POWER TAKE-OFF



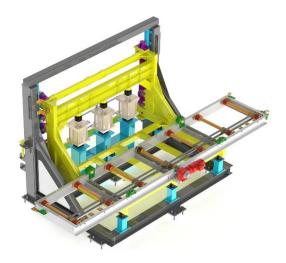
MORTIZE UNIT TESTING FIXTURE



SEWING MACHINE



MOTORIZED TILTING WELDING FIXTURE



SIDE ARM LIFT TABLE



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