



**E**xcellence  
in Engineering

**V**alue  
Creation

**I**nnovative  
approach

**Q**uality  
Solutions

A large, light green triangle pointing to the right, partially overlapping a smaller, light grey triangle behind it.

## About us

A team of professionals with experience in the field of Product design and development with emphasis in Concept Research, Modelling, Performance Analysis and Manufacturing support.

A large, light green triangle pointing to the left, partially overlapping a smaller, light grey triangle behind it.

## Our Vision

To become a premier Engineering firm in providing reliable and cost effective solutions to our customers by following ethical standards.

A large, light green triangle pointing to the right, partially overlapping a smaller, light grey triangle behind it.

## Our Mission

We strive to support our customers with advanced technology and innovative approach to ensure best in class product quality and solutions.



## Our Team profile

29+ years of Experience in product design and development. Expertise in NPD, Value Engineering, manufacturability checking, product costing & Vendor development. Design & development of automotive products(Alternators, wipers),circuit breakers, Wiring devices & power distribution panels.

15+ years of Experience in design and development of MCB, MCCB, SRCD,RCD & Wiring accessories. Expertise in building unique mechanisms, Electronic PCB design and development, PCB on board trouble shooting , Analysis and test, NPD, Structural, Thermal, Rigid body dynamics, Magnetic Analysis & DFMEA.

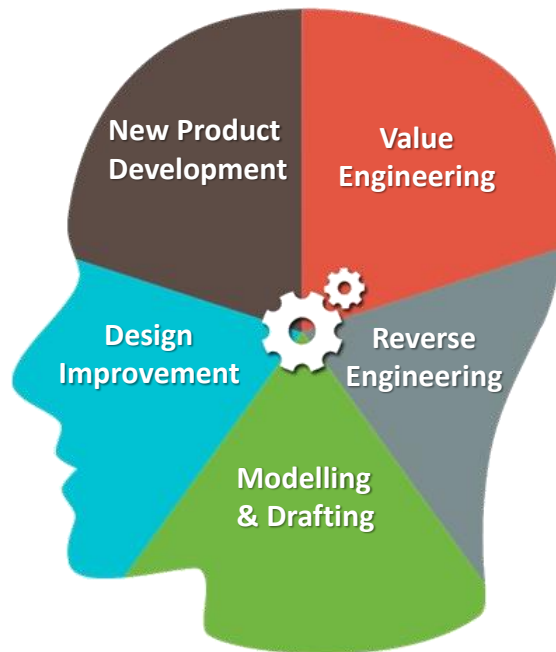
15+ years of Experience in design and development of MCB & MCCBs, cloud automation(AWS & azure) & Embedded system design and development, IOT System design and development

3+ years of Experience in design and development of PCB, Embedded system,



## What we do...

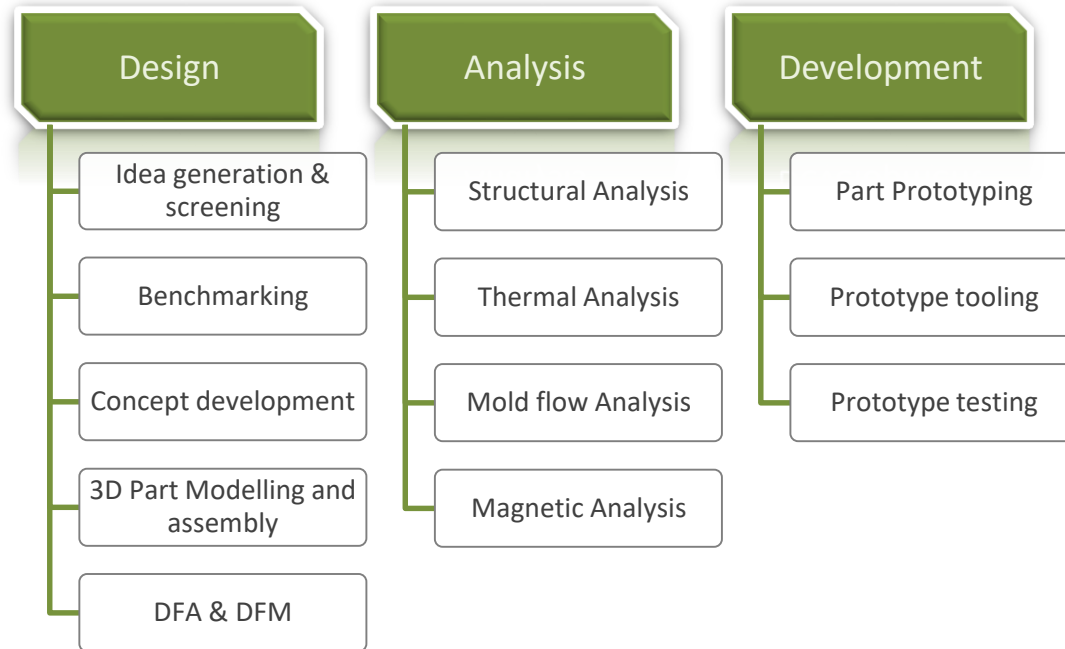
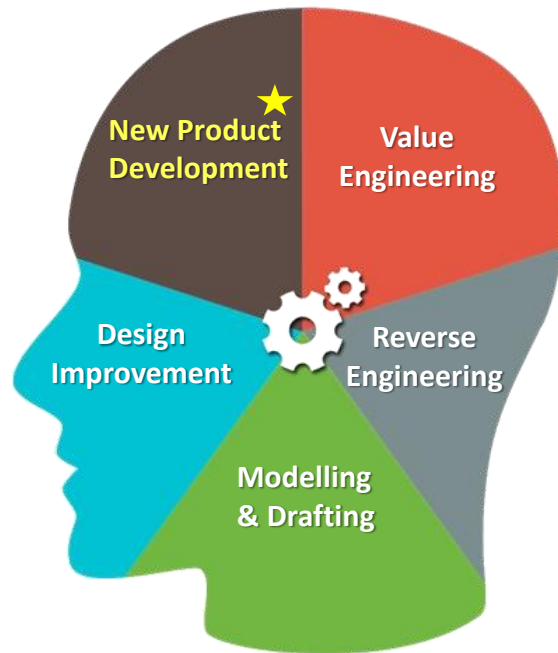
We provide variety of services and solutions which is contemporary & state of the art which would satisfy our customers in the following fields...





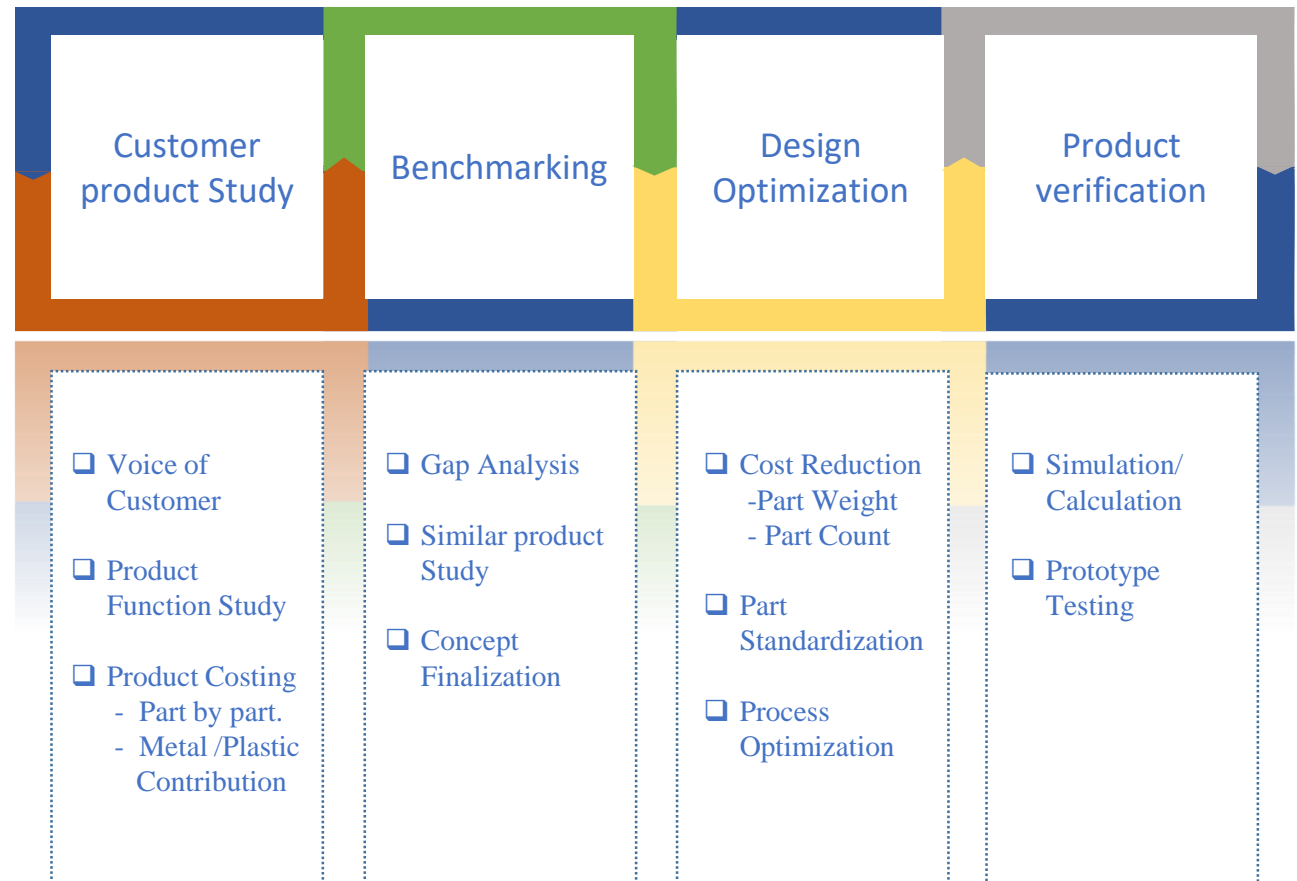
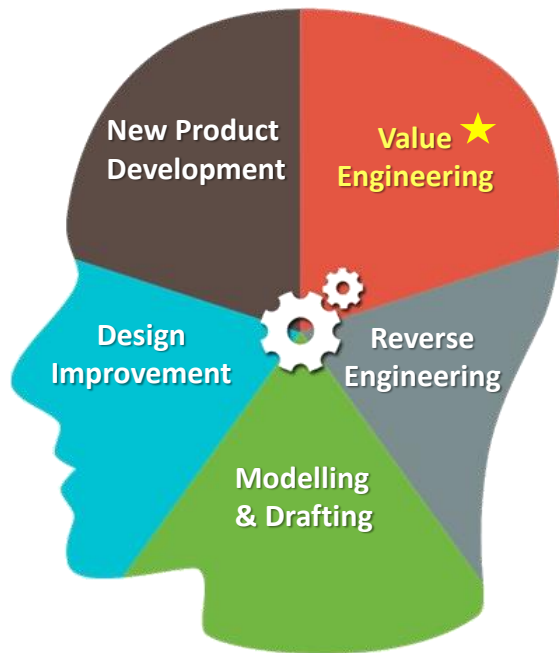
## New Product Development

We conceive our customer product requirements and provide them with a well designed, tested and certified product ready for mass production. We can also provide end to end manufacturing support.



## Value Engineering

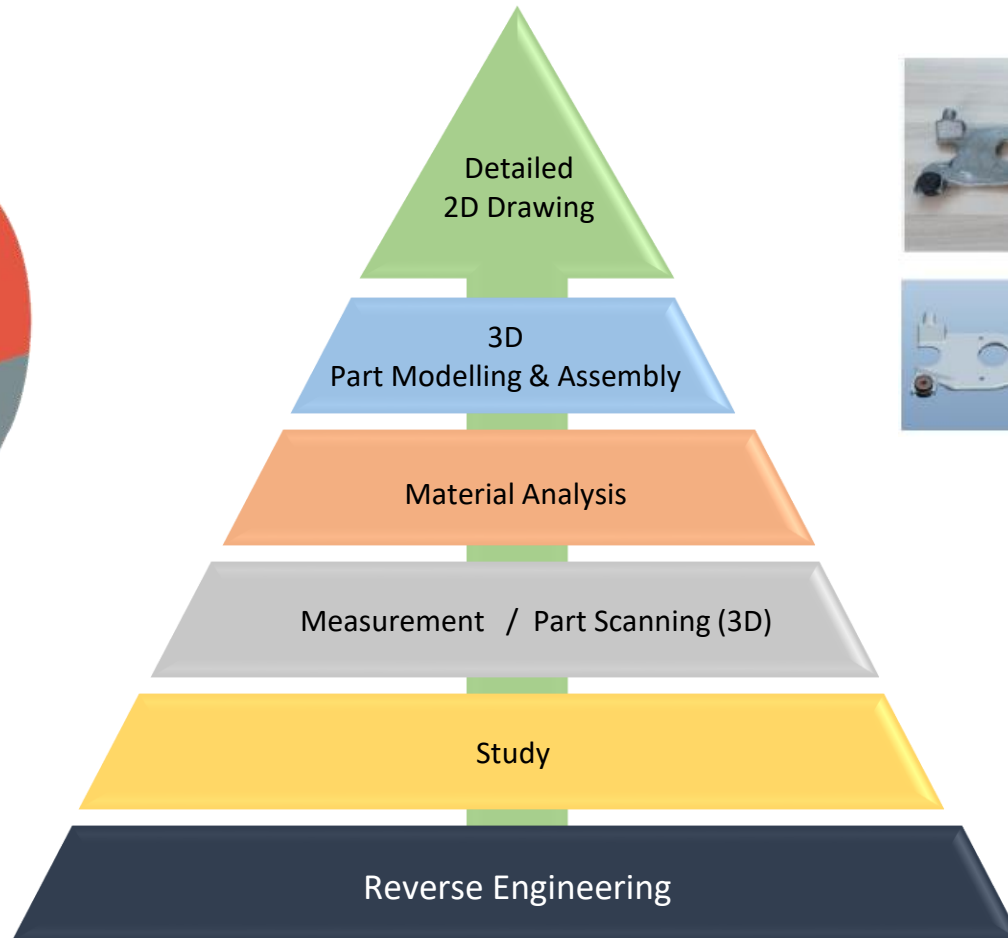
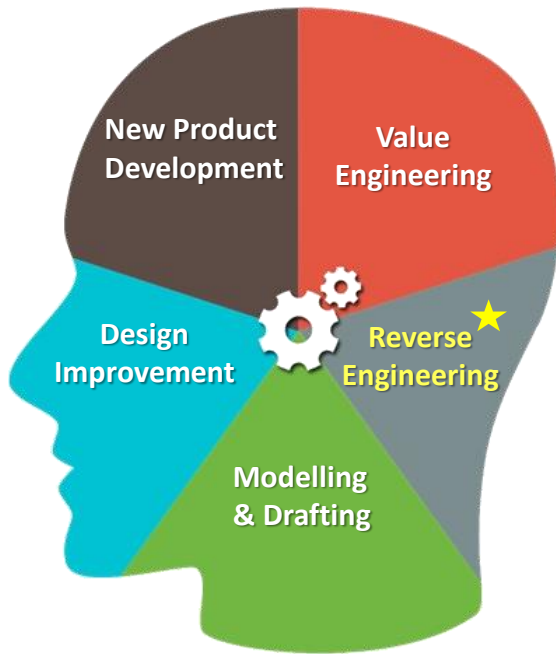
Value Analysis and Value Engineering to provide optimized design concepts resulting in cost reduction and improved quality.





## Reverse Engineering

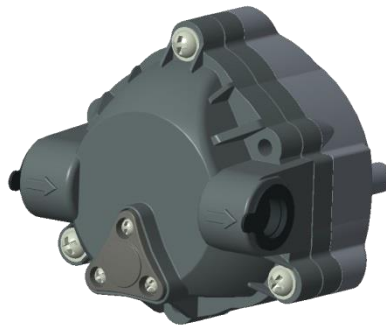
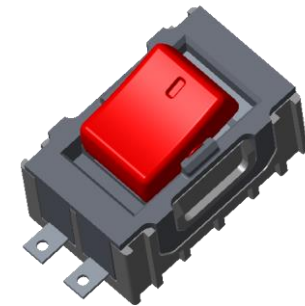
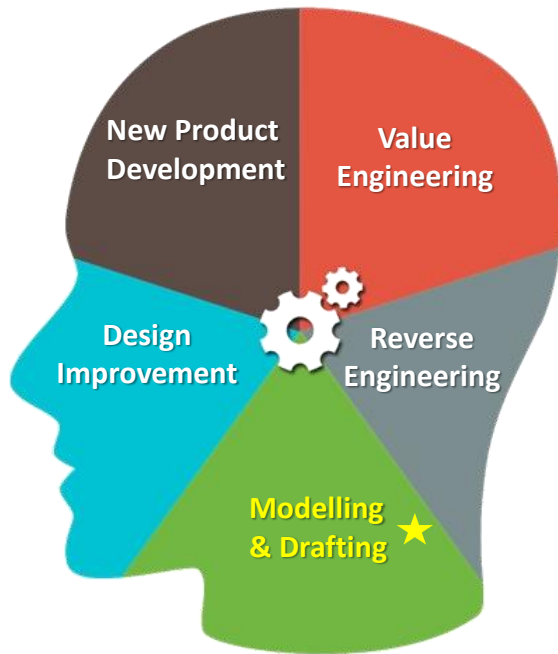
We support our customers for generating design variants through digitization which is rich in quality and accuracy.



## Modelling & Drafting

3D Modelling with utmost care considering the assembly and manufacturing aspects

The 3D parametric assembly exactly resembles the real time working of the products with all the functional constraints. **(Software used: PTC Creo)**

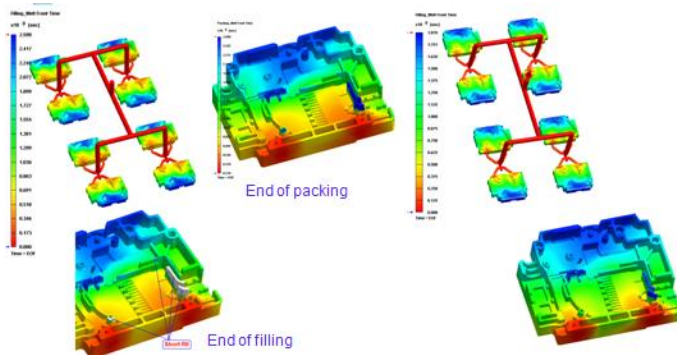




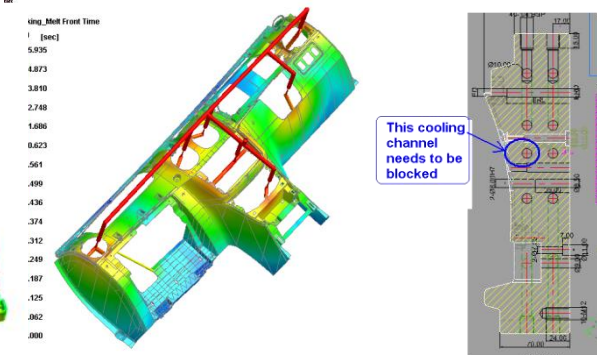


**Plastic part optimization** (We have technical expertise for these activities, using external resources for software)

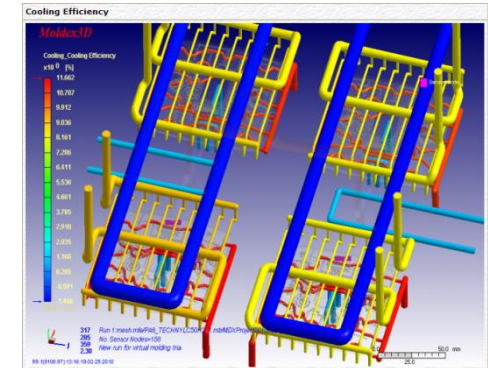
Molding Process Optimization



Optimized feed system and cooling channel design



3D Conformal cooling channel design



Alternate plastic material development /validation

Alternate material can be suggested after research and analysis to improve

- a) Performance
- b) Cost
- c) Processing easiness
- d) Quality

Linear static analysis and topology optimization

Few objectives of topology optimization

- a) To reduce weight
- b) To maximize stiffness
- c) To reduce cooling time

Trouble shooting in processing

Few objectives of troubleshooting in mold flow process are

- a) Air trap problems
- b) Fish eyes problems
- c) Flow marks problems
- d) Flashing & jetting problems
- e) Short shot problems
- f) Weld line & meld line problems



## Other Products expertise

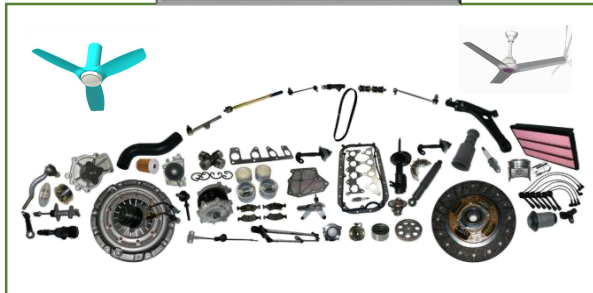
Circuit Breakers



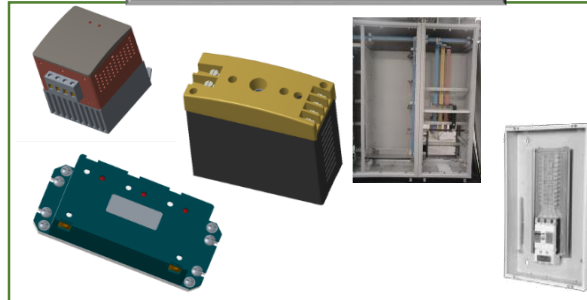
Wiring Accessories



Automotive & consumer products



Panels & Enclosures



Embedded , PCB design & development



## Past experience & accomplishments

### MCB

- Design improvement & Optimization for MCB(40A&63A) 6kA & 10kA short circuit breaking capacity.
- Design modification for 100A MCB for 10kA short circuit breaking capacity.
- Design optimization for (Thermal & Magnetic design) for 0.5A to 4A rating.
- Design & developed unique modular MCB Mechanism to suit existing design.

### MCCB

- Complete design of development of 250A MCCB for 50°ambient with 25kA short circuit breaking capacity.
- Mechanism Design for 100A MCCB for 50°ambient with 14kA short circuit breaking capacity.

### Wiring Accessories

- 16 Switched socket suitable for 1Gang & 2Gang ,Modular switches, SRCD, PRCD
- Unique Easy unplug mechanism for Extension sockets

We have designed, developed some products which are in the Indian market

**Microcontroller based Timers and controllers and IOT Products suitable for 1Gang || Two module box**



**Specifications**

Description	Value
Rated Voltage	250V AC 50 Hz
Maximum Operating current	16AX/2 HP/ 3 kW
Mounting Method	Flush/Surface
Suitable Box	Indian - 2 module Box
Conforms to standard	IS/IEC 60669-2
Color	White
Warranty	1 Year
Product weight	140 gms
Product Dimensions	87 x 87 x 45 mm
Terminal Size	2.5 mm <sup>2</sup> x 2

Product successfully tested at



**SRCD & PRCD –Socket outlet with RCD**



**Specifications**

Rated Voltage	230V AC 50 Hz
Maximum Operating current	16 A
Rated Trip Current	30mA
Rated Tripping time	< 40ms @ 5 * IΔN
Poles	2
Product Dimensions	118 x 94 x 40 (mm)
Suitable Box	Indian-2 or 3 module metal Box
Warranty	1 year
Conforms to	IEC 62640 & IS 1293
Breaking	Double pole, Double break
color	White

Product successfully tested at



## Hardware and firmware development

We do following activities for PCB design & development

- Hardware and firmware development for PCB including Schematic, BOM & source code(develop and optimize) inputs as per customer requirements. (We have software to do upto 2 layer PCB)
- PCB layout to suit product envelope (Design for assembly)
- PCB proto-type development & assembly
- Basic functional testing for PCB assembly

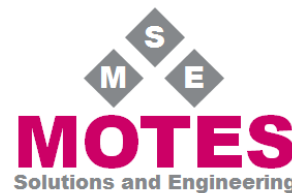
PCBs designed & developed for ours and for customers (MCU-based **timers** to precision controllers **for water levels, dynamic VFD motion control systems, 4-wheeler starter circuits, and intricate CNC/VMC machinery interfaces**, Residual current devices (**RCD**)for Electrical sockets & plugs and also **EMC filters**.



Clientele



**Lucas-TVS Limited**



## Clients - Respective projects



- Low cost switch design, Reverse engineering for 6/16A sockets & MCB SB200M Value engineering



- SRCD design for 1Gang & 2 Gang, Extension socket design, Clip-ON plates redesign.



Carborundum  
Universal

- Design automation for 3D model & 2D drawing generation work for various types of abrasive wheels



Lucas-TVS Limited

- Fan blade(Plastic) ,Brackets and other assembly parts and PCB design for BLDC fan ,Rectifier & Regulator design for Starter-Generator project, Reverse Engineering for wiping system



- Static structural & Thermal analysis for Rotor & Magnet assembly , Manpower deputation for Design Engineers ( PTC Creo)



Tube products  
of India

- Reverse engineering of Bracket assembly for E-Vehicle



- Reverse engineering of RO Pump assembly



- Industrial design, Enclosure & Rocker design for Electronic switch module



- Complete system design for Dual flush outlet valve mechanism & 2D drawing work for Inlet valve design



- Reverse engineering of pouches for different Tooth brush models



# CONTACT US

The text "CONTACT US" is rendered in a 3D, green, sans-serif font. The letter 'O' is replaced by a green globe. A white mouse cursor is positioned over the letter 'S', with a thin line extending from it towards the left.

## **EVIQ Design Solutions**

West Mambalam

Chennai 600 033

Email : [info@eviqds.com](mailto:info@eviqds.com)

Website : [www.eviqds.com](http://www.eviqds.com)

Phone : +91 94434 10073

+91 96299 00110

THANK YOU ☺