

# Welcome To

# YANTRNA SYSTEMS



## Introduction

**Yantrna** Systems is an Industrial Automation solution provider and Engineering design/Development company

We have strong background of Process Automation and Electronic/Electro-mechanical development and various mfg processes , end to end solutions .

Our Vision is to satisfy our client by providing one step ahead solutions of their requirements.

We believe in simplicity and most advance technology adoption in any of our Developments, Engineering and automation solutions.

Ensures that our client can depend and rely on us for all their aspects towards foolproof, cost effective and Productive solutions





## Our Core Capabilities

- Automation
- Process Control & Monitoring
- Zig And Fixtures , Gauges
- Material Handling systems
- Customized Product development
- Product Marketing
- Component validation and testing



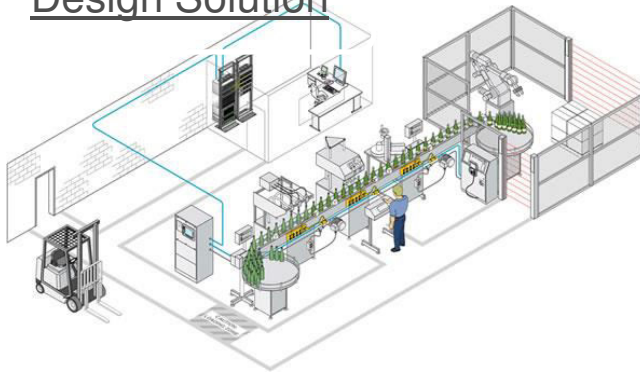
## Automation

- **Industrial, Plant, Process Automation.**  
(Process control systems / Process monitoring systems)
- **SPM** (Special purpose Machines)
- **Robotics** (Assembly And Test Equipment)
- **Assembly Fixtures** -Zigs And Fixtures , Gauges,  
System Interlock & Poka Systems.
- **Material Handling Systems and Conveyors.**
- **Existing instruments**, test setup, machine  
automation – (retrofit solutions)
- **Lab view based** Controls and automation  
systems
- **PLC, SCADA, Embedded** based instruments.  
Panel assembly and panel wiring.

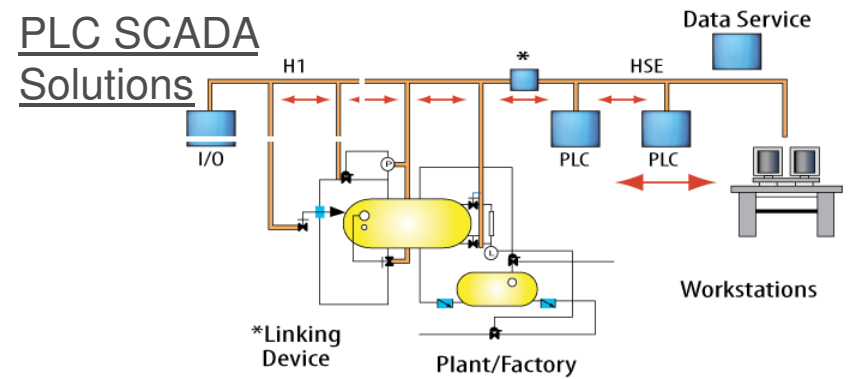


# ➤ Industrial, Plant, Process Automation.

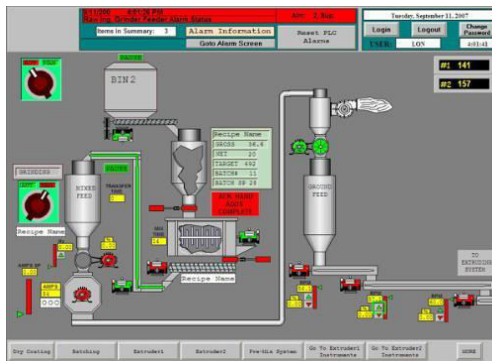
## Assembly Line Design Solution



## PLC SCADA Solutions

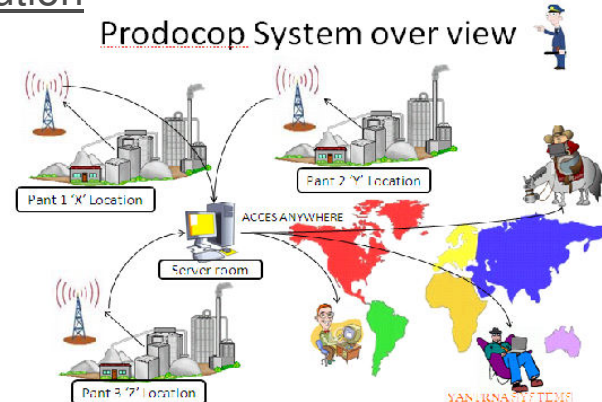


## Front End PC Software solution



## Remote Monitoring Solution

### Prodocop System over view



➤ **SPM**

# Customized systems and machinery

ELECTRICAL  
MOTORIZED  
AUTOMATION MACHINES



PLC SCADA  
Systems Solutions



PNEUMATIC  
AUTOMATION MACHINE  
SOLUTIONS

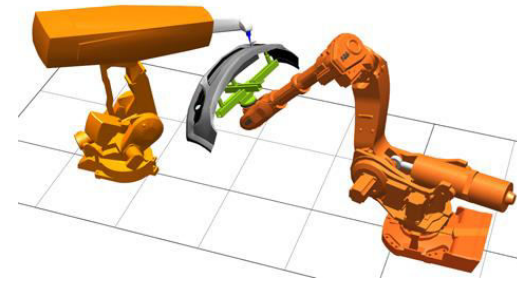


AUTOMATIC FEEDING  
SYSTEMS



➤ **Robotic arm and systems** (under development)

ROBOTIC ARM  
CUSTOMIZED SOLUTION



ROBOTIC ARM FOR  
ASSEMBLY



SMALL ROBOTIC  
XY AXIS MATRIX  
SYSTEM



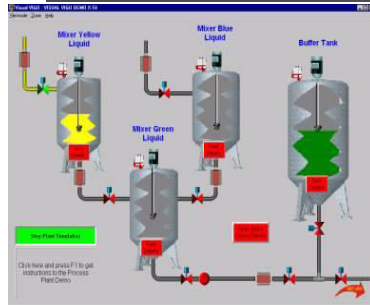
ROBOTIC  
ASSEMBLY LINE  
CUSTOMIZED  
SOLUTIONS



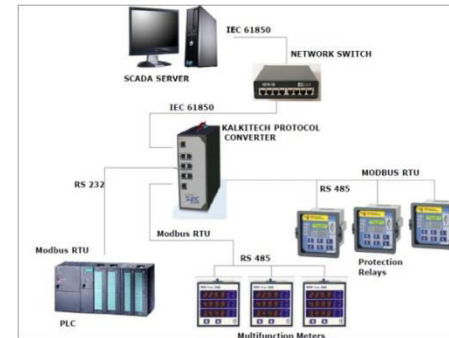
# ➤ PLC SCADA Embedded Systems

PLC SCADA Complete end to end solution

## SYSTEM SOFTWARE



## SYSTEM HARDWARE



## Embedded Monitoring systems





## ➤ Conveyor systems



CUSTOMIZED PVC  
LINK CONVEYOR



ROLLER CONVEYOR



CHAIN CONVEYOR



PVC BELT  
CONVEYOR





## ➤ Andon Display



Production Monitoring Display



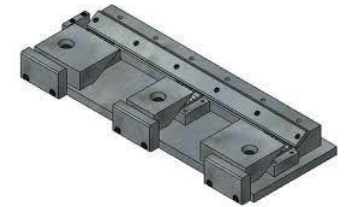
LCD Based Monitoring Display



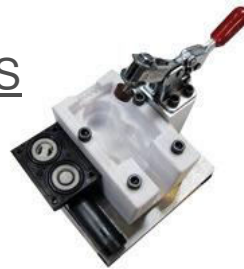
## ➤ Zigs and Fixtures



ALL KIND OF  
FIXTURE DESIGNING  
AND  
MANUFACTURING



SEMI AUTOMATIC  
ASSEMBLY FIXTURES



MANUAL ASSEMBLY  
FIXTURES



INSPECTION FIXTURE





## ➤ Material Handling Systems

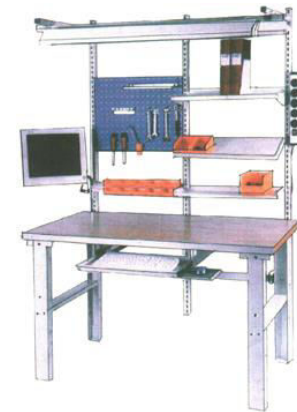
Over head cranes , push pull trolley systems



ALL KIND OF  
TROLLYS MATERIAL  
STORAGE RACKS ,  
LIFTING EQUIPMENT



Assembly Tables



## ➤ Component Validation and Testing

- ❖ Environmental testing
- ❖ Endurance testing
- ❖ Life cycle / performance test

### **Facility**

#### Environmental testing

- Thermal Shock
- Accelerated life testing
- Vibration test with environmental temperature -40°C to +120°C
- Cyclic environmental testing Hot chamber
- Cold Chamber
- Dust test
- Water spray test
- Vibration test
- Salt spray





**Yantrna Systems**<sup>TM</sup>  
Engineering for ever-e-things

## ➤ Valuable Customers

**Mahindra**  
Rise.



**Mahindra**



**Sundram Fasteners Limited**

**WINDAL AUTO**

**Honeywell**  
Turbo Technologies



**NEPTUNE ENTERPRISES**

**Reliable Mechatronics Ltd**



**TATA** AUTOCOMP SYSTEMS LTD



**Volkswagen**





## ➤ Our successes stories

# Robotic combination switch reliability test system

**PATENT FILED NO. 105/MUM/2013 HMI Base System**



### List Of customers :

- Tata Motors
- MindaRica
- Varroc Engg .
- Reliable Mechatronics.



## ➤ Our successes stories

# Robotic combination switch reliability test system

**PATENT FILED NO. 105/MUM/2013**



### Features : Specifications

- 3 switch(same type)testing mechanism
- HMI based system
- PLC control panel
- Load max 50Amp each switch
- Power supply for load - 03v50amp
- Voltage drop tester for each point of switch contact (PANEL MOUNTED METER SIZE 90\*90)
- Operating Temperature rang -30Deg C to + 85 Deg C.







## ➤ Our successes stories

# Robotic combination switch reliability test system

**PC BASED SYSTEM**

**PATENT FILED NO.**  
**105/MUM/2013**



### List Of customers :

- **Tata Motors**
- **MindaRica**
- **Varroc Engg .**
- **Reliable Mechatronics.**





## ➤ Our successes stories

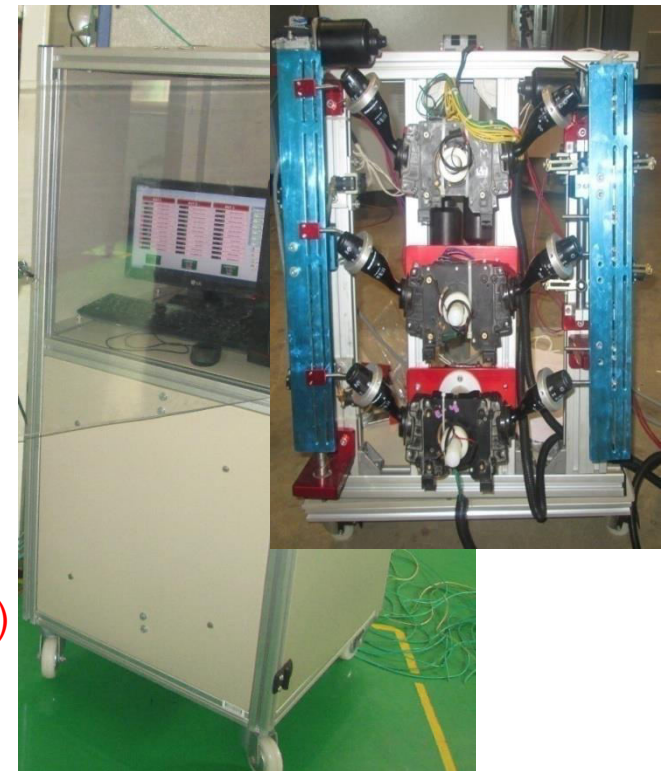
# Robotic combination switch reliability test system

**PC BASED SYSTEM**

**PATENT FILED NO. 105/MUM/2013**

### Features : Specifications

- 3 switch(same type)testing mechanism
- PC based system
- PLC control panel
- Encoder based system for more accuracy
- Load max 50a each switch
- Power supply for load - 03v50amp
- Voltage drop tester for each point of switch contact (PANEL MOUNTED METER SIZE 90\*90)
- Operating Temperature rang -30Deg C to + 85 Deg C.



## ➤ **Our successes stories**

### Automatic heat shrink chamber

#### Features : Specifications



- **Temperature range 20DegC to 400DegC**
- **IR Heater used for instant and fast heating**
- **System to reduce process time**
- **Save Electricity**
- **Increase production**

#### List Of customers :

- **Essem Shrinisons Pune.**
- **Essem Shrinisons Rudrapur.**
- **Neptune Enterprises**
- **Star Engg .**





➤ **Our successes stories**

# Neutral switch endurance test rig with hot oil bath



## Features : Specifications

- **Temperature range 20DegC to 400DegC**

## List Of customers :

- **Varroc**
- 





## ➤ Our successes stories

# Rear brake switch endurance test rig

### Features : Specifications



- Temperature range 20DegC to 400DegC
- IR Heater used for instant and fast heating
- System to reduce process time
- Save Electricity
- Increase production

### List Of customers :

- Essem Shrinisons Pune.
- Essem Shrinisons Rudrapur.
- Neptune Enterprises
- Star Engg .





## ➤ **Our successes stories**

### Starter Motor Life cycle test rig

#### Features : Specifications



- **Temperature range 20DegC to 400DegC**
- **IR Heater used for instant and fast heating**
- **System to reduce process time**
- **Save Electricity**
- **Increase production**

#### List Of customers :

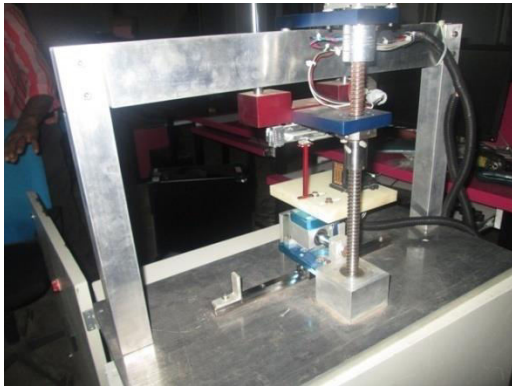
- **Essem Shrinisons Pune.**
- **Essem Shrinisons Rudrapur.**
- **Neptune Enterprises**
- **Star Engg .**



## ➤ Our successes stories

# Force measurement (Spring tension)

## Contact Force Testing Machine



### •Features :

- Indigenized design.
- PC Based Online testing.
- Single point contact testing measurement.
- Force range 0 to 400 gm.
- 1% Accuracy
- Operating temperature normal environment +20 +50 Deg C.
- Monitoring and data storage of each contact load measurement through PC (PC based system),
- Store history and faults data with alarm.
- Monitoring parameters – Force 0 gms. To 400 gms. , I/P and O/P voltage 12v per operation single point at a time.
- Count Number of operation and number of cycles/ parts done.
- Total number of operation 5 contact points individually tested in one cycle/ part.
- Force Curve respect to contact graph provided

### List Of customers :

➤ **MindaRica**

➤ **Varroc Engg .**



## ➤ Our successes stories

# Force measurement (Spring tension)

## Endurance (Fatigue) Testing Machine



- Features of Test Rig :
- Indigenized Electro mechanical design.
- Spring OD can be checked - Min 2 mm Max 50 mm
- Spring Length can be checked – Min 5mm Max 200 mm
- Spring load 5 gm Min up to 5000 gm
- Number of cycles set at a time Max 5 Lac
- Cycle Per Min – 100 Max
- Detachable load cell (disassembly of load cell)
- Number of cycle display to be provided
- Spring adjustable displacement
- Maximum 10 spring to be test at a time
- Load digital display
- Displacement Physical display (Mechanical)
- Cycle hold time programming MIN & MAX
- PLC , HMI based system (PC based optional)

### List Of customers :

- Industrial Springs LTD.
- Varroc Engg .





## ➤ Our successes stories

# 4 wheeler Door Lock Testing with force monitoring



### •Features of Test Rig :

- Indigenized Electro mechanical design.
- Check the door lock LH and RH at s time
- Check for the Lock and Unlock operation
- Pneumatic pressure controlled system .
- Number of cycle display provided
- Load / Pressure digital display indicator
- Displacement physical display (Mechanical adjustment)
- Cycle hold time programming MIN & MAX
- PLC , HMI based system (PC based optional)

### List Of customers :

➤ **Volkswagen**



## ➤ Our successes stories

### 25 / 40 feet motorized conveyor systems



#### List Of customers :

- **Essem Shrinisons**
- **RD Electronics**
- **Reliable Mechatronics**
- **Neptune Enterprises**

#### •Features :

- Indigenized Electro mechanical design.
- Motorized conveyor
- Speed Adjustment .
- length 42 Feet ( As per Requirement can be made)
- Width 500mm ( As per Requirement can be made)





## ➤ Our successes stories

### Assembly Tables



#### List Of customers :

- **Essem Shrinisons**
- **RD Electronics**
- **Reliable Mechatronics**
- **Neptune Enterprises**

#### •Features :

- Indigenized Electro mechanical design.
- Manual Assembly Table
- PLC Controlled
- Process Control And monitoring Assembly Tables
- Any Size as per requirement



## Our successes stories

### ➤ Tiny conveyors



#### List Of customers :

- **Essem Shrinisons**
- **Neptune Enterprises**

#### •Features :

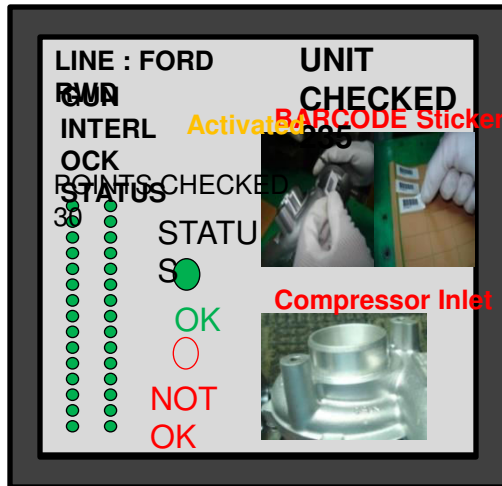
- Indigenized Electro mechanical design.
- Motorized conveyor for small application
- Speed Adjustment .
- length 42 Feet ( As per Requirement can be made)
- Width 500mm ( As per Requirement can be made)



## ➤ Our successes stories

**Certified By General Motors QA  
Department Bangalore**

# Visual Verification TQC (Touch Quality check) system



## Features

- System is to Mark & Verify all the specified visual points has been covered / checked as per sequence.
- Indication for each check point after checked.
- Foolproof system – even if any point is missed by operator it should arrest at in-house visual stage , should not pass to customer. (Interlock)
- System Can be used for multiple Product Line by selection , User friendly software easy to operate
- Data for checking can be modify online - Offline through customized software

## List Of customers :

- Honeywell Turbo Technology
- TVS (Chennai)
- Precision Cam shaft (EOU)
- Windal Auto LTD.

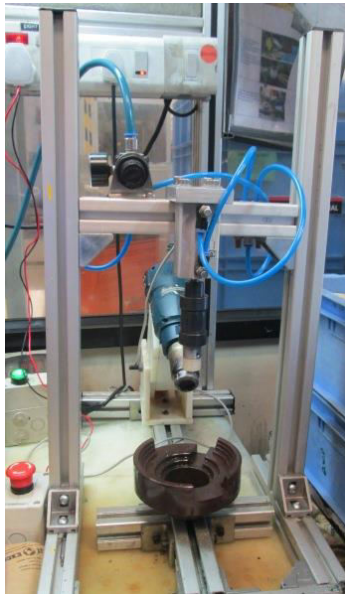




## ➤ Our successes stories

# PLC controlled Pneumatic based SPMs

Pneumatic Press  
with hot air control



Checking gauge systems Value  
engineering SPP



Special purpose parts as  
cost saving solutions



Automatic Printer

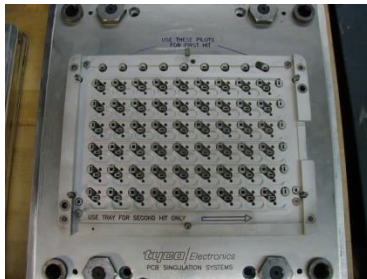


## ➤ Our successes stories

# Special purpose parts as cost saving solutions



Voltage Connector  
Earlier Importing from Korea  
Developed in India and Implement in a month's time with 50 % Cost reduction  
Less Lead Time



PCB Routing Fixture  
Earlier Importing from Germany  
Developed in India and Implement in a month's time with 30 % Cost reduction  
Less Lead Time





➤ **Our successes stories**

Special purpose parts as cost saving solutions



Spring Loaded Pin Fixtures  
For German made BBT Test System  
machine  
Developed in India





## ➤ Our successes stories

### Assembly line set up & automation (sub assembly line)



- End Of line test with Poka-yoke and interlocks



**Customers :**

- **Windal Auto - Rudrapur**





## ➤ Our successes stories

### Assembly line setup & Automation (press shop)

Automated press



Customers :

➤ Windal Auto - Dharwad



# Testing And Component Validation LAB





## ➤ Testing And Validation Facilities

### List Of Equipments

Environmental chamber



3 axis vibration system



Cold chamber



Salt Spray  
Chamber





## ➤ Testing And Validation Facilities

### List Of Equipments

Water Spray chamber



Dust Chamber



Hot air chamber





## ➤ Pipeline Projects

- ➔ FS Curve Measurement System
- ➔ Vision based Inspection System
- ➔ End Of Line Test System
- ➔ Automatic Thickness Measurement
- ➔ Torque Measurement





➤ **Pipeline Projects Workout**  
FS Curve System

[Link - Concept and Presentation](#)





➤ **Pipeline Projects Workout**  
Vision based Inspection System

[Link - Concept and Presentation](#)







➤ **Pipeline Projects Workout**  
End Of Line Test System

[Link - Concept and Presentation](#)





➤ **Pipeline Projects Workout**  
Torque Measurement

[Link - Concept and Presentation](#)



- **Pipeline Projects Workout**  
Automatic Thickness Measurement

[Link - Concept and Presentation](#)



## Product Marketing (Parent company)

- GSM / GPRS based Control and monitoring systems
- LED Lighting / Solar Lighting (Out door & Indore application)
- RFID Products / Inventory Management system
- Timer , Counters , Relay modules , Andon display
- PCB (Printed circuit boards)
- Wiring Harness
- EMS (Electronic Manufacturing services)



## In-house Facilities

### Machine Shop:



### List of machines :

- Milling Machine (conventional) – 3Nos.
- Jig Boring Machine (conventional) - 1Nos.
- M1TR – 1 number
- Wire Cutting Machine – 1 number
- Drilling Machine – 1 number
- Jig Saw – 1 Number
- Bench Grinder – 1 Number.

### Measuring Equipment :



### List of measuring equipment :

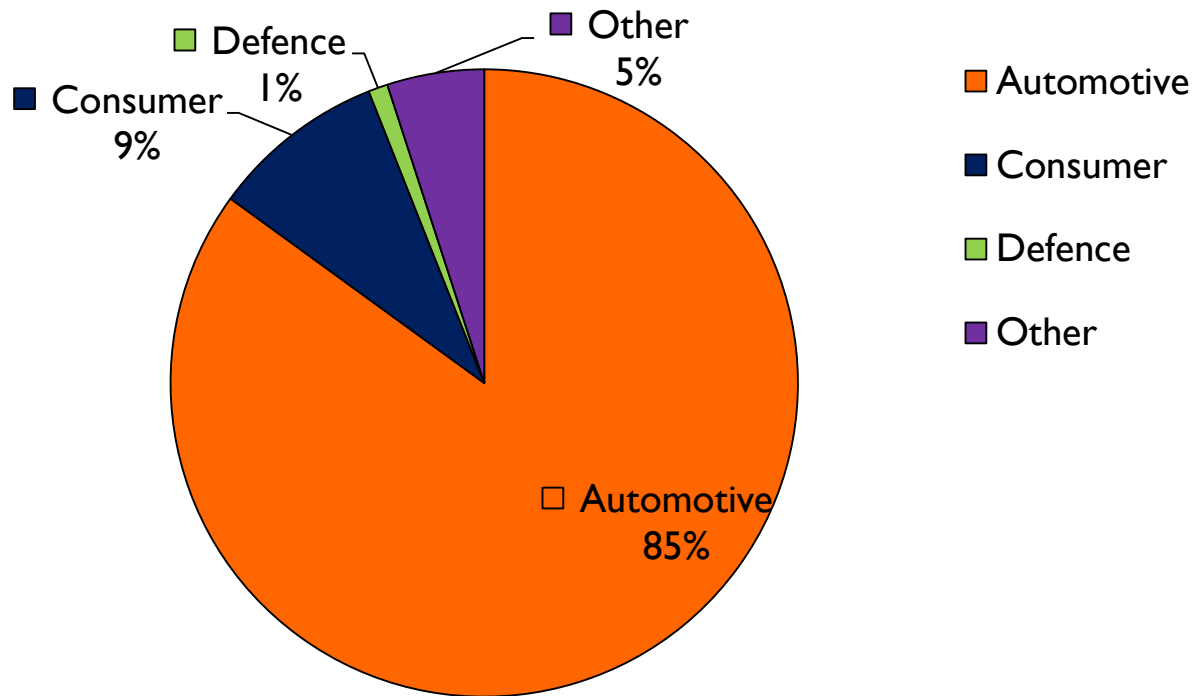
- Oscilloscope (Agilent make) – 1 Number
- Multimeter (Fluke Make)– 2 Nos.
- Current Meter (Fluke make)- 1 Number.
- Digital Vernier – 1 number
- Vernier Caliper – 1 number
- Micrometer – 1 Number
- Height Gauge – 1 Number.





## Segment wise Business

### Yantrna Systems customer segment





## TEAM

### Machine Shop:

- HOD
- Engineer - 1
- Supervisor 1
- Operator 3

### Software Programming:

(PLC , Embedded , Lab view)

- HOD
- Engineer
- Field application Engineer - 3

### QA :

- Engineer 1

### Assembly and Testing Shop :

- HOD
- Engineer - 1
- Worker - 2



# Thank you

## Contact Details:

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