

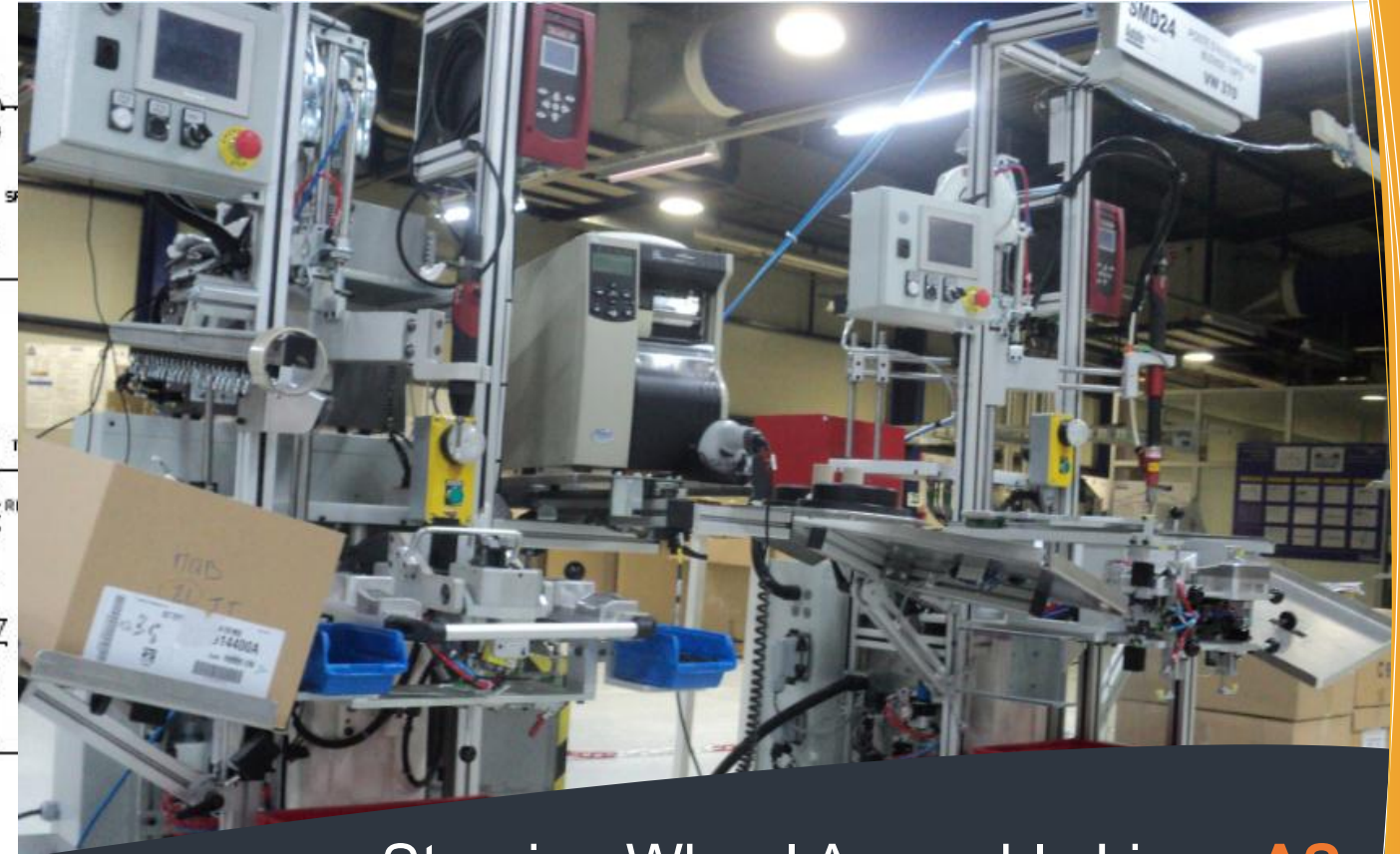
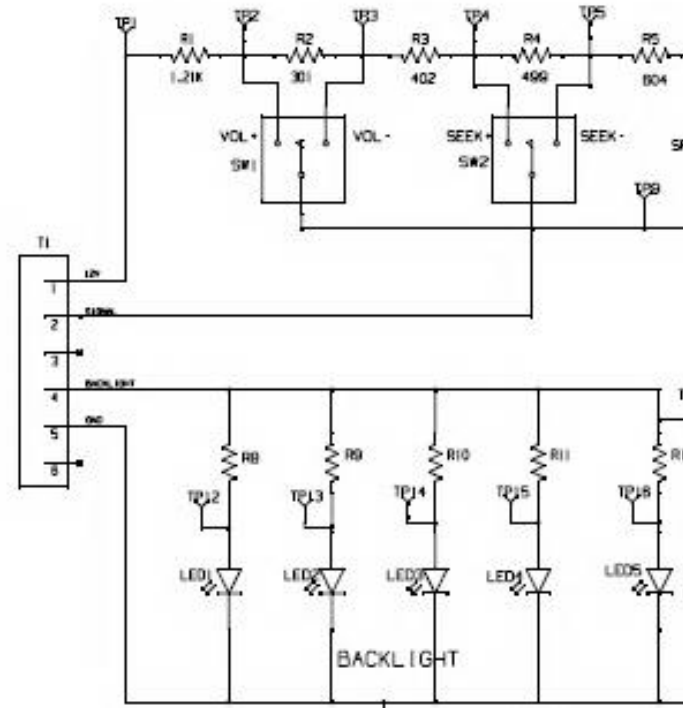
## MECHANIC & AUTOMATION SYSTEM DESIGN

SIBERNETIK with her experienced staff in custom machinery sector has completed many projects in cooperation with the leading companies of automotive industry.

Our dynamic staff works in a perfect harmony with our customers from the beginning of a project for the entire technological life of the product.

We intend to use the latest production and automation techniques in all the projects we carry on, in order to meet the demands of our customers.

This document describes the technical characteristics of Steering Wheel Assembly Lines designed and produced by SIBERNETIK



## Steering Wheel Assembly Lines **AS**

special  
designs to  
meet  
customer  
demands



### SPECIAL SOLUTIONS IN THIS PROJECT

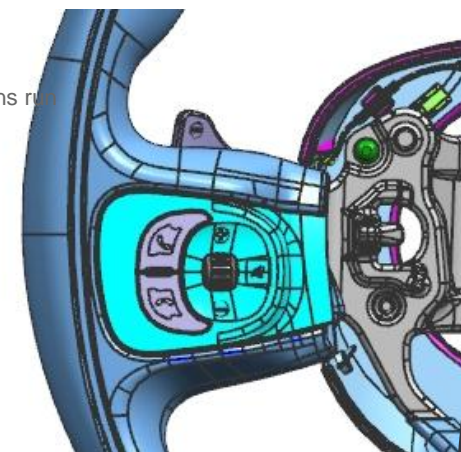
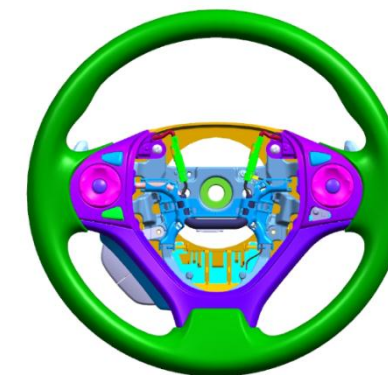
- ✓ Detection of Workpiece Presence with Various Sensors,
- ✓ Screwing Applications with Electrical Screwdrivers,
- ✓ Storage of Screwing Results,
- ✓ Automatical ScrewFeeding Applications,
- ✓ E-check Test of Radio & Cruise Control Buttons,
  - Control via Electrical Resistivity,
  - Control via PCAN-LIN Protocol,
- ✓ E-check Test of Steering Wheel Heating Function,
- ✓ E-check Test of Horn Plate Functionality,
- ✓ E-check Test of Steering Wheel Vibration Motor (LDW) Functionality,
- ✓ Height Control of Each Horn Plate Screw via Contact Sensor,



# assembly & e-check applications

USES TECHNOLOGY RESOURCES THAT YOU NEED IN YOUR BUSINESS

- ✓ Decopart is placed on the support fixture,
- ✓ Switches are placed on decopart,
- ✓ Switches are screwed on decopart manually by electrical screwdrivers,
- ✓ Torque and angle values of screwing are controlled and stored,
- ✓ Steering Wheel is placed on fixture and locked to the fixture automatically,
- ✓ Paddles are placed on Steering Wheel,
- ✓ Paddles are screwed on Steering Wheel by electrical screwdrivers manually,
- ✓ Torque and angle values of screwing are controlled and stored,
- ✓ E-check connector is plugged to the e-check socket,
- ✓ Operator pushes the buttons on switches one by one for e-check test,
- ✓ E-check test of each button is done,
- ✓ If e-check test result is OK; customer label is printed by barcode printer,
- ✓ Customer label is stuck on Steering Wheel,
- ✓ Barcode on Customer label is scanned by a fixed barcode scanner,
- ✓ Steering Wheel is unlocked & Unloaded by operator,



## control of key safety systems in your life

### PROJECT MANAGEMENT

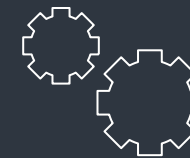
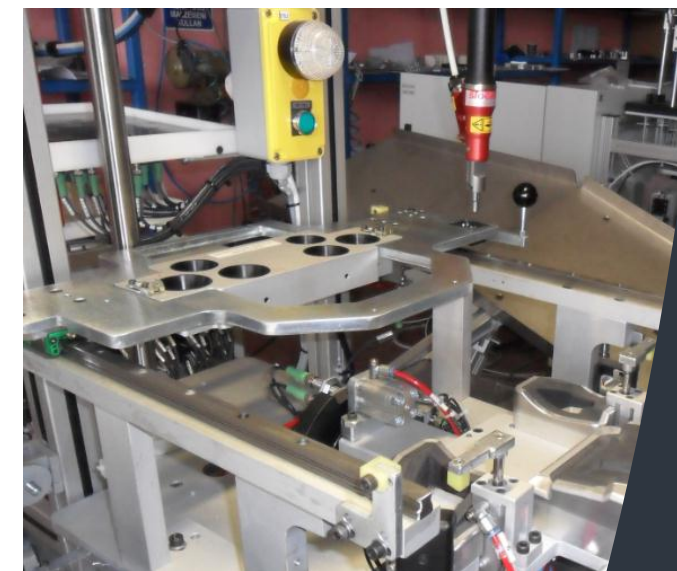
System requirements are classified according to the following items,

- Fabrication Conditions,
- PLC
- HMI
- Servo System
- Nutrunner
- Synoptic
- Safety

### PROJECT REALIZATION

Mechanic and automation system realizations run together in great harmony;

- Fabrication Conditions,
- Lay-Out
- Mechanic System
- Hydraulic System
- Pneumatic System
- Ergonomics
- Safety



### CUSTOMARY SOLUTIONS

Customary solutions are developed that will meet your demands according to your fabrication standards



### 3D CAD DESIGN

Systems are designed, using registered 3D CAD softwares on professional workstations



### INNOVATIVE SOLUTIONS

One of the best solutions is applied after all alternatives are offered and discussed in cooperation