



**Controlar**  
innovating industry

Controlar North America SA de CV  
México  
Company CV



**Controlar**  
innovating industry

# About Us



# Global Controlar in a Nutshell

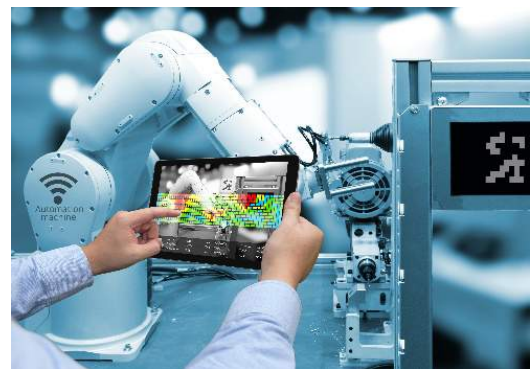
- Global company dedicated to **industrial automation and test systems** (core business)
- High standard of excellency in developing hardware and software for the Electronics Industry with special focus in the Automotive Industry
- **25 years in the market**
- **4 years in Mexican Market**
- More than 220 employees worldwide
- Production facilities and technical assistance around the world
- Stands for innovation, reliability and commitment to customers
- ISO 9001:2015 (Quality), ISO 14001 (Environmental), ISO 27001 (Information Security) and NP 4457 (R&D+I) Management Certifications





# Areas of Expertise

- Electronics development
- Automotive infotainment
- Communication systems
- Development of machines
- Development of complete assembly lines
- Systems integration and development
- Quality and functional test systems
- Robotics
- Mechanical Development
- Software Development





# Business Units



**Controlrol**  
test systems



**Controlrol**  
solutions & partners

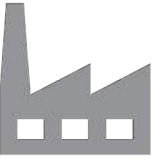


**Controlrol**  
automation systems



**Controlrol**  
aerospace & defense

- Each business unit delivers a significant portfolio of products and services worldwide including to best-known multinational companies.
- The company is currently experiencing a phase of strong growth and expansion both nationally and internationally, supplying new products and services always with excellent quality and innovation at a competitive price level.
- Controlrol AeroSpace & Defense is not established yet in Mexican Market



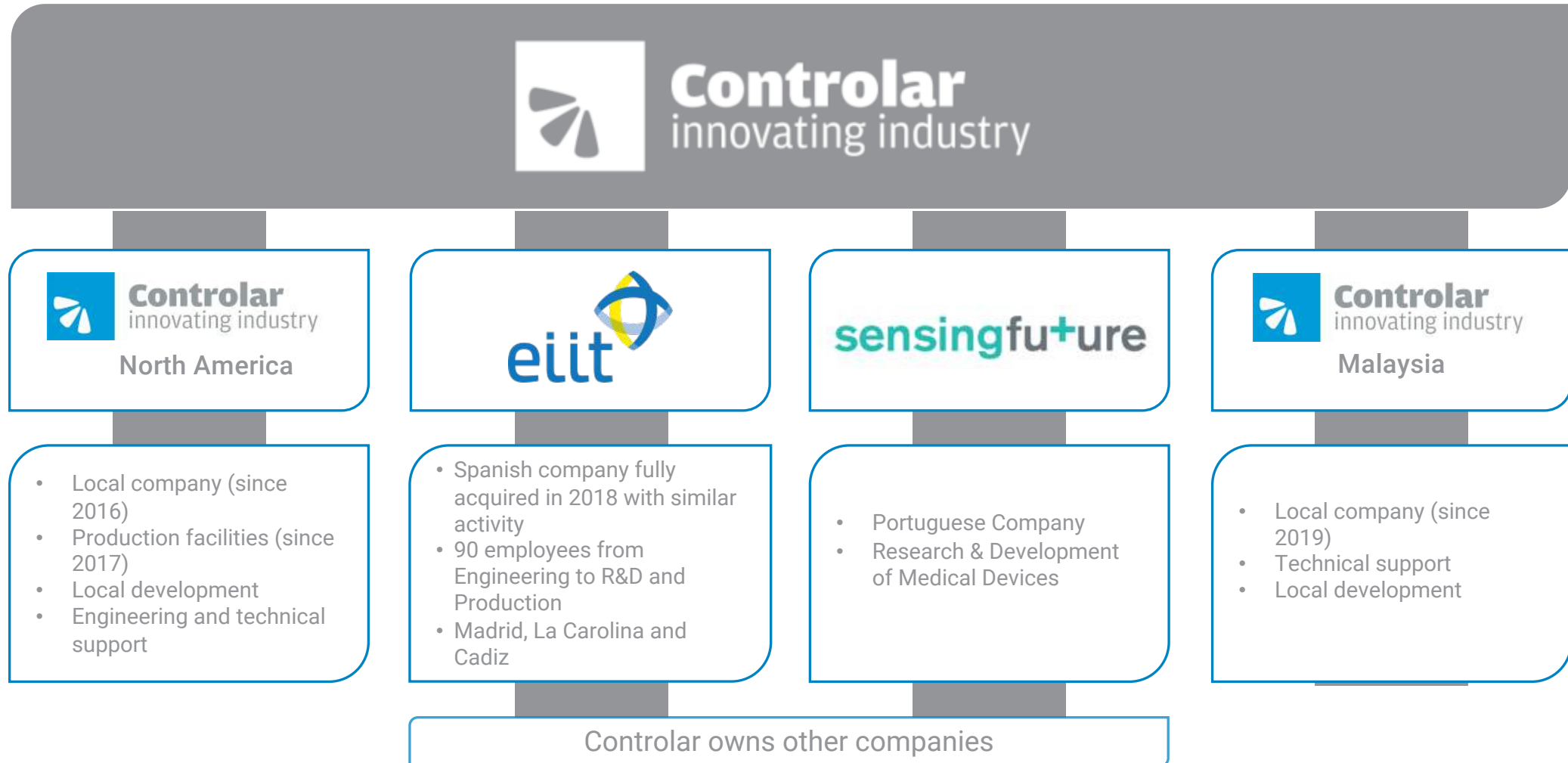
# Our Location - México

- Calle Amistad 3, Los Reyes, 54073 Tlalnepantla de Baz, EDOMEX
- **1900 m<sup>2</sup>** administrative Offices, Engineering, Technical support, Warehouse and Production facilities



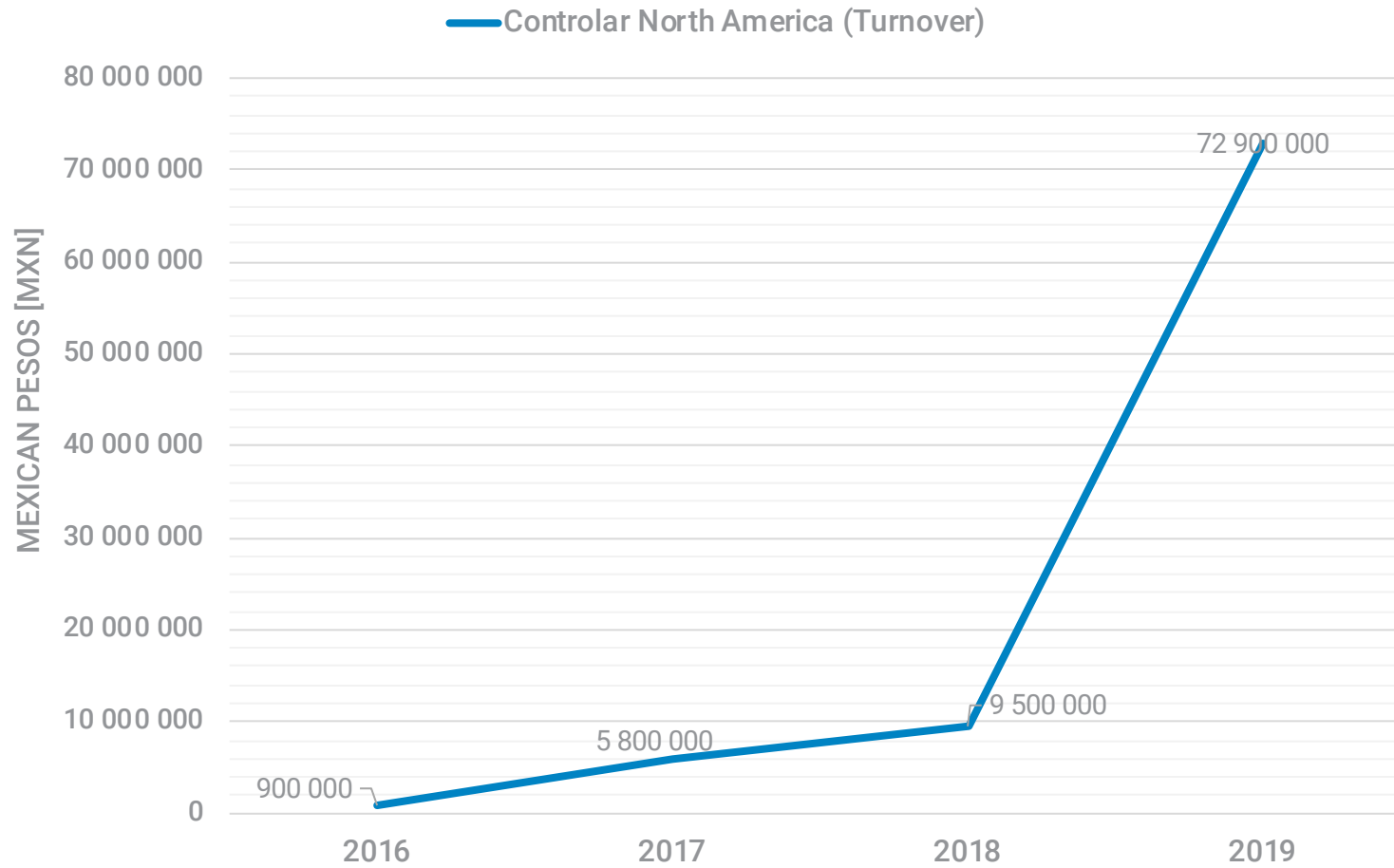


# Associates Companies





# Turnover Evolution







# Human Resources Distribution

## Distribution by Areas with different functions

Administrative & Purchasing	2
Accountability, Finance, HR	External
Sales Marketing & Communication	Headquarters
Quality, Environment and Safety	1
Key Accounts	5
Project Management & Development	5
Software Development	4
Mechanical Development	2
Technical Support	4
Production	5



# Milestones

**2016**  
Foundation and  
First  
establishment

**2017**  
Team Training and  
Development

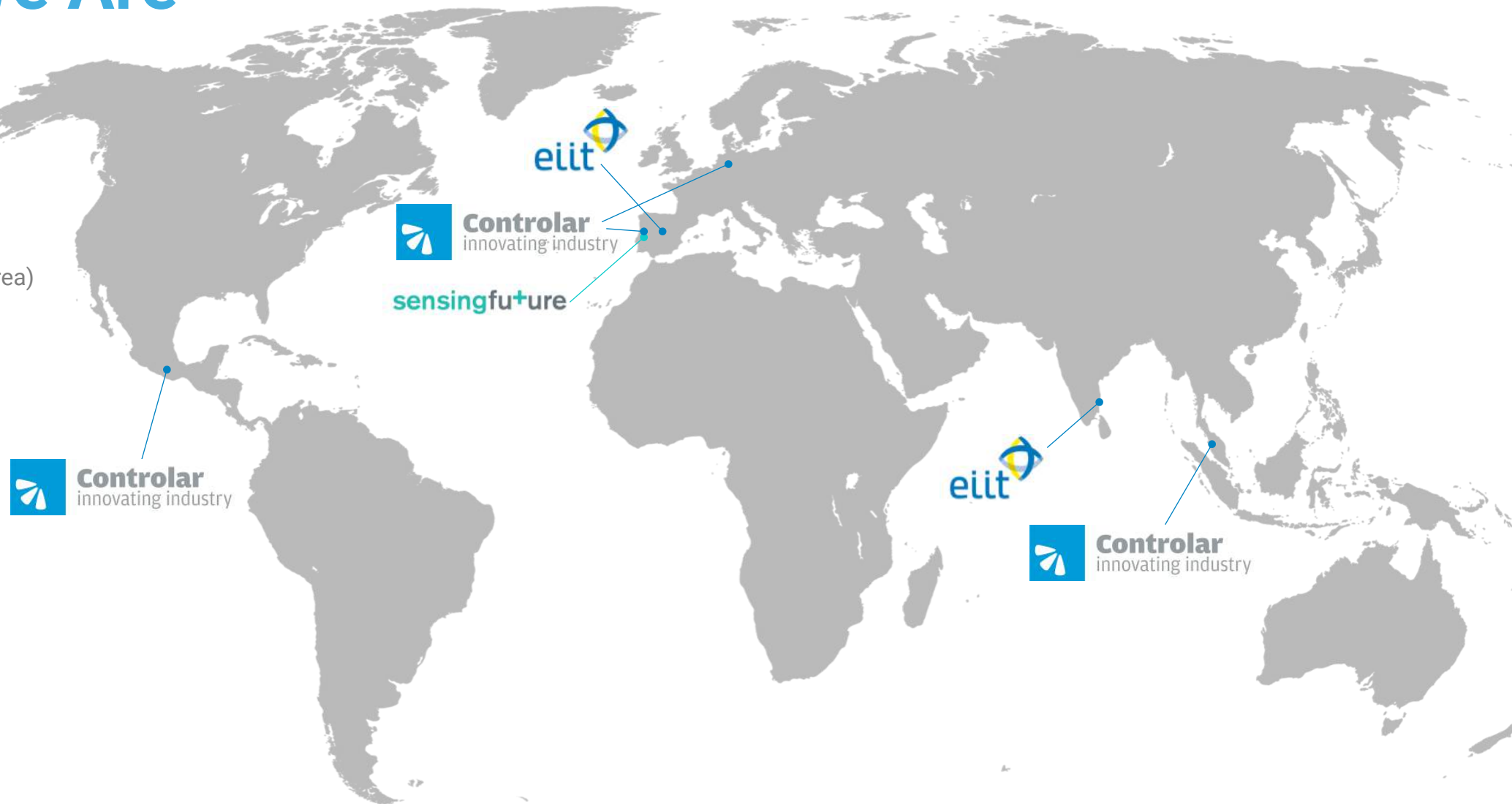
**2018**  
First Facilities and  
Start of local  
production

**2019**  
Business  
Development  
ISO 9001:2015  
Certification



# Where We Are

- **Controllar**
  - Portugal – Porto
  - Portugal – Montijo
  - Germany – Osnabrück
  - Malaysia – Penang
  - Mexico – Mexico City (area)
- **Eiit**
  - Spain – Madrid
  - Spain – La Carolina
  - Spain – Cadiz
  - India – Chennai
- **Sensing Future**
  - Portugal - Coimbra



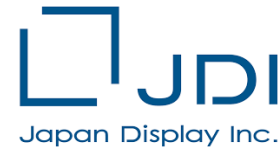


# Our Global Customers





# Other Worldwide References





# Certifications, Partnerships and Memberships

**Certificado**

Standard: **ISO 9001:2015**

No. Registro Certificado: **74 700 1998**

Titular del Certificado: **TÜV Rheinland de México, S.A. de C.V. certifica que: Controlar North America, S.A. de C.V., Andador SN, Lote 50 Manzana 24, Col. La Victoria, Teoloyucan, Estado de México, C.P. 54785, México**

Alcance: **Ha establecido y aplica un Sistema de Gestión de Calidad para: Concepción, Desarrollo y Producción de Soluciones de Tecnologías de Información y Automatización Industrial, Comercialización de Equipos y Servicios en el Ámbito de la Electrónica Industrial, Automatización y Tecnologías de Información.**

Validez: **Mediante auditoría realizada con Reporte No. 1998 Probando que los requerimientos de la norma: NMX-CC-9001-IMNC-2015 ISO 9001:2015 están cubiertos. El certificado es válido de 26-02-2020 hasta 25-02-2023.**

Director de Sistemas



**DETALLES DE EMPRESA:**

Andador SN, No. Lote 50 Manzana 24 Colonia La Victoria, Teoloyucan, Edo de México.

55 5861 8500

general@controlar.com.mx

www.controlar.com.mx

**REDES SOCIALES**





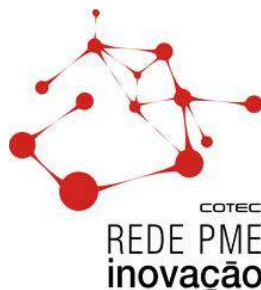
# Global Awards and Distinctions

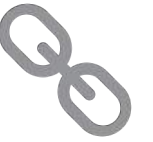


**PME Líder '19**



**excelência '18**





# Global Affiliations







# Our Strengths

- Why Controlrar

- **Background of 24 years of experience** in Automotive Industry
- Well-established partnership with reference **OEM partners worldwide**
- Engineering and manufacture organization with continuous improvement
- Solid development process and design validation in joint collaboration with the costumer
- Commitment to **quality and specifications**
- Supported by other companies and structures worldwide to provide **technical assistance around the world**
- Experience with high levels of specification (**WCM - World Class Manufacturing**)
- Experience with high levels of validation requirements
- Experience with industry methodologies (**OEE, FMEA, EEM**)
- Attractive labour cost





# WorldWide Business Units

Projects & Solutions



**Controlar**  
test systems



**Controlar**  
automation systems



**Controlar**  
aerospace & defense



**Controlar**  
solutions & partners



# Controlar

test systems



# Capabilities

- Research and development of specific electronic equipment
- Customization of PCB solutions
- Integration of reference equipment
- Development of Automatic Test Systems– ATE for Functional Tests on electronic equipment;
- Software Development (NI LabView™, NI TestStand™, C, C++, JAVA, C#, Python, SQL)
- Possibility of systems integration in different production phases (customized systems)
- Development and production of fixtures: customized test adapters (bed-of-nails, consoles, etc.)
- Supply of universal offline and inline handlers



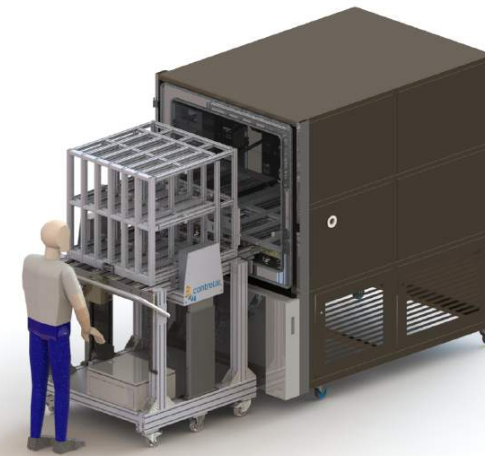
ICT - In-Circuit  
Testing

DWL Stations for  
programming

FCT - Functional  
Testing

HALT – High  
Accelerated Life  
Testing

EoL – End-of- Line  
Testing





# ICT – In-Circuit Testing

# In-Line Handling Solutions

- **Description:** testing of a wide range of PCBs. High handling speed, fast and easy setup, facilitated product changeover, and adapted to different electronic test technologies







# Off-Line Handling Solutions

- **Description:** Universal offline handler for ICT (In-Circuit), ISP (Flashing) and FCT (Functional) test needs.





# DWL – Download Station for Programming



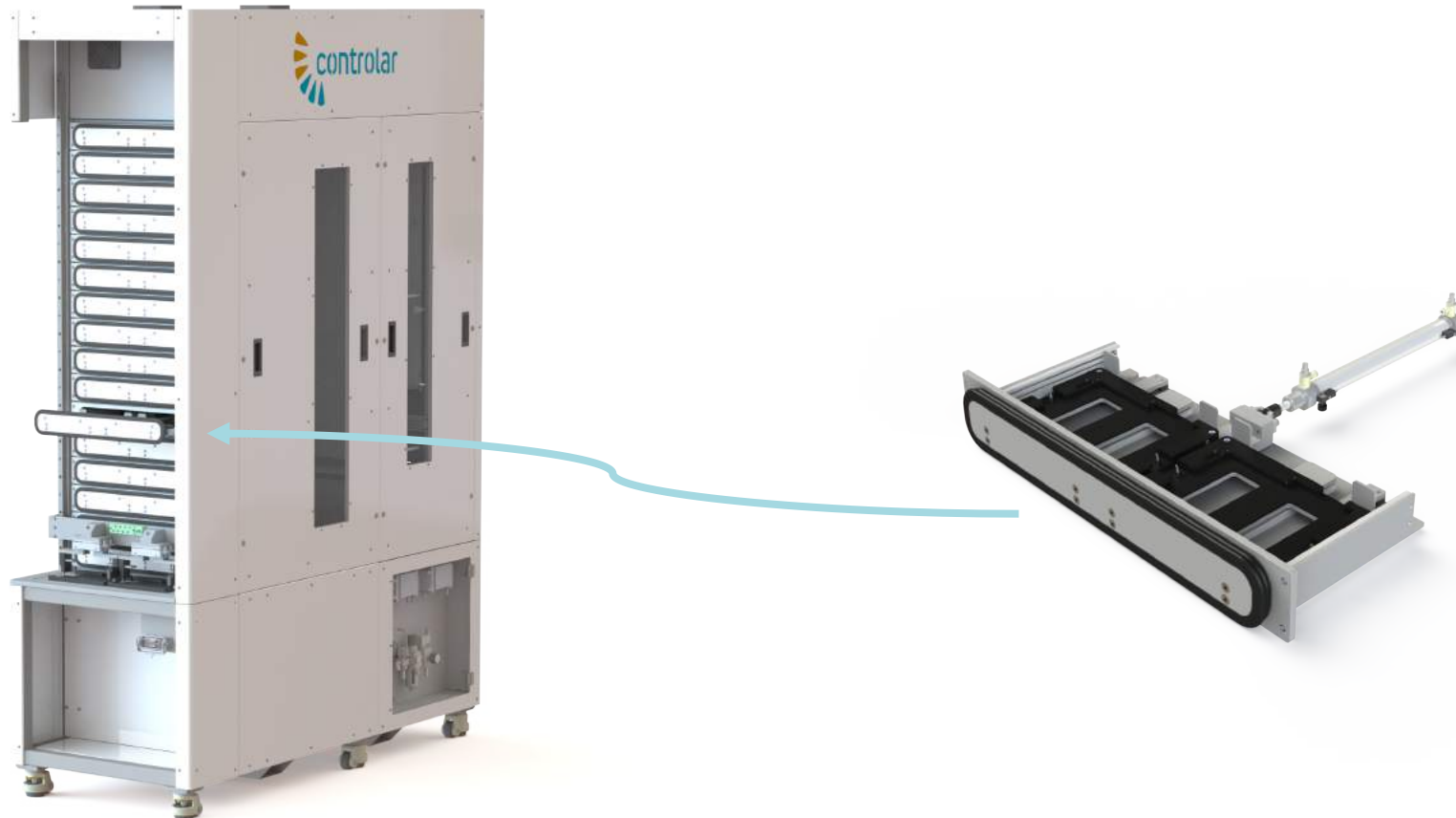
# Manual Download Stations

- **Description:** DUT programming using multiple download interfaces (CAN/CAN FD, USB2.0/USB3.0, Ethernet/BroadR-Reach, Boundary Scan, etc.). Manual load/upload of DUTs. Measures voltage, current consumption, DUT status check, etc.



# Automatic Download Station

- **Description:** DUT programming using multiple download interfaces (CAN/CAN FD, USB2.0/USB3.0, Ethernet/BroadR-Reach, Boundary Scan, etc.). Automatic load/upload of DUTs. Measures voltage, current consumption, DUT status check, etc

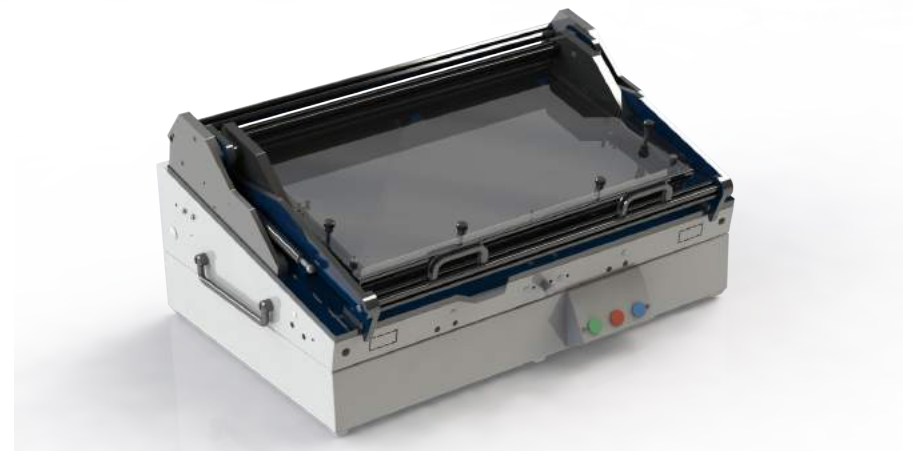




# FCT – Functional Test

# BoardLevel Test System (Automatic and Manual)

- **Description:** testing of a wide range of PCBs. High handling speed, fast and easy setup, facilitated product changeover, and adapted to different electronic test technologies.



# Wireless RF Shielded Functional Test System

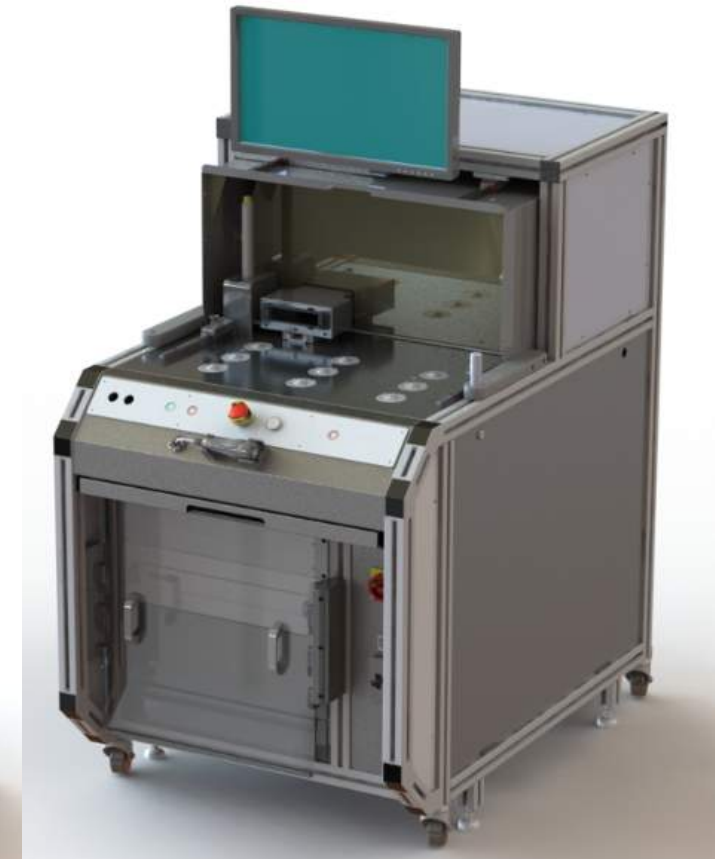
- **Description:** functional test system for wireless in-vehicle systems (IVS) and infotainment devices with integrated antennas tested in a shielded/anechoic environment.





# Functional Test Systems

- **Description:** automated or subjective functional tests on electronic devices and components at the end of the production line to ensure correct functionality of the DUTs.

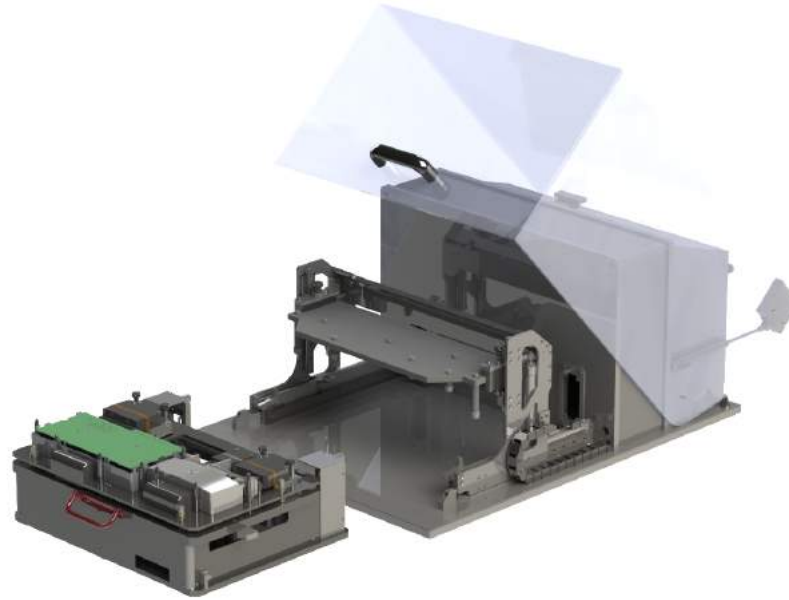
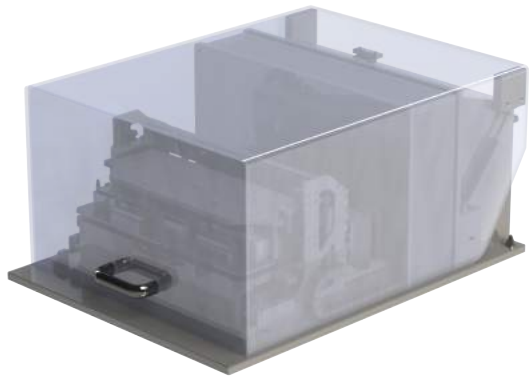






# Test System for Dielectric Strength Test (HIPOT)

- **Description:** electrical test performed on a component or product through the application of high voltage to determine the effectiveness of its insulation.





# Onsite Examples





# EoL – End-of-Line Testing



# Test System for Automated Optical Inspection (AOI)

- **Description:** functional test and vision test validation on displays, during manufacture, using MURA test concept, which optically detects defects and anomalies in the light intensity exhibited on the display.





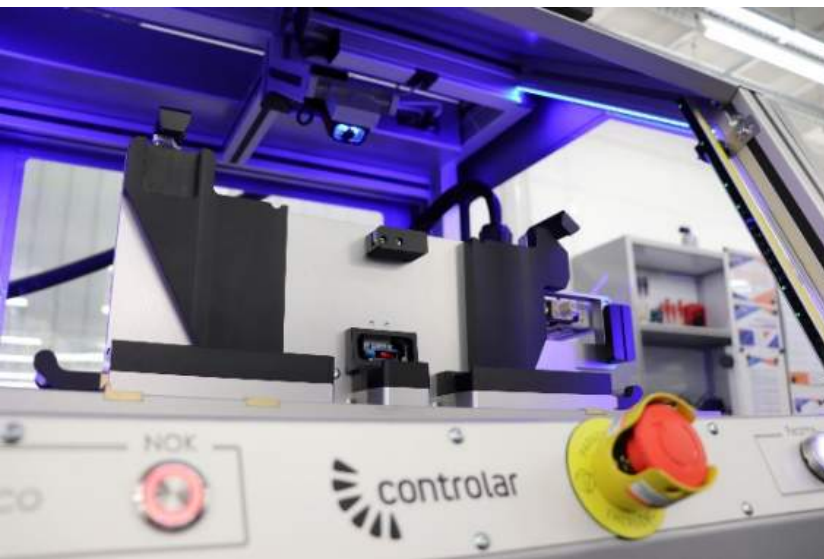
# Vibration Test System

- **Description:** highly stable test system with vibration to determine the extent to which de DUT can withstand mechanical vibrations and fatigue damage (in handling, transportation, etc).





# Onsite Examples







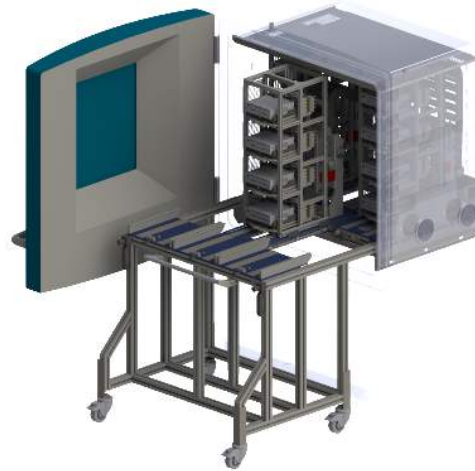
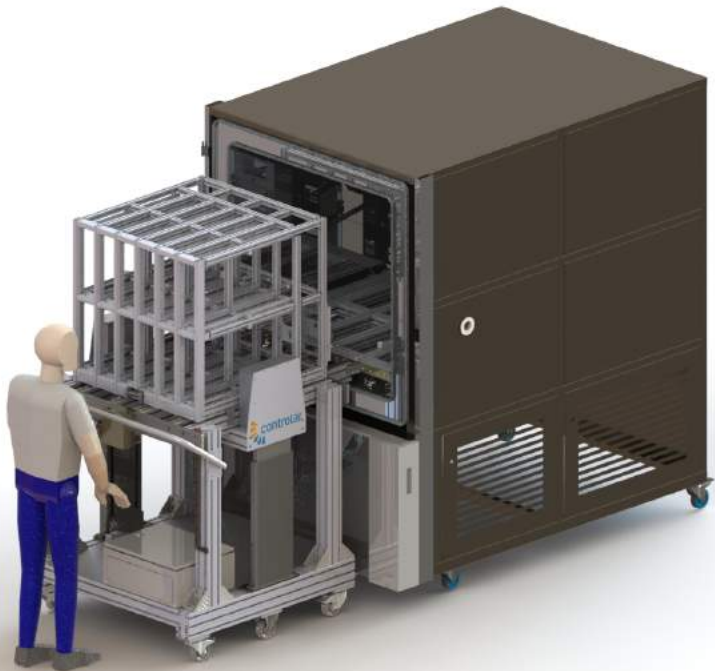
# HALT – Highly Accelerated Life Tests





# Highly Accelerated Life Test Systems

- **Description:** functional testing (Climatic Stress Screening) of a wide range of products through environmental stimuli (temperature and humidity) in the production line (EOL).



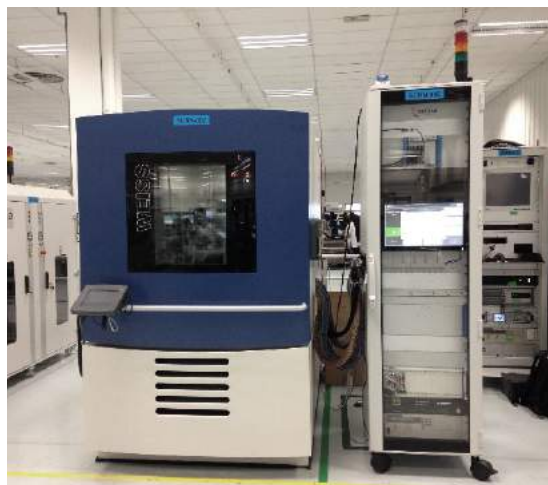
# Burn-In / Run-In Systems

- **Description:** burn- and run-in systems with automatic upload of DUTs. Burn-in and run-in consist of accelerated ageing on electronic equipment so that the critical initial period happens within the production process.





# Onsite Examples





# New Generation Systems

# TSIM | Test System Intelligent Machine

- **Description:** functional and versatile test system with auto-diagnosis. Prepared for flexible and dynamic production, using a standard interface and a quick ChangeOver method for multiple levels of functional tests on electronic devices and components.



# PARTS| Production Ready Automotive Radar Test System

- **Description:** high resolution testing and validation solution for automotive radars.





# TS-DMS | Test Solution for Driver Monitoring Systems

- **Description:** suitable for testing camera-based active driver monitoring systems as well as other camera setups.





# Tooling e Fixturing



# Fixtures & Tooling

- For a vast application field - ICT, functional test, flash programming, EOL testers, etc.
- For all currently used handling systems in the market: Inline or offline, mechanical, pneumatic or vacuum operation
- From simple mechanical fixtures, with a few hundred probes and low production volumes, up to highly complex fixtures with thousands of probes, double side probing, double actuation, etc.



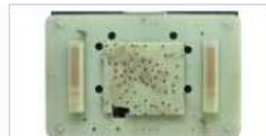
ICT fixture for EIIT ILS-1200 handler (pneumatic, inline)



ICT fixture for Parsec RF-20 handler (pneumatic, offline)



ICT fixture for IPTE MFT handler (pneumatic, inline)



Fixture probe plate for Digital Test MTS-180 handler (pneumatic, offline)



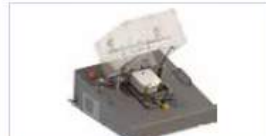
ICT fixture for Digital Test MTS-100 handler (vacuum, offline)



Manual Flash Station - adapter and customized jig



3D project development for EIIT XIL5800-TSI handler (vacuum, inline)



3D project development - Tooling for Hipoc Test Station



3D project development for IPTE PAK handler (pneumatic, inline)



Fixture for SPEA 3030 ICT (vacuum, offline)



Fixture for functional test (vacuum, offline)





# Other Solutions



# PTCase | Portable Test Case

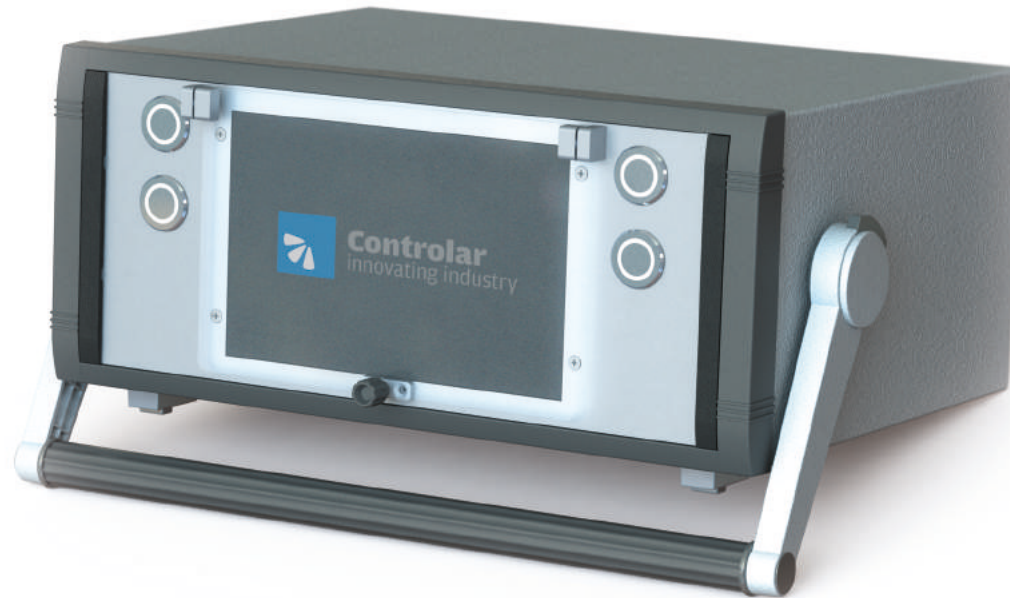
- **Description:** portable and compact system to test main functionalities of infotainment devices (radio, instrument cluster or display).





# CTUnit | Compact Test Unit

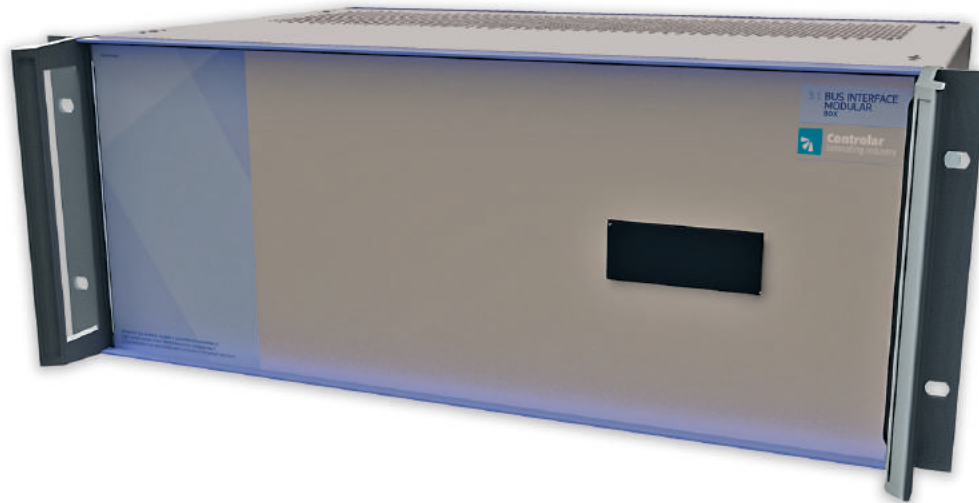
- **Description:** compact and low-cost solution that can be connected to a DUT, usually an instrument cluster, to provide diagnosis of CAN for telltales, pointers and displays' pattern control.





# Bridge4Net

- **Description:** Ethernet test system for highly efficient conversion of BroadR-Reach protocol. Featuring scalability, link error diagnosis and scalable configuration, it is the ideal option for all test systems applications in the automotive industry and/or ATE's suppliers that require conversion to Ethernet.



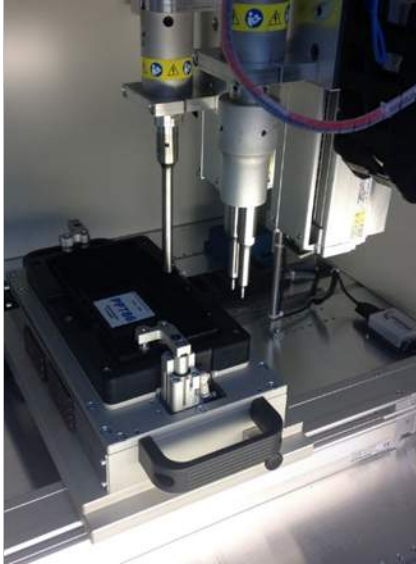


**Controlar**  
automation systems

# Capabilities

- Development of machines and production lines;
- Automation, remodeling and modernization of machines and processes;
- HMI and PLC programming;
- Development of specific software to control production and monitor efficiency – OEE and MES;
- Process monitoring solutions using SCADA, control of production lines and automation processes;
- Projects, installation and programming of robots;
- Industrial artificial vision systems;
- Traceability applications.

**Assembly • Welding • Haptics Test • Vision Systems • Greasing • Screw Driving**





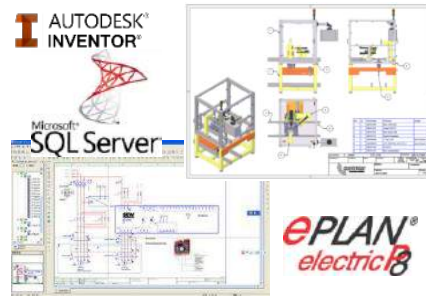
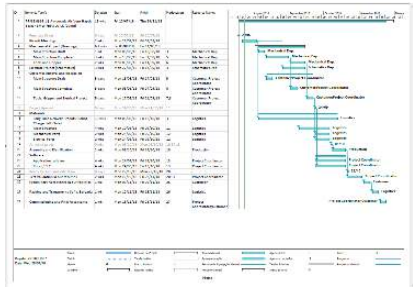
PROJECT PLANNING

PROJECT  
MANAGEMENT

PROJECT  
DEVELOPMENT

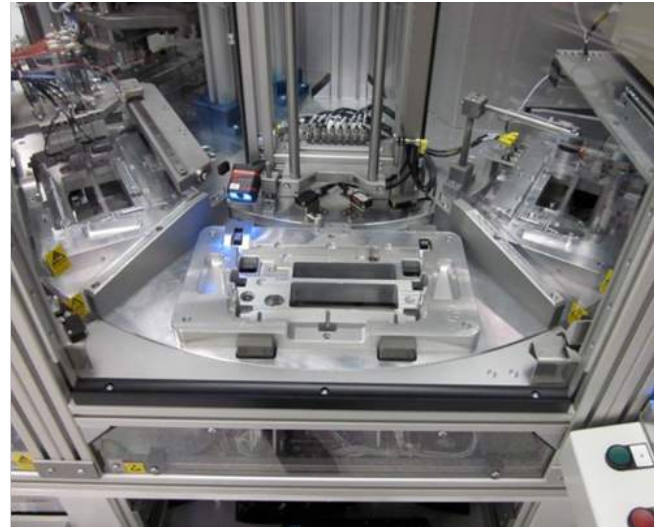
COMMITMENT AT  
CUSTOMER'S PLANT

DELIVERY AND  
TECHNICAL  
SUPPORT



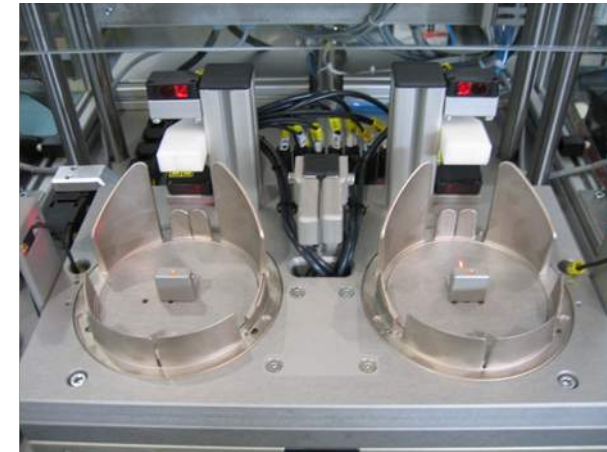
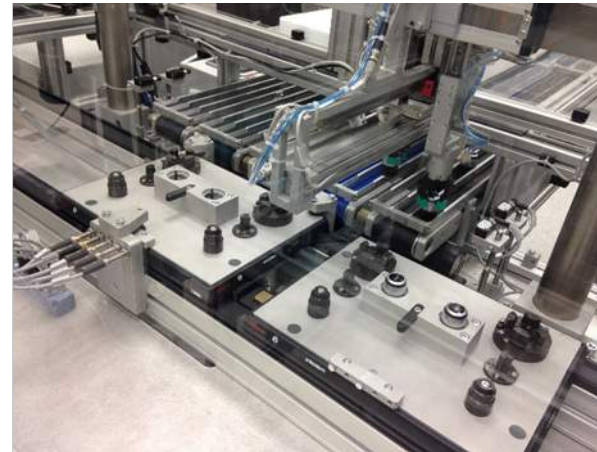
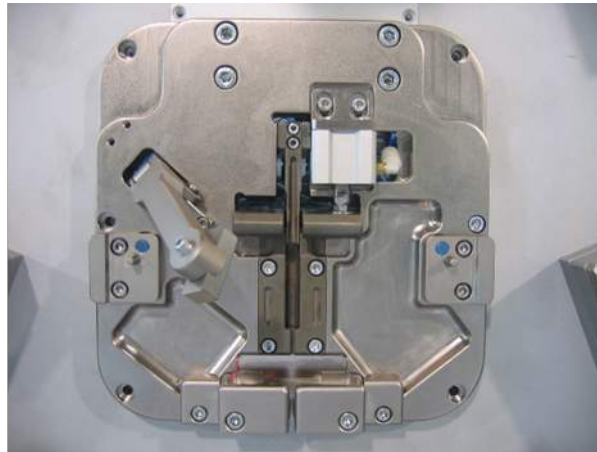
# Assembly

- **Description**
  - Automated assembly line for electrical compressors
  - Assembly and test of electronic control unit



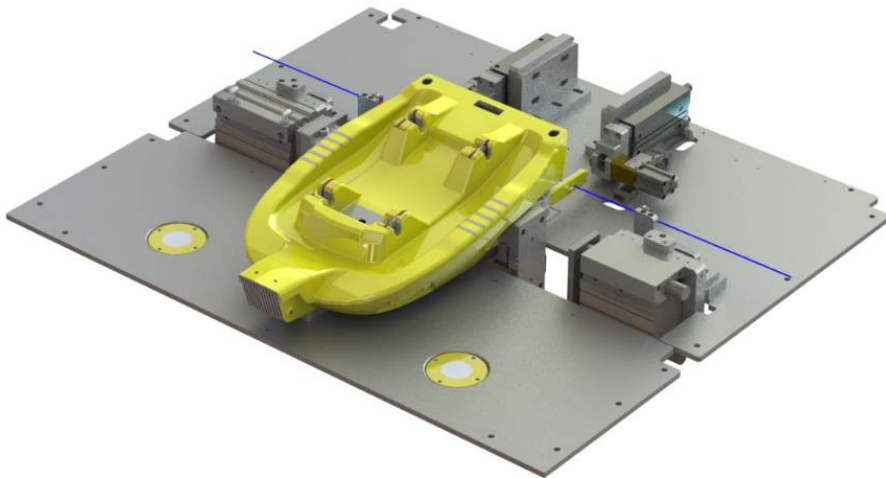
# Assembly

- **Description:** semi-automatic assembly stations for the automotive industry



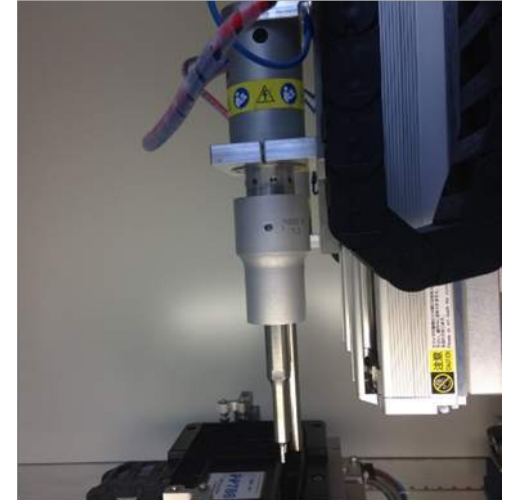
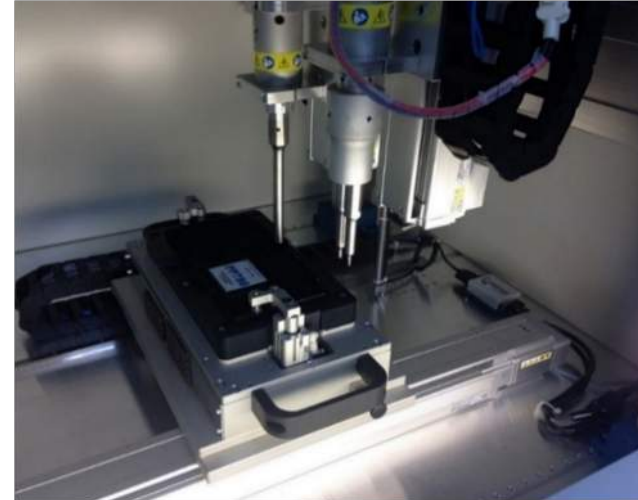
# Assembly

- **Description:** vision testing, automatic insertion and correct positioning of components into ISOFIX systems.



# Welding

- **Description:** ultra-sonic welding machine of radio bezels – automotive industry



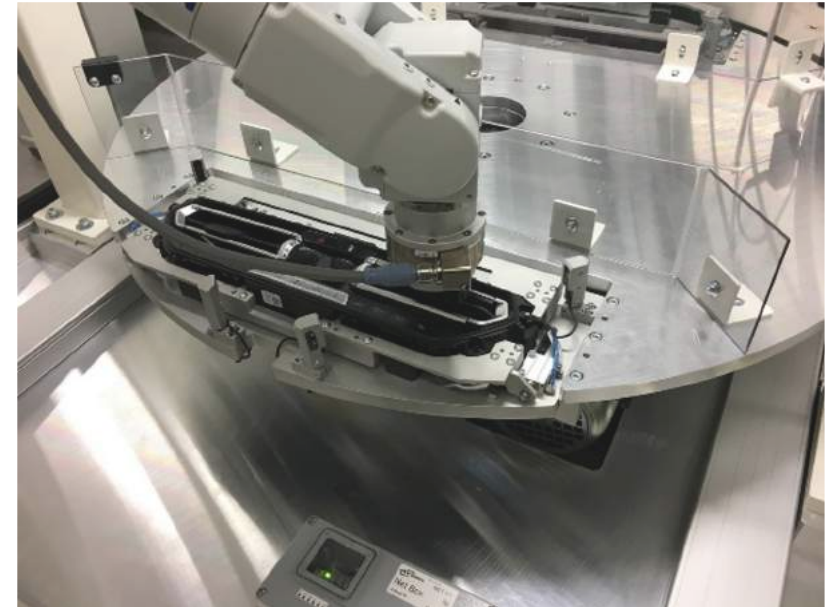
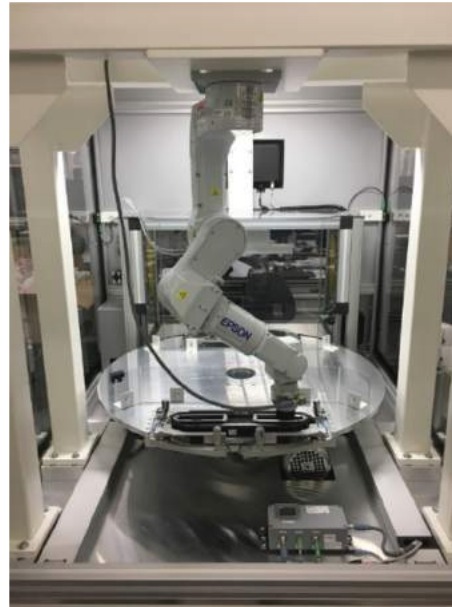
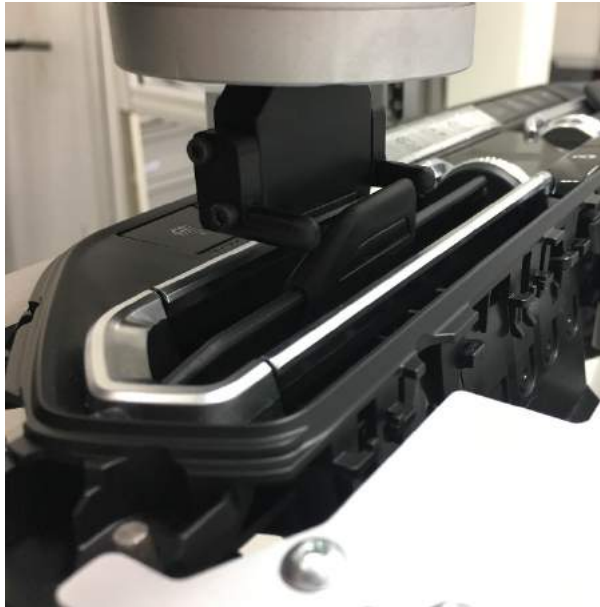
# Haptics Test

- **Description:** plastics vision and testing – haptics and vision control of radio bezels



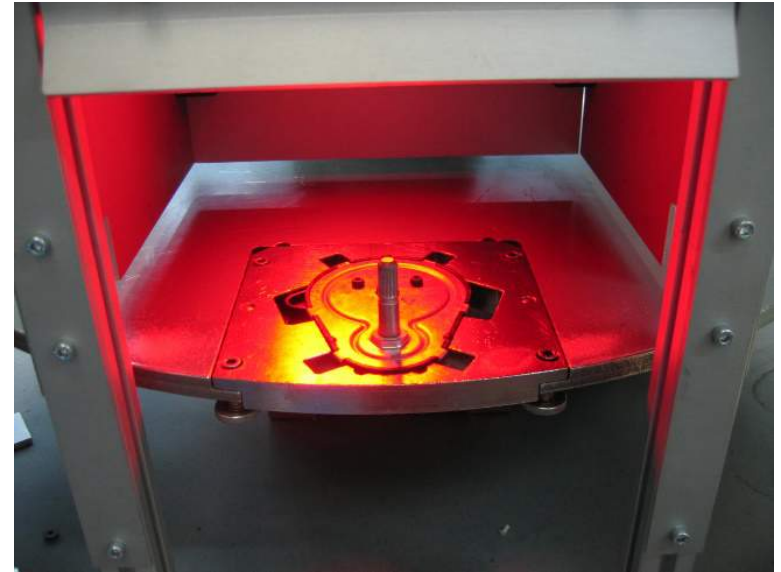
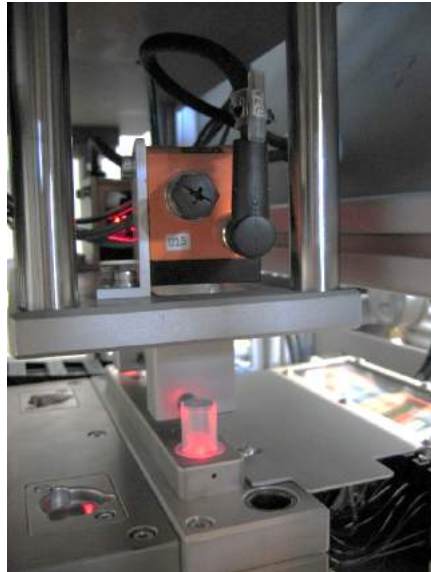
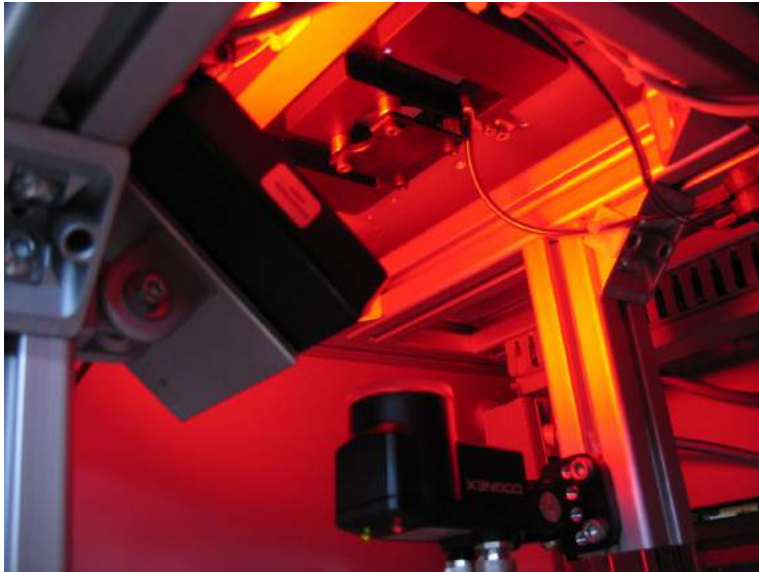
# Haptics Test

- **Description:** automatic air-vent haptics tester



# Artificial Vision

- **Description:** assembly of temperature control unit





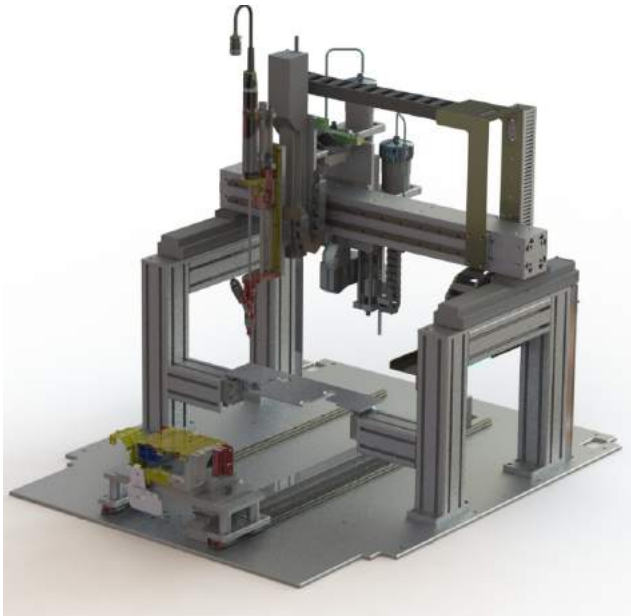
# Greasing

- **Description:** leaf springs greasing and inspection system – automotive industry



# Srew Driving

- **Description:** automatic screw driving and thermal compound application station



# Screw Driving

- **Description:** manual and automatic screw driving stations



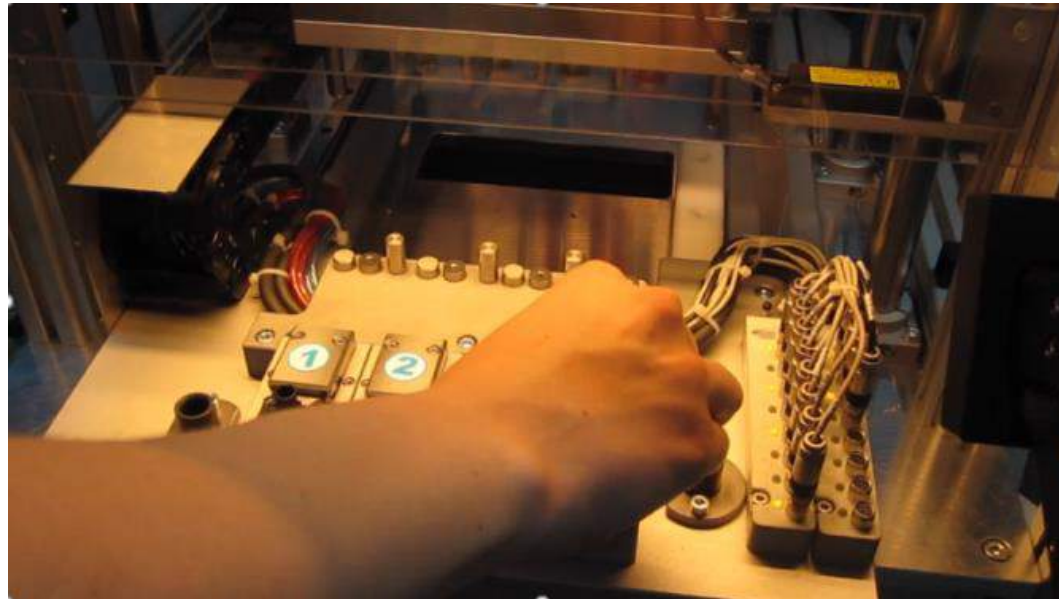
# Other Capabilities

- Leak Testing



# Other Capabilities

- Springs cutting





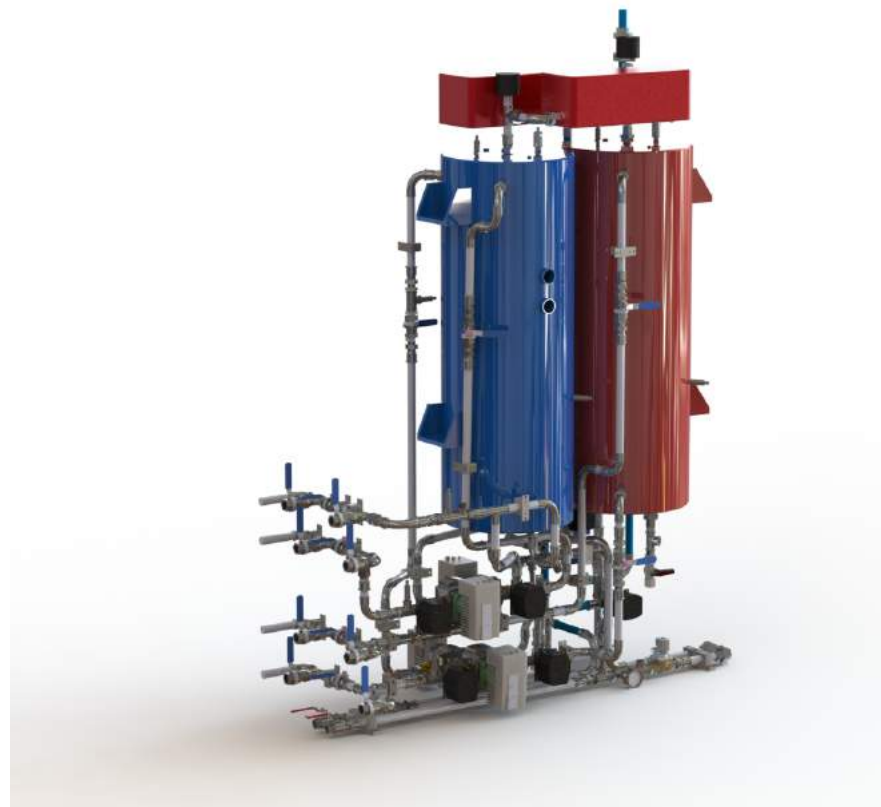
**Controlar**  
automation systems

# Test Bench Systems

Hydraulic Division

# Lifetime Test Rigs for Heat Pumps

- **Description:** efficiency characterization of electric air-water and liquid-water type heaters:
  - Geothermic and domestic consume simulation in real test rigs
  - Lifetime test acceleration



# Pressure Cycle Machine

- **Description:** water pressure cycle machine
  - High frequency acquisition rate (cRIO , FPGA)
  - High water mass energy compression







**Controlar**  
solutions & partners



# Solutions & Partnerships

- GÖPEL electronic test solutions for the automotive industry





# CONTACTS

[info@mx.controlar.com](mailto:info@mx.controlar.com)

+52 55 5861 8500

[www.controlar.com](http://www.controlar.com)



**Thank you!**