

IK4 – TEKNIKER: List of equipment

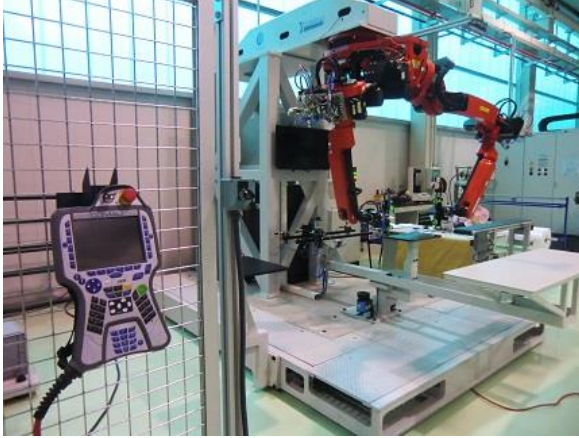
- **Robotics Laboratory**
 - 3 Additive Manufacturing robotic cells (3 ABB robots)
 - Collaborative Dual arm robotic cell (COMAU RML)
 - COMAU NM45 industrial robot
 - Bin Picking setup ([KUKA KR60](#))
 - Collaborative robots (2 [UR10](#), [KUKA IIWA](#), [ABB YUMI](#))
 - Means for HR Interaction (projection system, gesture detection, voice-based control)
 - Modular FourByThree Robot
 - Ackerman and Omnidirectional mobile platforms
 - TEKNIBOT, Mobile robot for guiding in public sites



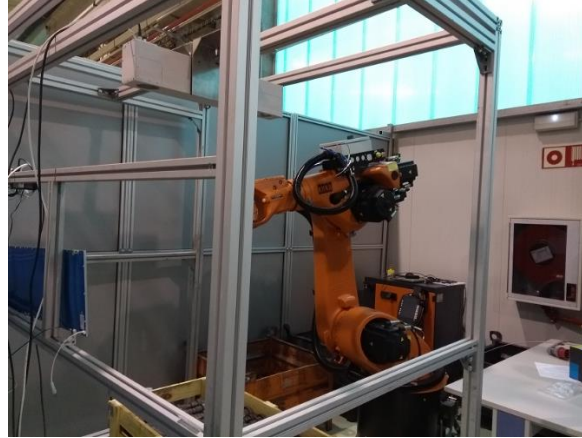
Human robot collaboration lab.



Additive manufacturing lab.



Dual arm robotic cell



Bin Picking setup

- **Vision Laboratory**
 - Different cameras, optics, lighting systems
 - Linear and rotating equipment for part manipulation

Workshop with many different production means: Lathes, milling machines, assembly, workshop, the above mentioned three additive manufacturing robotic cells.



Manufacturing workshop



General Assembly workshop

- **High precision assembly workshop.** It allows testing and assembly equipment in controlled environmental conditions

Clean room and Metrology lab

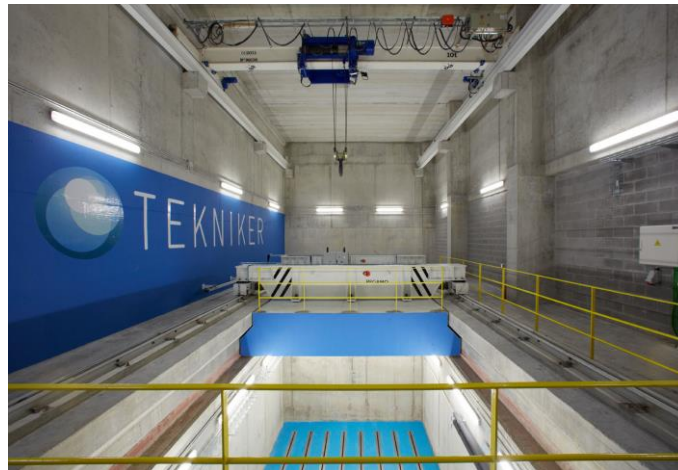


High precision assembly workshop



Metrology lab.

- **Bunker** for testing components and machinery that can accumulate high mechanical energy



Bunker

#List of software

- Several CAD/CAM software: SOLIDWORKS, NX, etc
- LABVIEW, SIMULINK, MATLAB

List of services

- Consultancy in any of the research fields
- Support on IPR management and technology transfer
- Support to local Schools and Universities: visits, master and PhD tesis
- Robotics experimenting, testing and proof of concept
- Technology-watch definition and setup
- Design and development of mechatronic systems
- Clean room
- Analysis and certification on several themes
 - Tribology analysis
 - Physicochemical surface treatments: Nanoimprint lithography, PVD, Sol-Gel, Plasma electrolytic oxidation, Direct laser deposition, Laser texturing
 - Processes of conventional and non-conventional manufacturing at macro-, micro- and nanoscale: Electrodeposition, Laser cladding, Microinjection, Machining, Untrasound, Micromachining, lithography.
 - Validation of optical Measurement technologies
 - Validation of electrochemical measurement technologies
 - Design of automation and robotic systems
 - Calibration of robots
 - On-Line sensor test benches for fluids
 - Climatic chamber
 - Test equipment for electromagnetic compatibility (EMC)
 - Electrodynamic vibration equipment for electronic component essays

TEKNIKER has accreditations provided by Official Bodies for:

- calibrations in the dimensional area (in the permanent laboratory and “in situ”) and in the Mechanics-Hardness area (in the permanent laboratory and “in situ”).
- tests on magnetic particles and penetrant liquids such as Level 2 in the Metallic Materials and Welding industrial sectors.
- quality control tests for clinical implants
- tests and calibrations in laboratories.
- tests in the environmental sector: on samples of environmental liquids; physical-chemical analysis
- tests in the field of Metallic Materials (chemical analysis, mechanical tests and metallographic tests)
- control and monitoring of the quality of water and the management of discharges in the domain of public water