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## Leica DCM8 microscope

3D optical surface metrology system



Combines multi-spectral imaging and confocal microscopy to image and measure material surfaces, map topography, and analyse surface roughness. Fully digital microscope with objectives from 1.25X to 150X.

**Owner institution:** InnoRenew CoE

**Location:** Kettejeva 1, Koper

**Contact:** Matthew Schwarzkopf  
[matthew.schwarzkopf@innorenew.eu](mailto:matthew.schwarzkopf@innorenew.eu)



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## Leica TIC3X ion beam milling system

Surface preparation of materials for microscopy



Creates near-perfect surfaces of materials for microscopy using accelerated argon ions. Capable of cross-cuts (4 mm x 1 mm) and surface milling of 25 mm<sup>2</sup> areas. Includes a cooling stage for heat sensitive materials.

**Owner institution:** InnoRenew CoE

**Location:** Kettejeva 1, Koper

**Contact:** Matthew Schwarzkopf  
matthew.schwarzkopf@innorenew.eu



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## Leica EM TXP target surfacing system

Surface preparation of materials for microscopy



Mechanical surface preparation device for microscopy. Uses grinding, cutting, and polishing fixtures to prepare mirror like surfaces of a variety of materials.

**Owner institution:** InnoRenew CoE

**Location:** Kettejeva 1, Koper

**Contact:** Matthew Schwarzkopf  
matthew.schwarzkopf@innorenew.eu

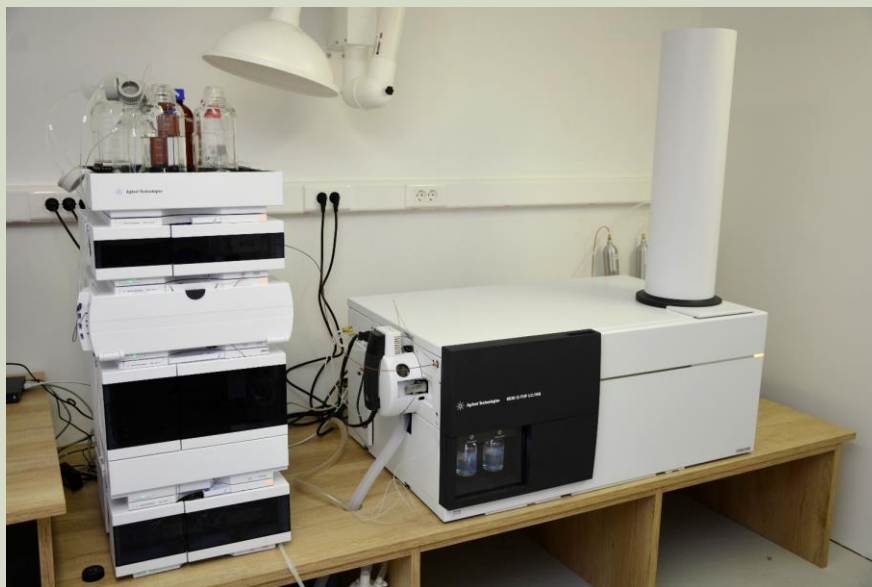


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## Agilent 6500 LC/MS Q-TOF system

Liquid chromatograph / mass spectrometer with quadrupole time of flight



Used for the detection of biochemical and organic compounds in complex samples of environmental and biological origin. The double mass spectrometry detectors (quadrupole and TOF) allow to gain more structural information on your analyte based on the fragmentation pattern.

**Owner institution:** InnoRenew CoE

**Location:** Glagoljaška ulica 8, Koper

**Contact:** Kelly Peeters  
Kelly.peeters@innorenew.eu



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## **Agilent 5977B GC/MSD**

Gas chromatograph / mass spectrometer



Used for the measurement of organic compounds in solid, liquid and gas phase samples.

Includes liquid sample, headspace, solid phase micro extraction, thermal desorption, pyrolysis and cooled injection introduction systems, and micro chamber.

**Owner institution:** InnoRenew CoE

**Location:** Glagoljaška ulica 8, Koper

**Contact:** Kelly Peeters  
Kelly.peeters@innorenew.eu





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## **Nabertherm RSRC 120-1000/13 Tube Furnace**

Used for carbonization of materials



Equipped with gas system to incorporate CO<sub>2</sub> and N<sub>2</sub>. Capable of batch and continuous processing with adjustable speed and tilting. Processing temperatures up to 1200C. Three-zone control for heating.

**Owner institution:** InnoRenew CoE

**Location:** Cesta 4 maja, Cerknica

**Contact:** Dave DeVallance  
devallance@innorenew.eu

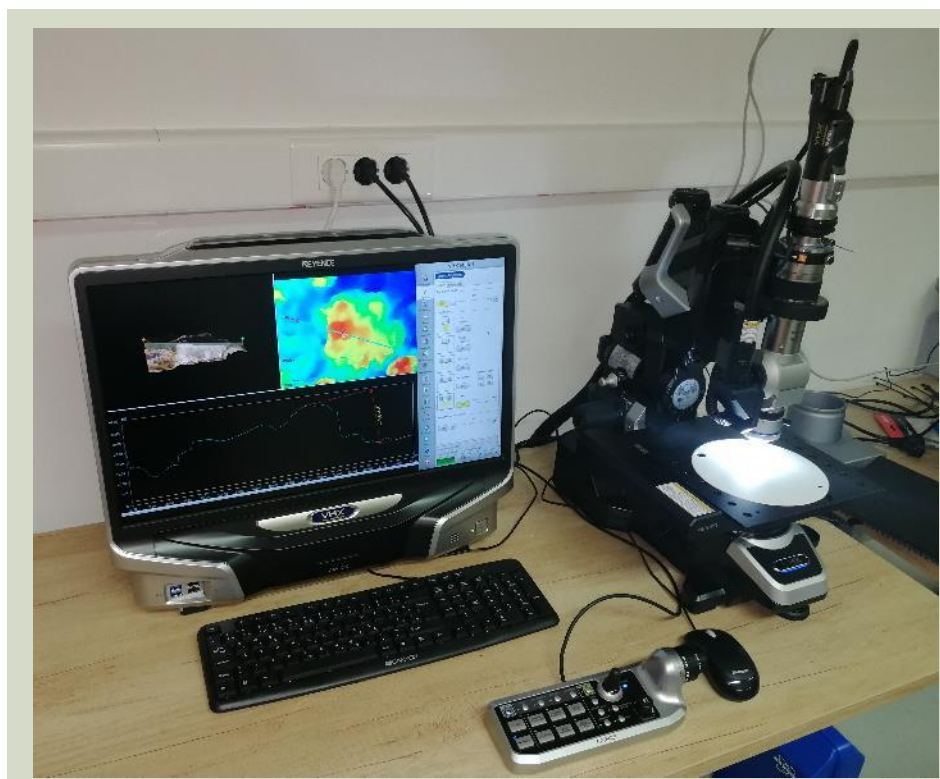


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## Keyence VHX-6000 digital microscope

View, capture and measure diverse objects



Multifunctional device for macro/microscopic characterization of materials, assuring large depth-of-field, capturing fully focused images at magnification from 0.5x to 5000x, inspecting objects from any angle, capable of advanced 2D and 3D measurements directly on the image.

**Owner institution:** InnoRenew CoE

**Location:** Glagoljaška 8, Koper

**Contact:** Jakub Sandak  
jakub.sandak@innorenew.eu



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## **MPA II Bruker Optics Spectrometer**

FT-NIR Multi Purpose Analyzer



A fast and precise tool for the non-destructive analysis of liquid, solid and semi-solid materials. Equipped with fibre optic, integration sphere and transmission sample compartment for vials, operates in the range 11500-4000cm<sup>-1</sup>. The OPUS software allows data acquisition, processing, and evaluation.

**Owner institution:** InnoRenew CoE

**Location:** Glagoljaška 8, Koper

**Contact:** Anna Sandak  
anna.sandak@innorenew.eu





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## **VIAVI MicroNIR™ OnSite-W Spectrometer**

wireless NIR spectrometer designed for rapid, handheld material analysis



The smallest fully-integrated NIR spectrometer based on linear variable filter (LVF) technology. With no moving parts and IP65/IP67 dust/water ingress rating, it is designed for a wide range of material characterization applications. The system includes the VIAVI MicroNIR Pro software suite.

**Owner institution:** InnoRenew CoE

**Location:** Glagoljaška 8, Koper

**Contact:** Anna Sandak  
anna.sandak@innorenew.eu



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## **VIAVI MicroNIR™ PAT–W Spectrometer**

A fit-for-purpose NIR analyzer for quality-by-design (QbD) manufacturing



A system for real-time process monitoring in PAT applications. It has no moving components enabling superior instrument stability and performance in harsh process environments (IP67 standards). The system includes the VIAVI MicroNIR Pro software.

**Owner institution:** InnoRenew CoE

**Location:** Glagoljaška 8, Koper

**Contact:** Anna Sandak  
anna.sandak@innorenew.eu



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## SCM Si5 Linvincibile

Large format sliding table circular saw



Wood working machine suitable for complex sample preparation and experimentations regarding machinability of materials and process/surface quality

**Owner institution:** InnoRenew CoE

**Location:** KMK - Industrijska cesta 4f, 6310 Izola

**Contact:** Jakub Sandak  
[jakub.sandak@innorenew.eu](mailto:jakub.sandak@innorenew.eu)



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## SCM SC2c

Small format sliding table circular saw



Wood working machine suitable for complex sample preparation and experimentations regarding machinability of materials and process/surface quality

**Owner institution:** InnoRenew CoE

**Location:** KMK - Industrijska cesta 4f, 6310 Izola

**Contact:** Jakub Sandak  
jakub.sandak@innorenew.eu



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## **SCM F520 CLASS**

Planner (joiner)



Wood working machine suitable for complex sample preparation and experimentations regarding machinability of materials and process/surface quality

**Owner institution:** InnoRenew CoE

**Location:** KMK - Industrijska cesta 4f, 6310 Izola

**Contact:** Jakub Sandak  
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## SCM S630 CLASS

Thicknesser



Wood working machine suitable for complex sample preparation and experimentations regarding machinability of materials and process/surface quality

**Owner institution:** InnoRenew CoE

**Location:** KMK - Industrijska cesta 4f, 6310 Izola

**Contact:** Jakub Sandak  
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## **SCM S600p**

**Bandsaw**



Wood working machine suitable for complex sample preparation and experimentations regarding machinability of materials and process/surface quality

**Owner institution:** InnoRenew CoE

**Location:** KMK - Industrijska cesta 4f, 6310 Izola

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## **VOLPATO LBK150**

Edge sander



Wood working machine suitable for complex sample preparation and experimentations regarding machinability of materials and process/surface quality

**Owner institution:** InnoRenew CoE

**Location:** KMK - Industrijska cesta 4f, 6310 Izola

**Contact:** Jakub Sandak  
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## **SCM TI 105 NOVA**

Spindle-moulder



Wood working machine suitable for complex sample preparation and experimentations regarding machinability of materials and process/surface quality

**Owner institution:** InnoRenew CoE

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**Contact:** Jakub Sandak  
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## SCM SD 60 RCS (1100mm)

Wide-belt sander



Wood working machine suitable for complex sample preparation and experimentations regarding machinability of materials and process/surface quality

**Owner institution:** InnoRenew CoE

**Location:** KMK - Industrijska cesta 4f, 6310 Izola

**Contact:** Jakub Sandak  
jakub.sandak@innorenew.eu





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## **JET 16-32 Plus**

Mini wide-belt sander



Wood working machine suitable for complex sample preparation and experimentations regarding machinability of materials and process/surface quality

**Owner institution:** InnoRenew CoE

**Location:** KMK - Industrijska cesta 4f, 6310 Izola

**Contact:** Jakub Sandak  
jakub.sandak@innorenew.eu



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## SCM T124

Wood lathe



Wood working machine suitable for complex sample preparation and experimentations regarding machinability of materials and process/surface quality

**Owner institution:** InnoRenew CoE

**Location:** KMK - Industrijska cesta 4f, 6310 Izola

**Contact:** Jakub Sandak  
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## **SCM AS16**

Horizontal mortiser



Wood working machine suitable for complex sample preparation and experimentations regarding machinability of materials and process/surface quality

**Owner institution:** InnoRenew CoE

**Location:** KMK - Industrijska cesta 4f, 6310 Izola

**Contact:** Jakub Sandak  
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## **HÖCKER POLYTECHNIK Vacumobile VT250**

Dust exhaustion system



Vacuum system for aspiration of dust produced during woodworking operations, equipped with frequency inverter, pressure control unit and fire extinguisher

**Owner institution:** InnoRenew CoE

**Location:** KMK - Industrijska cesta 4f, 6310 Izola

**Contact:** Jakub Sandak  
[jakub.sandak@innorenew.eu](mailto:jakub.sandak@innorenew.eu)



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## **ACword FT400**

Mobile dust exhaustion system



Vacuum system for aspiration of dust produced during woodworking operations

**Owner institution:** InnoRenew CoE

**Location:** KMK - Industrijska cesta 4f, 6310 Izola

**Contact:** Jakub Sandak  
[jakub.sandak@innorenew.eu](mailto:jakub.sandak@innorenew.eu)





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## **ACword FT302**

Mobile dust exhaustion system



Vacuum system for aspiration of dust produced during woodworking operations

**Owner institution:** InnoRenew CoE

**Location:** KMK - Industrijska cesta 4f, 6310 Izola

**Contact:** Jakub Sandak  
[jakub.sandak@innorenew.eu](mailto:jakub.sandak@innorenew.eu)



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## **SCM ECO 300S**

Mobile dust exhaustion system



Vacuum system for aspiration of dust produced during woodworking operations

**Owner institution:** InnoRenew CoE

**Location:** KMK - Industrijska cesta 4f, 6310 Izola

**Contact:** Jakub Sandak  
jakub.sandak@innorenew.eu



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## **ELMAG Superturn 700/140 - Vario**

Universal turner/router for metal



Metal working machine for turning, milling and drilling operations performed on the metal parts used in prototypes

**Owner institution:** InnoRenew CoE

**Location:** KMK - Industrijska cesta 4f, 6310 Izola

**Contact:** Jakub Sandak  
[jakub.sandak@innorenew.eu](mailto:jakub.sandak@innorenew.eu)



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## Work benches

Working tables



Three working tables assisting material processing and assembly

**Owner institution:** InnoRenew CoE

**Location:** KMK - Industrijska cesta 4f, 6310 Izola

**Contact:** Jakub Sandak  
[jakub.sandak@innorenew.eu](mailto:jakub.sandak@innorenew.eu)



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## Biopac Systems, Inc Psychophysiological assessment kit

Detect and assess psychophysiological responses



Signals assessed from:  
EEG (Wired + Wireless)  
EDA (Wired + Wireless)  
ECG (Wired + Wireless)  
PPG (Wired + Wireless)  
HD Blood pressure (Wired)

**Owner institution:** InnoRenew CoE

**Location:** Dijaški Dom, Koper

**Contact:** Mike Burnard  
mike.burnard@innorenew.eu





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## **PAL Technologies activPal4 micro**

Monitor and assess human activity over long periods of time



7 monitors

Attach to a person for up to 7 days

Detect sitting, lying, standing, stepping, and other activities.

**Owner institution:** InnoRenew CoE

**Location:** Dijaški Dom, Koper

**Contact:** Mike Burnard  
mike.burnard@innorenew.eu

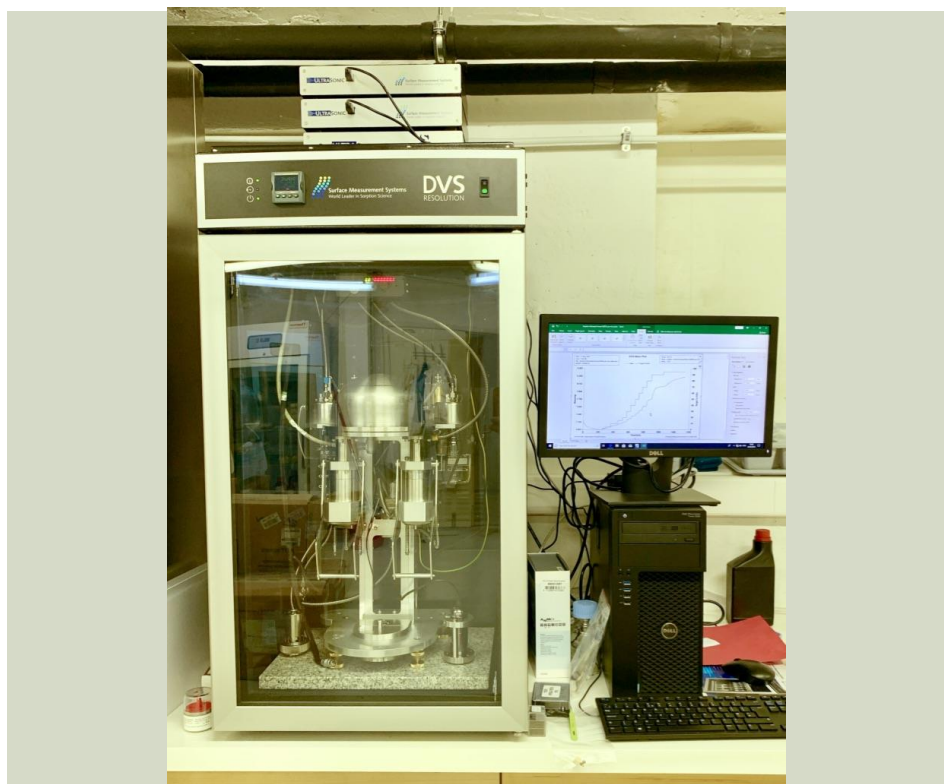


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## Dynamic Vapour Sorption (DVS – Surface Measurement Systems)

Analyse moisture absorbed by a sample



The DVS is used for measuring the sorption properties of materials.

Temperature stability:  $\pm 0.02$  °C

RH stability:  $\pm 0.1\%$

Mass change resolution:  $0.1\mu\text{g}$

Root mean square noise:  $0.3\mu\text{g}$

**Owner institution:** InnoRenew CoE

**Location:** Glagoljaška 8, Koper

**Contact:** Matthew Schwarzkopf  
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## Centrifuge (Universal 320 R, Hettich)

Sample separation / preparation



Temperature controlled  
Inserts for multiple size sample  
containers

**Owner institution:** InnoRenew CoE

**Location:** Glagoljaška 8, Koper

**Contact:** Mike Burnard  
mike.burnard@innorenew.eu



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## Laboratory incubation shaker (IS-OS 20, Phoenix Instruments)

Sample preparation/mixing



Temperature controlled (+5 – 60 C)  
20mm amplitude

**Owner institution:** InnoRenew CoE

**Location:** Glagoljaška 8, Koper

**Contact:** Mike Burnard  
[mike.burnard@innorenew.eu](mailto:mike.burnard@innorenew.eu)



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## Ultrasonic waterbath (S 30 H Elmasonic - Elma)

Sample preparation, cleaning



Used to clean samples or small laboratory equipment

**Owner institution:** InnoRenew CoE

**Location:** Glagoljaška 8, Koper

**Contact:** Matthew Schwarzkopf  
matthew.schwarzkopf@innorenew.eu





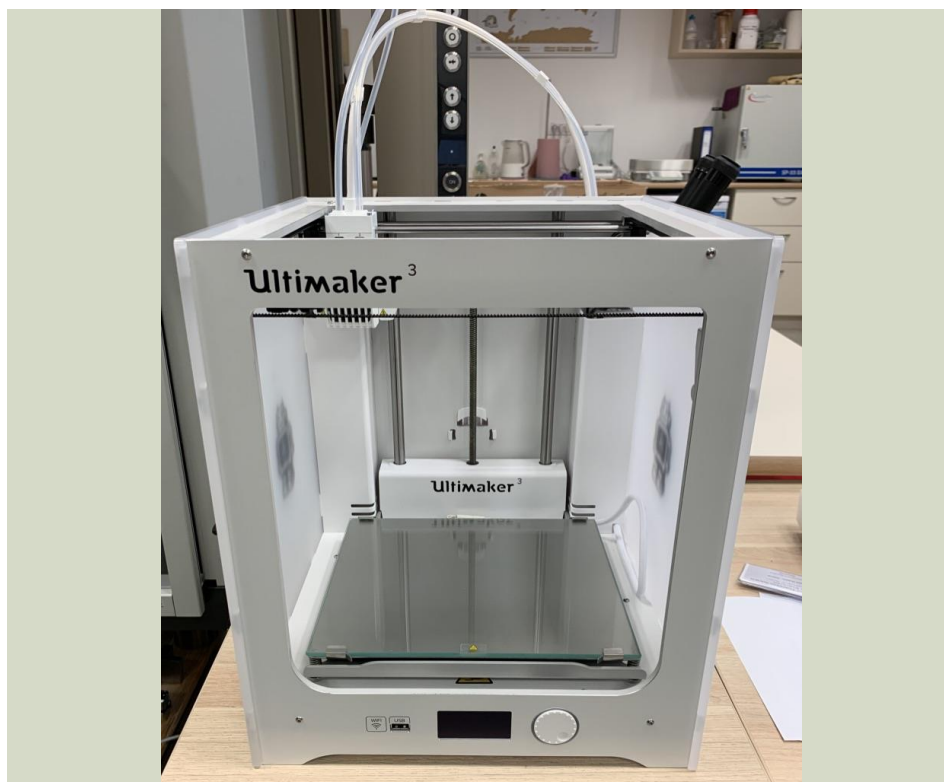
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## 3D printer (Ultimaker 3)

3D printer for prototyping and polymer blend testing



215 x 215 x 200 mm print size  
20 micron layer depth  
Nozzle temperature up to 280 C

**Owner institution:** InnoRenew CoE

**Location:** Kettejeva 1, Koper

**Contact:** Matthew Schwarzkopf  
[matthew.schwarzkopf@innorenew.eu](mailto:matthew.schwarzkopf@innorenew.eu)



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## Zwick/Roell UTM

Mechanical testing of materials



100 kN capacity universal testing machine. Includes fixtures for 3-point and 4-point bending, shear block, tension, and compression tests. Features a programmable environmental chamber for temperature and humidity control during testing; -40C to 200C and 10% to 85% RH

**Owner institution:** InnoRenew CoE

**Location:** Kettejeva 1, Koper

**Contact:** Matthew Schwarzkopf  
[matthew.schwarzkopf@innorenew.eu](mailto:matthew.schwarzkopf@innorenew.eu)



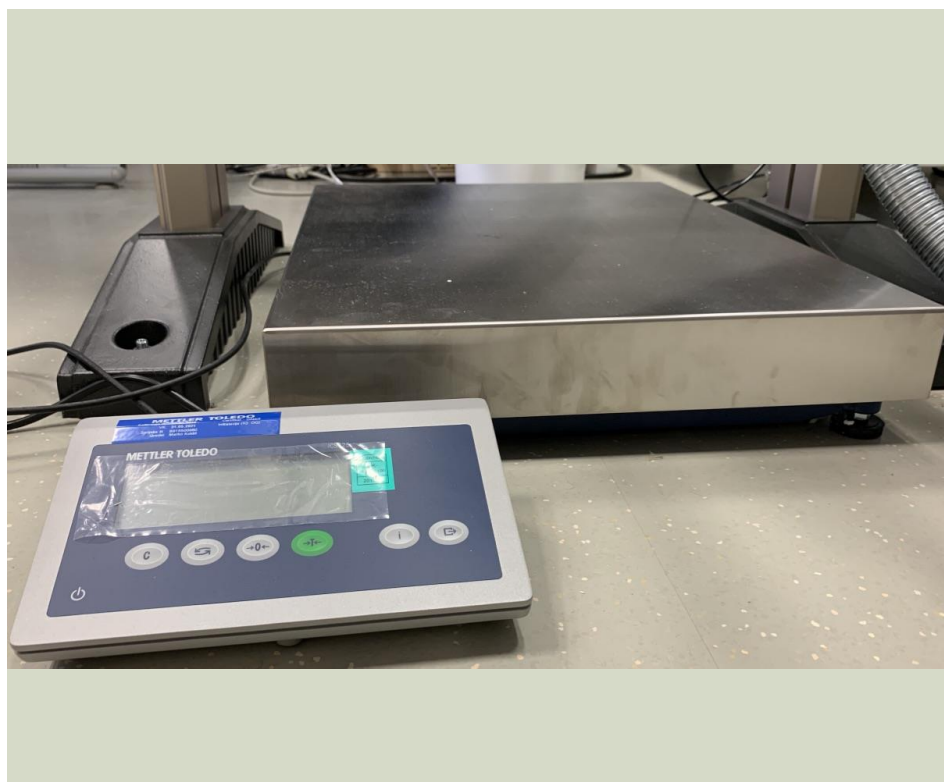
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## 300 kg scale (Mettler Toledo)

Scale for weighing heavy objects



Digital readout

Capacity to 300 kg

Precision: 0.1 kg

**Owner institution:** InnoRenew CoE

**Location:** Kettejeva 1, Koper

**Contact:** Matthew Schwarzkopf  
[matthew.schwarzkopf@innorenew.eu](mailto:matthew.schwarzkopf@innorenew.eu)



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## 10 kg scale (Mettler Toledo)

Scale for weighing objects



Digital readout

Capacity to 10 kg

Precision: 0.1 g

**Owner institution:** InnoRenew CoE

**Location:** Kettejeva 1, Koper

**Contact:** Matthew Schwarzkopf  
[matthew.schwarzkopf@innorenew.eu](mailto:matthew.schwarzkopf@innorenew.eu)

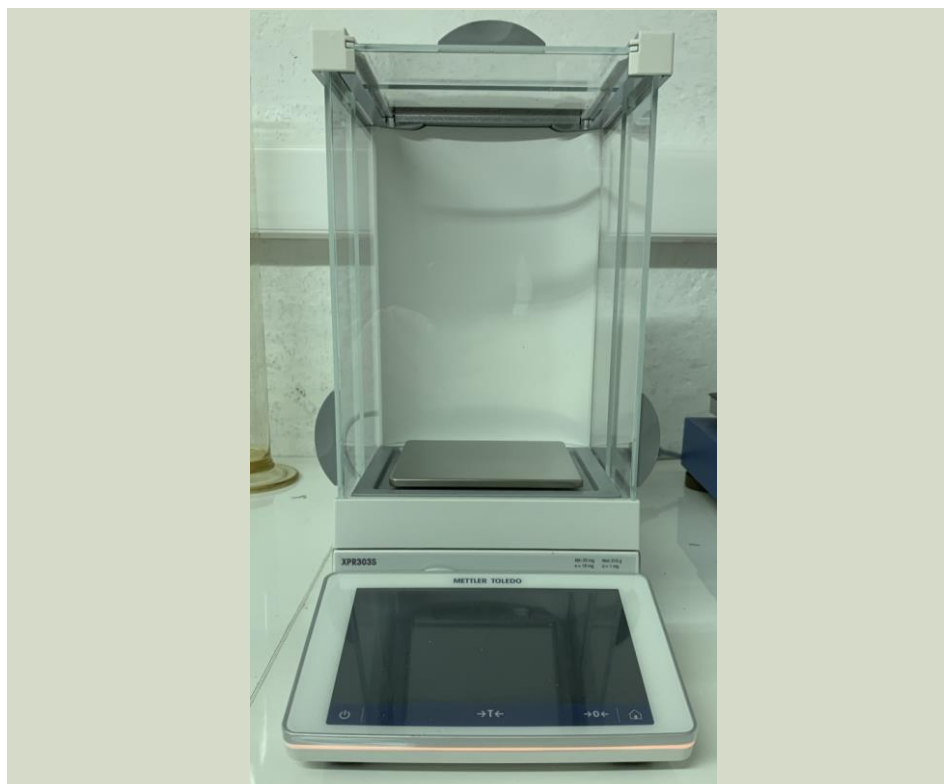


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## 300 g scale (Mettler Toledo)

Scale for weighing objects



Digital readout

Capacity to 300 g

Precision: 0.001 g

**Owner institution:** InnoRenew CoE

**Location:** Glagoljaška 8, Koper

**Contact:** Matthew Schwarzkopf  
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## Minor items

- Refrigerator, Freezer, network switch, fireproof chemical storage cabinets, laptops, monitors, storage servers, multipurpose server

## Software

- NI LabView