UGT UMWELT GERÄTE TECHNIK

PROJECTS & REFERENCES

Our system solutions featuring Picarro products, along with our specialized peripheral devices, have been successfully tested and applied in numerous projects with universities and research institutions. Here you can see a selection of these collaborative applications.



EcoLab flex: Lawrence Berkeley National Lab, USA

We designed and installed two EcoLab Flex systems that allow direct and intensive monitoring and manipulation of replicated plant-soil-microbe-atmosphere interactions over the complete plant life cycle. Each EcoLab flex is equipped with environmental controls to carefully and continuously monitor temperature, humidity, soil moisture, soil water tension, photoperiod, and greenhouse gas fluxes.



Fully automated and movable Gas Measurement System: HSWT Freising, Germany

Four independent structures consisting of transparent and opaque chambers move from plot to plot on a rail system and open and close according to an automatic measurement program that controls the connected Picarro gas and isotope analyzers. The MOORuse project demonstrates the climate potential of landuse management on bog sites - by rewetting and subsequent agricultural use for paludicultures.



Water Isotope Probe System: University of Oulo, Finnland

The Isotope Hydrology group from University of Oulu, Finland uses a Picarro analyzer and the UGT Water Isotope Probe System to measure the isotopic composition of different snow packages and study the role of snow in the annual water balance of forest ecosystems. The innovative sampling system delivers precise and continuous data required for advanced isotope research in cold environments.

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UGT UMWELT GERÄTE TECHNIK
The Solutionists

MORE THAN STANDARD



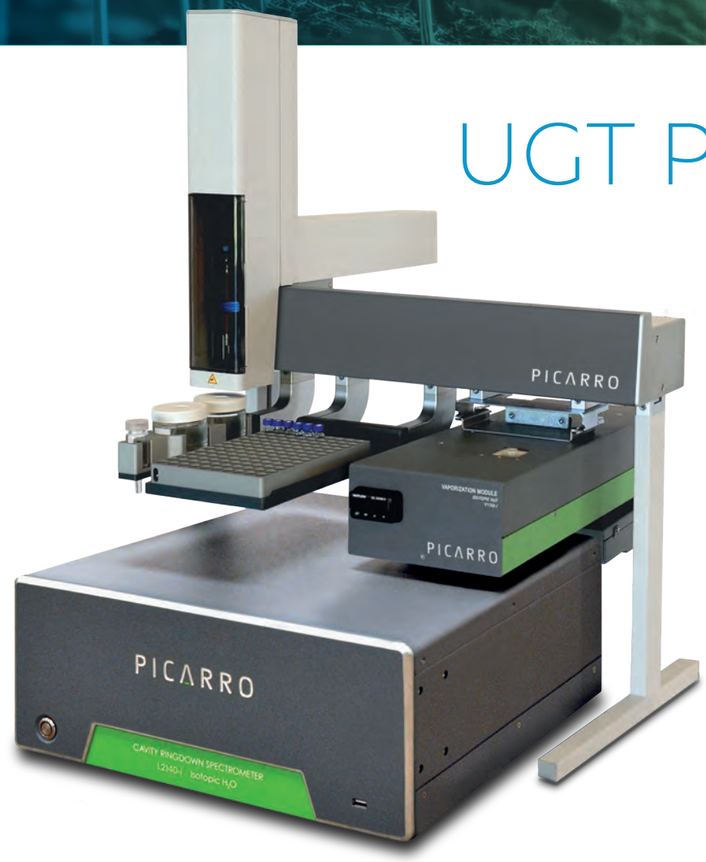
UGT PERIPHERAL DEVICES

for Picarro Analyzers

Seamless integration of gas measurement into ecosystem research

Perfectly compatible with Picarro Analyzers

Proven and reliable technology



Even more info at:
www.ugt-online.de

Best-fit technology for Picarro Analyzers

At UGT, we rely on the market-leading precision and long term reliability of Picarro CRDS Analyzers for gas concentration and isotope measurements. This is why we aim for seamless integration of Picarro Analyzers into our mini ecosystems and lysimeter solutions, as a valuable addition for evaluating the water-, carbon- and nitrogen cycle.

We also know that our customers thrive to make the most of their Picarro Analyzers in the field, to guarantee stable and optimal conditions for their measurements.
Therefore, we have developed some of their ideas into market-ready products. These peripherals will help you tap the whole CRDS potential for your own demanding field projects for greenhouse- and trace gas measurements, as well as ^{13}C and water isotope measurements from different media and ecosystems.



PERIPHERAL DEVICES



ClimBox

We developed the ClimBox for convenient mobile and permanent deployment of Picarro analyzers, multiplexers and pumps in the field, protecting them from harsh weather conditions.

- Ideal for mobile use of your devices in demanding environments
- Lockable aluminum roller shutter front
- Integrated connection box with IEC sockets and fuse protection



Capillary Water Guard (CWG)

The CWG serves as an additional protection against water ingress into a Picarro multiplexer/ analyzer.
It detects even smallest droplets and shuts off the sample line, switching to ambient/ a dry gas source.

- Reliable protection against water ingress
- Use in continuous operation
- Easy to operate and maintenance-free

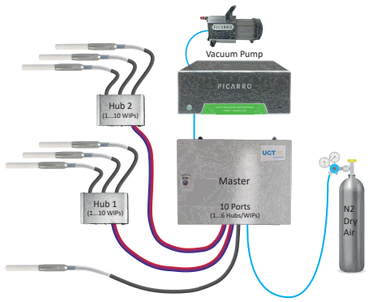


SYSTEM INTEGRATIONS

EcoLab flex

These mini-ecosystems and climate chambers enable the comprehensive investigation of ecosystem functions in the pedos-, bio-, atmospheric continuum under controlled boundary conditions. Our systems are variable and can be optimized for your research objective.

- Customizable for your research objective
- Small footprint with high scientific efficiency
- Seamless integration with Picarro GHG-, ^{13}C-, and water isotope analyzers



Water Isotope Probe System

Water Isotope Probes are used for direct, non-destructive in situ measurement of stable water isotopes.

- Investigation of the entire soil-plant-water cycle
- Dilution of sample intake with dry gas minimizes condensation and effects on isotopic compositions
- Same probes for measurements from soil, xylem, air and reference standards



Lysimeter

Lysimeters are used for evaluating the water balance and solute transport processes in a defined soil volume. Combined with Picarro analyzers, they provide valuable insights into the water-, carbon and nutrient cycle of soil-plant systems.

- Undisturbed soil monoliths
- Equipped with multiple sensors and samplers, data logger & E-supply
- Soil research across scales: from small Ready-to-Go and lab lysimeters to large-scale lysimeter stations



Gas Measurement Chambers

UGT develops and builds customized chambers for soil GHG measurements. This ranges from simple manual chambers to automated and movable systems.

- Flexible, project-specific solutions
- Reproducible measurements from all your plots
- Can be equipped with multiple sensors