

# HiRAS

## Specifications



### HiRAS-Autosampler

#### HiRAS-Autosampler (Standard Model) includes:

- ✓ Rain collector 300 mm, with bird deterrent ring and leaf catcher for direct attachment to the autosampler
- ✓ Precipitation water buffer tank with volume detection
- ✓ Filling of disposable syringes via valve hub and FEP capillaries, with largely atmospheric seal
- ✓ Autosampler is delivered fully assembled with disposable syringes and FEP capillaries
- ✓ Mobile App for Android

#### Technical data:

Dimensions:	525 x 420 x 265 mm
Transport dimensions box:	630 x 500 x 300 mm (Pelicase)
Empty weight:	approx. 25 kg
Sample volume:	165x 25 ml disposable syringes, preconditioning possible
Variably adjustable flushing volume of tubings	
Resolution:	approx. 2 mm or approx. 5 min.
Material Autosampler:	aluminum frame, FEP capillaries
Material Pelicase:	Polypropylene

#### Anchorable and height-adjustable stand for HiRAS

- ✓ 1x base plate with 4x leg mounts suitable for the Pelicase incl. 4x knurled screws for mounting on the Pelicase
- ✓ 4x legs individually adjustable in height between 55 and 95 cm via slides with hand toggle
- ✓ 8x knurled screws for attaching the legs to the base plate leg sockets
- ✓ 4x ground screws for anchoring the legs
- ✓ Material: aluminum and stainless steel
- ✓ Tool-free assembly

#### Please notice:

**An additional 12 V power supply, e.g. exchangeable battery, solar, mains power is required. We would be happy to offer you a suitable system extension.**

#### Options:

- ✓ Remote access via router
- ✓ Anchorable and height-adjustable stand
- ✓ Weather station with individual sensor equipment - we recommend our UGT Weather station, because there is also a router included
- ✓ Winterproof, heatable version



# HiRAS

## High Resolution Auto Sampler

For collecting and protected storage of stable water isotopes in remote areas.

Licensed Product of GFZ Potsdam



With EU funding



Umwelt-Geräte-Technik GmbH  
Eberswalder Str. 58 · D-15374 Müncheberg  
P. +49 33432/7559-0 · info@ugt-online.de

Branch Munich  
Lindberghstr. 7a · D-85399 Hallbergmoos  
P. +49 811/124478-0 · info-sued@ugt-online.de



Even more info at:  
[www.ugt-online.de](http://www.ugt-online.de)

# THE ALL-ROUNDER

## Isotope & Chemical analysis

The prototype of HIRAS was designed for the collection of stable water isotope samples at weather stations. Together we can adapt and optimize HIRAS for your application:

- ✓ routine measurements for immission monitoring
- ✓ tracer tests, determination of breakthrough curves of harmful substances, regular analyses during production processes, process optimization
- ✓ hazards monitoring (dispersion of hazardous gases or liquids in air, groundwater, rivers and more)
- ✓ remediation of contaminated sites, landfills and stockpiles

## HiRAS – Automated Water Sampler for Isotope and Environmental Analysis

- ✓ The automated sampler in its compact form allows self-sufficient sampling of long precipitation series even at remote stations.
- ✓ Sampling and storage is performed without atmospheric exchange and allows the samples to be used for various chemical as well as isotopic analyses.
- ✓ Optimized in long-term tests by GFZ (Nepal, Zugspitze, Potsdam). Isotope stability (18O, 2H) min. 3 months, up to 50°C.

## Rugged – precise – self sufficient

Use the HIRAS autosampler for longterm isotope monitoring worldwide, even in remote areas with limited access.



# HiRAS-AUTOSAMPLER

## High Resolution Automated Sampler

### Flexible deployment

Program your sampling protocol controlled by time interval, volume, event-driven, combined

#### High resolution

Up to 2 mm / 5 min

#### Extensive data base

Rack for 165 samples for high resolution rainfall events or long measurement series

#### Valid results

Sampling without cross-contamination, absolutely gas-tight



### Remote access

In regions with GSM network, the Android-based mobile app gives you access to the device at any time.

This enables, e.g. targeted sampling of events.

With intuitive user interface to change parameters, testing of valves, starting, adjusting, ending the sampling protocol, live check of values.



### Longterm monitoring

Low energy consumption

#### Self-sufficient, flexible energy supply

Battery, Solar panel or mains operation



### Rugged and compact

Stable Pelicase for easy transport, 3D-printed rack, low weight

#### Reliable

Wear-free filling, gas-tight sample storage

