



PREMIUM ANALYSE

HT ionix™

Tritium Bubblers

The HT IONIX tritium bubblers are designed for trapping tritium oxide (HTO) as well as gas (HT). This method has a proven efficiency for radioprotection purposes, environmental surveillance as well as stack release monitoring.



FEATURES

- **High trapping efficiency**
 - HTO & HT > 95%.
 - Trapping efficiency validated in laboratory.
- **Convenient**
 - Intuitive to use.
 - Limited liquid loss.
 - Quick and easy set up.
 - No outside condensation.
- **Easy maintenance**
 - Small footprint.
 - Stainless steel sampling circuit.
 - Light (weight < 15 kg) and rugged.
 - Only one annual maintenance required.
- **User-friendly**
 - Color touch screen.
 - Color identification of bottles.

DESCRIPTION

The HT IONIX bubblers product range gathers several samplers designed for monitoring levels of atmospheric tritium both HTO (vapour) form and HT (gas).

The HT IONIX bubblers are suitable for all applications in stack and ventilation systems monitoring, surveillance of premises or even environmental monitoring.

These devices have been designed according to the requirements of the NF M60-312-1 & M60-822-1 standards.

Easy to use, light and rugged, these bubblers offer some of the most advanced features, such as:

- Reduced liquid volume.
- Remote monitoring and control via Modbus.
- Record of defects and measurement conditions.

The HT IONIX bubblers can be easily and quickly converted in HC IONIX bubblers for sampling and trapping Carbon 14, thanks to a conversion kit available as an option.

MAIN CHARACTERISTICS

- The HT IONIX bubblers are available in 2 versions:
 - The HT IONIX 20 bubbler allows the sampling of tritium oxide (HTO).
 - The HT IONIX 22 bubbler allows the sampling of tritium oxide (HTO) as well as gas (HT) after catalytic oxidation in a furnace.

	HT IONIX 20	HT IONIX 22
Main characteristics		
Overall dimensions	L 410 x H 315 x D 340 mm	L 510 x H 315 x D 340 mm
Weight (empty)	< 12 kg	< 15 kg
Power supply	100-240 Vac 50-60 Hz	
Max power	240 W	530 W
Electrical protection	Fusibles 2A (220V) & 10A (24V)	
Dry-contact outputs	6 outputs (flow, pump, cooling, electronic, proper functioning, status error)	7 outputs (flow, pump, cooling, electronic, proper functioning, status error, furnace)
Volume of bottles	125 mL	
Recommended water volume	100 mL demineralized water	
Sampling circuit	100% Stainless Steel	
Inlet filter	1 µm fiberglass	
Gas I / O	6 mm Swagelok double ring connectors	
Flow rate	Customizable from 50 cc/min to 850 cc/min (3 L/h to 51 L/h)	
Furnace temperature settings	N.A	recommended 450°C, max 500°C

Operating conditions:

- Use temperature: +2°C to +48°C (+35°F to +118°F).
- Storage temperature: -5°C to +70°C (+23°F to +158°F).
- Use pressure: 850 - 1 150 mbar abs.
- Humidity: < 95% (without condensation).
- Protection level: IP 40.

HT ionix 20
2 bottles HTO tritium sampler



FEATURES

Gas sample circuit:

- Flow regulation based on pressure drop.
- Sampling circuit 100% made in stainless steel.
- Color identification of the bottles to limit the risk of switch.
- Installation and removal of bottles made easy thanks to a standard thread (GL 45).
- Filtration of particles up to 1 micron through a front mounted easily interchangeable filter.
- Mass flowmeter, calibrated with a certified standard COFRAC flowmeter over the range of 50 to 850 cc/min (3 to 51 L/h).
- Relative Humidity Compensation System.
 - No condensation outside of the bottles or the piping.
 - Reduced water losses in all bottles even on long measurement period (up to 1 month).
- Self-regulating catalytic oxidation furnace with durable catalyzer.
- Reduced water sampling volume (from 60 mL) to limit the dilution of the sample.

Electronic control:

- Color touchscreen.
 - Display of the sampling history, real-time errors, sampling status history, ...
 - Display of operating and sampling data (standardized flowrate, sampling duration, volume sampled, ...).
 - Ability to reset the duration and volume sampled before each new measurement campaign on the main screen.
- Light and sound alarm.
- 4-20 mA input for external flowmeter.
- Autotest at startup and permanent self-control.
- Remote beacon connector (additional beacon required).
- Modbus Ethernet connection allowing remote visualization of faults and the status of operation as well as unit remote control.
- Dry-contact outputs for the transmission of faults (flow, pump, furnace, cooling, electronic, general failure).

Delivered with power supply cable, glass bottles, conformity certificate, user and maintenance manual and Modbus registers.



Software interface



Back of the device



QUALIFICATIONS

- Tested in Mirion Technologies (Premium Analyse) COFRAC certified tritium gas laboratory (certification number 1-6856*).
- CE conformity.
- Test reports available on request.

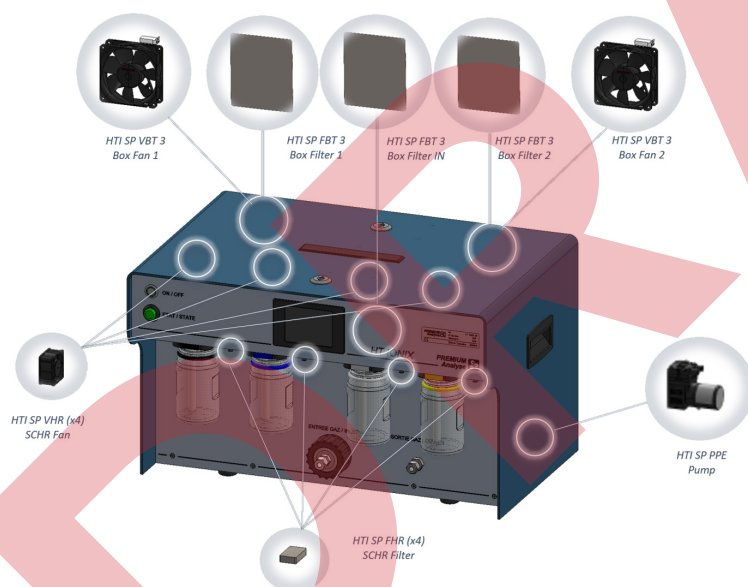
* accreditation details available on : www.cofrac.fr/en

Part Numbers	
HTO tritium bubbler	HT IONIX 20
HTO + HT tritium bubbler	HT IONIX 22

Accessories	
250mL Conversion kit (4 bottles)	HTI ACC 4F 250
Rolling table for 1 bubbler	HTI ACC TR1
Carrying basket for 8 bottles 125mL	HTI ACC PT125
Clamp alarm beacon	ACC BAL P
Fixed alarm beacon	ACC BAL F
Transport case with foam block	HTI ACC PEL

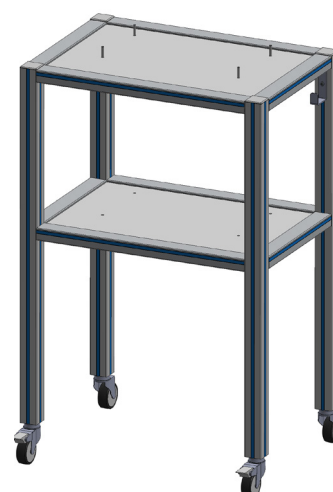
Consummables	
Sampling filters (pack of 100)	HTI SP FPR
RHCS fan	HTI SP VHR
RHCS fan filter (pack of 12)	HTI SP FHR
Case fan	HTI SP VBT 3
Case fan filter (pack of 6)	HTI SP FBT 3
Pump	HTI SP PPE

Spare Parts	
Pack of 4 125mL bottles	HTI SP 4FL 125
Pack of 4 250mL bottles	HTI SP 4FL 250
RHCS head	HTI SP SCHR 4
Oxidation furnace	HTI SP FOX
Diving tube for 125 mL bottle	HTI SP TP125 v3
PTH probe	HTI SP PTH
Flowmeter	HTI SP DEB 2
Gaskets kit (pack of 2)	HTI SP JNT
Power fuses (pack of 2)	HTI SP FUS 2A
Main board fuse	HTI SP FUS 10A
Touchscreen assembly	HTI SP ECR
RHCS management card	SSP HTI GHR A1
System control card	SSP HTI EPE A3
NTC probe	HTI SP NTC 3



Maintenance	
Annual maintenance kit without pump (FPR + FHR + FBT 3)	HTI MNT KIT 3
Annual maintenance kit with pump (FPR + FHR + FBT 3 + ppe)	HTI MNT KIT PPE 3
Annual maintenance fee	HTI MNT ANN

Rolling table
HTI ACC TR1



CONTACT US

Mirion Technologies (Premium Analyse)
Phone: +33 (0)3 87 51 31 75
Mail: contact@premium-analyse.fr

**PREMIUM
Analyse** 
always one idea ahead