



MIRION
TECHNOLOGIES

PREMIUM ANALYSE

HT ionixTM

Tritium Bubblers

The tritium bubblers are designed for the following applications: radioprotection, environmental monitoring, discharge measurement, laboratory



FEATURES

- **High trapping efficiency**
 - HT & HTO → > 95%
 - Trapping efficiency validated in laboratory
- **Simple and robust**
 - Intuitive to use
 - Limited liquid loss
 - Fast and easy set up
 - Real-time leak detection
 - No undesirable condensation
- **Easy maintenance**
 - Small footprint
 - Easy decontamination
 - Light (weight < 15 kg) and rugged
 - Only one annual maintenance required
- **Easy to use**
 - Color touch screen
 - Color identification of bottles

DESCRIPTION

The range of bubblers HT ionix consists of trappers designed for monitoring levels of concentration of atmospheric tritium HTO (vapour) form and HT (gas).

The HT ionix bubblers adapt to all your control applications in stacks, ventilation systems, surveillance of premises or even environmental applications.

These devices meet the requirements of the standards NF M60-312-1 & M60-822-1.

Simple to use, light and strong, these bubblers offers some of the most advanced features, such as:

- Reduced sample volume
- Remote control via Modbus Ethernet
- Record conditions of measurement and faults

GENERAL CHARACTERISTICS

- The HT ionix bubblers are proposed in 2 versions:
 - The HT ionix 20 bubbler allows the sampling of vapour tritium (HTO)
 - The HT ionix 20 bubbler allows the sampling of vapour tritium (HTO) and gas (HT) after catalytic oxidation in a furnace

	HT IONIX 20	HT IONIX 22
General characteristics		
Overall dimensions	L 410 x H 315 x D 340 mm	L 510 x H 315 x D 340 mm
Weight	< 12 kg	< 15 kg
Power supply	100-240 Vac 50-60 Hz	100-240 Vac 50-60 Hz
Average power	100 W	460 W
Electrical protection	2A fuse	2A fuse
Digital outputs	6 outputs (flow, pump, cooling, electronic, proper functioning, state error)	6 outputs (flow, pump, cooling, electronic, proper functioning, state error, furnace)
Bottles volume	125 mL	125 mL
Recommended water volume	100 mL demineralised water	100 mL demineralised water
Sampling circuit		
Inlet filter	1 µm glass-fiber	1 µm glass-fiber
Gas I / O	6 mm Swagelok double ring connectors	6 mm Swagelok double ring connectors
Flow settings	Adjustable from 50 cc/min to 500 cc/min (3 L/h to 30 L/h)	Adjustable from 50 cc/min to 500 cc/min (3 L/h to 30 L/h)
Furnace temperature settings	N.A	450°C, max 700°C

Operating conditions

- Use temperature: +2 to +48°C
- Storage temperature: -5°C to +70°C
- Humidity: < 95% (without condensation)
- Protection level: IP 40

HT ionix 20
2 bottles HTO tritium sampler



SPECIFICATION

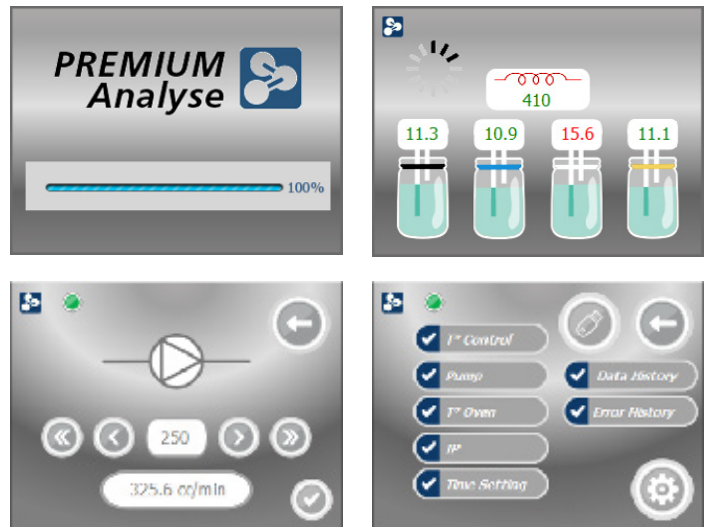
Gas sample circuit:

- Sample circuit in stainless steel
- Flow regulated based on pressure drop
- Identification of the bottles in order to limit the risk of reversal
- Setting up and removal of flasks facilitated by a standard screw (GL 45)
- Filtration of particles to 1 microns through a front mounted easily interchangeable filter
- Mass flow meter, calibrated with a certified standard COFRAC flowmeter over the range 50 to 500 cc/min (3 to 30 L/h)
- Relative Humidity Compensation System
 - No condensation outside the bubbler
 - Water losses very limited in all bottles on long measurement campaigns (1 month).
- Reduced water sampling volume (from 60 mL) to limit the dilution of the sample
- Self-regulating catalytic oxidation furnace

Electronic control:

- Color touchscreen
 - Display of operating and sampling data (standard flowrate, sampling duration, volume sampled, temperature,...)
 - View the history of the operating states, real-time errors, sampling history,...
 - Possibility to reset the duration and the volume of sampling before each new measurement campaign on the main screen
- Light and sound alarm
- 4-20 mA input for external flowmeter
- Autotest at startup and during operation
- External beacon connector (additional beacon required)
- Modbus Ethernet link for remote visualization of faults and the state of operation
- 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, Modbus registers



Software interface



Back of the device



QUALIFICATIONS

- Tests in the tritium gas calibration laboratory of Mirion Technologies (PREMIUM Analyse)
- CE conformity
- Test reports available on request

Order references

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

Accessories

Rolling table for 1 HT Ionix	HTI ACC TR1
Carrying basket for 8 flacons 125mL	HTI ACC PT8
Clamp alarm beacon	ACC BAL P
Fixed alarm beacon	ACC BAL F
Transport case with foarm	HTI ACC PEL

Consummables

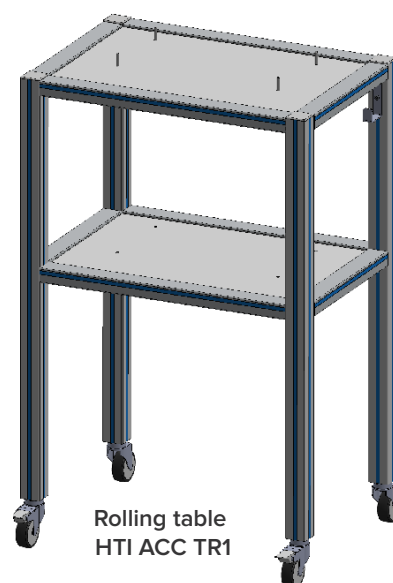
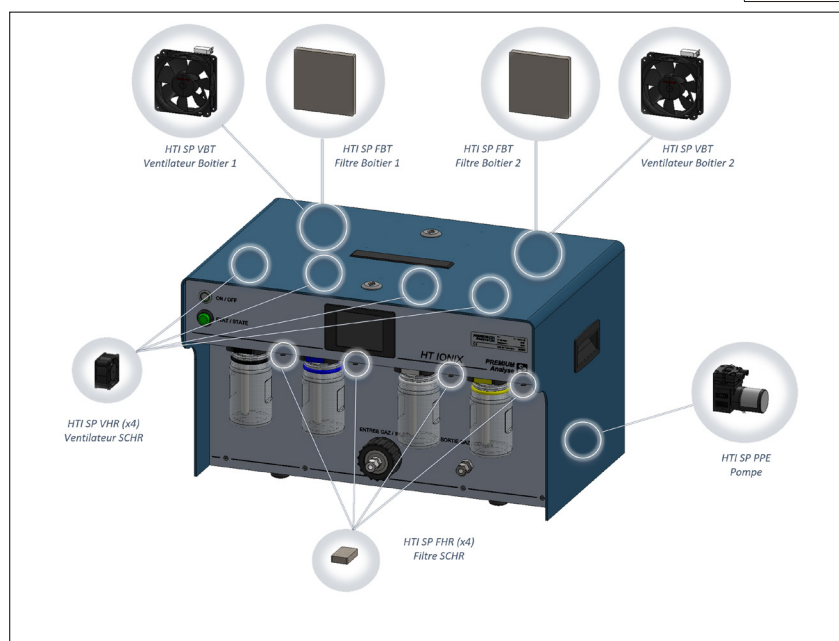
Inlet sampling filter	HTI SP FPR
RHCS fan	HTI SP VHR
RHCS fan filter	HTI SP FHR
Case fan	HTI SP VBT
Case fan filter	HTI SP FBT
Pump	HTI SP PPE

Spareparts

Pack of 2 bottles	HTI SP 2FL
Pack of 4 bottles	HTP SP 4FL
RHCS head	HTI SP SCHR
Oxidation furnace	HTI SP FOX
Diving tube for 125 mL bottle	HTI SP TP125
PTH probe	HTI SP PTH
Flowmeter	HTI SP DEB
Gaskets kit (pack of 2)	HTI SP JNT
Fuses (pack of 2)	HTI SP FUS

Maintenance

Annual maintenance kit without pump (FPR + FHR + FBT)	HTI MNT KIT
Annual maintenance kit with pump (FPR + FHR + FBT)	HTI MNT KIT PPE
Annual maintenance flat rate	HTI MNT ANN



CONTACT US

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