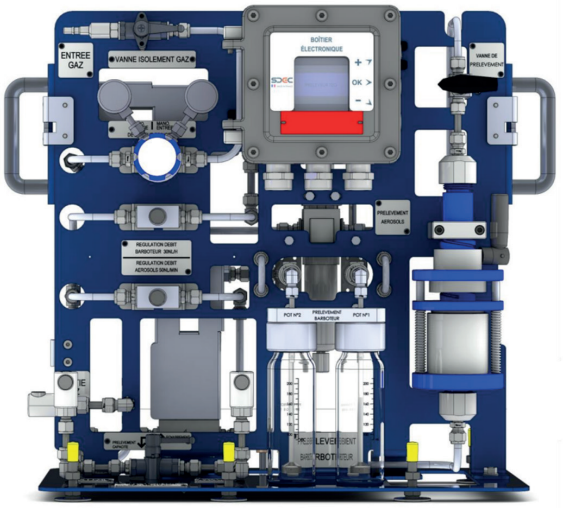
SOLUTIONS TECHNOLOGIQUES POUR L'ENVIRONNEMENT

T.E.G SAMPLER

(aerosols sampler + bubbler)

Sampling of tritium (HTO), aerosols and iodine in compliance with NF ISO 20041-1 & NF ISO 2889 standards



DESCRIPTION

TEG sampler allows sampling of hydrogenated gaseous effluents (<4%) in a 2 to 12 absolute bars pressure range (example : nuclear power plants' gaseous effluents tanks).

It allows simultaneously:

- Sampling of tritium HTO form
- Sampling of aerosolsn iodine and other rare gases.

Built in compliance with ATEX regulation (EXplosive ATmosphere), TEG sampler could be used inside sorbonnes and glove boxes.

ADVANTAGES

- 2 in 1 device, combining both a bubbling module for HTO trapping and an aerosol sampling system. With possibility of bypassing the bubbler channel for use of the aerosol channel only
- Advanced ergonomics :
  - Assembly/disassembly of the bubbler module using a quick connectors system
  - TPHP sampling head with quarter-turn opening/closing system to facilitate handling inside glove boxes
- Rugged design for a use in ATEX environments (ATEX II 3 G Ex nA IIC T4 Gc)
- Gas capacity connection point for rare gases sampling

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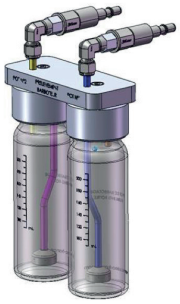
OPERATING PRINCIPLE

TEG sampler is equiped with two simultaneous sampling channels. A first bubbler ligne dedicated to HTO sampling, and a second aerosols channel for aerosols, iodine and other rare gases sampling. Each channel include a mass flow controller and a valve for flow setting.



Bubbler channel :

HTO tritium sampling is performed using bubbling princple.

A specific two vials bubbler is mounted on the TEG plateform by a self-sealing quick connectors system.

Aerosols, iodine and other rare gases channel :

Aerosols and iodine sampling is performed thanks to a high performance sampling head TPHP, which can hold a Ø 50 mm paper filter for aerosols sampling, and two carbon cartridges for iodine sampling. TPHP allows easy filters and cartridges by a quarter-turn opening mechanism.

Other rare gases sampling, if necessary, could be performed by connecting a gas capacity prior to TPHP thanks to a self-sealing quick connectors system.

FEATURES

- Realtime display of flow rates and sampling volumes of both sampling channels.
- Aerosols channel flow rate regulation from 1 to 55 SLPM (Standard Liter Per Minute), calibrated and verified using a COFRAC certified flowmeter in the 10 to 50 SLPM range.
- Bubbler channel flow rate regulation from 0,1 to 35 SLPH (Standard Liter Per Hour), calibrated and verified using a COFRAC certified flowmeter at 30 SLPH.
- Realtime sampling flows monitoring with on-screen warning display in case of +/-10% deviation from setpoint, indicating the faulty sampling channel.

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SPECIFICATIONS

	Bubbler channel	Aerosol channel
	Technical	
Species	HTO	Aerosols + iodine
Air flow	0,1 à 35 SLPH	1 à 55 SLPM
	Environmental	
Operating T°	+2 à +50 °C	
Operating relative air moisture	5 à 90%	
Protection index	IP65	
Display	Backlit LCD screen	
Inlet pressure	Bellow 12 absolute bars	
Exhaust pressure	Atmosphere	
	Mechanical	
Dimensions without handles L x H x D (mm)	545 x 555 x 220	
Dimensions with handles L x H x D (mm)	545 x 631 x 216	
Gravity center L x H x D (mm)	267 x 264 x 142	
Weight (kg)	23	
	Electrical	
Power supply	240V 50Hz	
Max power (Watts)	7	

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