



T4i FemtoMachine PRO

*equipped with Symbiotic Engine
for calibration and testing of
chemical detectors and sensors
anywhere anytime*

*Handheld, battery-powered
vapour generator*



*Speed and simplicity
Operation in 2 simple steps*

- Turn power on
- Upload method



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What it is

T4i FemtoMachine PRO is a credible, robust, handheld vapour generator designed to produce constant vapour plumes of chemicals (TICs/VOCs) in the lab and outdoors.

The user selects concentration levels of a large number of chemicals in the low ppm/high ppb range to calibrate and test chemical sensors.

Who needs it

T4i FemtoMachine PRO allows for lab or outdoors testing and calibration of atmospheric (e.g., IMS, PID, SAW, sensor arrays) or vacuum (e.g., MS) detectors.

How it works

T4i FemtoMachine PRO produces continuous TICs/VOCs vapour plumes at pre-defined, fully controlled concentration levels. No use of pressurized gas cylinders is needed.

T4i FemtoMachine PRO uses standard permeation tubes for a broad range of TICs and VOCs. The user uploads a method for unattended production of pre-selected stable concentration.

T4i FemtoMachine PRO has unique innovative remote operation through a web-based software; the right selection for generating vapour plumes anywhere, anytime; to be used in exercises and training with chemical detectors.



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Specifications

Chemicals	
Types of compounds	Broad range of TICs and environmental VOCs and gases
Mixture generation	2 – 4 components
Versatility	
Threaded (M5) outlet port	Connection with detectors and Tedlar® bags
Capability of syringe sampling	Special proprietary technology septum nut accessory
Optional proprietary technology	Connects with gas cylinders for gases calibration
Analytical	
Concentration range	Low ppb to ppm
Concentration accuracy	Certified tubes <2% non-certified <25%
Concentration repeatability	<3% for high ppb <10% for low ppb
Output flow	200-1500 mL/min
Output flow repeatability	1%
Technology	
Technique	Permeation tubes
Flow control	Microprocessor based automated electronic
Oven	Proprietary technology. Robust, inert oven heated up to 115°C (±0.1°C)
Safety	
Carrier gas	Ambient air. Does not use dangerous and costly gas cylinders
Exhaust purge	Molecular sieves trap

Specifications

Physical features	
Dimensions (LxWxH)	298 x 221 x 74 mm 11.7 x 8.7 x 2.9 inches
Weight	1.98 kg (4.36 lbs)
Enclosure and protection	Rugged, IP66, sealed external connectors
Power	
Input voltage	110-240VAC w/ external power supply or 12VDC (2A max, 24W max)
Batteries	4 x Li 18650 (3.3Ah), 2h oven operation at 70°C (158°F)
Cold start up time	30 minutes
Environmental	
Operating °C/°F and humidity	10°C – 40°C (50°F - 104°F), RH <95%
Storage temperature	-30°C - 55°C (-22°F - 131°F)
User interface	
Control	One button operation, online monitoring and diagnostics
Software Symbiotic Engine	Proprietary technology
Alerts	Illuminated switch, visual and audio alerts
Diagnostics for self-testing	Reporting operation log file
Training	1h, formal certified training
Protocols	USB
Authentication, authorisation	Proprietary security technology

Specifications

Autonomous operation	Symbiotic Engine based with security and safety features
Standardisation	
CE certified IPC-A-610 ISO EN6145-1:2019 ISO EN6145-7:2019	ISO EN6145-10:2019 ISO EN6143:2006 ISO EN60529:2001 RoHS

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