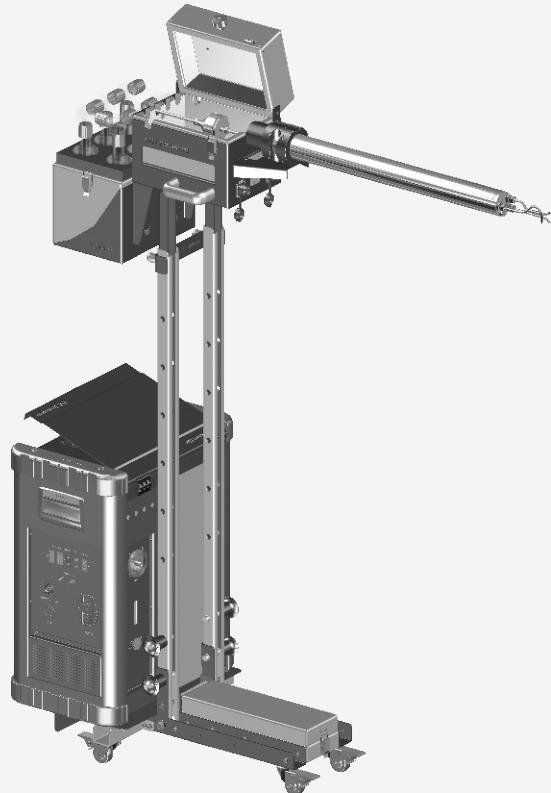


# Catalog 2020



We work **hard** & **smart** so you can have a **smart** life

## ISO Smart<sup>Plus</sup> Isokinetic dust & gas Sampler



[www.ensinstruments.com](http://www.ensinstruments.com)

**ENS Instruments**

**ISO Smart** *Plus*

**Dust & Gas Samplear**
**ISO Smart** *Plus*

ISO Smart *Plus* fully automatic sampling device is designed for dust and gas sampling. It performs the sampling in accordance with international standards. It measures and calculated the required parameters according to rules sets in the standards.

It is an automatic sampler for sampling of particulate matter, gases, metals and dioxines

**Sampling Methods Accordance With:**

- UNI EN 13284 : Stationary source emissions - Determination of low range mass concentration of dust
- US EPA M2 : Determination of stack gas velocity and volumetric flow rate ( Type S Pitot Tube)
- EN UNI 16911 : Determination of stack gas velocity and volumetric flow rate ( Type S Pitot Tube)
- US EPA M4 : Determination of moisture contents in stack gases
- US EPA 5 : Determination of particulate matter emissions from stationary sources ( Out of stack)
- US EPA 17 : Determination of particulate matter emissions from stationary sources (In stack)
- EN 1948 : Stationary source emissions - Determination of mass concentration of PCDDs/PCDFs and dioxin-like PCBs
- EN 14385 : Stationary source emissions - Determination of the total emission of As, Cd, Cr, Co, Cu, Mn, Ni, Pb, Sb, Tl and V
- EN 13211 : Stationary source emissions - Determination of the concentration of total mercury



## Main Characteristics:

- Fast isokinetic control at any condition
- Volume measurement with dry gas meter
- Stack temperature and velocity measurement
- Autotest
- USB interface to download stored data
- Visualization of stored data on display of the instrument
- Bluetooth interface to print data
- Wide color graphic display
- Wide library to store the duct specification
- Available with ISO 17025 accredited laboratory certificate

## Parameters Stored on Instrument Report:

- Serial number of instrument
- Sampling date and hour
- Gas velocity
- Duct, heated probe and heated box tempreture
- Condensation bath Tempreture
- Condensation bath's gas outlet tempreture
- Duct absolute presuure
- Sampling and atmospheric pressure
- Duct and nozzle flow
- Sampled volume, duration
- Isokinetic deviation
- Faults
- and more



## Stored Report:

Measurement report is a sample summary report of measurement log parameter record with timer programable intagation.

Report formate is compatible with Windows, Google Chrome Microsoft Office.

You can load the report to your mobile phone form the instrument and send it by e-mail to related person.

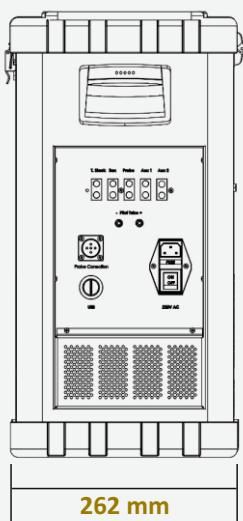
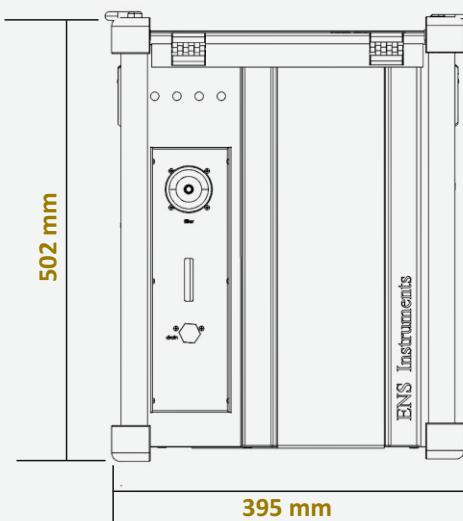
## Quality Control:

Quality control for automatic isokinetic sampling provide by calibration traceability of each sensor and measured parameters. ISO Smart Plus stores each calibration performed by the user or by the manufacture. The calibration report downloadable via USB. Points of the calibration for each sensor are programmable by the user. Temprature calibration curve following ITS 90 standarts.



## Technical Specifications:

- Material : Double painted aluminum
- Gas meter : Class G4, 0.4 m<sup>3</sup>/h ÷ 6.0 m<sup>3</sup>/h
- Gas inlet : Protected by filter and liquid sensor
- Display : 5.0 " color LCD display
- Data port : USB 2.0, (\*)
- Printer port : Bluetooth
- Data Transfer : To PC by USB 2.0, Bluetooth to Printer
- Water sensor : built in (\*)
- Dimension : 395 x 262 x 502 mm
- Weight : 15 kg ( with 4.5 m<sup>3</sup>/h pump )



(\*) Optional

## Measurement Parameters:

### - Differential pressure :

Range : -100 ÷ 1000 Pa  
Accuracy : Better than 1% of measure ± 2 Pa  
Resolution : 0.1 Pa (0.01 mmH<sub>2</sub>O)

### - Absolute pressure (Static or Barometric) :

Range : 0 ÷ 105 kPa (1050 mBar)  
Accuracy : Better than 1% of measure ± 0.01 kPa  
Resolution : 0.01 kPa (0.1 mBar)

### - Temperature :

Nº of inlet : Depending on the request up to 5  
Range : 0 ÷ 1200 °C  
Accuracy : % 1 off measure ± 0.2 °C  
Resolution : 0.1 °C

Dry gas meter temperature Pt<sup>100</sup> sensor  
Range : -20 ÷ 80 °C  
Accuracy : 1% off measure ± 0.2 °C  
Resolution : 0.1 °C

### - Volume measurement by Dry gas metre:

Accuracy : 2%  
Resolution : 0.1 liter

### - Flow measurement:

Res. time : 300 ms  
Mass meter : 5 ÷ 60 l/min  
Accuracy : Better than 2%  
Resolution : 0.01 liter

