

Countum Group

# SATAM

Metering Solutions



## On board metering unit

## EMS 24 & EMS 48

EMS 24 - EMS 48 are compact metering units designed to measure pressurized hydrocarbons on road tankers, especially fuel delivery tankers. They can be fitted with mechanical register or Equalis electronic flow computer for a secure archiving of the transactions and for a control of all the actions linked to delivery operations.

Flow  
computers

Measuring  
systems

Flow  
meters

Accessories

### Sector of application

- On-board measurement on tank trucks
- Preparation of biofuels by means of on-line batch blending
- Measurement of white products and of biofuels

### High reliability measuring system

#### A compact metering unit

Significant reduction in the dimensions and weight of the unit.

Simplified installation on the fuel delivery tanker.

#### A rugged and reliable metering technology

PD meter with moving blades.

Excellent long term stability.

Integrated strainer and air eliminator.

Measurement accuracy independent of liquid viscosity.

#### High flexibility of installation

Fully assembled and tested in production facility.

### Key points

#### Low installation cost

Complete and ready to install measuring unit including strainer, air eliminator, PD meter, valve and register.

#### Self powered technology

No need for power supply with mechanical register version.

#### Low maintenance costs

Simple and robust construction with minimal moving mechanical parts.

#### Stability of measurements

Measurement accuracy guaranteed over a period of many years without drift of the calibration curve.

#### Multi purpose operation

The flow computer version controls the automatic system linked to deliveries such as control of bottom valves, pump engagement.

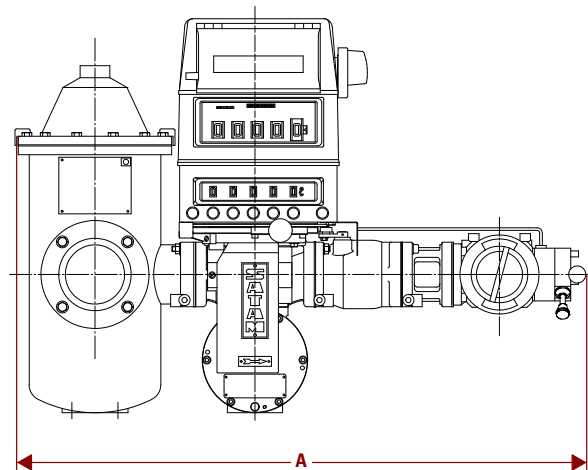
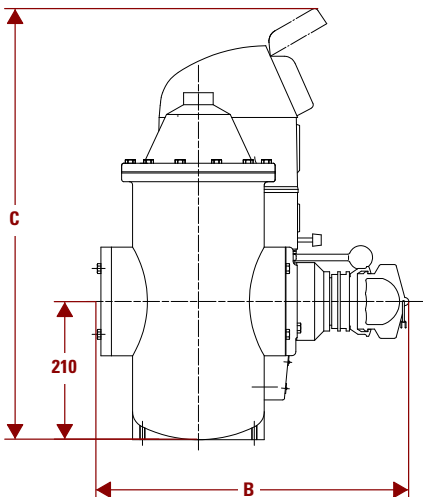
#### Versatile communication with flow computer version

Secure archiving of metrology data and transactions.

Transmission of transactions to data processing system via data bus or memory stick.

# Technical data - On board metering system

Measuring system		EMS 24	EMS 48
Maximum flow rate	m <sup>3</sup> /h - L/mn - USGPM	24 - 400 - 105	48 - 800 - 210
Applications		On-board metering system for tank truck, truck loading application, in-line blending	
Measured parameters		Actual volume, temperature-corrected volume*, mass*, flow rate**, temperature* (* : only for electronic register version) (** : option for mechanical register version)	
Measured liquids		Petrol, premium fuels, diesel, E5...E85, bio-diesel, ethanol, methanol, kerosene, Fatty acid methyl ester oils	
Equipment	Strainer & gas elimination device	Model EC 42 / FS 24 Horizontal stainless steel 450 µm basket filter (diesel fuel) or 200 µm (petrol) Aluminum housing with non return valve Gas release controlled by float and differential valve	
	PD meter	ZC 17-24	ZC 17-48
	Temperature measurement	4-wire Pt 100 (option for electronic calculator version)	
	Multifunction valve	XAD 39 available in mechanical or electrical version XAD 54 pneumatic version	
	3-way valve (option)	Low and high flow rate, authorization, restriction of flow rate Distribution to hose on reel or to short hose	
	Register	Mechanical register model VR , preset*, printer*, pulser*, (* : option) or Electronic register model Equalis with display, secure archiving of transactions	
Operating conditions	Pressure	8 bar max. -10 bar upon request	
	Viscosity	20cSt max. – Consult us about higher viscosities	
	Liquid temperature	-10 to + 80 °C	
	Ambient temperature	Standard -25 to + 55 °C ; Option -40 to + 55 °C Contact us about higher or lower temperatures	
Metrological performances	Volume accuracy	≤ ±0.15 % - Option ≤ ±0.1 % - for measuring range 10 : 1	
	Volume repeatability	≤ ±0.02 %	
	Temperature accuracy	≤ 0.5 °C	
Installation	ATEX certification	Zone 1 ; II 2 G	
Custody transfer approval		MID CE type approval n°LNE11123 Type Compliance certificate OIML R117 n°LNE-24351	
Dimensions (mm) and weight		EMS 24	EMS 48
	Length (A)	785	863
	Width (B)	461	461
	Height (C)	662	662
	Weight (kg)	56	62



## Headquarters and Sales Department

PARIS NORD II  
Bat. le Gauvain - 47, allée des Impressionnistes  
BP 85012 Villepinte  
95931 Roissy CDG Cedex FRANCE  
Phone: +33 (0)1 48 63 02 11  
Fax: +33 (0)1 49 38 41 01  
E-mail: sales@satam.eu

## Manufacturing facility

Avenue de Verdun - CS 60129  
14700 Falaise FRANCE  
Phone: +33 (0)2 31 41 41 41  
Fax: +33 (0)2 31 40 75 61



[www.satam.eu](http://www.satam.eu)