

Equipment	Horizontal measuring system	
Model	EMS12 with mechanical register	
Performance characteristics		
Measured liquids	Liquid hydrocarbons, industrial oils, fatty acid esters, ethanol	
Static pressure	max	15 bar
Inlet pressure	max	8 bar – 6 bar for gasoline (MID)
Liquid temperature	min / max	- 10°C / +90°C 14°F / +194°F
Working flow rate	min / max	1.2 m ³ /h - 20 L/min – 5.25 USGPM / 12 m ³ /h - 200 L/min – 52.5 USGPM
Liquid viscosity	max	20 mm ² /s at operating conditions
Accuracy	< +/- 0.15% of measured value	
Repeatability	< +/- 0.02% of measured value	
Pressure drop at max flowrate	0.7 bar max (without valve) – see valve datasheet for additional data.	
Test report	Test of gas extractor efficiency (@ max flow rate with gas pocket) Calibration on 3 points (1.2 m ³ /h, 6 m ³ /h, 12 m ³ /h) – meter only	
Description of the measuring system		
Components	<ol style="list-style-type: none"> 1- Strainer Air eliminator – FS24 2- Positive displacement meter – ZC17-12 3- Multi-function valves 4- Gas detector 5- Three-way valve 6- Mechanical register 	
1-Strainer air eliminator – FS24		
Connection nominal size	inlet / outlet	DN 80 / DN50 - 3" / 2"
Effective volume	11 L	
Materials	body / seal	Aluminum (EN AC 42200) / Viton, nitrile (option alcohols measurement)
Check valve	Embedded, on liquid outlet	
Gas release head	Automatic gas release controlled by float and differential valve	
Gas release connection	DN25 - 1"	
Filtering technology	Basket filter	
Filtering size	50 µm, 200 µm, 450 µm (selection depending on measured product)	
External coating	Acrylic-Epoxy coating RAL5010	
2-Positive Displacement meter - ZC17-12		
Connection nominal size	DN 50 - 2"	
Displacement element type	Sliding vanes flowmeter	
Cyclic volume	0,33 L - 0,08 USG	
Body material	Cast aluminum (EC AN-42000 ST6) with protective coating	
Cap/end cover material	Carbon steel (EN 1.0625) with protective coating	
Seal/O-ring material	Viton, Nitrile (option for alcohols measurement)	
Blades / Blades connection rods	Graphite / Stainless steel	
Rotor/ Bearings	Aluminum (EN AC-42100) / Stainless steel (EN 1.4301)	
Swing joint	Viton, Nitrile (option for alcohol), PTFE (option for low ambient temperature)	
Accuracy adjuster type	Mechanical adjuster AB35	
Temperature compensation type	NA	
External coating	Acrylic-Epoxy coating RAL5010	

SATAM sas**Headquarters & Sales Department**

Paris Nord 2 – Bâtiment Le Gauvain
 47, allée des Impressionnistes – BP85012 – Villepinte
 95931 Roissy CDG Cedex – France
 Tel : +33 (0)1 48 63 02 11 – Fax: +33 (0)1 49 38 41 01
 Email : sales@satam.eu

Manufacturing facility

Avenue de Verdun
 14700 Falaise – France
 Tel : +33 (0)2 31 41 41 41
 Fax : +33 (0)2 31 40 75 61

Equipment	Horizontal measuring system		
Model	EMS12 with mechanical register		
31-Multi-function valves (option): XAD39 with mechanical control or XAD54 with pneumatic control			
Connection nominal size	DN50 - 2"		
Operating principle	Piston operated by differential pressure with: -mechanically controlled inlet circuit (XAD39) -pneumatically controlled inlet circuit (XAD54)		
Body material & Cylinder material	Aluminum (EN AC-42200)		
Piston material	Aluminum with lining (EN AW-5083)		
Retaining spring material	Stainless steel		
Closing time adjustment	Adjusting screw (XAD39) / Pressure adjustment (XAD54)		
External coating	Acrylic-Epoxy coating RAL5010		
32-Multi-function valve (option): XAD39-B with electrical control			
Connection nominal size	DN 50 - 2"		
Operating principle	Standard version: two single acting diaphragm valves to control low flow rate and high flow rate. Diaphragms operated by solenoids. Low temperature version: piston valve activated by 2 solenoids to control low flow rate and high flow rate.		
Body material	Brass		
Seal materials	Viton, Nitrile (option for alcohols measurement),PTFE (option for low temperature version)		
External coating	Acrylic-epoxy coating - RAL5010		
Electromagnets specifications	220VAC 50Hz, 220VAC 60Hz (option), 24 VDC (option)		
Ambient working temperature	min / max	-20°C, -40°C (low temp. option) / +40°C	-4°F, -40°F (option) / +176°F
4-Gas detector (option)			
Working principle	Glass sight for visual detection of gas		
Installation	Downstream XAD39 valve Integrated as standard into XAD54 valve		
Materials	Aluminum, glass		
External coating	Acrylic-Epoxy coating RAL5010		
5-Three-way valve XAD46 (option)			
Connection nominal size	DN50 - 2"		
Association of 3-way valve with printer	Compulsory to secure the transaction		
Operating principle	Manual 3-way ball valve to enable delivery via empty hose or via full hose Mechanical link with printer to secure valve position during delivery		
Body material	Stainless steel, Aluminum (clapper box)		
External coating	Acrylic-Epoxy coating RAL5010		
4-Register			
Register type	Mechanical register		
Model	VR7887, 5 digits – direct metering, 6 digits (option)		
Accessories	Mechanical preset (for XAD39), pneumatic preset (for XAD54) electrical preset (for XAD39-B) Printer, pulses transmitter		
Environmental			
Ambient working temperature	min / max	-25°C, -40°C (option) / +55°C	-13°F, -40°F (option) / +131°F
Storage temperature	min / max	-40°C / +80°C	-40°F / +176°F
Certification			
ATEX	II 2 G c T4 Gb		
European metrology	CE /MID Type examination certificate n°LNE-11123		
International metrology	OIMLR117-1, type compliance certificate n°LNE-24351		
Standards compliance	API, ASME, NATO. See note 1		

Note 1: Contact us for further information about standards compliance.

SATAM sas**Headquarters & Sales Department**

Paris Nord 2 – Bâtiment Le Gauvain
47, allée des Impressionnistes – BP85012 – Villepinte
95931 Roissy CDG Cedex – France
Tel : +33 (0)1 48 63 02 11 – Fax: +33 (0)1 49 38 41 01
Email : sales@satam.eu

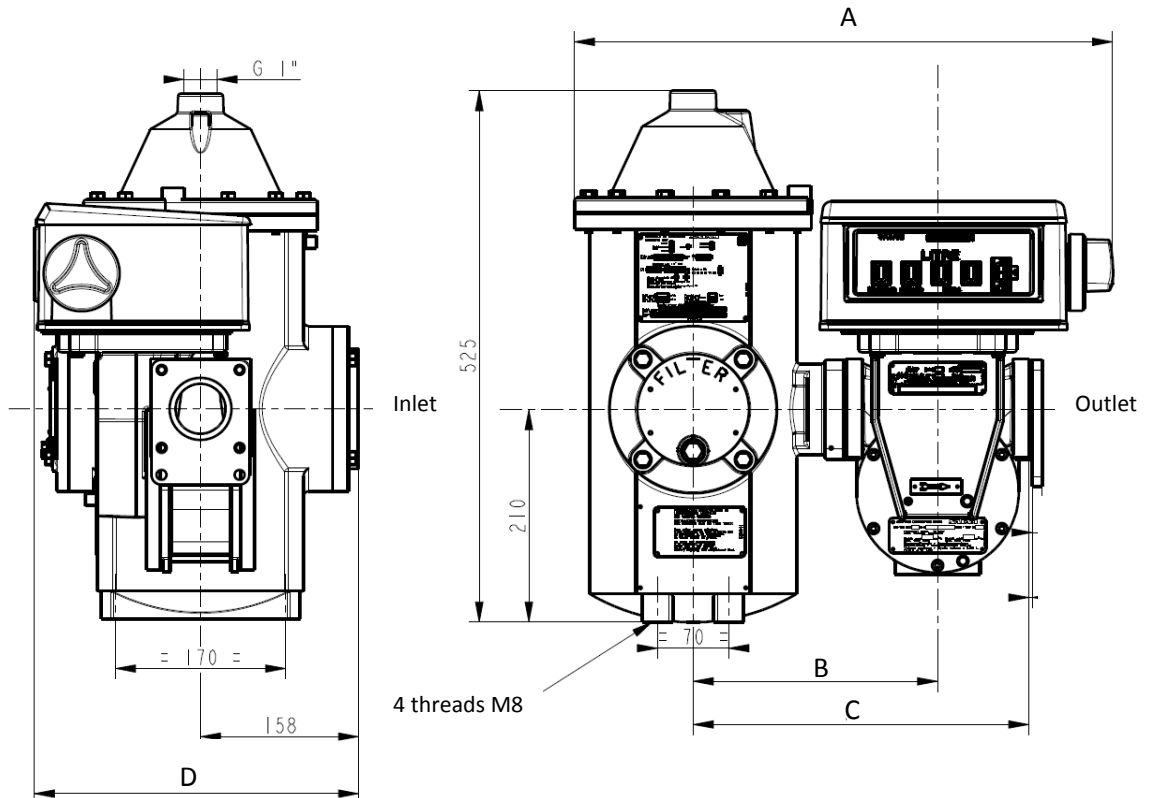
Manufacturing facility

Avenue de Verdun
14700 Falaise – France
Tel : +33 (0)2 31 41 41 41
Fax : +33 (0)2 31 40 75 61

Equipment	Horizontal measuring system
Model	EMS12 with mechanical register

Dimensions and weight

The version shown below is a left hand inlet device. It consists of Strainer Air Eliminator, PD meter, mechanical register.



Dimensions (mm)	EMS 12 left hand inlet	EMS 12 right hand inlet
A	530	580
B	241	346
C	331	436
D	325	325
Weight	41 kg	41 kg

SATAM sas

Headquarters & Sales Department

Paris Nord 2 – Bâtiment Le Gauvain
 47, allée des Impressionnistes – BP85012 – Villepinte
 95931 Roissy CDG Cedex – France
 Tel : +33 (0)1 48 63 02 11 – Fax: +33 (0)1 49 38 41 01
 Email : sales@satam.eu

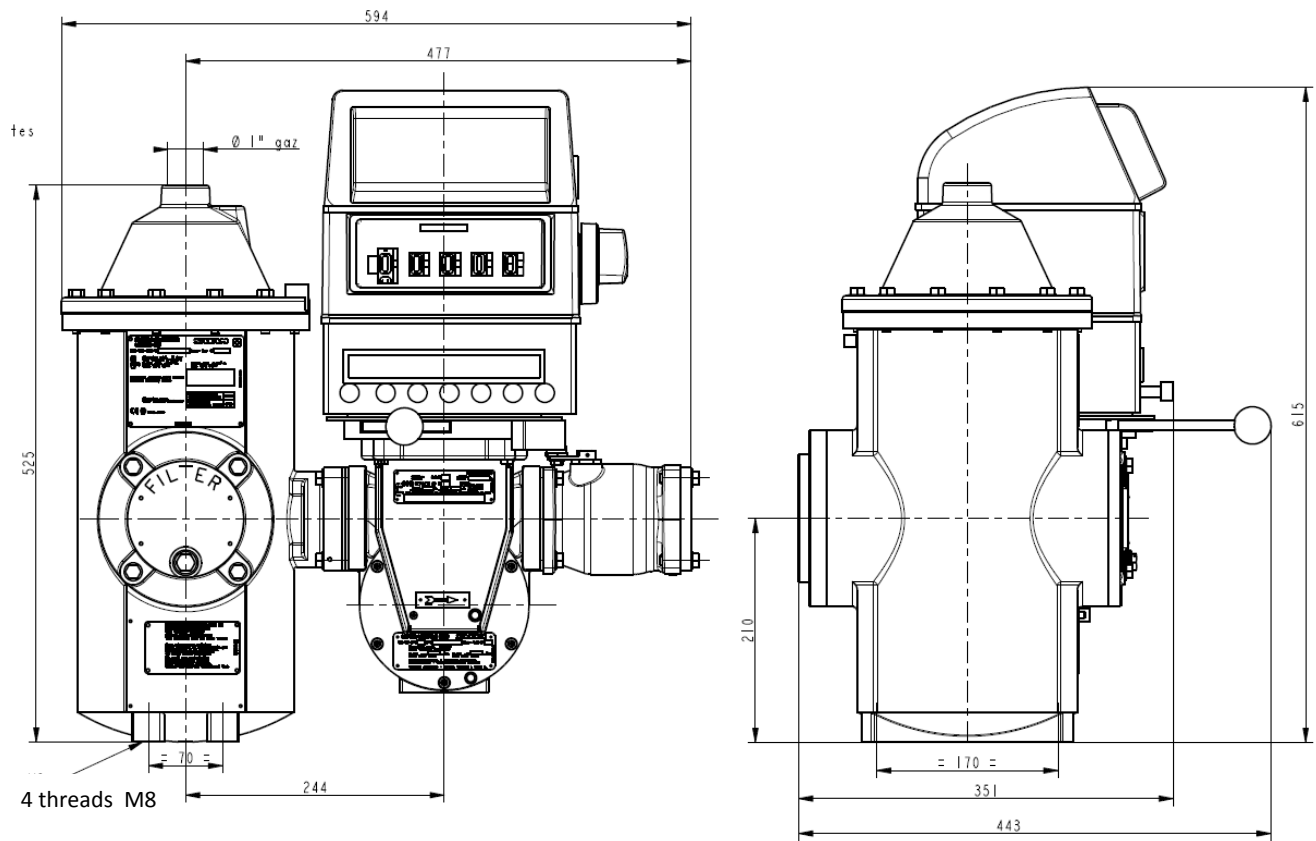
Manufacturing facility

Avenue de Verdun
 14700 Falaise – France
 Tel : +33 (0)2 31 41 41 41
 Fax : +33 (0)2 31 40 75 61

Equipment	Horizontal measuring system
Model	EMS12 with mechanical register

Dimensions and weight

The version shown below is a left hand inlet device. It consists of Strainer Air Eliminator, PD meter, XAD39 valve, , mechanical register, preset and printer.



Weight : 56 kg

SATAM sas

Headquarters & Sales Department

Paris Nord 2 – Bâtiment Le Gauguin
 47, allée des Impressionnistes – BP85012 – Villepinte
 95931 Roissy CDG Cedex – France
 Tel : +33 (0)1 48 63 02 11 – Fax: +33 (0)1 49 38 41 01
 Email : sales@satam.eu

Manufacturing facility

Avenue de Verdun
 14700 Falaise – France
 Tel : +33 (0)2 31 41 41 41
 Fax : +33 (0)2 31 40 75 61