

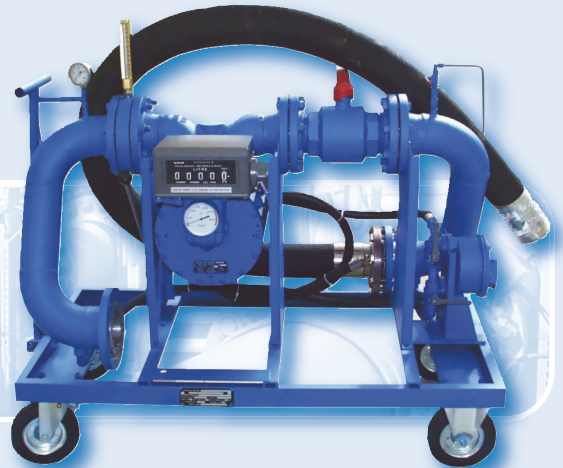
Countum Group

SATAM

Metering Solutions

Master meter

ZCM 17



Flow
computers

Measuring
systems

Flow
meters

Accessories

The Satam "Master Meter" product range is dedicated to periodic calibration of custody transfer measuring equipment.

The ZCM 17 is a working standard that can be used regularly to check and calibrate measuring instruments or measuring systems. With minimal dimensions, it can easily be moved to several different sites without the requirement for lifting tools. Equipped with an Equalis electronic register that ensures linearization of measurements, it can be used with liquids of various viscosities without no loss of accuracy.

Sector of application

Oil depots

For oil product reception and loading stations for tank truck, tank car and ships.

Hydrocarbon transportation

Distribution of fuel oil or fuel by road tanker.

Aircraft refuelling

Aircraft dispensers and aircraft fuelling tankers.

Army

Depot supplies and loading of trucks.

Transport companies

Refuelling of locomotives, trucks and public transport coaches.

Marine applications

Refuelling of ships.

Mining sites

Refuelling of trucks or site machinery.

Design of the master meter

Robust construction

Positive displacement meter with moving blades.

Modular design

Available with mechanical or electronic register.

Calibration for different viscosities

Supplied with one calibration certificate per each operating viscosity.

Key points

Compact design

Calibration device of reduced weight and dimensions.

Possibility to move the ZCM 17 to different sites without the requirement for lifting tools

Self powered technology

Functioning of the mechanical register version without any power supply.

Modular design

Wide range of accessories to create your customized calibration device.

Can be installed on a trolley as mobile calibration equipment.

Stability and accuracy of measurements

Stable and accurate volume measurement without any influence of installation position.

Flowmeter manifold separated from measurement chamber to eliminate any possible influence of external mechanical stresses on measurement accuracy.



Technical data - Master meter ZCM 17

Model		ZCM 17	24	48	80	150	250	330
Application		Master meter dedicated to calibration of custody transfer volume measuring equipments						
Max. Operating flowrate	m³/h - L/mn - USGPM		24 - 400 - 105	48 - 800 - 210	80 - 1333 - 360	150 - 2500 - 660	250 - 4166 - 1100	330 - 5500 - 1453
Min. Operating flowrate	m³/h - L/mn - USGPM		2.4 - 40 - 10.5	4.8 - 80 - 21	8 - 133.3 - 36	15 - 250 - 66	25 - 416.6 - 110	33 - 550 - 145
Measured parameters		Operating volume Base volume (only for ZCM 17 IE)						
Measured liquids		Petrol, premium fuels, diesel, E5...E85, bio-diesel, ethanol, methanol, kerosene, fatty acid methyl ester oils						
Connections		Flanges or dry couplings* 2 x 3 m hoses*						
Meter	Diameter		2"	2"	3"	4"	6"	8"
	PD meter		ZC17-24	ZC17-48	ZC17-80	ZC17-150	ZC17-250	ZC17-330

Versions		ZCM 17 IM	ZCM 17 IE
Register		Mechanical register (VR) Total volume with reset: 5 digits Total volume without reset: 8 digits	Electronic register (Equalis) Total volume: 6 digits Secure storage of ZCM 17 calibration curves Calculation of base volume
	Volume display	Operating volume	Operating volume, base volume
	Flowrate display	Included with IDI module L/mn or m³/h	Included
	Calibration curve	7 flowrate values with 2 values per flowrate One curve per operating viscosity	
	Calculation of base volume	Manual calculation	Automatic calculation
	Temperature measurement*	Local display	Pt 100
	Pressure measurement*	Local display	
	Isolating valve*	Ball valve located downstream the PD meter	
	Drainage equipment*	Manual drainage pump with purge valve and 2 release valves	
	Trolley*	Calibration device mounted on chassis with 4 pivoting wheels	
Operating conditions	Pressure	10 bar max.	
	Viscosity	50 cSt max.	
	Liquid temperature	-10 °C to +80 °C	
	Ambient temperature	Standard : - 25 °C to + 55 °C - Option : - 40 °C to + 55 °C Contact us for higher or lower temperatures	
Metrological performances	Volume accuracy	< 0,1%	< 0,05% with linearization
	Volume repeatability	< 0,02%	
	Temperature accuracy	<± 0.5°C	
	Calibration certificate - Linearization curve	Calibration certificate according to OIML R117	
Installation	Electrical power supply	No (self-powered device)	24 VCC or 230 VCA
	ATEX certification	Zone 1 ; II 2 G	

* : optional supply

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