FUEL FLOW METER
AIC - 6004 / 6008
SWISSLINE - UNIFLOWMASTER

Diesel consumption flow meter for engines up to 735 KW (1000 HP) Vertical mounting system, ideal for mobile testing applications

888 Instruktor

900 Veritas

1000

4000 VERITAS©

5000 Fuel flow Master

6000 Swissline

FS

Board Computer and Totalizer

The AIC-6000 UNIFLOWMETER flow meter has been designed for a easy mounting for mobile and stationary testing applications.
Made for pulsating liquids, the true consumption of the vehicle engine is measured by switching the return flow from the tank directly to the fuel supply line.

Application

- Acurate fuel consumption measuring on mobile equipment such as trucks, construction and farming machineries, buses, light vehicle, boats.
- Can also be used on stationary engines.

Media that can be measured

- any fuel oil, incl. any bio-fuel oil.

Features and benefits

- **Up to 15 % of fuel economy, through a constant control of the driver**
- Reliable instantaneous consumption display and flow totalisation
- Instrument protected via high-end fuel filter
- Average fuel consumption visualisation with 3 digits after coma
- Mechanical meter of proven technology since more than 20 years
- No interferences with vehicle existing on-board electronic (CAN-Bus)
- AIC flowmeters work on all fuel injection type
- Suitable for engines with fuel injection of latest generation

CE certified
EME Test according
to 95/54/CE directives

Automative Information & Control Systems AG

Measuring Systems

A complete measuring systems consist of :

- flow meter AIC-6004 or 6008
- fuel oil filter (included)
- AIC Board Computer
- cables for electrical connection
- Installation Kit

Fuel Oil meter AIC-6008
AIC Ref. S6008.00

Fuel Oil meter AIC-6004
AIC Ref. S6004.00

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Measuring principle

Each unit is produced as one module in the interests of simple installation. All holders and housing parts are made of stainless steel or anodized aluminium.

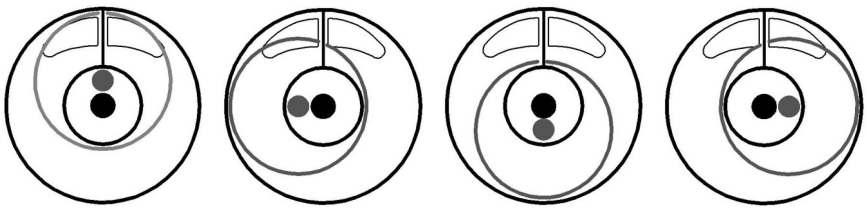
Fuel flow measurement:
The consumption of fuel for engines can be measured by 2 ways :

- Direct (means that there is no fuel returning to the tank, the return flow is reinjected in the fuel circulation flow of the injection circuit.
- Differential (means that the supply and return flow are subtracted. The return fuel flow goes back in the tank.

AIC SYSTEMS Ltd. has strongly developed the best measuring solution : the **DIRECT flow** measurement. This solution allows a true measurement of the fuel flow, within a uncertainty better than +/- 1 % (+/- 0.2 % repeatability). The differential fuel flow allows only an accuracy of best 5 % or worse.

High pulse rate output:
The control and pulse technology is based on the latest SMD technology and is moulded to be water tight and vibration resistant (Pat. AIC). This allows high pulse count per flow quantity unit. The AIC-6004 Swissline Uniflowmaster is supplied with 2000 ppl, and the AIC-6008 Swissline Uniflowmaster is supplied with 804 ppl (pulses per one litre).

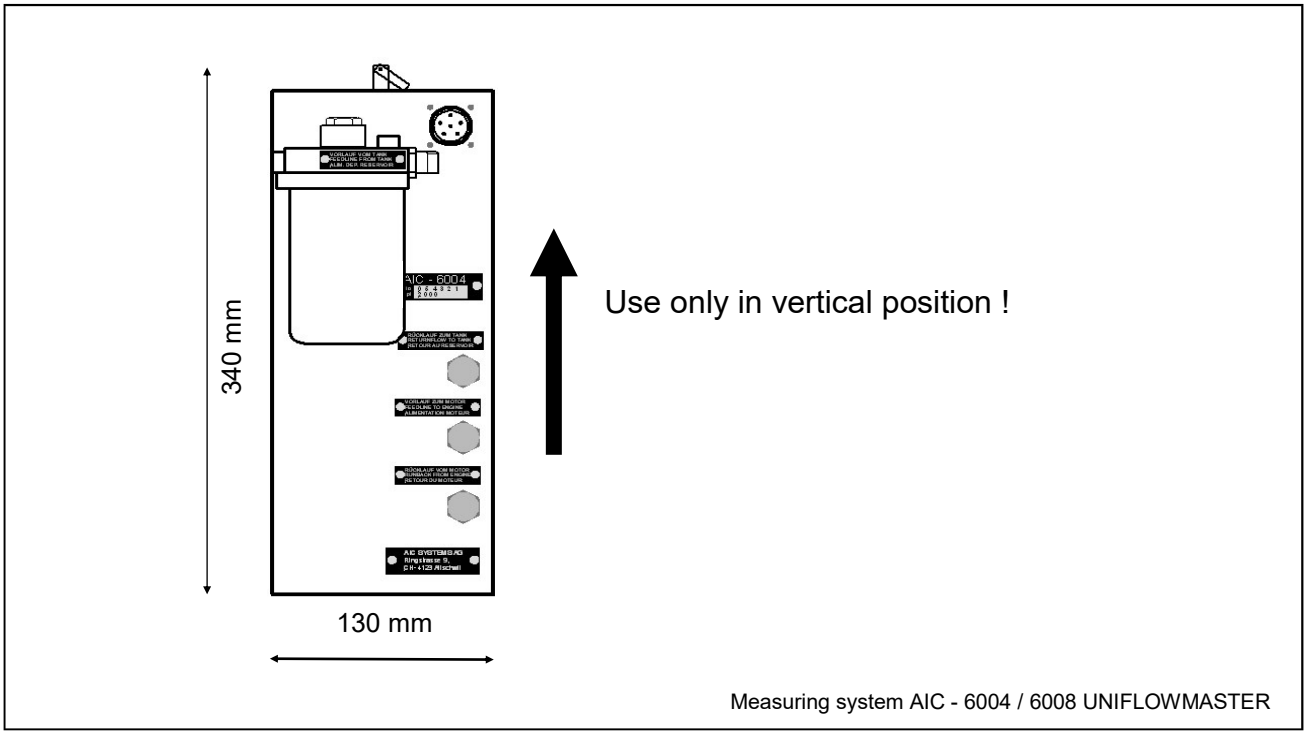
Rotary piston technology:
After decades of experience, AIC SYSTEMS Ltd. made its choice for the most reliable volumetric flow meter technology existing, with the less weir and moving parts.
The rotary piston technology fits the fuel consumption measuring principle perfectly, a single moving piston oscillates softly in a measuring chamber protected by a thin layer of fuel maintaining the piston self floating. This allows the meter to have the less possible mechanical friction. Under normal working conditions the pressure loss ahead of the measuring cell is of max. 100 mbar.



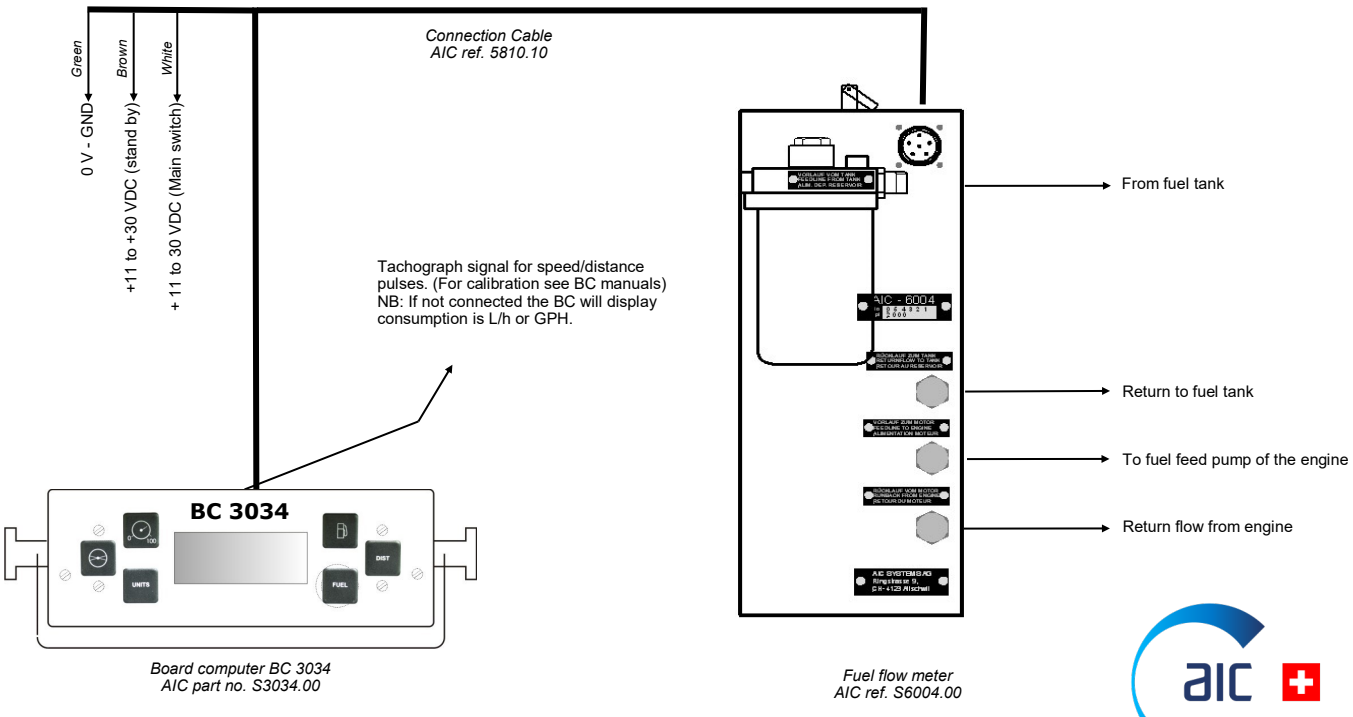
Calibration

Each flow meter unit, is subject to careful calibration at the factory. Customer calibration can also be saved on simple demand.

Dimensions



Installation



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Technical data

AIC 6004 and 6008
UNIFLOWMASTER

General data

Manufacturer	AIC SYSTEMS AG
Product designation	AIC-6004 UNIFLOWMASTER AIC-6008 UNIFLOWMASTER

Mechanical data

Dimensions (L x l x p)	AIC-6004 390 x 135 x 310 mm (incl. filter) AIC-6008 390 x 135 x 310 mm (incl. filter)
Weights	AIC-6004 13,8 kg (incl. filter) AIC-6008 14.3 kg (incl. filter)

Materials

Flow meter sensor	Brass, aluminium
O-rings	Viton®
Connectors	Chrome Steel M 16 x 1.5
Casing	Stainless steel
Mounting bracket	Stainless steel

Flow meter

Measurement Principle	Volumetric, oscillating piston, with microprocessor controlled pulse emitter (Pat. AIC)
Measuring range	AIC-6004 : 1 to 120 l/h AIC-6008 : 4 to 200 l/h
Accuracy	better than 1 % of reading
Repeatability	better than 0.2 % of reading
Admissible pressure	- 1 to 6 bar
Mounting position	vertical
Operating temperature	-30 ... 90°C
Ingress protection	Sensor, IP 67

Electrical connection

Power supply	8 - 28 VDC
Pulse signal	Square pulse, NPN Open-Collector, pulse width 0.7 ms
Pulse rate	AIC-6004 : 2000 ppl AIC-6008 : 804 ppl

Ordering structure

Flow meter

Model Type	Designation	Order code
AIC-6004 UNIFLOWMASTER	for engines up to max. 515 KW (700 HP) 2000 ppl, pulse NPN Open-Collector, pulse width 0.7 ms	S6004.00
AIC-6008 UNIFLOWMASTER	for engines up to max. 735 KW (1000 HP) 804 ppl, pulse NPN Open-Collector, pulse width 0.7 ms	S6008.00

Options

Connection kit	Fuel meter internal Bio-Fuel piping	6000.BIO
	Power supply 12 VDC	6000.12

Accessories

Connection kit	Universal connection kit, includes various connection fitting (metric), with 12.5m fuel hose	S1460.0
	Universal connection kit, includes various connection fitting (metric), with 12.5m fuel hose	S1460.BIO
Connection cable	Signal cable 10m /mobile appl. 12 / 24 VDC	5810.10
	10 m cable connecting the fuel oil meter with wires end free	5812.10

Board computer

Totalizes		References
AIC-BC3034	On-board computer, incl. 14 functions and data logging option. and programming plug. Operating voltage : 11 to 30 VDC Functions available : consumption-instantaneous, -average with 3 decimals, -cumulated, travel speed, distance travelled, average speed, cumulated fuel consumption, driving time, operating time Choice of standards : metric, US	S3034.0

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