Fuel Flow Meter
AIC - 5004 / 5008 FUEL FLOW MASTER

- **Diesel consumption flow meter for engines up to 735 KW (1000 HP)**
- **Stationary fuel flow meter**
- **Accuracy better than 1%**

The AIC-5000 FUEL FLOW MASTER flow meter has been designed for an easy mounting for stationary testing applications.

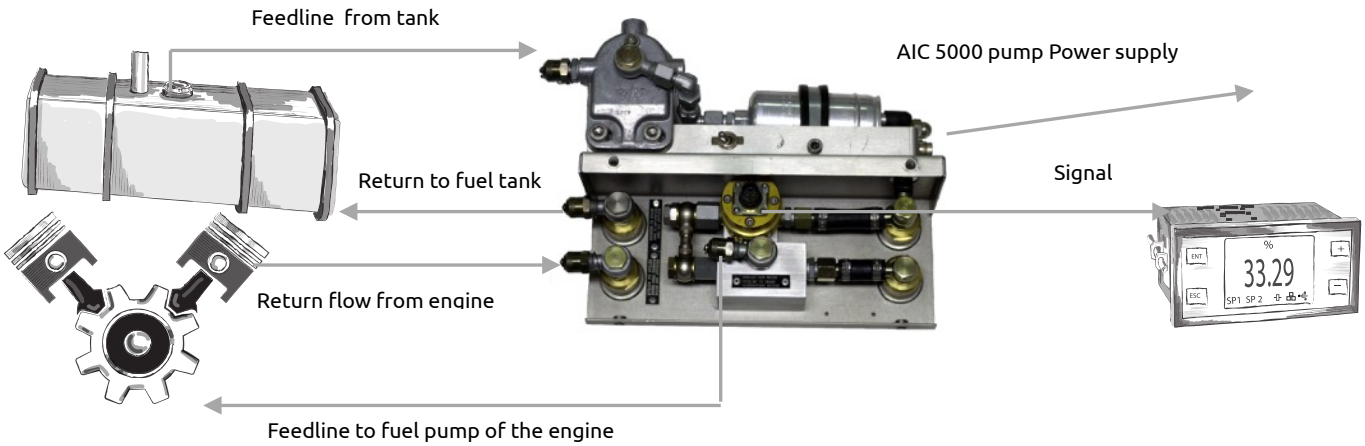
Made for pulsating liquids, the true consumption of the vehicle engine is measured by switching the return flow from the tank, directly to the fuel supply line.

Applications:
- Engine test stands
- Dynamic chassis dynamometers

Media that can be measured:
- Diesel
- Bio-fuel

Features and benefits:
- Reliable instantaneous consumption display and flow totalisation
- Average fuel consumption visualisation with 3 digits after coma
- Instrument protected via in-line fuel filter
- Mechanical meter of proven technology since more than 30 years
- No interferences with vehicle existing on-board electronic (CAN-Bus)
- Units are factory calibrated and ready to measure accurately right after installation. Free of additional setup.

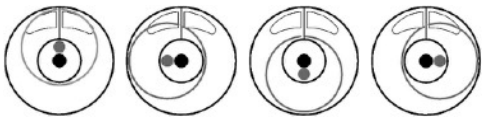
System Setup



Technology

Rotary piston technology

After decades of experience, AIC SYSTEMS Ltd. has opted for the reliable volumetric flow meter technology. The rotary piston technology fits the fuel consumption measuring principle ideally. 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, thus reduced wear. Under normal working conditions the line pressure loss ahead of the measuring cell is of max. 100 mbar.

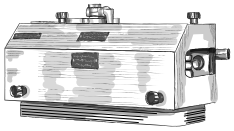


Direct measuring principle

With the Direct Measurement principle, the installation of only one AIC Fuel Flowmeter is required.
The fresh and cool fuel consumed is aspirated from the tank and its volume measured by the AIC fuel Flowmeter.
With this solution no fuel is returning back to the tank and the fuel passing through the AIC Volumetric measuring chamber represents precisely the real engine consumption.
The great benefit is that an AIC fuel consumption measuring system is ready to use right after installation.

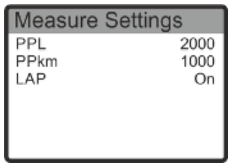
Typical AIC 5000 FUEL FLOW MASTER Installation

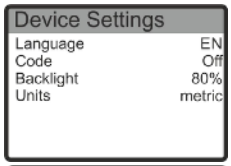
Flow Meter AIC 5000

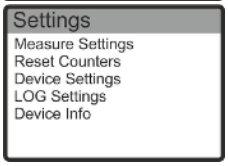


Signal cable 3482.10

Board Computer BC 3329





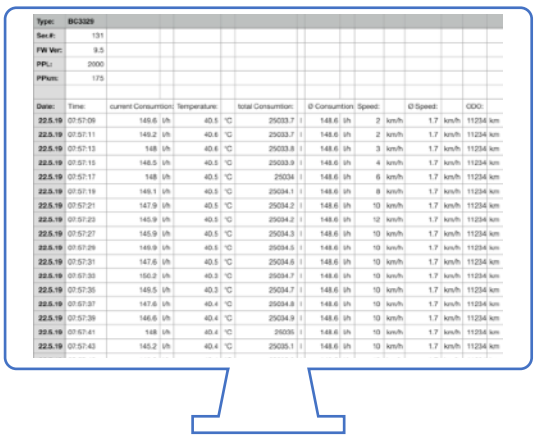


Board Computer BC3329

The Board Computer BC3329 Display has input for Flow and Speed sensors. All measured values can be easily seen and written off the large display.

The Board Computer BC3329 LOG has in addition the manual input for a lap routine. With the LOG version all values are logged on the USB stick in CSV format for a better evaluation and further processing.

- View instantaneous fuel consumption
- Average fuel consumption (3 decimals)
- Fuel consumption accumulation
- Lap routine for later calculations of the individual lap characteristic
- Reading in Metric or US unit
- Easy control with start, stop logs and reset functions
- All settings are stored and will not be lost in the event of power failure
- Languages: English, German, French, Spanish and Portuguese



Technical data

AIC 5004 / 5008 Fuel Flow Master

General Data

Manufacturer	AIC SYSTEMS AG
Product designation	AIC 5004 FUELFLOWMASTER
	AIC 5008 FUELFLOWMASTER

Mechanical Data

Dimensions (L x l x p)	AIC 5004 / 5008 FUELFLOWMASTER
	340 x 180 x 270 mm / 13.4 x 7 x 10.6" (incl.filter)
Weights	AIC 5004 FUELFLOWMASTER
	ca. 9.6 kg / 21.1 lb (incl.filter)
	AIC 5008 FUELFLOWMASTER
	ca. 10.1 kg / 22.3 lb (incl.filter)

Materials

Flow meter - sensor	Brass, aluminium
O - rings	Viton™
Connectors	Chrome Steel M 16x1.5
Casing	Stanless steel

Flowmeter

Measurement principle	Volumetric, oscillating piston, with microprocessor controlled pulse emitter (Pat.AIC)
Measuring range	AIC 5004: 1 to 120 l/h
	AIC 5008: 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	Horisontal
Operating temperature	-30…..90 C°
Ingress protection	Sensor, IP 67

Electrical connection

Power supply	8-28 VDC
Pulse signal	Rectangular NPN, open collector, pulse width 0,7 ms
Pulse rate	AIC 5004: 2000 ppl
	AIC 5008: 804 ppl

Ordering structure

Model Type	Designation	Order code
Flow Meter		
AIC-5004 UNIFLOWMASTER	2000 ppl for engines up to 700 HP or 120 l/h	S5004.00
AIC-5008 UNIFLOWMASTER	804 ppl for engines up to 1000 HP or 240 l/h max.	S5008.00
Options		
Bio fuel option	Fuel meter internal Bio-Fuel piping option	5000.BIO
12 V Option	Power supply 12 VDC instead of 24 VDC	5000.12
Accessories		
Connector kits	Connector kit s1460.0 + power supply 12V	S1465.12
	Connector kit s1460.0 + power supply 24V	s1465.24
Signal cables	Signal cable 10m (from AIC 800, 900, 4000, 5000 to BC 3329)	3482.10
	Signal cable 10m 1 end free	5620.10
BC 3329		
BC 3329 LOG	Bord Computer BC 3329 **LOG** for 20-28V DC No USB stick incl	3329.03
	Bord Computer BC 3329 **LOG** for 09-12V DC No USB stick incl	3329.04
BC 3329 Display	Bord Computer BC 3329 **Display** for 20-28V DC	3329.05
	Bord Computer BC 3329 **Display** for 09-12V DC	3329.06

All informations are subject to change.

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