

# Fuel Flow Meter AIC - 6000



- Accuracy better than 1% over the full range (For accuracy better than 0.5 % please see our NEMO family)
- Diesel consumption flow meter for engines up to 735 KW (1000 HP)
- Ideal solution for mobile testing



The AIC-6000 has been designed for an easy mounting for mobile / road 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:

- Accurate fuel consumption measuring on mobile equipment such as trucks, construction and farming machines, buses, boats, trains
- Also be used on stationary engines

### Suitable media:

- Diesel
- Biodiesel: HVO, Biodiesel B100 and B30
- etc

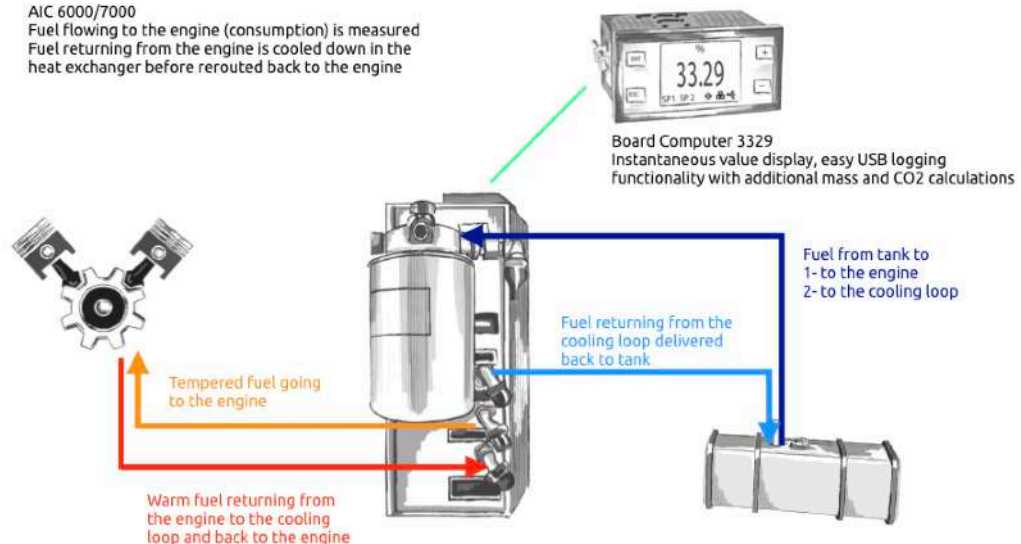
### Features and benefits:

- Up to 15% of fuel economy, through a constant control of the driver
- Reliable instantaneous consumption display and flow totalization
- Average fuel consumption visualization 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

AIC 6000/7000

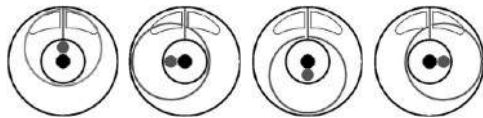
Fuel flowing to the engine (consumption) is measured  
Fuel returning from the engine is cooled down in the  
heat exchanger before rerouted back to the engine



# 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.

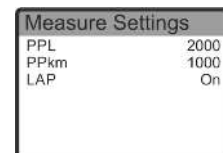
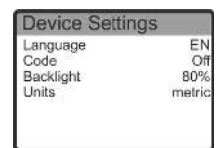
## Typical AIC 6000 Installation

Flow Meter AIC 6000



Signal cable

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

Date:	Time:	current Consumption:	Temperature:	total Consumption:	Ø Consumption:	Speed:	Ø Speed:	ODO:
22.5.19	07:57:06	148.6 l/h	40.5 °C	29032.7	148.6 l/h	3 km/h	1.7 km/h	11234 km
22.5.19	07:57:11	149.2 l/h	40.6 °C	29032.7	148.8 l/h	2 km/h	1.7 km/h	11234 km
22.5.19	07:57:13	148 l/h	40.6 °C	29033.8	148.8 l/h	3 km/h	1.7 km/h	11234 km
22.5.19	07:57:19	148.9 l/h	40.5 °C	29039.9	148.8 l/h	4 km/h	1.7 km/h	11234 km
22.5.19	07:57:17	148 l/h	40.5 °C	29038.1	148.8 l/h	6 km/h	1.7 km/h	11234 km
22.5.19	07:57:19	148.1 l/h	40.3 °C	29044.1	148.8 l/h	8 km/h	1.7 km/h	11234 km
22.5.19	07:57:21	147.9 l/h	40.5 °C	29044.2	148.6 l/h	10 km/h	1.7 km/h	11234 km
22.5.19	07:57:23	145.9 l/h	40.5 °C	29044.2	148.6 l/h	12 km/h	1.7 km/h	11234 km
22.5.19	07:57:27	145.9 l/h	40.5 °C	29044.3	148.6 l/h	10 km/h	1.7 km/h	11234 km
22.5.19	07:57:29	148.9 l/h	40.5 °C	29044.3	148.6 l/h	10 km/h	1.7 km/h	11234 km
22.5.19	07:57:31	147.5 l/h	40.5 °C	29044.8	148.6 l/h	10 km/h	1.7 km/h	11234 km
22.5.19	07:57:33	150.2 l/h	40.3 °C	29044.7	148.6 l/h	10 km/h	1.7 km/h	11234 km
22.5.19	07:57:35	149.5 l/h	40.3 °C	29044.7	148.6 l/h	10 km/h	1.7 km/h	11234 km
22.5.19	07:57:37	147.6 l/h	40.4 °C	29044.8	148.6 l/h	10 km/h	1.7 km/h	11234 km
22.5.19	07:57:39	146.6 l/h	40.4 °C	29044.9	148.6 l/h	10 km/h	1.7 km/h	11234 km
22.5.19	07:57:41	148 l/h	40.4 °C	29045	148.6 l/h	10 km/h	1.7 km/h	11234 km
22.5.19	07:57:43	145.2 l/h	40.4 °C	29045.1	148.6 l/h	10 km/h	1.7 km/h	11234 km

## Technical data

### AIC 6004 / 6008

#### General Data

Manufacturer	AIC SYSTEMS AG
Product designation	AIC 6004
	AIC 6008

#### Mechanical Data

Dimensions (L x l x p)	AIC 6004 / 6008
	390 x 135 x 310 mm / 15.4 x 5.3 x 12.2" (incl.filter)
Weights	AIC 6004: ca. 13.8 kg / 28.7 lb (incl.filter)
	AIC 6008: ca. 14.3 kg / 30.9 lb (incl.filter)

#### Materials

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

#### Flowmeter

Measurement principle	Volumetric, oscillating piston, with microprocessor controlled pulse emitter
Measuring range	AIC 6004: 1 to 120 l/h
	AIC 6008: 4 to 240 l/h
Max. permissible error of actual value	AIC 6004: $<\pm 1\%$ 1-2 l/h $\pm 2.5\%$ AIC 6008: $<\pm 1\%$ 4-5 l/h $\pm 2\%$
Repeatability	Better than 0.2 % of reading
Admissible pressure	-1 to 6 bar
Mounting position	Verical
Operating temperature	-30.....90 C°
Ingress protection	IP 65

#### Electrical connection

Power supply	8-28 VDC
Pulse signal	NPN open -collector; square 0.7 ms pulse width

## Ordering structure

### Model Type

### Designation

#### Flow Meter

AIC-6004 for engines up to 700 HP or 120 l/h

AIC-6008 for engines up to 1000 HP or 240 l/h max.

#### Options

Bio fuel option Fuel meter internal Bio-Fuel piping option

#### Accessories

Connector kits Connector kit s1460.0 + 12.5m fuel hose

Signal cables Signal cable 10m (from AIC 6000 to BC 3329)

Signal cable 10m 1 end free

Mounting bracket Mounting bracket INOX

#### Board computer

BC 3329 LOG Bord Computer BC 3329 **LOG** for 20-28V DC No USB stick incl

Bord Computer BC 3329 **LOG** for 09-12V DC No USB stick incl

BC 3329 Display Bord Computer BC 3329 **Display** for 20-28V DC

Bord Computer BC 3329 **Display** for 09-12V DC

All informations are subject to change.



[www.flowmeter-aic.com](http://www.flowmeter-aic.com)

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