

Fuel Management with AIC fuel flow meters

AIC Systems is a world leader in developing and manufacturing of fuel flow consumption solutions for various industries.

Since more than 40 years we've been providing to all major OEMs of diesel and fuel engines with reliable, simple to install and usable solutions.

Based in Switzerland, we introduced the "Direct Measurement" concept for most accurate measuring the engine fuel consumption. The new real driving emissions (RDE) specifications like the EU regulation 2019/318 require an evolutionary leap in internal combustion engines. To meet today's and tomorrow's CO2 emissions and reduce the NOx emission limits requires a new generation of powertrains with a holistic approach and significantly enhanced functionality. The "all-in-one" AIC fuel flow solutions do meet those new requirements.

Above all, AIC fuel flow meters are specially dedicated for mobile applications on trucks, buses, construction machines, railway, gensets, farming equipment and ships with an **0.5 % accuracy**.

Today our solutions are used worldwide for testing and improving fuel efficiency as well as for press tests and marketing to promote the individual vehicle benefits .



Our Markets

Trucks & Buses



Vans



Railway & Boat



Agriculture



Utility vehicles



Construction & demolition



Tyres Mfg



Fleet solutions & Testing



Forestry & landscaping



Solutions for Mobile Testing

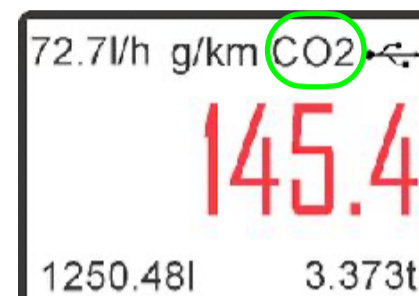


Display and log the current fuel consumption data in terms of volume, mass flow and CO2 emissions in the simplest and most precise way. The new AIC NEMO fuel consumption meter and the Board Computer 3329 with a large LCD display with intuitive handling are good reasons to choose the AIC all-in one range if you need a **0.5% accuracy** solution.

AIC 7000 NEMO



- Qmin 0.26 gph _ 1 l/h
- Qmax 63.4 gph _ 240 l/h
- Accuracy +/- 0.5 %
- Repeatability +/- 0.2 %
- Nominal pressure 87 psi _ 6 bar



Applications:

- Mobile vehicle fuel economy monitoring for small, medium and large trucks, buses, dump trucks, construction equipment, mining equipment and agriculture machines
- Turbo-machinery development technology and small to medium diesel engines



AIC 700 NEMO



- Qmin 0.26 gph _ 1 l/h
- Qmax 22 gph _ 80 l/h
- Accuracy +/- 0.5 %
- Nominal pressure 360 psi _ 25 bar
- Hydraulic connection with two hose nozzles 1/3 " _ 8,5 mm
- Suitable for engines with and without open-loop fuel supply



Applications:

- Mobile vehicle fuel economy monitoring for camping-cars, vans, small and medium trucks, mini buses, vans, motorhomes and light agriculture machines
- Turbo-machinery development technology and small to medium diesel engines



More than 3000 companies worldwide are already using AIC fuel flow measurement solutions!

Solutions for Permanent Installation

AIC 4000 NEMO



- Qmax 396 gph _ 3000 l/h
- «All-in-one» product designed for permanent installation on vehicle's chassis
- Suitable for all fuels type
- Works on all engines up to 11000 HP
- Accuracy +/- 0.5 %



Applications:

- Mobile vehicle fuel economy monitoring for fleet management
- Turbo-machinery development technology, small to medium diesel engines and trains as well as boats

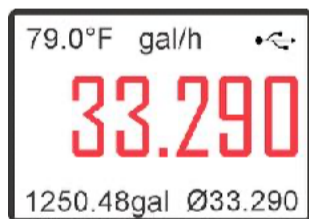
Data acquisition and logging system

Board computer BC3329



The AIC BC 3329 board computer displays, calculates and logs easily your instantaneous fuel consumption data, cumulative measured values as well as speed/ distance and lap routine. On-board vehicle and large LCD display with a top intuitive handling and good enough DAQ solution.

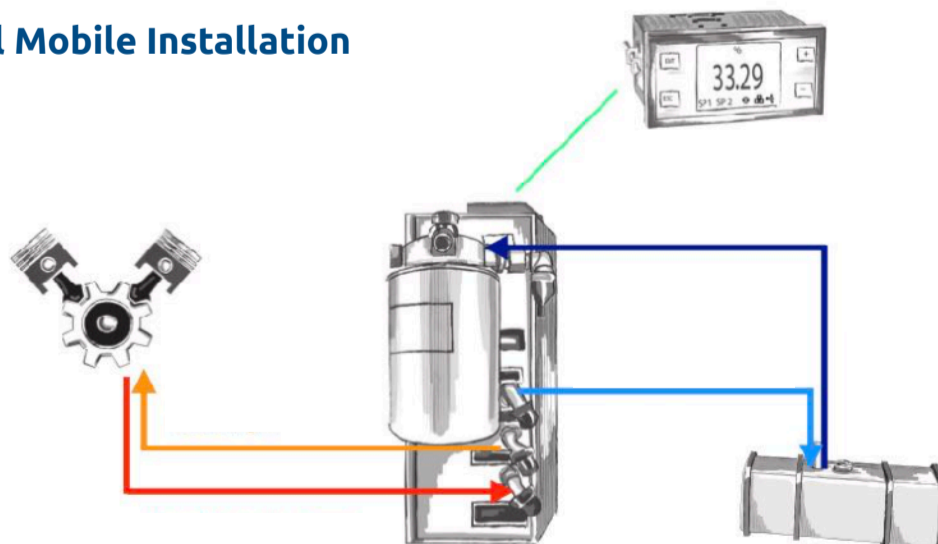
All data in one CSV log file



Date	Time	Current Consumption	Temperature	Total Consumption	Ø Consumption	Speed	Ø Speed	ODO
22.6.19	07:07:09	149.6 l/h	45.6 °C	25033.7 l	148.6 l/h	0 km/h	1.7 km/h	11236 km
22.6.19	07:07:11	149.2 l/h	45.8 °C	25033.7 l	148.6 l/h	2 km/h	1.7 km/h	11236 km
22.6.19	07:07:13	148 l/h	45.6 °C	25033.6 l	148.6 l/h	3 km/h	1.7 km/h	11236 km
22.6.19	07:07:15	148.5 l/h	45.5 °C	25033.5 l	148.6 l/h	4 km/h	1.7 km/h	11236 km
22.6.19	07:07:17	148 l/h	45.5 °C	25034 l	148.6 l/h	6 km/h	1.7 km/h	11236 km
22.6.19	07:07:19	149.1 l/h	45.5 °C	25034.1 l	148.6 l/h	8 km/h	1.7 km/h	11236 km
22.6.19	07:07:21	147.9 l/h	45.5 °C	25034.2 l	148.6 l/h	10 km/h	1.7 km/h	11236 km
22.6.19	07:07:23	149.9 l/h	45.5 °C	25034.3 l	148.6 l/h	12 km/h	1.7 km/h	11236 km
22.6.19	07:07:27	149.9 l/h	45.5 °C	25034.4 l	148.6 l/h	10 km/h	1.7 km/h	11236 km
22.6.19	07:07:29	149.9 l/h	45.5 °C	25034.5 l	148.6 l/h	10 km/h	1.7 km/h	11236 km
22.6.19	07:07:31	147.6 l/h	45.6 °C	25034.6 l	148.6 l/h	10 km/h	1.7 km/h	11236 km
22.6.19	07:07:33	150.2 l/h	45.3 °C	25034.7 l	148.6 l/h	10 km/h	1.7 km/h	11236 km
22.6.19	07:07:35	149.5 l/h	45.3 °C	25034.7 l	148.6 l/h	10 km/h	1.7 km/h	11236 km
22.6.19	07:07:37	147.6 l/h	45.4 °C	25034.8 l	148.6 l/h	10 km/h	1.7 km/h	11236 km

- View instantaneous fuel consumption
- Average fuel consumption (3 decimals)
- Fuel consumption accumulation
- Most intuitive logging functionality via USB drive
- Reading in Metric or US units
- Easy control with start, stop logs and reset functions

Typical Mobile Installation



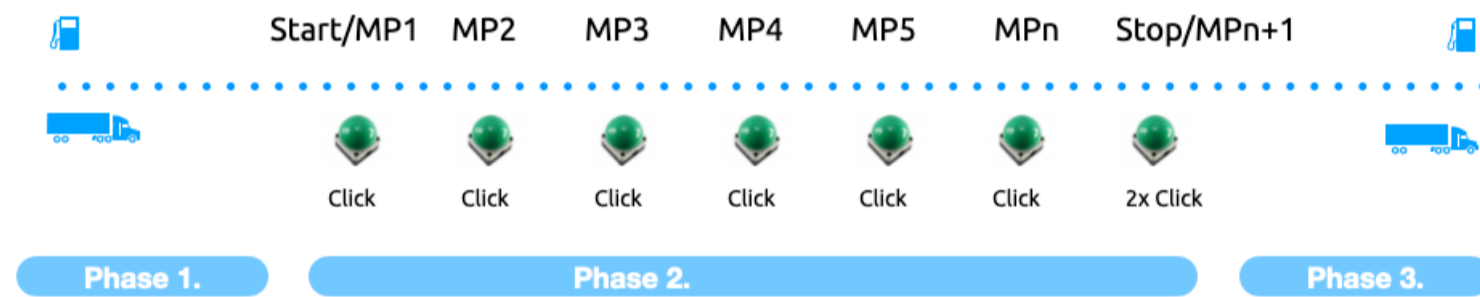
AIC Press Ride Application



Optimize your press test and log the fuel consumption data in terms of volume, mass flow and CO2 emissions automatically in the simplest and most precise way. The new AIC Press Ride application with intuitive handling and excellent reproducibility are good reasons to choose the AIC all-in one solution.

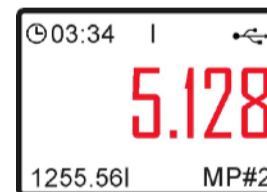
The AIC Press Ride app with its small foot print is very easy to use in every cabin and the system set-up is just a minute way for your in-house press test.

To start the sequence you push the palm button once and for every measuring point (MP) on your way you push the palm button once again. To stop the recording in phase 2 you just push twice the palm button. Phase 1, 2 and 3 are recorded and by stopping the logging you can retrieve the data of all three phases for further analysis.



Applications:

- Fully automated press tests for small, medium and large trucks, buses, vans, dump trucks, construction equipment, mining equipment, mobile homes and agriculture & forestry machines
- Turbo-machinery development technology and small to medium diesel engines

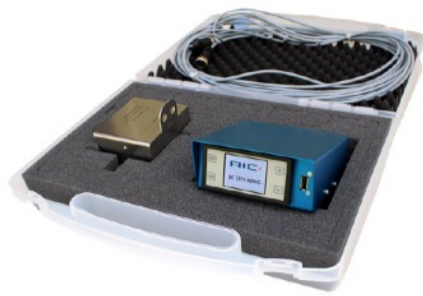


CSV file example:



MP#:	Date:	Time:	PR Time:		PR Consumption:	PR Distance:	current Consumption:	Temperature:	total Consumption:
1	14.5.20	07:57:33	00:00:00	h:m:s	0.000 l	0.0 km	93.852 l/h	22.1 °C	600.550 l
--	14.5.20	07:57:38	--:--:--	h:m:s	--:--	-- km	94.040 l/h	22.1 °C	600.839 l
--	14.5.20	07:57:58	--:--:--	h:m:s	--:--	-- km	94.162 l/h	22.1 °C	601.364 l
2	14.5.20	07:57:59	00:00:32	h:m:s	0.840 l	0.7 km	94.090 l/h	22.1 °C	601.390 l
--	14.5.20	07:58:08	--:--:--	h:m:s	--:--	-- km	94.230 l/h	22.1 °C	601.626 l

AIC 700 NEMO Set



An all-in-one sales & marketing tool to display the current fuel consumption data in terms of volume, mass flow and CO2 emissions to promote the benefits of your vehicle in a simple and most precise way. Cornerstones of the set are the AIC 700 NEMO fuel consumption meter and the Board Computer 3329 with a large LCD display with intuitive handling are good reasons to choose the AIC solution.



The AIC 700 NEMO SET is a comprehensive plug-in-play solution including:

- AIC 700 NEMO flowmeter, accuracy +/- 0.5 %
- BC 3329 board computer
- Cabin stand for quickest installation
- 16.4 ft _ 5 m signal cable to connect AIC 700 NEMO to the BC 3329



Solutions for large engines applications

AIC 300 for volume flow
AIC 400 NEMO for mass flow



- Qmax 396 gph _ 3000 l/h
- Suitable for all fuels
- Works on all engines up to 11000 HP
- Accuracy +/- 0.5 %

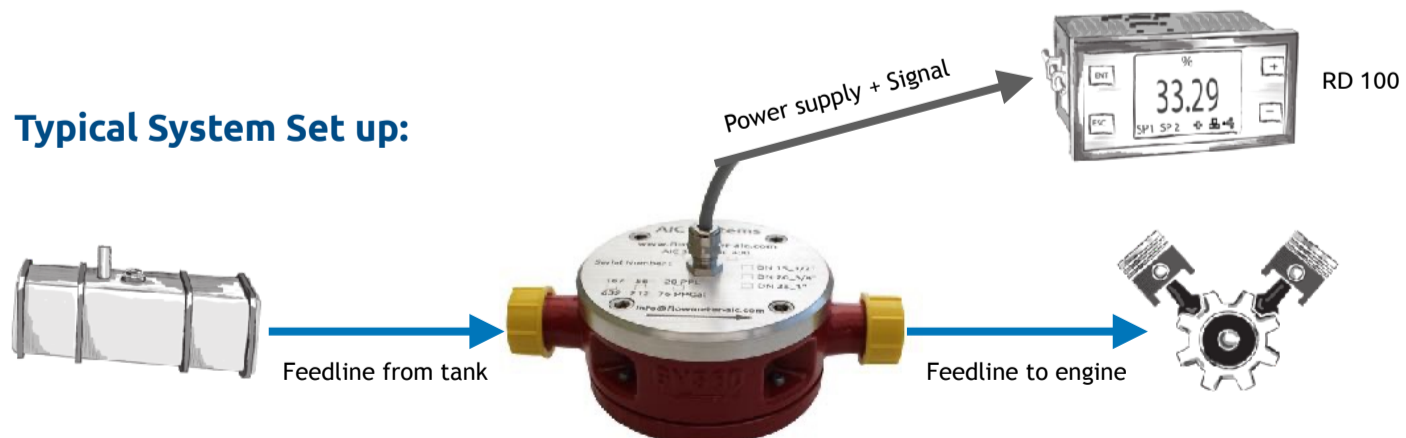
Compact volume and mass flowmeter with efficient cost of ownership for basic applications with integrated PT 1000 sensor (AIC 400 NEMO). Carbon Steel housing with threaded ends ISO 228-1 for up to 16 bar _ 232 psi and 100°C _ 212°F. Specially designed for large engines (skid, genset, locomotives & marine). Suitable for fuels, e.g. diesel, biodiesel, MDO, oils & most non-aggressive lubricating liquids.



Applications:

- Oil industry
- Railway
- Boats
- Generators
- Skids
- Large construction and demolition machines

Typical System Set up:



CALIBRATION



ACCURACY of DATA is an essential feature of fuel consumption measurement. To be able to provide the most **ACCURATE** and **RELIABLE DATA**, all measuring instruments need to be regularly checked and recalibrated.

AIC Systems AG has the technical ability to provide:

Pre-Checking and Test Services:

Every device that comes back to AIC is thoroughly checked to make sure that each component is up to its standards.

Calibration services:

- In-house Calibration - we recalibrate your devices in house on our calibration rig to assure their performance. Once the calibration is done, we issue a calibration certificate for each device in order to have your calibration requirements update.
- ISO Calibration - we can provide you with an ISO 17025 calibration if required by your organisation.

SERVICE & REPAIR

AIC provides the full range of service with functional checking and repair in its location in Switzerland. Your benefits:

- Original spare parts
- Qualified workforce
- Quick turnaround

RENTAL



AIC Rental gives you the flexibility your job requires with the Swiss performance and productivity you do expect. With just a call away, no matter how much you need, how soon or how long you need it.

By working together, we will design a solution that helps you to grow your business while controlling risks and costs.

The advantages of choosing AIC Rental equipment:

- Rental equipment from AIC is built to stand up to challenging job sites and work environments, and everything is tested and maintained to meet strict quality standards.
- You will get the latest productivity and safety technologies with options for state-of-the-art equipment monitoring and innovative automated controls.

Why to choose AIC solutions

- Simple to install and to operate
- Reliable, accurate and certified measurement
- Fuel consumption measurement with accuracy 0.5%
- Rugged design for long lasting and reliable measurements
- One instrument for multiple vehicles
- One instruments for multiple fluids
- No need to calibrate the AIC instrument when changing the fuel type in a testing phase/period



AIC Customers



All major players of the world auto industry are using AIC fuel flow meters in their R&D centres. For example:

Fuel additive studies

Fuel efficient tire testing

Testing and validating engine ECU (ECM)

Trucks, buses, agriculture, marine, construction and demolition, railway, tire, engines manufacturer are using AIC fuel flow meters for more than 40 years:



Mercedes-Benz

NAVISTAR



RENAULT



LIEBHERR



IVECO



JOHN DEERE

*Please contact us!
We will be happy to help you!*



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