AVL BOBCAT™ – The COMPACT™ C Solution For Test Automation & Control

The AVL BOBCAT test-bed automation software is optimized for engine testing applications, where ease-of-use and lower cost are priorities.

The system consists of BOBCAT software installed on a workstation and hardware used for control of – and acquiring data from – the unit under test. AVL BOBCAT includes an integrated digital controller for complete control of the engine and dynamometer (hydraulic dyno, EC-dyno and AC-dyno).

The optimized workflow of the automation software enables the creation of standard test procedures without the need for additional training and support to improve test-bed efficiency.

AVL BOBCAT run mode with two monitors for complete overview and control

AVL COMPACT system with Load Unit & Mechanics with customer engine, Starter Unit and ECU

Application Area

AVL BOBCAT offers a “Ready-Set-Go” test bed automation solution at an affordable price for:

- Engine performance testing
- Emission Certification for nonroad IC engines
- Fuel validation testing
- Component development
- Engine durability testing
- Engine Overhauling
- Educational purposes

FOR FURTHER INFORMATION, PLEASE CONTACT:

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AVL BOBCAT™ – TEST AUTOMATION & CONTROL

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Highlights At A Glance

- Designed to integrate with existing instrumentation and mechanical systems
- Quick operation that allows tests to be defined easier and initiated faster
- Intuitive structure for creating test-cell, unit-under-test and test-procedure configuration
- Interpretable and upgradable to the full scale of AVL's testing solutions

AVL COMPACT™ C Ready-Set-Go

Many engine test beds have been used for decades and now need to be modernized to meet requirements of the latest engine technologies.

Additionally, increasing costs create a demand shift towards cost-efficient solutions that don't compromise reliability, accuracy and user-friendliness.

AVL COMPACT™ is the answer to those market needs. It represents a complete product range of modular and expandable, accurate, reliable and easy-to-use systems that enable the user to concentrate on the testing tasks.

AVL BOBCAT is at the heart of the AVL COMPACT product range and functions as the automation & control system of the engine test bed.

Fuel Consumption Measurement

High Fuel efficiency and CO^2 reduction are key characteristics of modern engines. Therefore, today's testing facilities require a precise, easy-to-use and reliable fuel-consumption measurement system.

AVL FUEL SYSTEM COMPACT™ is designed to meet those demands. Its measurement and conditioning units support both diesel and gasoline applications up to 600 kW and a large diversity of engine injection systems. Simple installation, optimized hydraulic design for easy maintenance, and an intelligent interface to AVL BOBCAT make it an ideal system for measurements of fuel consumption.

Emission Certification For Nonroad IC Engines

AVL GEM COMPACT™ manages the complexity of emissions system preconditioning, test sequencing, system monitoring, troubleshooting, data processing, data archiving and validation. It provides fully validated and tailored applications as well as a framework for discrete mode B-Type ISO 8178 test cycles, including:

- §1039 – NonRoad CI
- §1042 – Marine CI
- §1045 – Marine SI
- §1048 – NonRoad SI >19kW
- §1051 – Recreational Vehicles
- §1054 – NonRoad SI ≤ 19kW

Engine Performance

Repeatable test conditions, high control accuracy and sophisticated data acquisition are important keys to determine precise engine-performance gains.

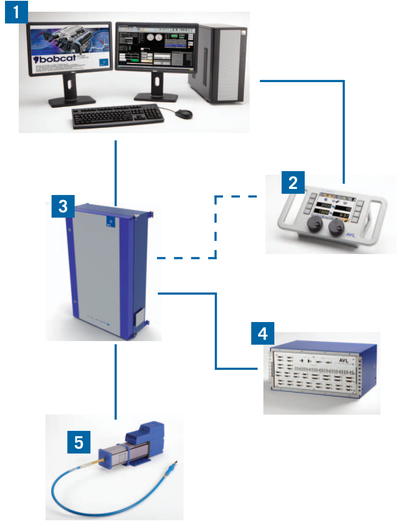
The AVL COMPACT™ system is the answer to these requirements and adds high flexibility and ease-of-use to fulfill your demanding engine testing needs.

For racing, tuning and engine performance development, look to AVL to be your partner on your way to victory lane.

AVL FUEL SYSTEM COMPACT

AVL GEM COMPACT user interface

Formula SAE race car and AVL COMPACT – a winning team



1 WORKSTATION

The AVL BOBCAT workstation uses two monitors to provide the cell operator with complete overview & control of the testing process.

2 OPERATING PANEL

This remote operating panel features touch-screen functionality, configurable push buttons and rotary encoders for control of the engine and dyno.

3 CELL BOX

At the heart of the AVL BOBCAT system is a wall-mounted cell box. This enclosure contains the power and communication distribution for the test cell, as well as the dyno and throttle control and emergency stop system.

4 I/O CUBES

Depending on the required I/O configuration, there are different I/O configurations available, including an all-in-one I/O cube or a dedicated cube for temperature channels. Additional cubes can be easily added to the system.

5 THROTTLE ACTUATOR

The throttle actuator is equipped with automatic range calibration for easy setup. Force, speed, displacement, and acceleration limiting and a definable e-stop position ensure maximum security and ease-of-use.