

CADET-LITE

Introduction: Cadet-Lite has been introduced in to the CP range to meet the needs of educational establishments, smaller companies or those who just want a smaller test rigs. Cadet-Lite still has a dynamometer control and datalogging system with the same format and base structure as the Full CadetV12 systems but with a reduced channel count and associated cost.

Cadet-Lite's Modular components are:

- **3U Control Rack**
- **Control PC and Cadet Software**
- **Winged Keyboard Operator Interface**
- **Dyno Control and Engine Electrics Box**
- **In-Cell Transducer Box**
- **AT12 Throttle Actuator**



3U Control Rack

A single CP128 rack houses all the control cards required for Cadet-Lite. Together with the interconnections for the in-cell boxes the winged keyboard, display, mouse and Control PC.



In-Cell Transducer Box Provides:

- 6 off K-type Thermocouples
- 4 off Pressure Transducer Quick fit connectors
- 2 off Platinum Resistance Thermometers (with user configurable system trip levels)
- 2 off Auxiliary Voltage Channels

Cadet-Lite does not include any of the sensors, this is to keep costs down and allows the customer to specify the type and number of sensors most appropriate for their particular application. CP can advise on suitable sensors and supply them if required.

Dyno Control and Engine Electrics Box

There are Four relay switched low voltage terminals, these are powered by connecting an in-cell power supply (12/24V DC Battery) to the Power Input terminals, and then up to four pairs of Power Output terminals can be switched on or off with the associated Digital Output during tests.

These power output terminals can be used for engine electric applications such as ECU, Ignition, Fuel Pumps Glow Plugs or other.



CP Data Sheet

AT12 Throttle Actuator

The AT12 is an enclosed DC motor driven Throttle Actuator that forms part of the CADET-LITE D ynamometer and Throttle control system. The actuator provides performance suitable for applications ranging from small two stroke engines up to heavy diesels and Racing Engines.



CADET LITE Software

At the heart of the CADET LITE system is the control software, this enables full control of the Dynamometer and Throttle Actuator, datalogging of 14 input channels:

Input Channels

- | | |
|---|--------------|
| 6 Thermocouple | Engine Speed |
| 2 Platinum Resistance Thermometer Trips | Torque |
| 4 Pressure Transducers | 2 Spare PID |
| 2 Auxiliary – Voltage / External Sensor | |

CADET LITE also provides calculated channels and 10 stage programmability for cycle steps.



CADET LITE uses a cut down version of the full control CADET V12 software, all controls and displays are of the same format so you get all the design benefits of the fully developed version.

Features of CADET V12 available at the Operator Level allow tests to be defined, run and data results processed. Test strategies can be defined easily at the computer screen by entering information into simple to understand forms.

Tests may use control processes previously defined at the Engineering Level and simply define the required setpoints and, if required, any additional control constants.

The test editor allows the creation of **Event Based Test Flow (EBTF)** that will allow test strategies to be developed with little, or no computer programming knowledge.

