CT 110
Test stand for single-cylinder engines, 7,5 kW

The CT 110 test stand can be used for a wide range of experiments on small internal combustion engines with a power output of up to 7.5 kW. There is a choice of 4 different engines, which can be mounted on the base plate in the test stand as required. An engine can be installed in just a few minutes.

A load is applied to the engines by an air-cooled asynchronous motor, which is actuated by a frequency converter.

The engines can be investigated under full and partial load. A variable load and speed is used to determine the characteristic diagram for the engine. The interaction of the brake and the engine can also be investigated.

The test stand is ideal for both demonstrations and for independent experiments by students. The powerful software provides excellent support for the learning process. The well-structured instructional material sets out the fundamentals and provides a step-by-step guide through the experiments.

The test stand can be operated in normal laboratory facilities. The engine and asynchronous motor are mounted on a single vibration-insulated frame. Intake sound absorption reduces noise. The exhaust gases are vented externally via a hose.

CT 110 Test stand for single-cylinder engines, 7,5 kW

CT 110
+ test engine (CT 100.20 – CT 100.23) incl. software for data acquisition

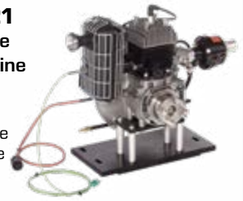
- characteristic curves at full and partial load
- determination of engine friction loss
- comparison of diesel and petrol engines
- comparison of two-stroke and four-stroke engines

CT 100.20
Four-stroke petrol engine

Air-cooled four-stroke petrol engine with carburettor

CT 100.21
Two-stroke petrol engine

Air-cooled two-stroke petrol engine with reverse scavenging

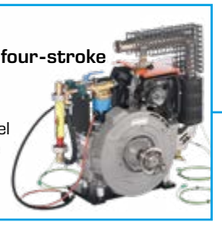


CT 100.22
Four-stroke diesel engine

Air-cooled four-stroke diesel engine with direct injection

CT 100.23
Water-cooled four-stroke diesel engine

Water-cooled four-stroke diesel engine using the swirl chamber principle



Extended range of experiments

with

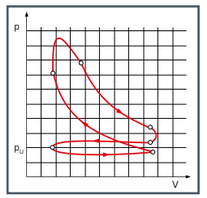
electronic indication with PC-based data acquisition with CT 100.13 + engine-specific pressure transducer (CT 100.14 – CT 100.17)

CT 100.14
Pressure transducer

CT 100.17
Pressure transducer

CT 100.16
Pressure transducer

CT 100.15
Pressure transducer



CT 100.13
Electronic engine indicating system

Pressure measurement in the cylinder chamber of an internal combustion engine

- p-V diagram
- p-t diagram
- pressure curve during gas exchange
- determination of the indicated performance
- determination of mechanical efficiency

TDC sensors for all models are included in the scope of delivery

or

exhaust gas analysis with CT 159.02

CT 159.02
Exhaust gas analysing unit

Measurement of the composition of exhaust gases (CO, CO_2, HC, O_2), the fuel/air ratio **λ** and the oil temperature of the engine.

or

exhaust gas calorimeter with CT 100.11

CT 100.11
Exhaust gas calorimeter

Counterflow heat exchanger for calorimetric analysis of exhaust gases from internal combustion engines