

# CT 100.20

## Four-stroke petrol engine for CT 110



### Learning objectives/experiments

- familiarisation with a four-stroke petrol engine
- plotting of torque and power curves
- determination of specific fuel consumption
- determination of volumetric efficiency and lambda (fuel-air ratio)
- determination of the frictional power of the engine

### Specification

- [1] air-cooled single-cylinder four-stroke petrol engine for installation in the CT 110 test stand
- [2] engine mounted on base plate
- [3] force transmission to brake via elastic claw coupling
- [4] engine complete with fuel hose and exhaust gas temperature sensor
- [5] fuel hose with self-sealing quick-release coupling

### Technical data

- Air-cooled single-cylinder petrol engine
- power output: 7,5kW at 3000min<sup>-1</sup>
  - bore: 87,3mm
  - stroke: 66,7mm

LxWxH: 600x480x630mm  
Weight: approx. 36kg

### Scope of delivery

- 1 engine, complete with all connections and supply lines
- 1 manual

### Description

#### ■ engine for use in CT 110 test stand

CT 100.20 is part of a series of devices enabling experiments to be performed on engines and machines. In conjunction with the CT 110 test stand, which includes a drive and brake unit, the four-stroke petrol engine is highly suitable for use in teaching the fundamentals of engine functioning and measurement.

The engine used here is an air-cooled single-cylinder four-stroke petrol engine with external carburation. The engine is started by an electric motor mounted in the CT 110 unit. The air cooling is effected by blades attached to the fly-wheel. The brake unit is connected by way of an elastic claw coupling.

The engine is prepared for measurement of the cylinder pressure for indication, and additionally includes a sensor to measure the exhaust gas temperature. The sensor, ignition cut-off and fuel supply are connected to the CT 110 test stand.

The full load and partial load characteristic curves of the engine are plotted in experiments.