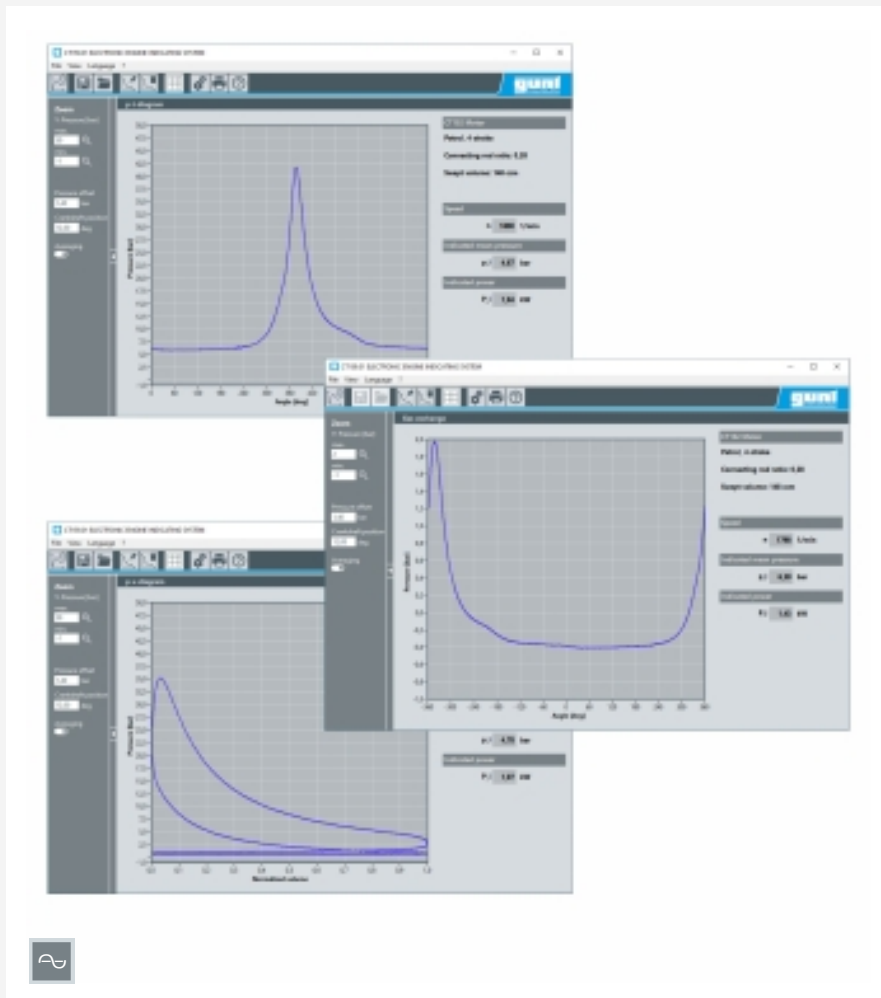


CT 100.13

Electronic engine indicating system for CT 110



The illustration shows: p-t diagram, pressure curve for gas cycle, p-V diagram

Description

■ cylinder pressure indication system, suitable for CT 100.20 – CT 100.23 engines

Indicating systems can be used for a thermodynamic analysis of engines. In industrial applications, these systems are used to optimise the combustion process.

The system is used in conjunction with the CT 100.14 respectively CT 100.17 spark plug pressure transducer and the CT 100.15 respectively CT 100.16 pressure transducers. It allows pressure measurements to be carried out in the cylinder head of an internal combustion engine and is designed for the CT 100.20, CT 100.21, CT 100.22 and CT 100.23 engines. The data is transferred to a PC for further processing. The software produces p-t and p-V diagrams, and also displays the mean pressure and the indicated power output.

The system consists of software, an inductive proximity switch as TDC sensor and a measuring amplifier for the pressure transducer and the TDC sensor.

Learning objectives/experiments

- familiarisation with and use of an electronic cylinder pressure indication system
- p-t diagram
- p-V diagram
- pressure curve for gas cycle
- determination of indicated power output from p-V diagram

Specification

- [1] cylinder pressure indication system for internal combustion engine
- [2] only to be used in conjunction with CT 100.14, CT 100.15, CT 100.16 or CT 100.17 pressure transducer
- [3] chronological representation of pressure curve against the crank angle in p-t diagram to determine the maximum pressure and to monitor the ignition point and the pressure increase
- [4] representation of pressure curve against the standardised piston capacity in p-V diagram to determine the indicated power output
- [5] system consists of measuring amplifier, software and inductive proximity switch as TDC sensor
- [6] GUNT software for data acquisition via USB under Windows 10

Technical data

Measuring amplifier

- amplification factor: 10mbar/mV

TDC sensor trigger distance

- 1mm

230V, 50Hz, 1 phase

230V, 60Hz, 1 phase

120V, 60Hz, 1 phase

UL/CSA optional

LxWxH: 280x260x120mm (measuring amplifier)

Weight: approx. 5kg

Required for operation

PC with Windows

Scope of delivery

- 1 measuring amplifier
- 1 inductive proximity switch
- 1 set of accessories
- 1 GUNT software + USB cable

CT 100.13

Electronic engine indicating system for CT 110

Required accessories

CT 110 Engines	Test stand for single-cylinder engines, 7,5kW
CT 100.20 with	Four-stroke petrol engine for CT 110
CT 100.14 or	Pressure transducer for CT 100.20
CT 100.23 with	Water-cooled four-stroke diesel engine for CT 110
CT 100.15 or	Pressure transducer for CT 100.23
CT 100.22 with	Four-stroke diesel engine for CT 110
CT 100.16 or	Pressure transducer for CT 100.22
CT 100.21 with	Two-stroke petrol engine for CT 110
CT 100.17	Pressure transducer for CT 100.21