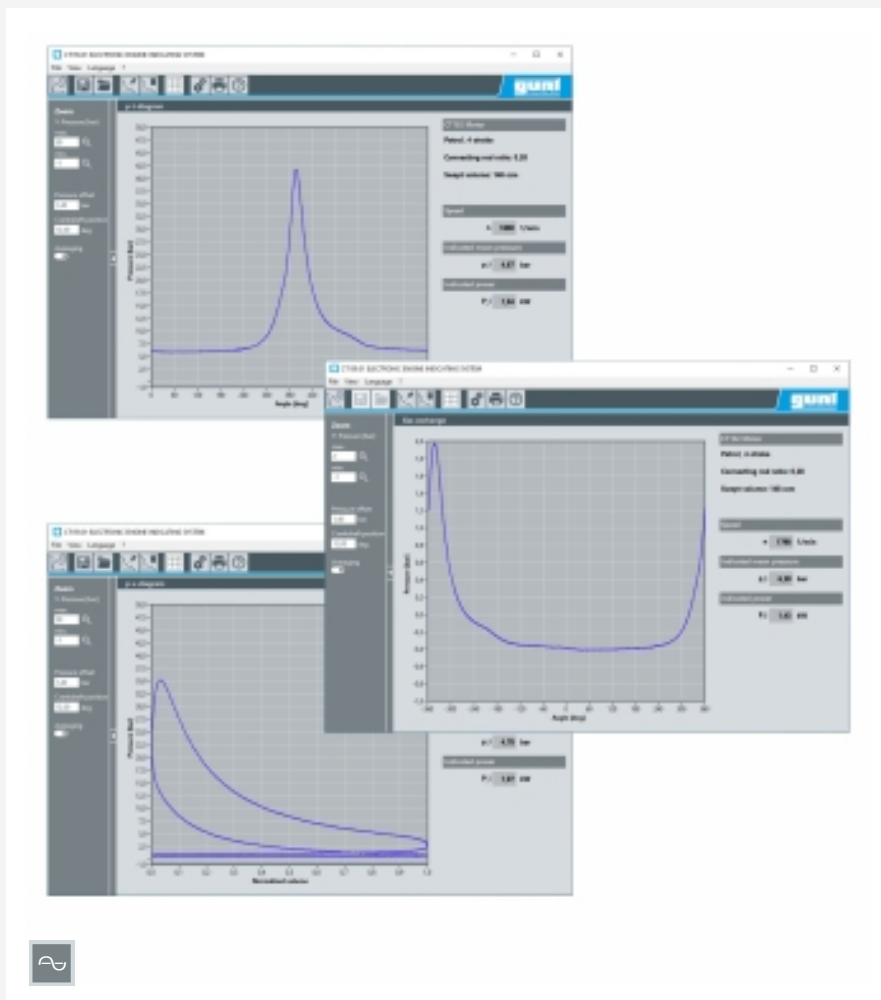


CT 159.01

Electronic engine indicating system for CT 159



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

Description

■ **cylinder pressure indication system, suitable for CT 150 – CT 153 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 transducer sets CT 159.03, CT 159.04 and the CT 159.05. Each of the sets consists of a pressure transducer and a TDC sensor. It allows pressure measurements to be carried out in the cylinder head of an internal combustion engine and is designed for the CT 150, CT 151 and CT 153 engines. The data is transferred to a PC for further processing. The software produces p-t and p-V diagrams, and also displays the average pressure and the indicated power output.

The system consists of software and a measuring amplifier for the pressure transducer and 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 159.03, CT 159.04 or CT 159.05 transducers
- [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 and software
- [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 set of accessories
- 1 GUNT software + USB cable

CT 159.01

Electronic engine indicating system for CT 159

Required accessories

CT 159 Engines	Modular test stand for single-cylinder engines, 3kW
CT 150 with	Four-stroke petrol engine for CT 159
CT 159.03 or	Pressure transducer and TDC sensor for CT 150
CT 151 with	Four-stroke diesel engine for CT 159
CT 159.04 or	Pressure transducer and TDC sensor for CT 151
CT 153 with	Two-stroke petrol engine for CT 159
CT 159.05	Pressure transducer and TDC sensor for CT 153