

CT 300.05

Two-cylinder diesel engine for CT 300



Learning objectives/experiments

- 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 (in passive mode)

Specification

- [1] water-cooled two-cylinder four-stroke diesel engine for installation in the CT 300 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

Water-cooled two-cylinder diesel engine

- displacement: 570cm³
- bore: 70mm
- stroke: 74mm
- power output: approx. 10,2kW at 3600min⁻¹

LxWxH: 650x610x710mm

Weight: approx. 110kg

Scope of delivery

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

Description

■ engine for use in CT 300 test stand

In conjunction with the CT 300 test stand, which includes a drive and brake unit, the four-stroke diesel engine CT 300.05 is highly suitable for use in teaching the fundamentals of engine functioning and measurement.

The engine used here is a water-cooled two-cylinder four-stroke diesel engine with indirect injection. The engine is started, run in passive mode and slowed down by an electric motor mounted in the CT 300 unit. The brake unit is connected by way of a 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 300 test stand.

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

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Required accessories

063.30000	CT 300	Engine test stand, 11kW
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Optional accessories

063.15902	CT 159.02	Exhaust gas analysing unit
063.30001	CT 300.01	Exhaust gas calorimeter for CT 300
063.30009	CT 300.09	Electronic engine indicating system for CT 300
with		
063.30018	CT 300.18	Pressure transducer and TDC sensor for CT 300.05