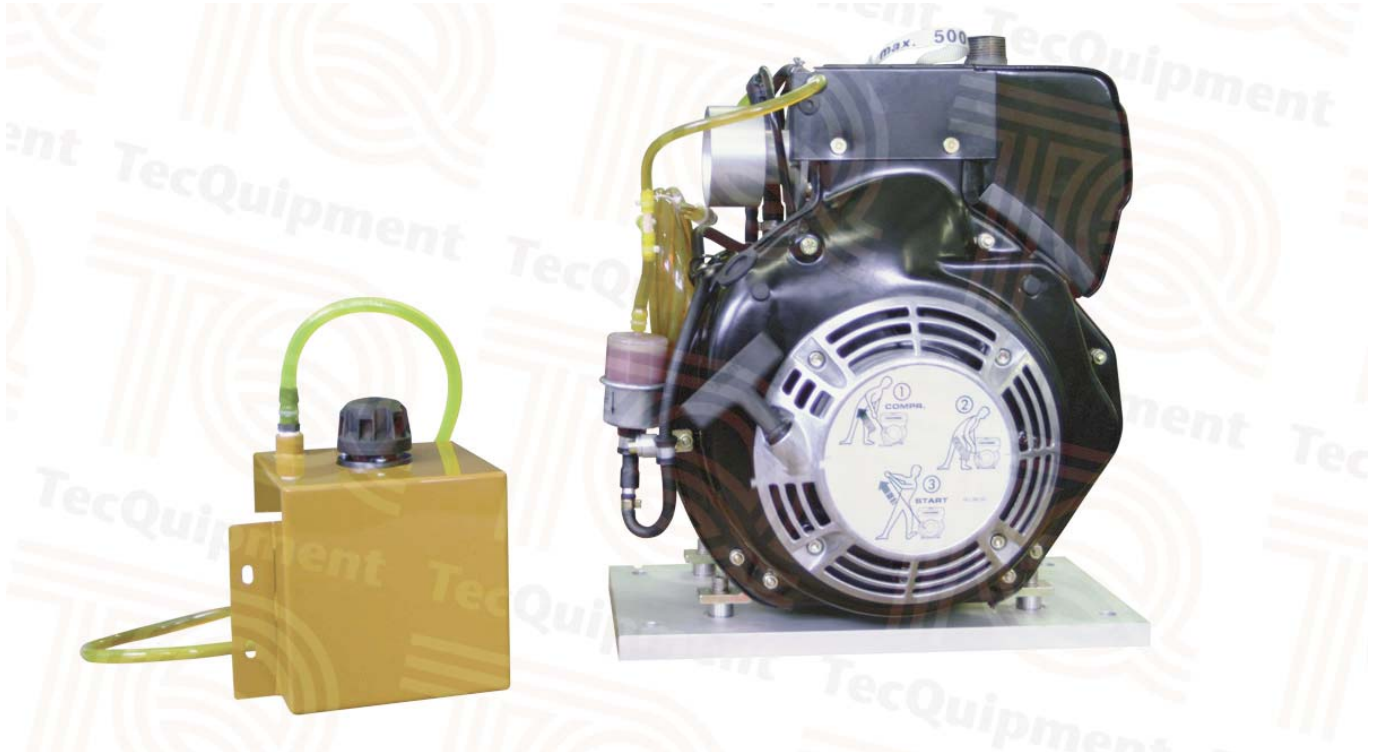




## Thermodynamics

**TD202****Four-Stroke Diesel Engine**

***A four-stroke, single-cylinder diesel engine for use with TecEquipment's Small Engine Test Set (TD200)***



- For safe and effective studies and demonstrations of a four-stroke, single-cylinder diesel engine
- For use with TecEquipment's Small Engine Test Set (TD200)
- High-quality yet cost-effective engine specially modified for educational use
- Wide range of investigations possible
- Quickly and accurately mounts on the test bed
- Includes colour-coded fuel tank with quick-release couplings

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- An ISO 9001 certified company

# TD202

# Four-Stroke Diesel Engine

## Description

High-quality, cost-effective four-stroke, single-cylinder diesel engine for use with TecEquipment's Small Engine Test Set (TD200). Adapted specially for education to enable effective laboratory testing and demonstrations, the engine includes an exhaust thermocouple, a half-coupling to link to the test bed dynamometer and all essential hoses and fittings.

In addition, each engine includes a colour-coded fuel tank with self-sealing couplings. The couplings ensure the engine can be connected and disconnected quickly and efficiently with minimum loss or spillage of fuel. For convenience and safety, the fuel tank can be removed for filling or for storage in a fuel locker when not in use. Removing the fuel tank also prevents unauthorised use of the equipment.

The engine is mounted on a sturdy precision bed plate. The bed plate has dowels and slots which align and locate it accurately with the dynamometer test set. This minimises the time spent replacing one engine with another.

## Standard Features

- Supplied with comprehensive user guide
- Five-year warranty
- Made in accordance with the latest European Union directives

## Experiments

When used with TecEquipment's Small Engine Test Set (TD200), investigations into the performance and characteristics of a four-stroke diesel engine, including:

- Torque, speed and power relationship
- Brake mean effective pressure
- Engine performance curves
- Air and fuel consumption
- Volumetric and thermal efficiencies
- Willans line

## Essential Base Unit

- Small Engine Test Set (TD200)

## Operating Conditions

*Operating environment:*

Well ventilated laboratory

*Storage temperature range:*

-25°C to +55°C (when packed for transport)

*Operating temperature range:*

+5°C to +40°C

*Operating relative humidity range:*

80% at temperatures < 31°C decreasing linearly to 50% at 40°C

*Noise levels:*

The noise level produced by this engine may exceed 70 dB, therefore **TecEquipment strongly recommends the use of suitable ear defenders.**

## Specification

*Dimensions:*

Nett: height 450 mm x width 400 mm x depth 350 mm

Packed: 0.15 m<sup>3</sup>

*Weight:*

Nett: 35 kg, Packed: 43 kg

*Fuel:*

Diesel to minimum specifications EN590, BS2869 A1/A2 or ASTM D 975 - 1D/2D

*Engine capacity:*

232 cc

*Power and Torque:*

3.75 kW and 10.8 Nm at 3000 rev.min<sup>-1</sup>

*Speed:*

Governed to 3200 to 3400 rev.min<sup>-1</sup>

*Cooling:*

Air-cooled

**Note: All values stated are approximate and subject to variation**

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