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Manufacturer & Exporter · Ambala, Haryana, India

PRODUCT DATA SHEET
Catalogue reference for product evaluation

Phone: +91 7015865225 **Email:** info@scienticoindia.com **Web:** scienticoindia.com **Address:** #71, Industrial Area, Ambala Cantt, Haryana, India

Section Model Of Four-Stroke Diesel Engine | Torquemaster-37

Category: Automobile Engineering Lab Equipment · **Order Code:** TORQUEMASTER-37 · **Country of Origin:** India

Product Overview

Section Model Of Four-Stroke Diesel Engine Torquemaster-37 demonstrates the internal structure and operating principles of a 100 cc, 6 hp four-stroke diesel engine. This Section Model Of Four-Stroke Diesel Engine features indirect injection with cam operated jerk pump, pre-chamber, glow plug, overhead valves, and complete cooling and lubrication systems. A 3-volt bulb indicates the firing point, and an expansion phase bulb shows active cycle stages. Colour-coded internal surfaces and chromium plated parts enable comprehensive classroom demonstration.

View this product online: https://scienticoindia.com/product/section-model-of-four-stroke-diesel-engine-torquemaster-37/



Request a model-specific quotation
Include quantity and delivery country.

Technical Specifications

Section Model Of Four-Stroke Diesel Engine Torquemaster-37 — Technical Specifications

Parameter	Value
Model	Torquemaster-37
Engine Type	Four-stroke diesel engine
Displacement	100 cc
Power	6 hp
Injection Type	Indirect injection
Camshaft	In the crankcase
Valves	Overhead valves
Speed Control	RPM regulator
Lubrication	Oil pump
Fuel Supply	Carburetor
Air Supply	Air filter
Exhaust	Silencer
Fuel Storage	Tank
Fuel System	Cam operated jerk pump with diaphragm injection nozzle

Parameter	Value
Starting System	Starting valve
Ignition Indicator	3-volt bulb at firing point
Expansion Indicator	Small bulb lights during expansion phase
Operation	Manual, through a crank handle
Equipment Layout	On base
Finish	Fine finish
Length x Width x Height (approx.)	500 x 500 x 650 mm
Weight (approx.)	25 kg

Technical Data

Engine Configuration

Component	Detail
Displacement	100 cc
Power Output	6 hp
Stroke Type	Four-stroke cycle
Camshaft Location	In the crankcase
Valve Type	Overhead valves

Fuel and Injection System

Component	Detail
Injection Method	Indirect injection
Injection Pump	Cam operated jerk pump
Injector	Diaphragm injection nozzle
Pre-Chamber	Included for indirect injection
Starting Valve	Manual starting valve
Glow Plug	Preheating glow plug

Auxiliary Systems

Component	Detail
Lubrication	Oil pump
Cooling	Cooling system with distribution circuit
Fuel Storage	Tank
Air Filtration	Air filter
Exhaust	Silencer
Speed Control	RPM regulator

Operational Features

Component	Detail
Firing Point Indicator	3-volt bulb glows at correct firing point

Component	Detail
Expansion Phase Indicator	Small bulb lights during expansion phase
Operation Method	Manual crank handle
Electrical Contact System	Controls firing point indicator bulb

Key Features

Key Features

- **Operation:** Manually operated through a crank handle
- **Layout:** On base
- **Finish:** Fine finish
- **Handling:** Simple operations
- **Accuracy:** Functional accuracy
- **Design Type:** Section Model Of Four-Stroke Diesel Engine with indirect injection and firing point demonstration
- **Colour Coding:** Internal surfaces finished in different colours to indicate air, fuel and gas mixture, and exhaust gas contents
- **Indicators:** 3-volt bulb showing firing point and small bulb lighting during expansion phase

Experiments

- Study of four-stroke diesel engine internal structure and operating principles
- Observation of intake, compression, expansion, and exhaust strokes
- Study of indirect injection system with pre-chamber and glow plug
- Study of cam operated jerk pump and injection nozzle operation
- Observation of firing point through 3-volt bulb indicator
- Observation of expansion phase through small bulb indicator
- Study of overhead valve operation with camshaft in crankcase
- Study of cooling system and distribution circuit
- Study of oil pump and lubrication circuit
- Manual engine operation with crank handle

Construction and Design

The Section Model Of Four-Stroke Diesel Engine Torquemaster-37 is built as a 4-stroke diesel engine with 100 cc displacement and 6 hp power rating. The engine features a camshaft located in the crankcase with overhead valves for efficient operation. Indirect injection is used with a cam operated jerk pump, diaphragm injection nozzle, pre-chamber, and preheating glow plug. An oil pump provides lubrication, and a complete cooling system with distribution circuit is included. The model includes an RPM regulator, carburetor, air filter, silencer, and fuel tank. A 3-volt bulb shows the firing point of the engine, glowing at the correct point in the cycle through an electrical contact system. A small bulb lights up during the expansion phase to simulate the active stage of the cycle. The cutaway model is professionally painted with different colours to differentiate various parts, cross-sections, lubricating circuits, fuel system, and cooling system, with many parts chromium plated and galvanized for durability. Operation is manual through a crank handle.

Scope of Delivery

- Four-stroke diesel engine section model
- Cam operated jerk pump assembly
- Diaphragm injection nozzle and starting valve
- Pre-chamber and preheating glow plug
- Oil pump and cooling system
- RPM regulator, carburetor, and air filter
- Silencer and fuel tank
- 3-volt firing point indicator bulb
- Expansion phase indicator bulb
- Crank handle for manual operation
- Base mounting

Ordering & Delivery

- Send the product name, quantity, delivery country and destination with your enquiry.
- Production schedule, freight, payment terms and export documents are confirmed in the written quotation.

Frequently Asked Questions

Q1: What does the Section Model Of Four-Stroke Diesel Engine Torquemaster-37 demonstrate?
A: It demonstrates the internal structure and operating principles of a four-stroke diesel engine with indirect injection, showing all major systems and cycle phases.

Q2: How is the firing point indicated in this model?
A: A 3-volt bulb glows at the correct firing point in the cycle through an electrical contact system.

Q3: What type of injection system does this model use?
A: It uses indirect injection with a cam operated jerk pump, diaphragm injection nozzle, and pre-chamber with preheating glow plug.

Q4: How is the model operated?
A: The model is manually operated through a crank handle to demonstrate the four-stroke cycle.

Q5: What are the dimensions and weight of the model?
A: The approximate dimensions are 500 x 500 x 650 mm, with an approximate weight of 25 kg.

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