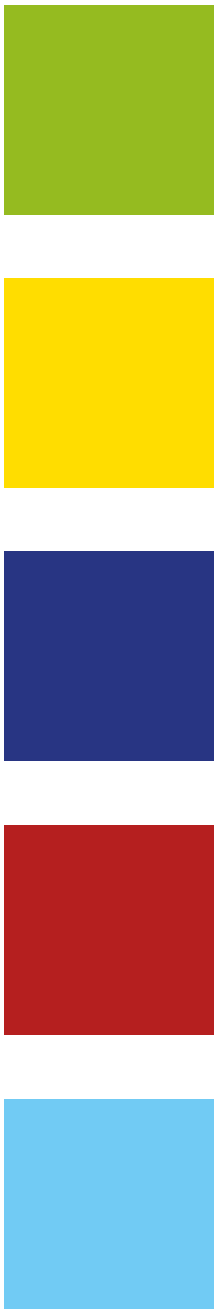
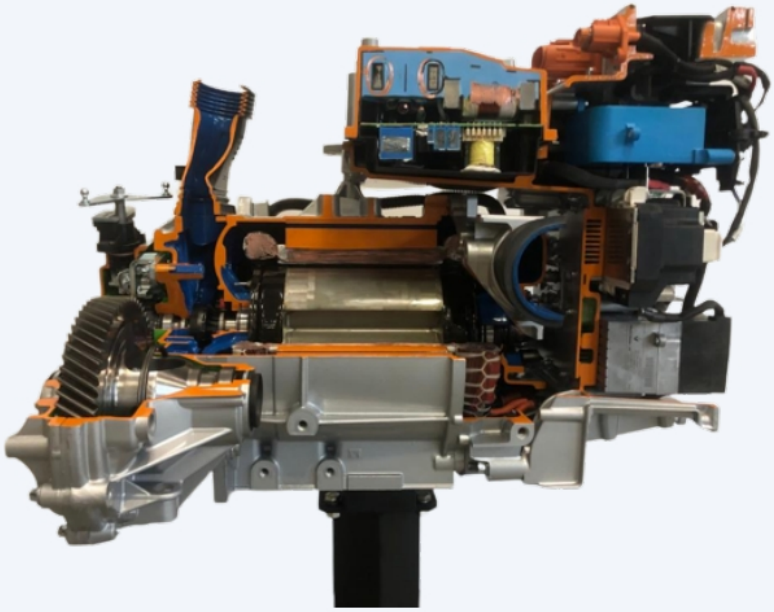


Engines & Models

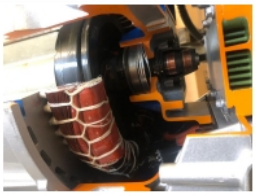
VB5405M

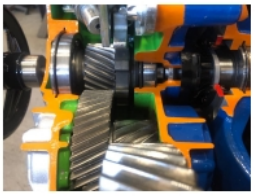
VB5405M TRAINING MODEL OF A RENAULT ZOE ELECTRIC CAR ENGINE (on stand with wheels) - manual

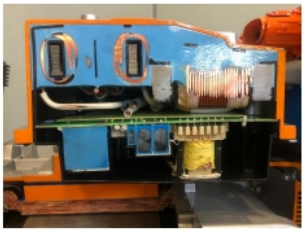


Accurate section of an electric engine/differential group originally mounted on Renault Zoe/Nissan Leafcars, year of production from 2013 to 2015, engine manufactured by Continental.

The shaft can be moved manually.







Approx. weight and dim.:

Cm:	*80x80x80h*
Net weight:	*kg 102*
Gross weight:	*kg 140*

Indicative picture for reference only

VB 4500M TOYOTA HYBRID ENGINE 1NZE-FXE HYBRID SYNERGY DRIVE - GASOLINE AND ELECTRIC (on stand with wheels)- manual

VB 4500E TOYOTA HYBRID ENGINE 1NZE-FXE HYBRID SYNERGY DRIVE - GASOLINE AND ELECTRIC (on stand with wheels)- electrical

The Toyota hybrid system (THS) has two sources of power, the petrol engine and the electric motor. The THS recovers energy otherwise lost to heat in the brakes and uses it to supplement the power of its fuel-burning engine. MG1 (motor generator 1) generates electrical power and starts the engine; MG2 (motor generator 2) drives the vehicle. During deceleration the wheels drive MG2 which acts as a generator for regenerative power recovery. The THS uses different modes to achieve the most efficient operation in response to driving conditions.

Indicative picture for reference only

Main technical specifications:

- *4 cylinders*
- *Displacement: 1500 cc*
- *DOHC overhead camshaft*
- *4 valves per cylinder*
- *Roller chain*
- *VVT-I system (Variable Valve Timing with intelligence) electronically controlled intake valves*
- *Multi-point electronic injection with throttle*
- *Electrical engine*
- *Epicyclical engine*
- *Generator*
- *Transmission belt (CTV)*
- *Gears*
- *Differential group*
- *Exhaust manifold with Lambda probe*

The engine is mounted on a stand with wheels and it is operated manually by means of one crank handle placed on the thermal engine and one on the electric engine in order to simulate the different cycles.

Approx. weight and dim.:

Cm:	*104x80x130h*
Net Weight:	*kg 180*
Gross Weight:	*kg 250*

Same as VB 4500 but operated electrically by means of two electric motors: one on the petrol engine and the other on the generator. The electric motors can be operated separately or simultaneously, according to teaching requirements.
The engine is provided with nomenclature panel.

Approx. weight and dim.:

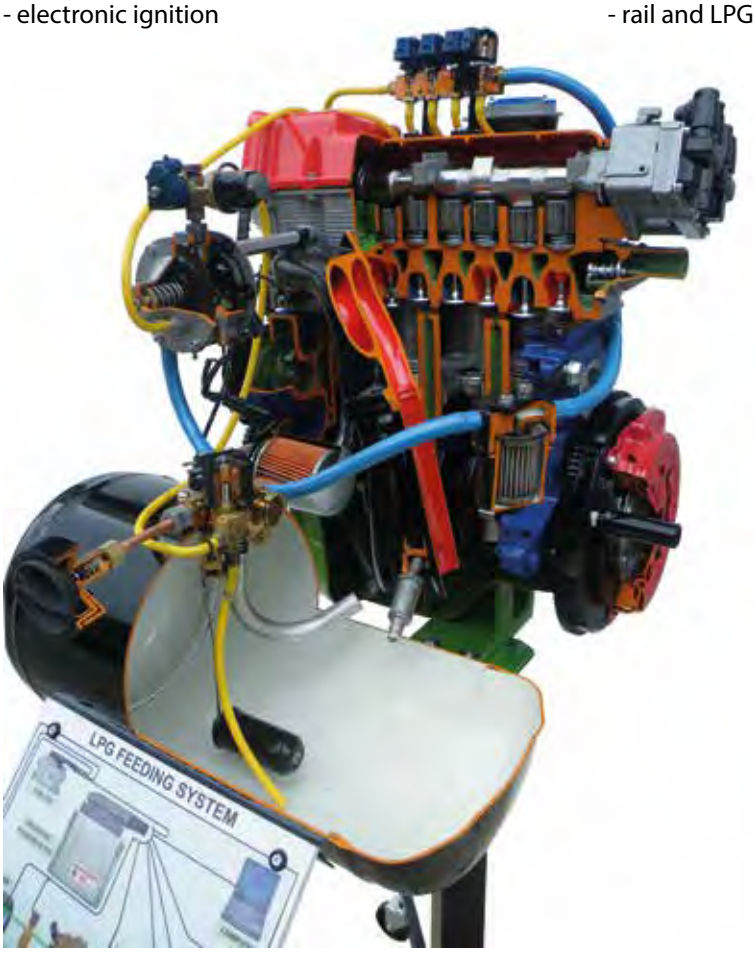
Cm:	*130x90x155h*
Net Weight:	*kg 190*
Gross Weight:	*kg 300*

VB 4300M ELECTRONIC INJECTION MULTIPOINTS ENGINE WITH PETROL/LPG FEEDING SYSTEM (on stand with wheels) - manual

Accurate section of an engine, where the main components of the two different feeding circuits (Petrol and LPG) are sectioned:

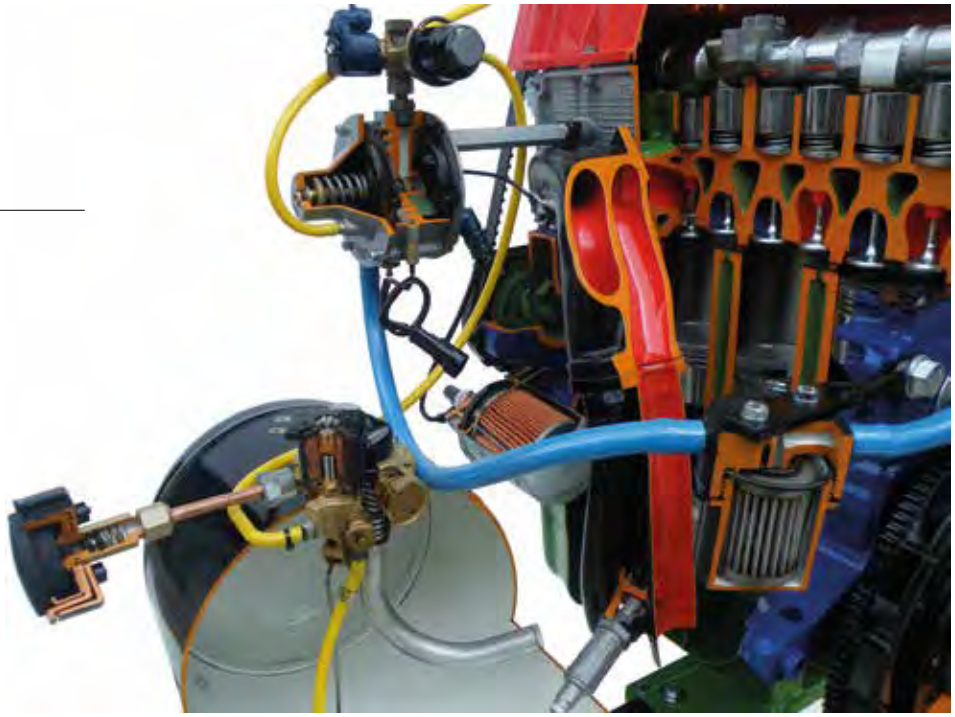
Petrol feeding circuit:
- electro-injectors
- throttle body
- rail
- sensors/ phonic wheel
- Lambda probe
- electronic ignition

LPG feeding circuit:
- genius reducer
- LPG electrovalve
- LPG tank with float device for the charge level
- charge socket
- filter
- rail and LPG electro-injectors



Indicative picture for reference only

For the engine specifications see **VB 5212** at page **A-19**.
Schematic illustration of the different mechanical components together with its electronic and electrical connections.



Approx. weight and dim.:

Cm:	*70x80x95h*
Net Weight:	*kg 86*
Gross Weight:	*kg 105*

VB 4400M MAZDA RX TWIN-ROTOR WANKEL ENGINE (on stand with wheels) - manual

Accurate section of the most common Mazda RX wankel engine, clearly showing the following main components:

- Drive shaft with flywheel
- Twin-rotor
- Suction and exhaust channels
- Chain-driven oil pump
- Water pump with thermostatic valve
- Electronic injection
- Twin-spark ignition

Indicative picture for reference only

The engine is operated manually by means of a handle.

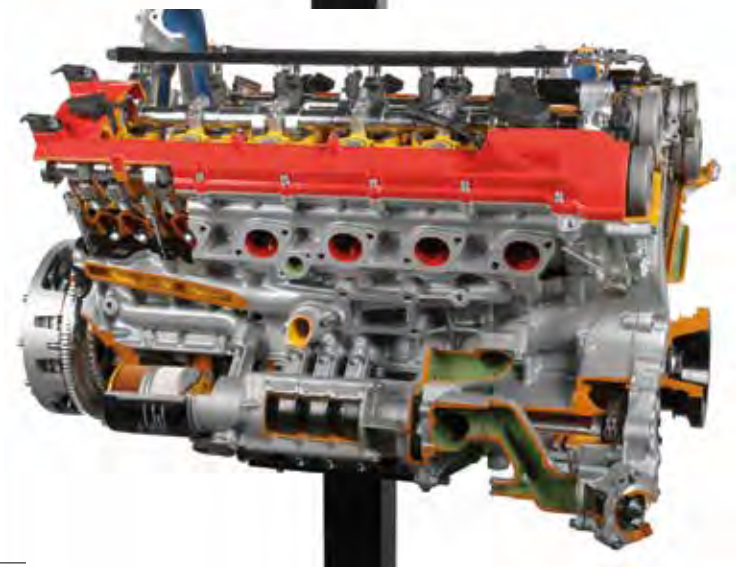
Approx. weight and dim.:

Cm:	*70x70x100h*
Net Weight:	*kg 95*
Gross Weight:	*kg 140*

VB 4550M FERRARI 12 V CYLINDERS ENGINE (on stand with wheels) - manual

VB 4551M FERRARI 8 V CYLINDERS ENGINE (on stand with wheels) - manual

This accurate section shows the maximum expression of the most advanced automotive technique and engineering of our region: the Ferrari engine.



Indicative picture for reference only

VB 4550M

Main technical specifications:

- *12 V cylinders*
- *4 valves per cylinder*
- *Displacement: 5999 cc*
- *DOHC overhead camshaft*
- *4 variable timing devices on the camshaft*
- *Multi-point electronic injection*
- *Chain/Belt timing*
- *3 oil pumps*
- *Water pump*

VB 4550M - VB 4551M

Approx. weight and dim.:

Cm:	*80x100x130h*
Net Weight:	*kg 180*
Gross Weight:	*kg 250*

VB 4551M

Main technical specifications:

- *8 V cylinders*
- *4 valves per cylinder*
- *Displacement: 3000 cc*
- *DOHC overhead camshaft*
- *Mechanic injection with electronic governor KE3 Jetronic*
- *Belt distribution*
- *Oil pump*
- *Water pump*
- *Alternator*

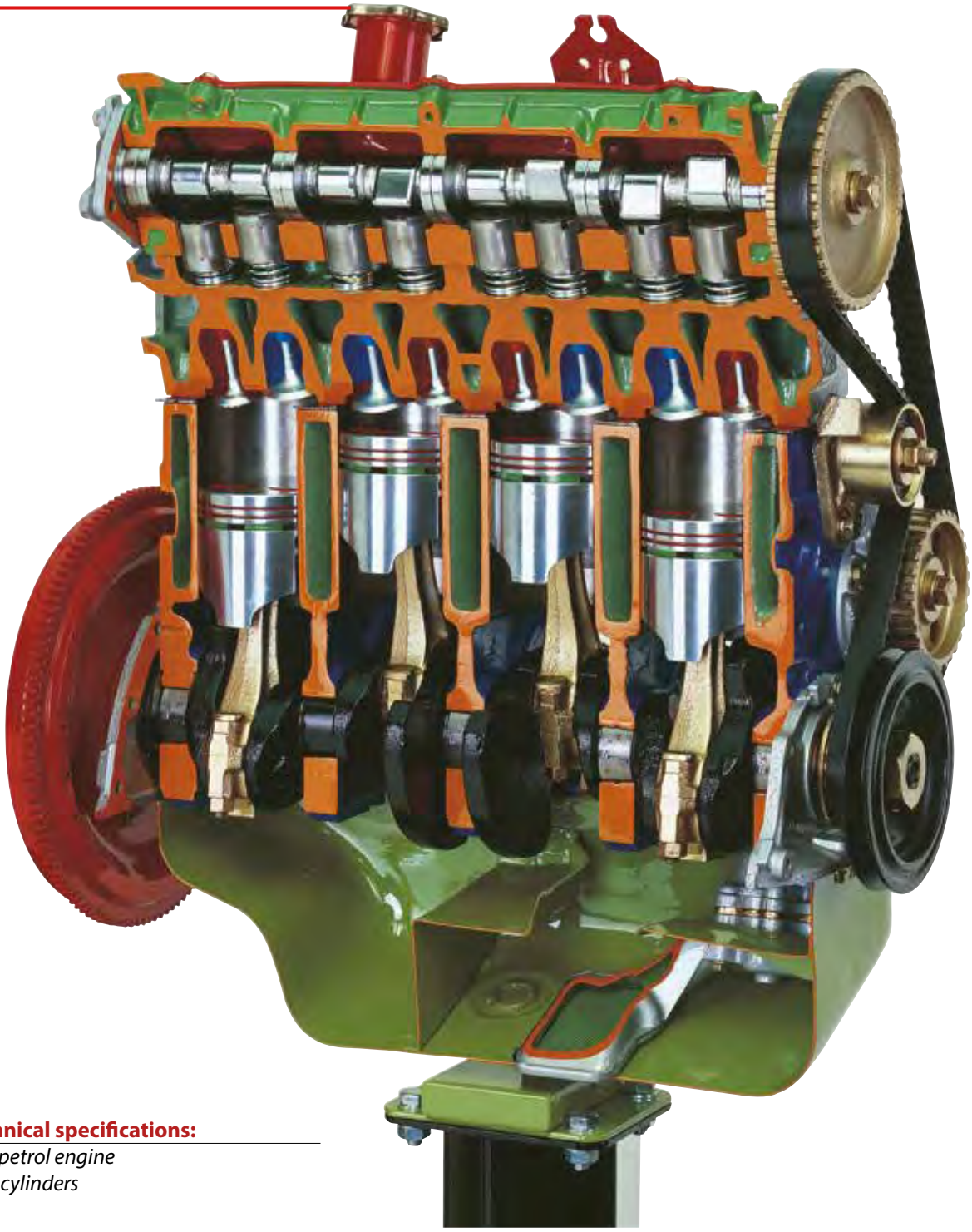
The engine is mounted on a stand with wheels and it is operated manually by means of a crank handle.

VB 5440 - VB 5445

VB 5440M ENGINE UNIT WITH OVERHEAD CAMSHAFT (OHC) AND TOOTHED TIMING BELT (on stand with wheels) - manual

VB 5445M ENGINE UNIT WITH DOUBLE OVERHEAD CAMSHAFT (DOHC) AND TOOTHED TIMING BELT (on stand with wheels) - manual

*****NEW 16V VERSION*****



Indicative picture for reference only

Main technical specifications:

- *4 stroke petrol engine*
- *4 in-line cylinders*

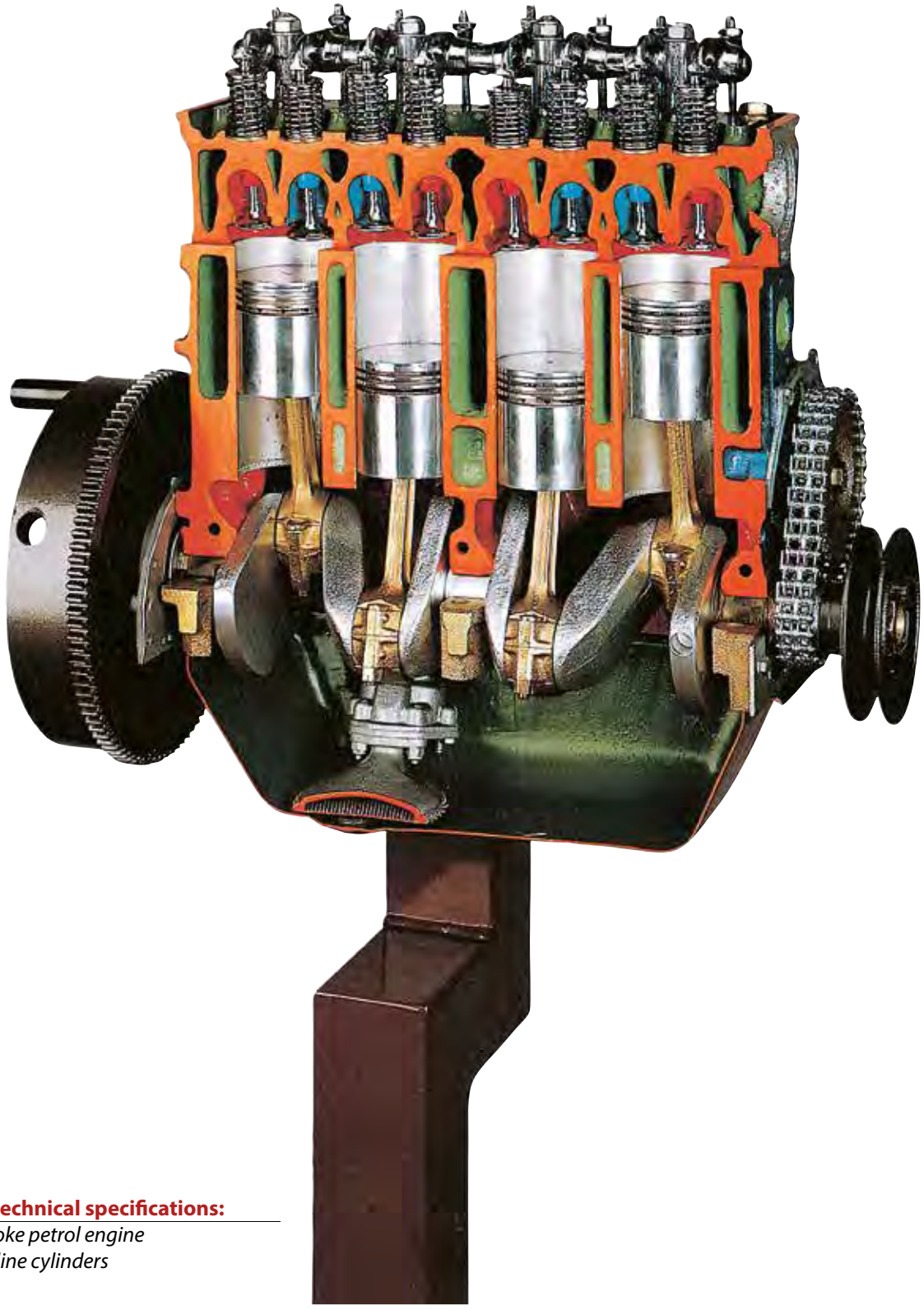
The engine is operated manually through a crank handle.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

Approx. weight and dim.:

Cm:	*70x60x80h*
Net Weight:	*kg 60*
Gross Weight:	*kg 110*

VB 5450M ENGINE UNIT WITH OVERHEAD VALVE (OHV) AND TIMING CHAIN (on stand with wheels) - manual



Indicative picture for reference only

Main technical specifications:

- *4 stroke petrol engine*
- *4 in-line cylinders*

The engine is operated manually through a crank handle.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

Approx. weight and dim.:

Cm:	*70x60x80h*
Net Weight:	*kg 60*
Gross Weight:	*kg 110*

VB 4800 - VB 4801

VB 4800E 16 VALVE 4 CYLINDERS FIAT ENGINE WITH MULTI-POINT ELECTRONIC INJECTION (on stand with wheels) - electrical

VB 4801M 16 VALVE 4 CYLINDERS FIAT ENGINE WITH MULTI-POINT ELECTRONIC INJECTION (on stand with wheels) - manual

Indicative picture for reference only

VB 4800E

Main technical specifications:

- *4 in-line cylinders*
- *Displacement: 2000 cu. cm/1600 cc*
- *DOHC twin overhead camshaft*
- *Multipoint electronic injection with ignition-integrated control unit*
- *Vibration-damping balancing shafts*
- *4 valves per cylinder*
- *Water cooling*
- *12 Volt alternator*
- *Membrane clutch*

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

VB 4801M

Same as VB 4800 but operated manually through a crank handle

VB 4800E - VB 4801M

Approx. weight and dim.:

Cm:	*90x120x125h*
Net Weight:	*kg 160*
Gross Weight:	*kg 210*

VB 4805E 16 VALVE 4 CYLINDERS FIAT ENGINE WITH MULTI-POINT ELECTRONIC INJECTION + REAR DRIVE GEARBOX 5 SPEEDS + REVERSE (on stand with wheels) - electrical

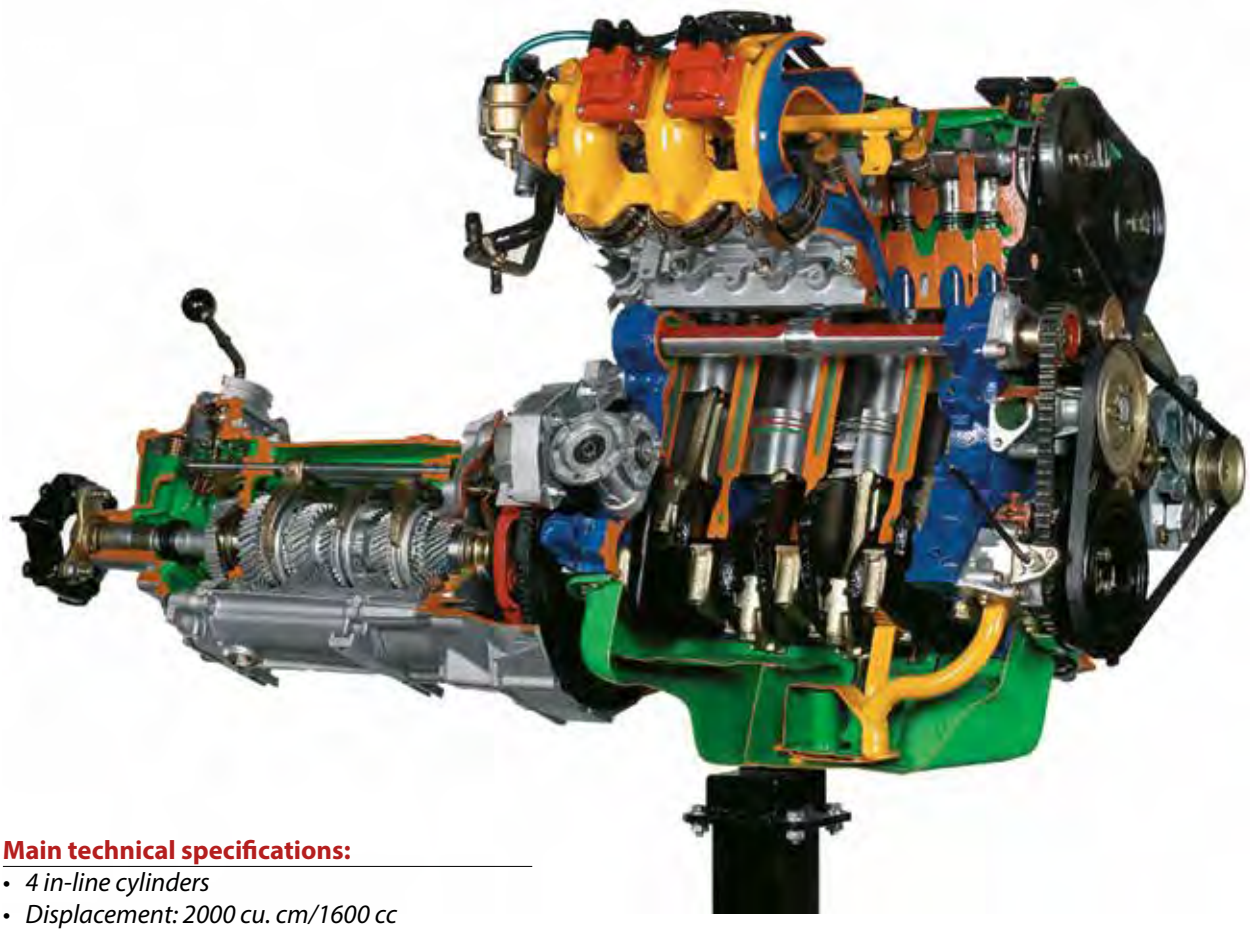
VB 4806E 16 VALVE 4 CYLINDERS FIAT ENGINE WITH MULTI-POINT ELECTRONIC INJECTION + REAR DRIVE GEARBOX 5 SPEEDS + REVERSE TURBOSUPERCHARGER (on stand with wheels) – electrical

VB 4807E 16 VALVE 4 CYLINDERS FIAT ENGINE WITH MULTI-POINT ELECTRONIC INJECTION + FRONT DRIVE GEARBOX 5 SPEEDS + REVERSE +DIFFERENTIAL (on stand with wheels) – electrical

VB 4808E 16 VALVE 4 CYLINDERS FIAT ENGINE WITH MULTI-POINT ELECTRONIC INJECTION + FRONT DRIVE GEARBOX 5 SPEEDS + REVERSE +DIFFERENTIAL WITH TURBOSUPERCHARGER (on stand with wheels) – electrical

VB 4805 - VB 4806 - VB 4807 - VB 4808

Indicative picture for reference only



Main technical specifications:

- *4 in-line cylinders*
- *Displacement: 2000 cu. cm/1600 cc*
- *DOHC twin overhead camshaft*
- *Multipoint electronic injection with ignition-integrated control unit*
- *Vibration-damping balancing shafts*
- *Gearbox 5 forward speeds + reverse*
- *4 valves per cylinder*
- *Water cooling*
- *12 Volt alternator*
- *Membrane clutch*

Approx. weight and dim.:

Cm:	*160x86x100h*
Net Weight:	*kg 195*
Gross Weight:	*kg 250*

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

VB 4600 - VB 4601

VB 4600E PETROL ENGINE WITH DIRECT INJECTION 16 VALVES MULTI-POINT ELECTRONIC INJECTION - 4 CYLINDERS 4 STROKES (on stand with wheels) - electrical

VB 4601M PETROL ENGINE WITH DIRECT INJECTION 16 VALVES MULTI-POINT ELECTRONIC INJECTION - 4 CYLINDERS 4 STROKES (on stand with wheels) - manual

Petrol engines with direct injection (fuel inlet in the combustion chamber and not in the air suction duct), have high performances and are designed to comply with the most severe anti-pollution regulations.
We can provide the following:
VB 4600/F - TSI-FSI Audi/Volkswagen
VB 4600/G - GDI Mitsubishi

Indicative picture for reference only

VB 4600 F/G/

Main technical specifications:

- *4 in-line cylinders*
- *Displacement: 1400-2000 cc*
- *DOHC twin overhead camshaft*
- *Multi-point electronic injection*
- *4 valves per cylinder*
- *Water cooling*
- *12V alternator*

The engine is mounted on a stand with wheels and it operates at 220V; it runs at a reduced speed in order to let the student easily observe and understand the operation of the various mechanical parts.

VB 4601 F/G/'

Same as VB 4600 but operated manually by means of a crank handle.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc.

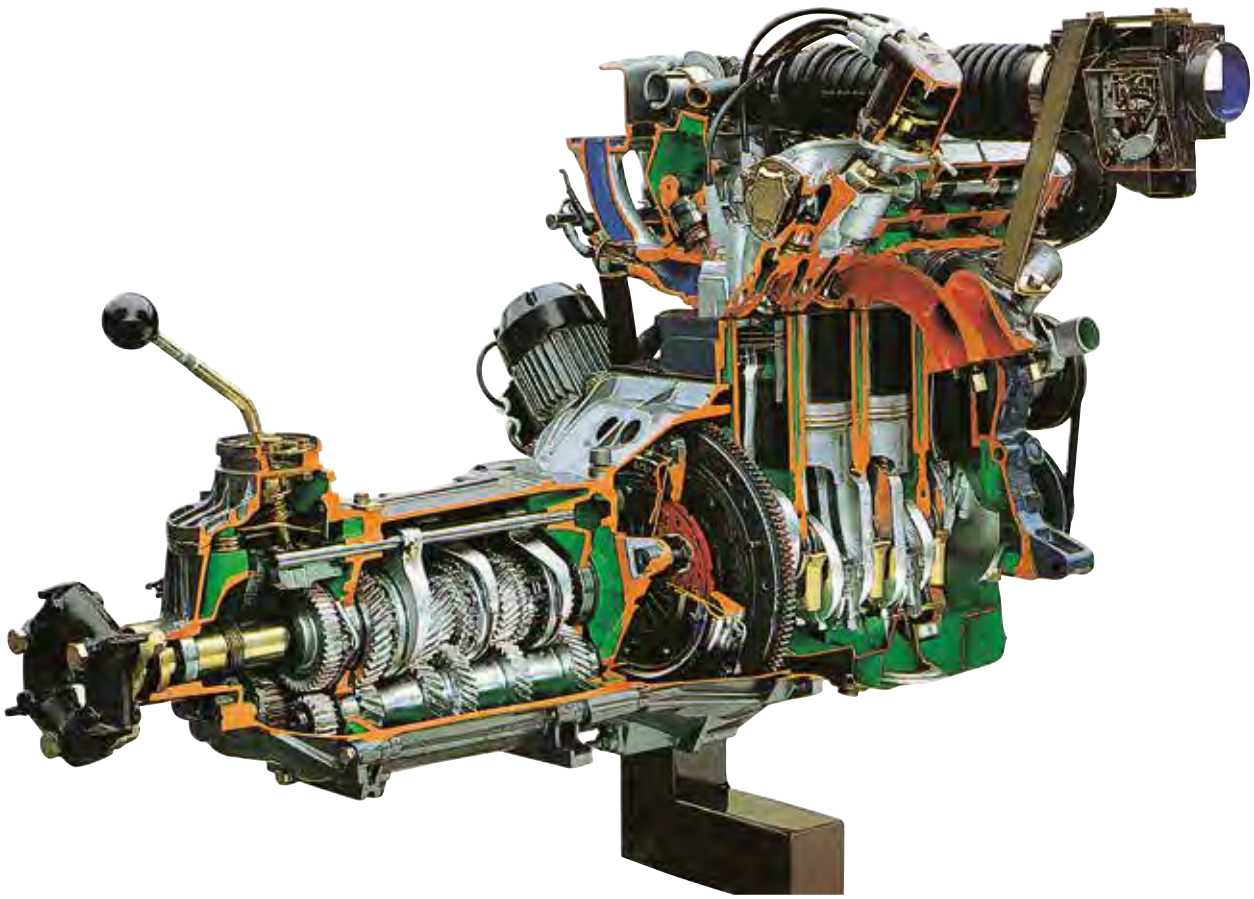
VB 4600 - VB 4601

Approx. weight and dim.:

Cm:	*90x110x125h*
Net Weight:	*kg 150*
Gross Weight:	*kg 210*

VB 5150E FIAT 4 CYLINDERS PETROL ENGINE (LONGITUDINALLY MOUNTED) WITH L-JETRONIC ELECTRONIC INJECTION REAR wheel-DRIVE (on stand with wheels) - electrical

VB 5152E FIAT 4 CYLINDERS PETROL ENGINE (TRANSVERSALLY MOUNTED) WITH L-JETRONIC ELECTRONIC INJECTION FRONT wheel-DRIVE (on stand with wheels) - electrical



Indicative picture for reference only

VB 5150E

Main technical features:

- *Displacement: 2000 cu. cm or 1600 cc (according to availability)*
- *2 overhead camshafts - DOHC*
- *MULTIPOINT electronic injection*
- *4 in-line cylinders*
- *Gearbox: 5 forward speeds + reverse*
- *Electronic ignition*

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

VB 5152E FRONT DRIVE

Same as VB 5150 with Gearbox 5 forward speeds + reverse and integrated differential and FRONT wheel-drive.

VB 5150E - VB 5152E

Approx. weight and dim.:

Cm:	*80x140x110h*
Net Weight:	*kg 140*
Gross Weight:	*kg 200*

VB 5166E VOLKSWAGEN 4 CYLINDERS PETROL ENGINE WITH MULTI-POINT ELECTRONIC INJECTION (on stand with wheels) - electrical

Indicative picture for reference only

Main technical features:

- *Displacement: 1600/1800/2000 cu. cm*
- *Overhead camshaft (OHC)*
- *Distribution by means of a toothed belt*
- *4 in-line cylinders*
- *Gearbox: 5 forward speed + reverse, with integrated differential*

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

VB 5166E

Approx. weight and dim.:

Cm:	*60x155x90h*
Net Weight:	*kg 155*
Gross Weight:	*kg 205*

VB 5170E BMW 6 CYLINDERS PETROL ENGINE WITH L-JETRONIC INJECTION (on stand with wheels) - electrical

VB 5175E BMW 6 CYLINDERS PETROL ENGINE WITH K-JETRONIC INJECTION (on stand with wheels) - electrical !! LAST UNIT AVAILABLE !!

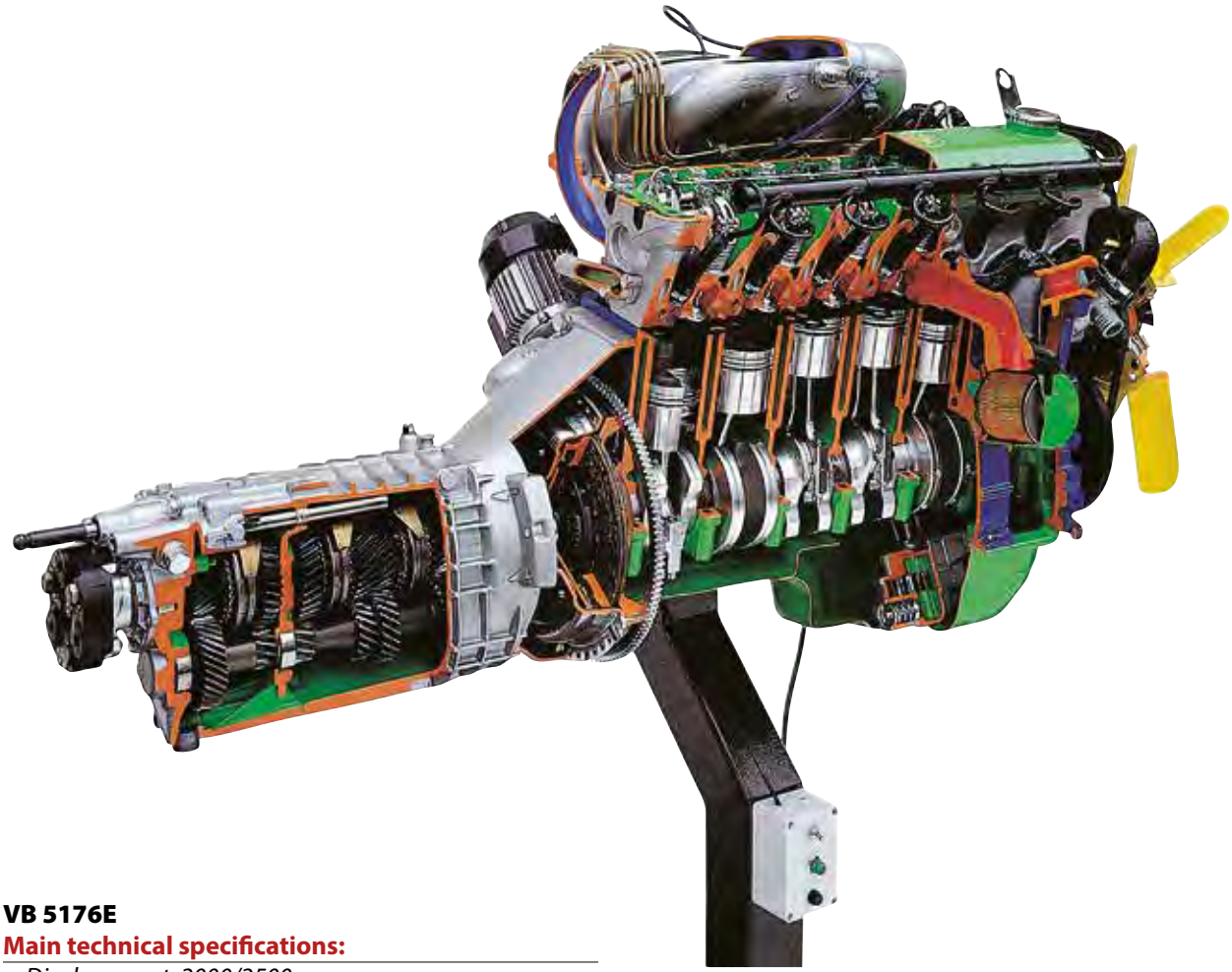
VB 5176E BMW 6 CYLINDERS PETROL ENGINE 24 VALVES WITH MULTI-POINT ELECTRONIC INJECTION AND TWIN OVERHEAD CAMSHAFT (DOHC) (on stand with wheels) - electrical

VB 5170E - VB 5175E

Main technical specifications:

- *Displacement: 2000/3200 cu. cm*
- *Overhead camshaft (OHC), valves with V-arrangement*
- *Distribution by means of a roller chain*
- *6 in-line cylinders*
- *Gearbox: 5 forward speeds + reverse*

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.



Indicative picture for reference only

VB 5176E

Main technical specifications:

- *Displacement: 2000/2500 cc*
- *Double overhead camshaft (DOHC)*
- *Distribution by means of a roller chain*
- *4 valves per cylinder*
- *6 in-line cylinders*
- *Gearbox: 5 forward speeds + reverse*

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

VB 5170E - VB 5175E - VB 5176E

Approx. weight and dim.:

Cm:	*140x80x100h*
Net Weight:	*kg 180*
Gross Weight:	*kg 265*

VB 5178M TOYOTA LEXUS ENGINE 8 V-TYPE CYLINDERS 32 VALVES (on stand with wheels) - manual

VB 5178

VB 5178M

Main technical features:

- *Displacement 3968cc*
- *8 V-type cylinders*
- *4 valves per cylinder (32 total)*
- *DOHC (double over-head camshaft)*
- *Bore and stroke 87,5x82,5*
- *Compression ratio 1:10*
- *Multi-point electronic fuel injection*
- *Electronic ignition*
- *12V alternator*
- *Centrifugal water pump*

Indicative picture for reference only

VB 5178M

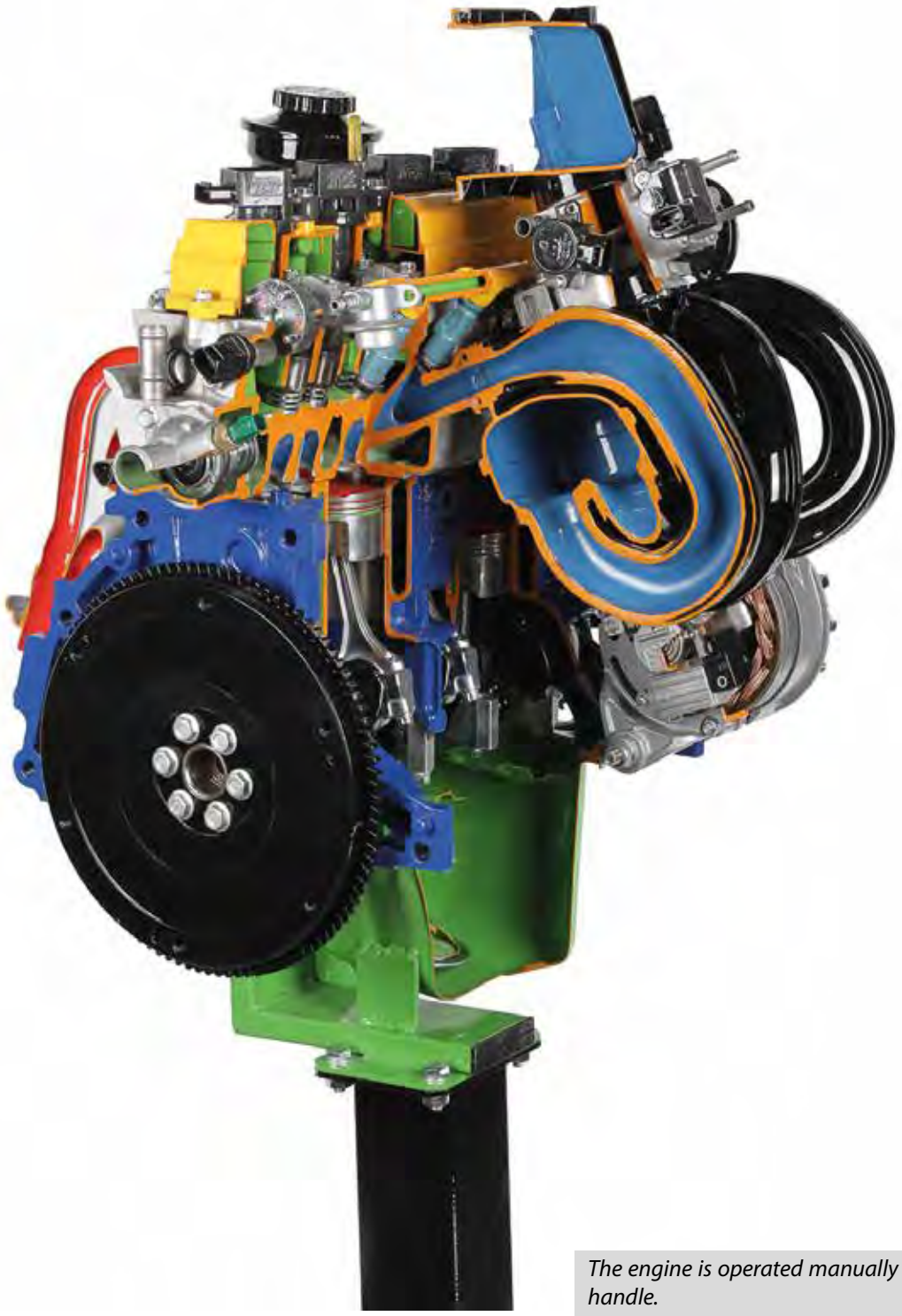
Approx. weight and dim.:

Cm:	*100x90x150h*
Net Weight:	*kg 180*
Gross Weight:	*kg 270*

The engine is operated manually by means of a crank handle.

VB 5181M TOYOTA PETROL ENGINE WITH VVT.I INJECTION (on stand with wheels) - manual

VB 5181E TOYOTA PETROL ENGINE WITH VVT.I INJECTION (on stand with wheels) - electrical



Indicative picture for reference only

Main technical specifications:

- *4 cylinders*
- *Displacement: 1000-1300 cc*
- *DOHC - double overhead camshaft*
- *VVT.I system with electronically controlled intake valves*
- *4 valves per cylinder*
- *Roller chain*
- *Multi-point electronic injection with throttle*
- *12V alternator*
- *Thermostatic valve*

The engine is operated manually by means of a crank handle.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc.

Approx. weight and dim.:

Cm:	*70x90x100h*
Net Weight:	*kg 60*
Gross Weight:	*kg 110*

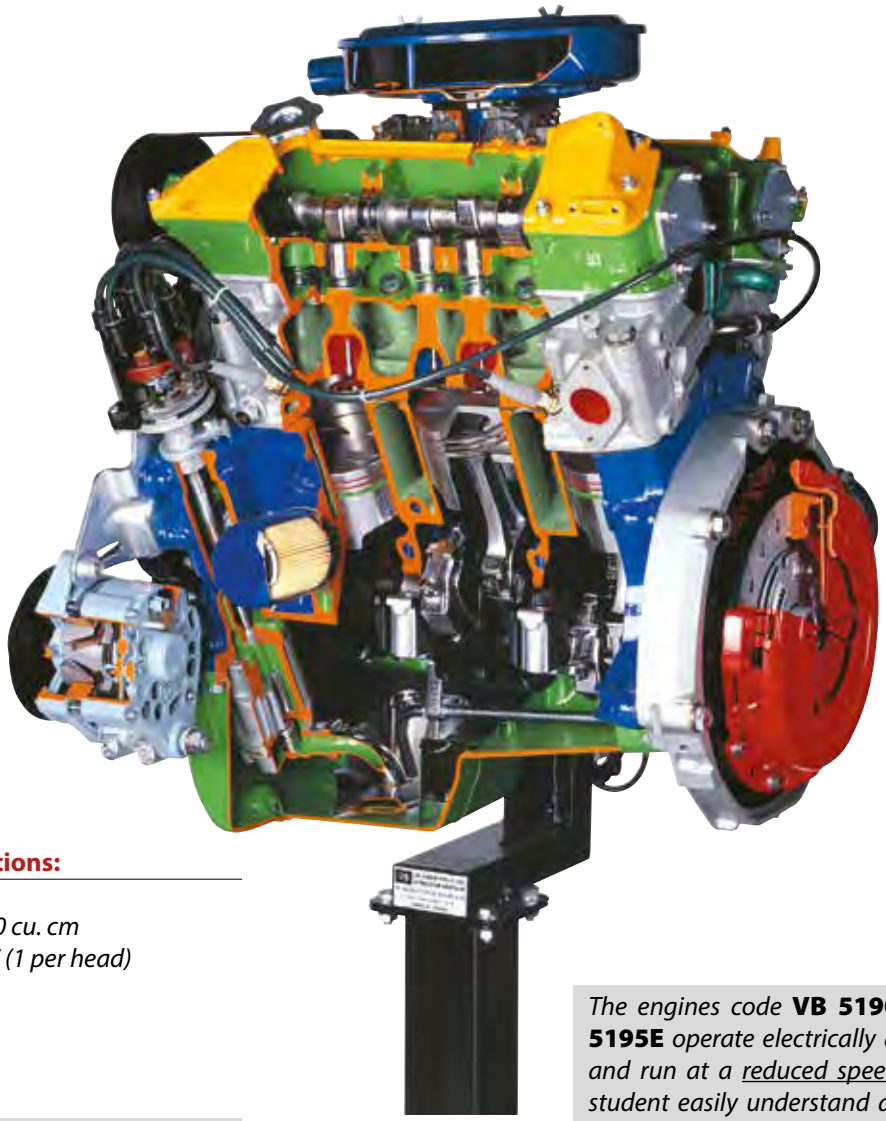
VB 5190 - VB 5195

VB 5190E 6 V CYLINDERS PETROL ENGINE CARBURETTOR (on stand with wheels) - electrical

VB 5195E 6 V CYLINDERS PETROL ENGINE WITH MULTI-POINT ELECTRONIC INJECTION (on stand with wheels) - electrical

VB 5190M 6 V CYLINDERS PETROL ENGINE CARBURETTOR (on stand with wheels) - manual

VB 5195M 6 V CYLINDERS PETROL ENGINE WITH MULTI-POINT ELECTRONIC INJECTION (on stand with wheels) - manual



Indicative picture for reference only

VB 5190E

Main technical specifications:

- *6 V cylinders*
- *Displacement: 2800/3200 cu. cm*
- *Overhead camshaft OHC (1 per head)*
- *Twin-body carburettor*
- *Centrifugal water pump*
- *12 Volt alternator*
- *Membrane clutch*

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

VB 5195E

Main technical specifications:

- *6 V cylinders*
- *Displacement: 2000-3000 cc*
- *DOHC (2 per head)*
- *Multi-point E.I.*
- *Centrifugal water pump*
- *12V alternator*

The engines code **VB 5190E** *and* **VB 5195E** *operate electrically at 220 volts and run at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.*

VB 5190M

Same as VB 5190E but operated manually through a crank handle.

VB 5195M

Same as VB 5195E but operated manually through a crank handle

VB 5190E - VB 5195E - VB 5190M - VB 5195M

Approx. weight and dim.:

Cm:	*120x60x100h*
Net Weight:	*kg 190*
Gross Weight:	*kg 260*

VB 5210 CE FIAT PETROL ENGINE CARBURETTOR FEEDING (on stand with wheels) - electrical

VB 5212 IEE FIAT PETROL ENGINE WITH ELECTRONIC FUEL INJECTION - MULTI-POINT (on stand with wheels) - electrical

VB 5210 CE

Main technical specifications:

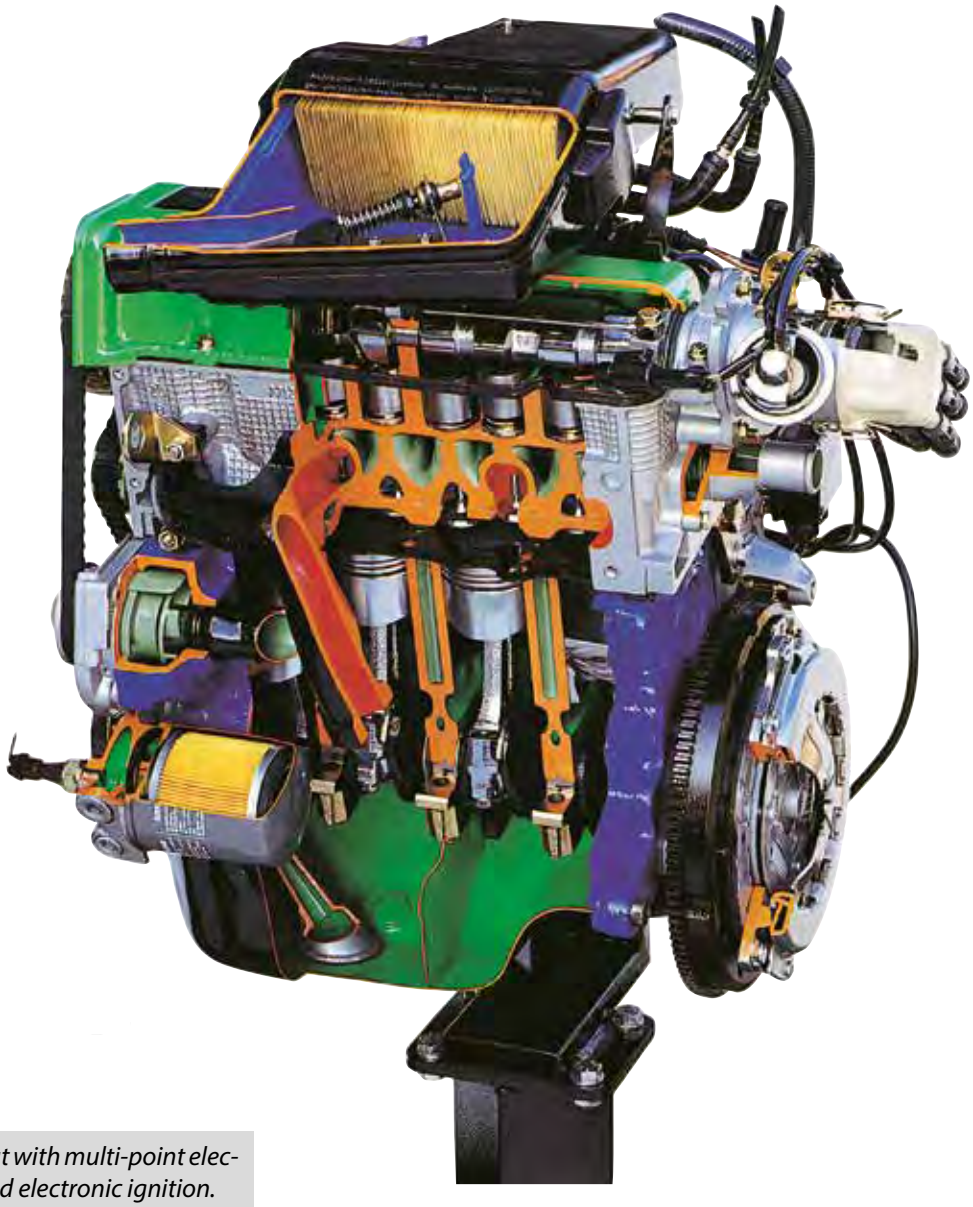
- *4 in-line cylinders*
- *Displacement: 1000/1300 cu. cm*
- *Overhead camshaft - OHC*
- *Carburettor*
- *Electronic ignition*
- *Alternator*
- *Toothed belt*

VB 5212 IEE

Main technical specifications:

- *4 in-line cylinders*
- *Displacement 1245 cc*
- *Overhead camshaft -OHC*
- *Electronic injection multipoints*
- *Electronic ignition*
- *Toothed belt*
- *Alternator*

Indicative picture for reference only



VB 5212 IEE

Same as VB 5210IEE but with multi-point electronic fuel injection and electronic ignition.

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

VB 5210 CE / **VB 5212 IEE** **Approx. weight and dim.:**	
Cm:	*67x87x85h*
Net Weight:	*kg 60*
Gross Weight:	*kg 120*

VB 5210 C - VB 5210 IE - VB 5212 IE

VB 5210 CM FIAT PETROL ENGINE CARBURETTOR FEEDING (on stand with wheels) - manual

VB 5210 IEM FIAT PETROL ENGINE WITH ELECTRONIC FUEL INJECTION - MONOJETRONIC (on stand with wheels) - manual

VB 5212 IEM FIAT PETROL ENGINE WITH ELECTRONIC FUEL INJECTION - MULTI-POINT (on stand with wheels) - manual

VB 5210 CM

Main technical specifications:

- *4 in-line cylinders*
- *Displacement: 1000/1300 cu. cm*
- *Overhead camshaft - OHC*
- *Carburettor*
- *Electronic ignition*
- *Alternator*
- *Toothed belt*

VB 5210 IEM - VB 5212 IEM

Main technical specifications:

- *4 in-line cylinders*
- *Displacement 1245 cc*
- *Overhead camshaft - OHC*
- *Electronic injection*
- *Electronic ignition*
- *Toothed belt*
- *Alternator*

Indicative picture for reference only

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

VB 5210 CM

Same as VB 5210CE but operated manually through a crank handle.

VB 5210 IEM

Same as VB 5210IEE but operated manually through a crank handle.

VB 5212 IEM

Same as VB 5212IEE but operated manually through a crank handle.

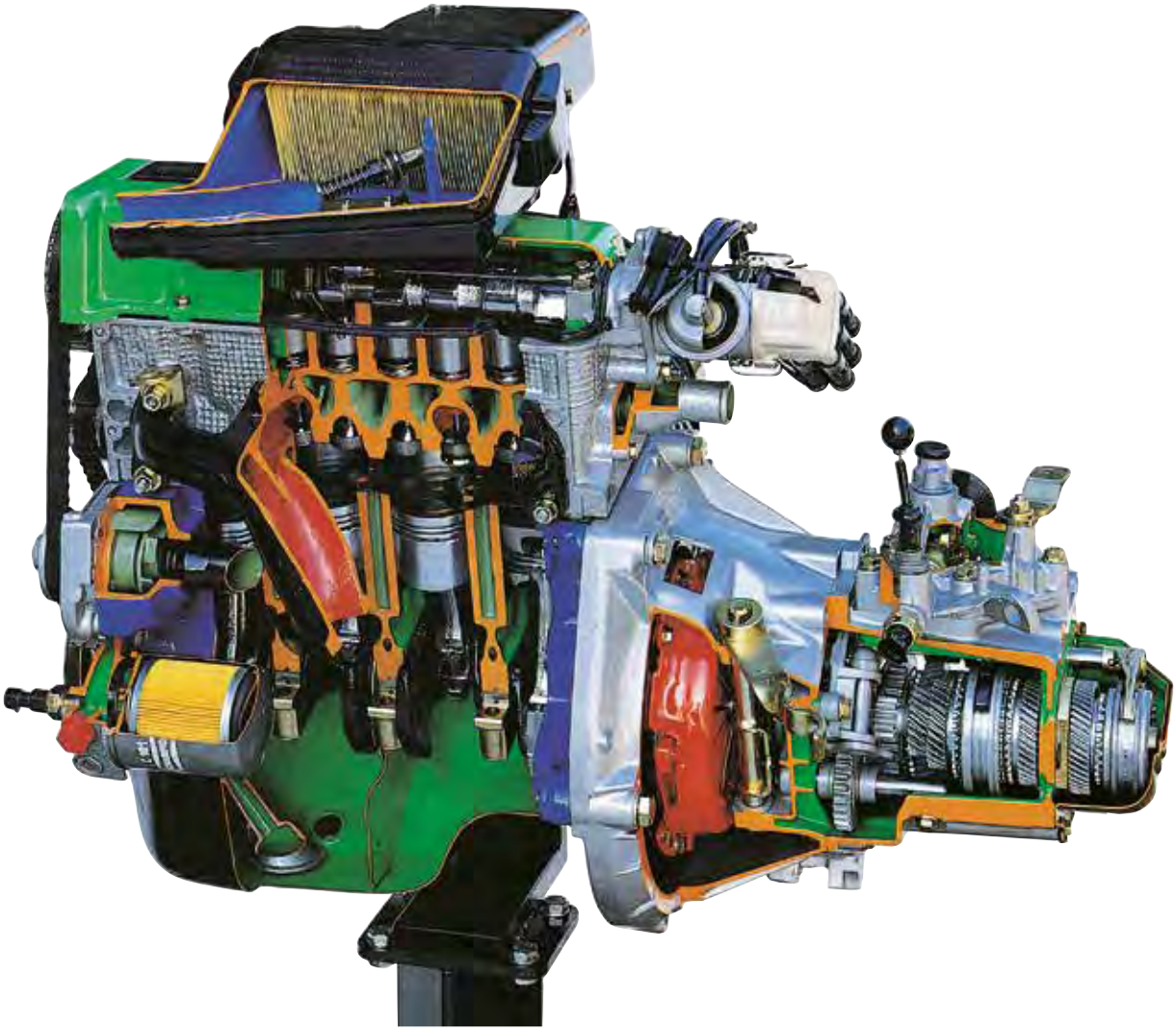
VB 5210 CM - VB 5210 IEM - VB 5212 IEM

Approx. weight and dim.:

Cm:	*67x87x85h*
Net Weight:	*kg 60*
Gross Weight:	*kg 120*

VB 5220 CE FIAT PETROL ENGINE WITH CARBURETTOR + GEARBOX (on stand with wheels) - electrical

VB 5222 IEE FIAT PETROL ENGINE WITH MULTI-POINT ELECTRONIC INJECTION + GEARBOX (on stand with wheels) - electrical



Indicative picture for reference only

VB 5220 CE

Main technical specifications:

- *4 in-line cylinders*
- *Displacement: 1000/1300 cu. cm*
- *Overhead camshaft - OHC*
- *Carburettor*
- *Electronic ignition*
- *Timing belt distribution*
- *Gearbox: 5 forward speeds + reverse with differential*

The engine operates electrically at 220 volts and run at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

VB 5222 IEE

Main technical specifications:

- *4 in-line cylinders*
- *Displacement: 1250 cc*
- *Overhead camshaft - OHC*
- *Electronic ignition*
- *Multi-point electronic injection*
- *Gearbox with 5F + R + differential*

	VB 5220 CE	VB 5222 IEE
Approx. weight and dim.:		
Cm:	*120x70x100h*	
Net Weight:	*kg 90*	
Gross Weight:	*kg 140*	

INJECTION CHASSIS

VB 5272E PETROL MULTI-POINT ENGINE CHASSIS WITH ABS AND HYDRAULIC POWER STEERING + WORKING LIGHT SYSTEM (on stand with wheels) - electrical

VB 5273E PETROL MULTI-POINT ENGINE CHASSIS WITH ABS AND HYDRAULIC POWER STEERING (on stand with wheels) - electrical

Indicative picture for reference only

VB 5272E

Main technical specifications:

- *Fiat chassis with front drive (transversally mounted engine)*
- *Petrol engine, 4 cylinders, displacement: 1200 Cu. Cm, complete of all accessories*
- *Electronic injection MPI (Multipoint) and electronic ignition controlled by a single electronic ECU (engine control unit)*
- *Catalytic converter with oxygen (Lambda) sensor*
- *Gearbox: 5 forward speeds+reverse+ differential*
- *Hydraulic power steering with double-jointed steering column*
- *Brake system with 4 sensors ABS*
- *Radiator with electric fan*
- *Front-disc brake*
- *Rear-drum or disc brake*
- *Independent wheels McPherson front suspension with oscillating arms*
- *Rear independent suspensions with oscillating arms*
- *Working front and back lighting system controlled by a dashboard*

The engine operates electrically 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

VB 5273E

Same as VB 5272E, but without light system.

VB 5272E - VB 5273E

Approx. weight and dim.:

Cm:	*220x160x115h*
Net Weight:	*kg 290*
Gross Weight:	*kg 400*

VB 5274E STANDARD PETROL MULTI-POINT ENGINE CHASSIS WITH WORKING LIGHT SYSTEM (on stand with wheels) - electrical

VB 5275E STANDARD PETROL MULTI-POINT ENGINE CHASSIS (on stand with wheels) - electrical

VB 5274 - VB 5275

VB 5274E

Main technical specifications:

- *Fiat chassis with front drive (transversally mounted engine)*
- *Petrol engine, 4 cylinders, displacement: 1200 Cu. Cm, complete of all accessories*
- *Electronic injection MPI (Multi-point) and electronic ignition controlled by a single electronic ECU (engine control unit)*
- *Catalytic converter with oxygen (Lambda) sensor*
- *Gearbox: 5 forward speeds+reverse+ differential*
- *Driving box gauge line with double-jointed steering column*
- *Radiator with electric fan*
- *Double circuit brake system with servo brake*
- *Front-disc brake*
- *Rear-drum brake*
- *Working front and rear light system controlled by a dashboard*

VB 5275E

Same as VB 5274E, but without light system.

The engine operates electrically at 230 Volts/ 50Hz and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

VB 5274E - VB 5275E

Approx. weight and dim.:

Cm:	*220x160x115h*
Net Weight:	*kg 290*
Gross Weight:	*kg 400*

Indicative picture for reference only

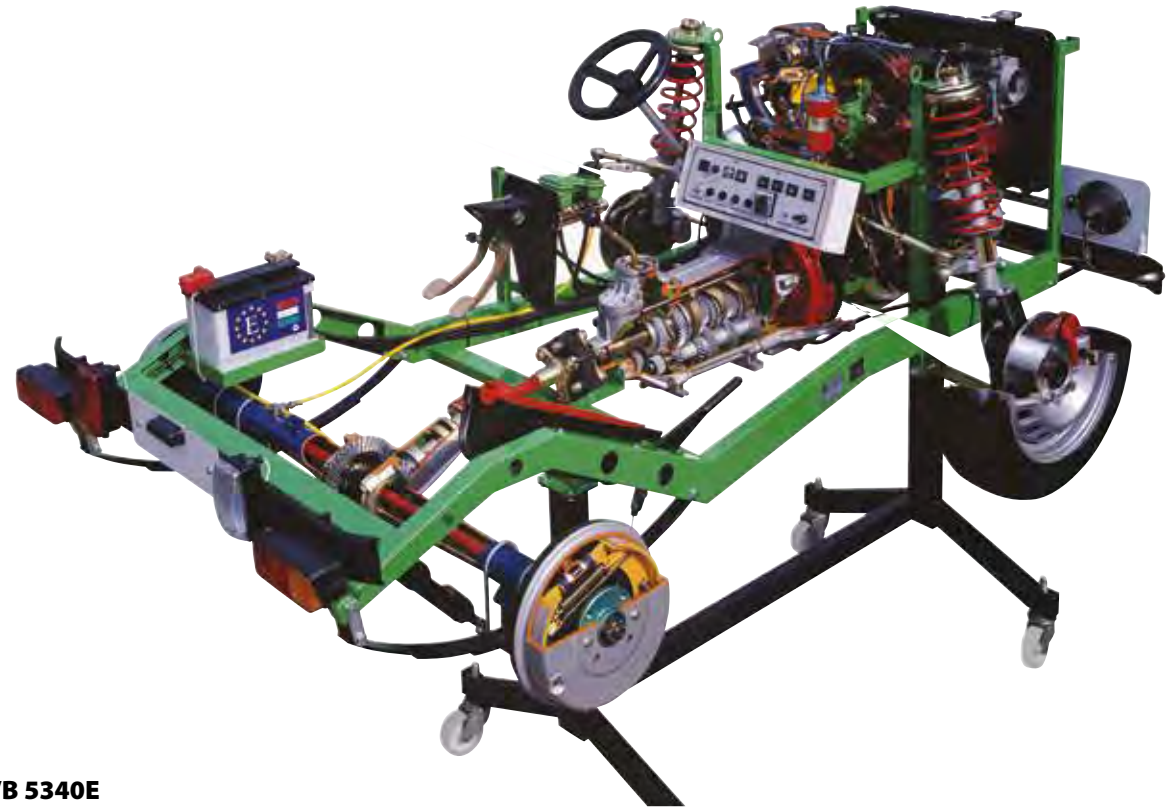
Indicative picture for reference only

VB 5274 - VB 5275

VB 5340E FIAT DOUBLE SHAFT (DOHC) WITH MULTI-POINT ELECTRONIC INJECTION WITH LIGHT SYSTEM (on stand with wheels) - electrical

VB 5350E FIAT DOUBLE SHAFT (DOHC) WITH MULTI-POINT ELECTRONIC INJECTION (on stand with wheels) - electrical

Indicative picture for reference only



VB 5340E

Main technical specifications:

- *4-stroke petrol engine 4-cylinders*
- *Displacement: 2000 cu. cm or 1600 according to availab.*
- *Gearbox: 5 forward speeds + reverse*
- *Differential with hypoid crown wheel and pinion*
- *Twin overhead camshaft driven by a toothed belt*
- *Electronic ignition*
- *Dual braking circuit*
- *McPherson front suspension*
- *Front disc brakes and rear drum brakes*
- *Rack steering box*
- *Rear leaf spring suspension*

Working light system

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc.

Many parts have been chromium, plated and galvanized for a longer life.

VB 5350E

Same as VB 5340, but without working light system.

VB 5340E - VB 5350E

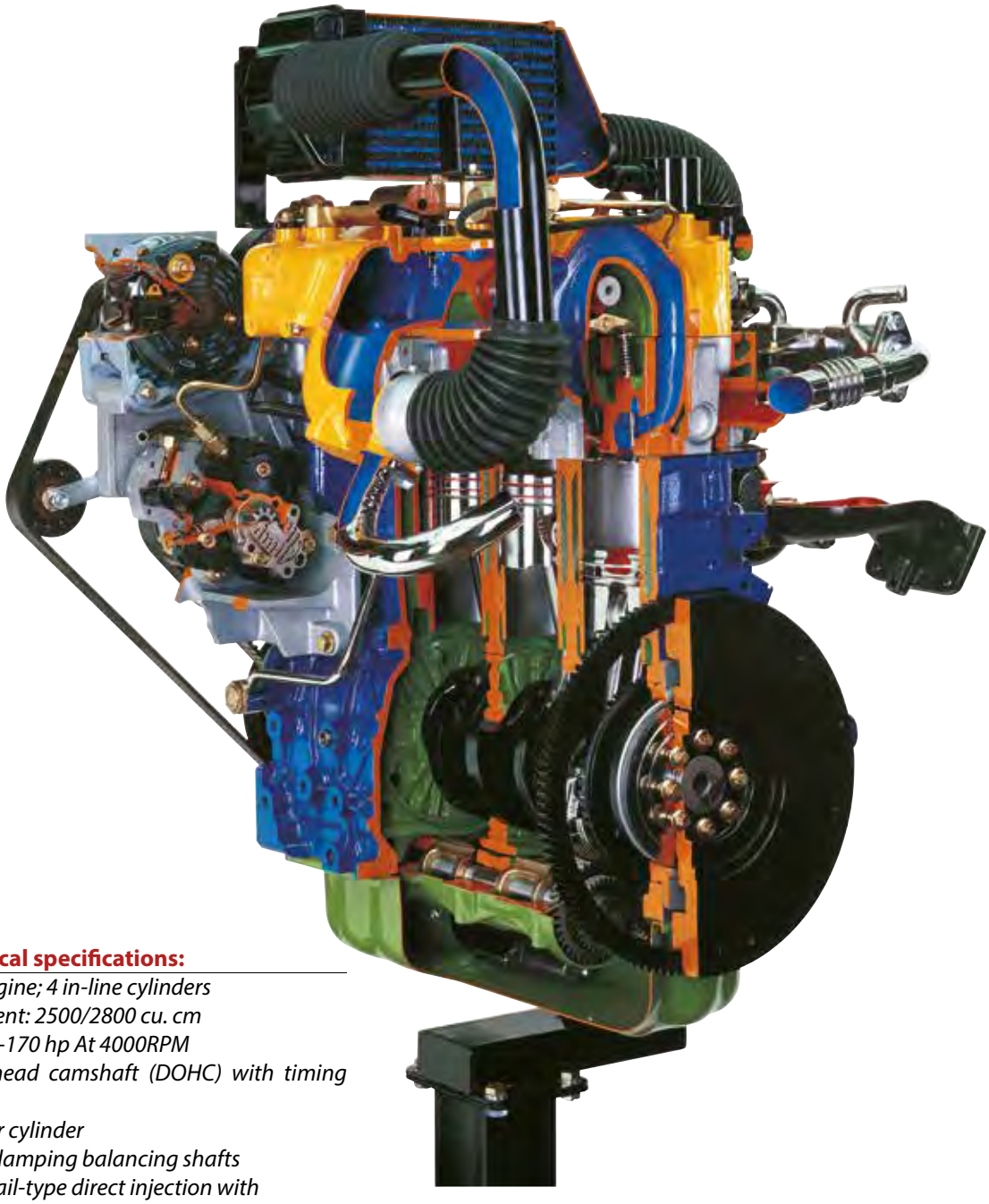
Approx. weight and dim.:

Cm:	*145x220x100h*
Net Weight:	*kg 300*
Gross Weight:	*kg 420*

VB 6010

VB 6010E 16 VALVE CHRYSLER TURBO DIESEL ENGINE WITH COMMON-RAIL INTERCOOLER (on stand with wheels) - electrical

VB 6010M 16 VALVE CHRYSLER TURBO DIESEL ENGINE WITH COMMON-RAIL INTERCOOLER (on stand with wheels) - manual



Indicative picture for reference only

VB 6010E

Main technical specifications:

- *4 stroke engine; 4 in-line cylinders*
- *Displacement: 2500/2800 cu. cm*
- *Power: 150-170 hp At 4000RPM*
- *Twin overhead camshaft (DOHC) with timing belt*
- *4 valves per cylinder*
- *Vibration-damping balancing shafts*
- *Common rail-type direct injection with electro-injectors*
- *Turbo-supercharger with air-air intercooler*
- *Alternator-oil filter-oil pump*

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate among the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

VB 6010M

Same as VB 6010E but operated manually through a crank handle.

VB 6010E - VB 6010M

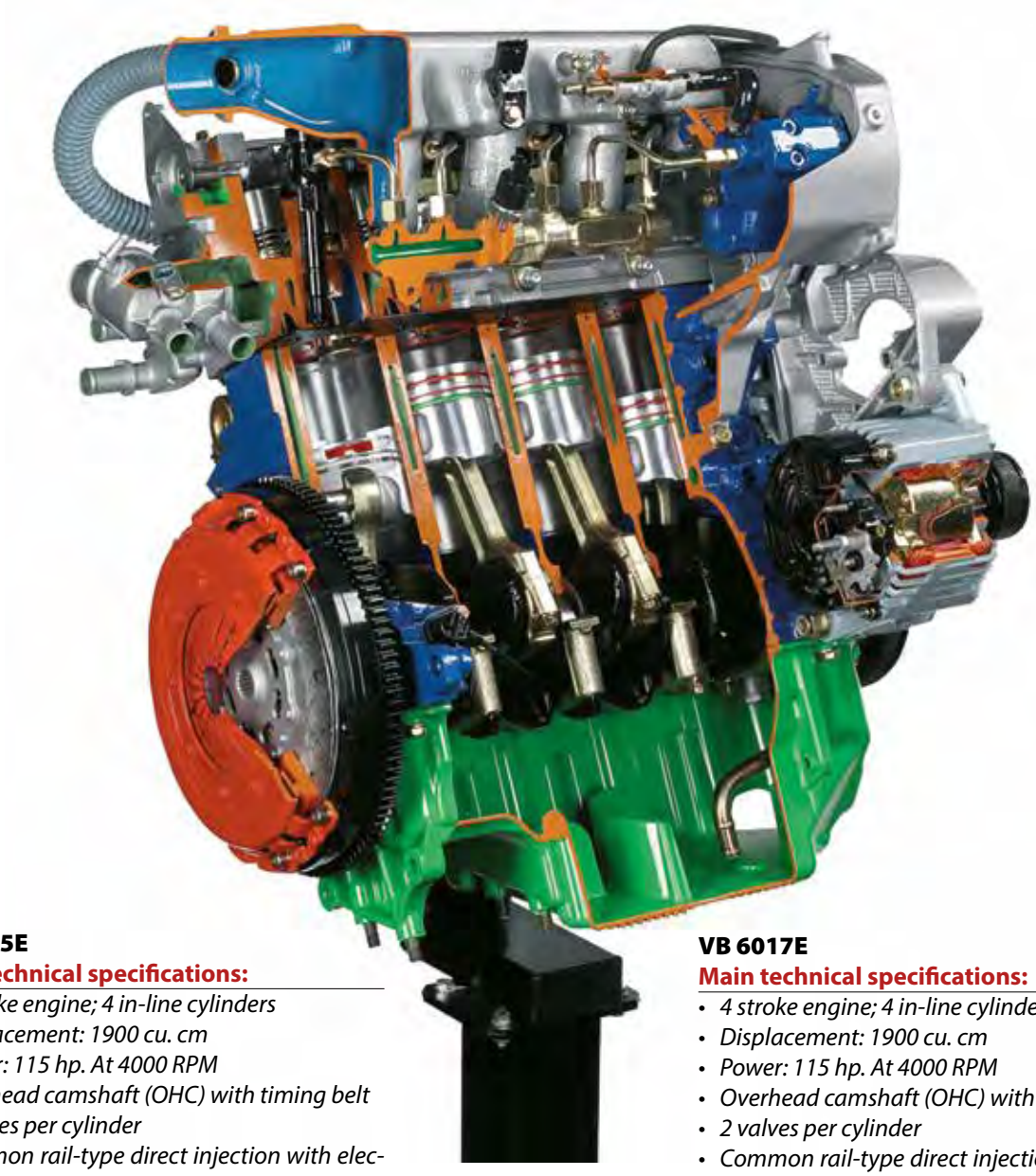
Approx. weight and dim.:

Cm:	*90x90x120h*
Net Weight:	*kg 200*
Gross Weight:	*kg 270*

VB 6015E FIAT/ALFA ROMEO 8 VALVE ENGINE with TURBO DIESEL COMMN-RAIL (on stand with wheels) –electrical

VB 6015M FIAT/ALFA ROMEO 8 VALVE ENGINE with TURBO DIESEL COMMN-RAIL (on stand with wheels) – manual

VB 6017E FIAT/ALFA ROMEO 8 VALVE ENGINE with TURBO DIESEL COMMN-RAIL WITH FRONT DRIVE GEARBOX 5 SPEEDS + REVERSE + DIFFERENTIAL (on stand with wheels) – electrical



Indicative picture for reference only

VB 6015E

Main technical specifications:

- *4 stroke engine; 4 in-line cylinders*
- *Displacement: 1900 cu. cm*
- *Power: 115 hp. At 4000 RPM*
- *Overhead camshaft (OHC) with timing belt*
- *2 valves per cylinder*
- *Common rail-type direct injection with electro-injectors*
- *Turbo-supercharger*
- *Alternator-oil filter-oil pump*

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

VB 6017E

Main technical specifications:

- *4 stroke engine; 4 in-line cylinders*
- *Displacement: 1900 cu. cm*
- *Power: 115 hp. At 4000 RPM*
- *Overhead camshaft (OHC) with timing belt*
- *2 valves per cylinder*
- *Common rail-type direct injection with electro-injectors*
- *Turbo-supercharger*
- *Alternator-oil filter-oil pump*
- *Gearbox 5 speeds + reverse*
- *Differential*
- *Rear Drive gearbox on request*

VB 6015M

Same as VB 6015E but operated electrically.

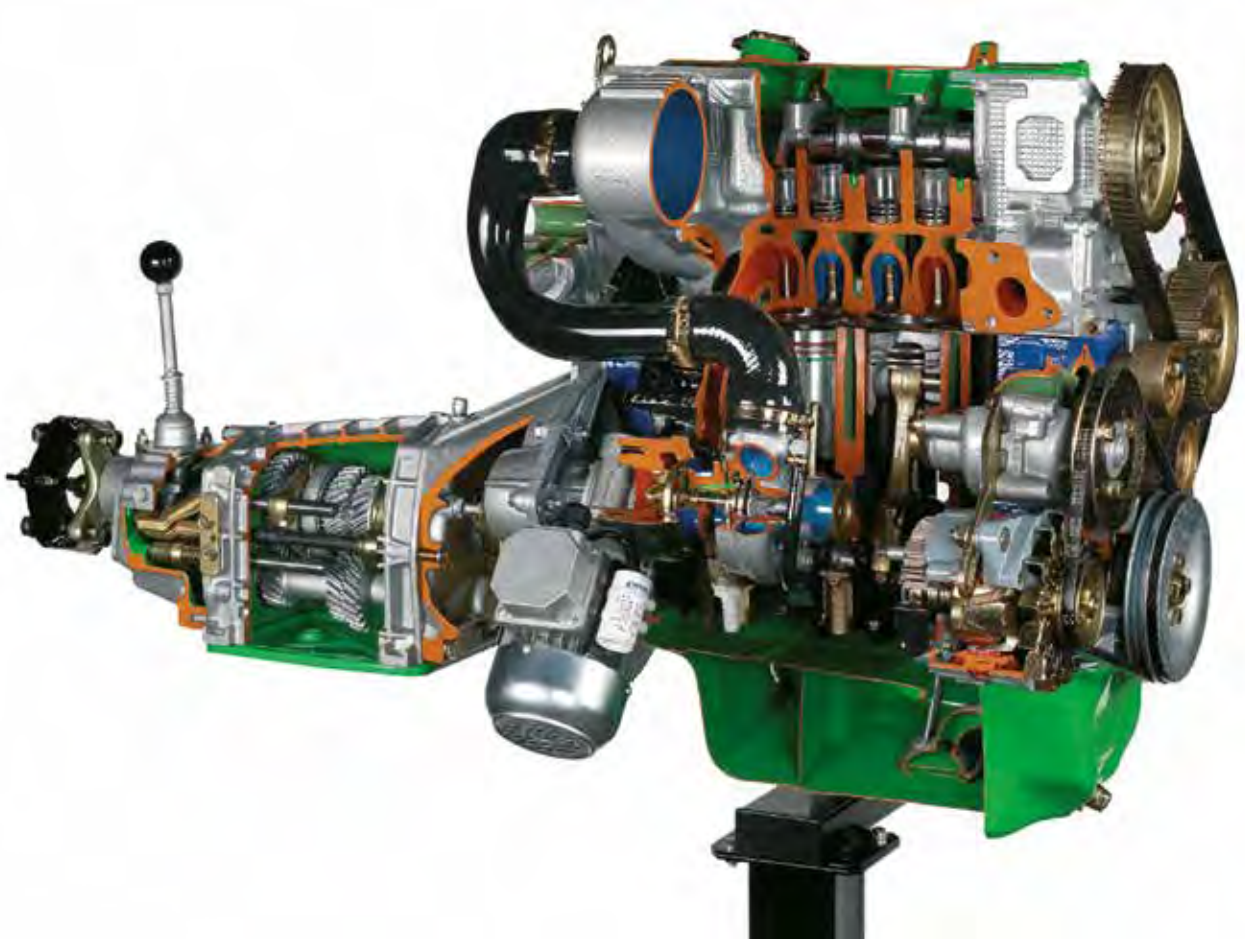
VB 6015E - VB 6015M - VB 6017E

Approx. weight and dim.:

Cm:	*90x100x120h*
Net Weight:	*kg 150*
Gross Weight:	*kg 210*

VB 6070E REAR DRIVE TURBO DIESEL ENGINE WITH CLUTCH GEARBOX (on stand with wheels) - electrical

VB 6071E REAR DRIVE DIESEL ENGINE WITH CLUTCH GEARBOX WITHOUT TURBOSUPERCHARGER (on stand with wheels) - electrical



Indicative picture for reference only

VB 6070E

Main technical specifications:

- *4 stroke engine; 4 cylinders in line*
- *Displacement: 1700 cu. cm*
- *Indirect injection*
- *Feeding by turbosupercharger*
- *VE Bosch type rotary injection pump*
- *Overhead camshaft (OHC)*
- *Distribution through a toothed belt*
- *Alternator*
- *Thermostatic valve*
- *Gearbox: 4 forward speeds + reverse*
- *Single-plate clutch with diaphragm*
- *Water cooling*

VB 6071E

Same as VB 6070E but without turbo-supercharger.

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

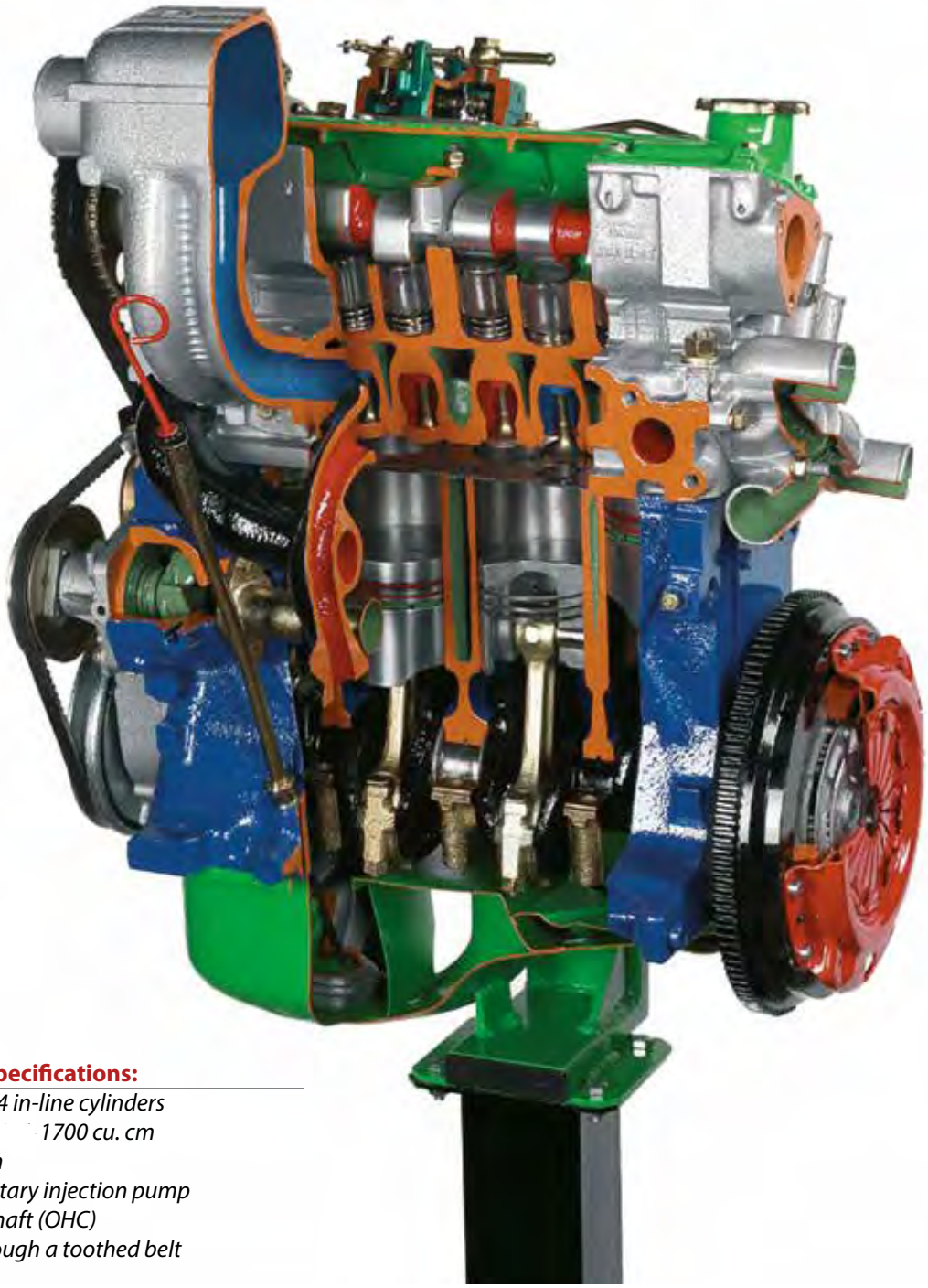
VB 6070E - VB 6071E

Approx. weight and dim.:

Cm:	*60x160x100h*
Net Weight:	*kg 150*
Gross Weight:	*kg 210*

VB 6065E DIESEL ENGINE FOR SMALL CAR (on stand with wheels) - electrical

VB 6065M DIESEL ENGINE FOR SMALL CAR (on stand with wheels) - manual



Indicative picture for reference only

VB 6065E

Main technical specifications:

- *4 stroke engine; 4 in-line cylinders*
- *Displacement: 1700 cu. cm*
- *Indirect injection*
- *VE Bosch type rotary injection pump*
- *Overhead camshaft (OHC)*
- *Distribution through a toothed belt*
- *Alternator*
- *Thermostatic valve*
- *Water cooling*

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

VB 6065M

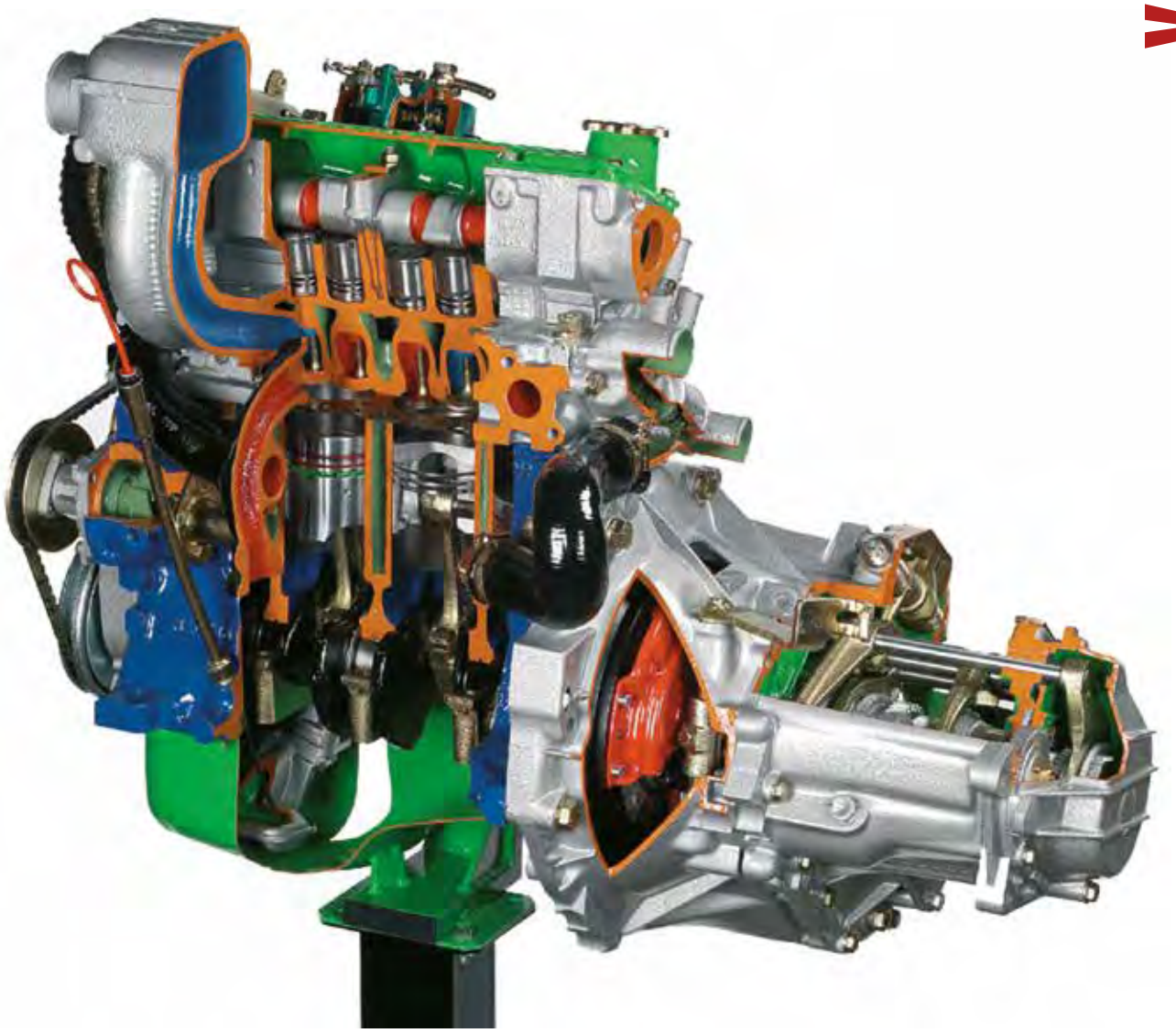
Same as VB 6065E but operated manually through a crank handle.

VB 6065E - VB 6065M

Approx. weight and dim.:

Cm:	*85x130x100h*
Net Weight:	*kg 160*
Gross Weight:	*kg 220*

VB 6068E FRONT DRIVE DIESEL ENGINE WITH CLUTCH-GEARBOX (on stand with wheels) - electrical



Indicative picture for reference only

VB 6068E

Main technical specifications:

- *4 stroke engine; 4 in-line cylinders*
- *Displacement: 1400-1700 cu. cm*
- *Indirect injection*
- *VE Bosch type rotary injection pump*
- *Overhead camshaft (OHC)*
- *Distribution through a toothed belt*
- *Alternator*
- *Thermostatic valve*
- *Power: 45/70 cv*
- *Gearbox: 5 forward speeds + reverse and differential*
- *Single-plate clutch with diaphragm*

The engine operates electrically at 220volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

VB 6068E

Approx. weight and dim.:

Cm:	*130x86x100h*
Net Weight:	*kg 140*
Gross Weight:	*kg 200*

VB 6075M TURBO DIESEL ENGINE (CAR AND LORRY) WITH DIRECT FUEL INJECTION (on stand with wheels) - manual

VB 6075

Indicative picture for reference only

Main technical specifications:

- *4 stroke engine; 4 in-line cylinders*
- *Displacement: 2500 cu. cm*
- *Direct/indirect injection*
- *Feeding by turbo-supercharger*
- *VE Bosch type rotary injection pump*
- *Overhead camshaft (OHC)*
- *Distribution through a toothed belt*
- *Alternator*
- *Thermostatic valve*
- *Intercooler water-oil*
- *Water cooling*

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

Approx. weight and dim.:

Cm:	*90x100x120h*
Net Weight:	*kg 200*
Gross Weight:	*kg 260*

VB 6077E 4 CYLINDERS DIESEL ENGINE FOR FARM TRACTOR (on stand with wheels) - electrical

Indicative picture for reference only

Main technical specifications:

- *4 cylinders indirect injection*
- *OHV camshaft in the crankcase*
- *Bosch in-line injection pump*
- *Gear timing*
- *Water cooling*
- *Gear oil pump*
- *Displacement:1900 cu. cm*

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

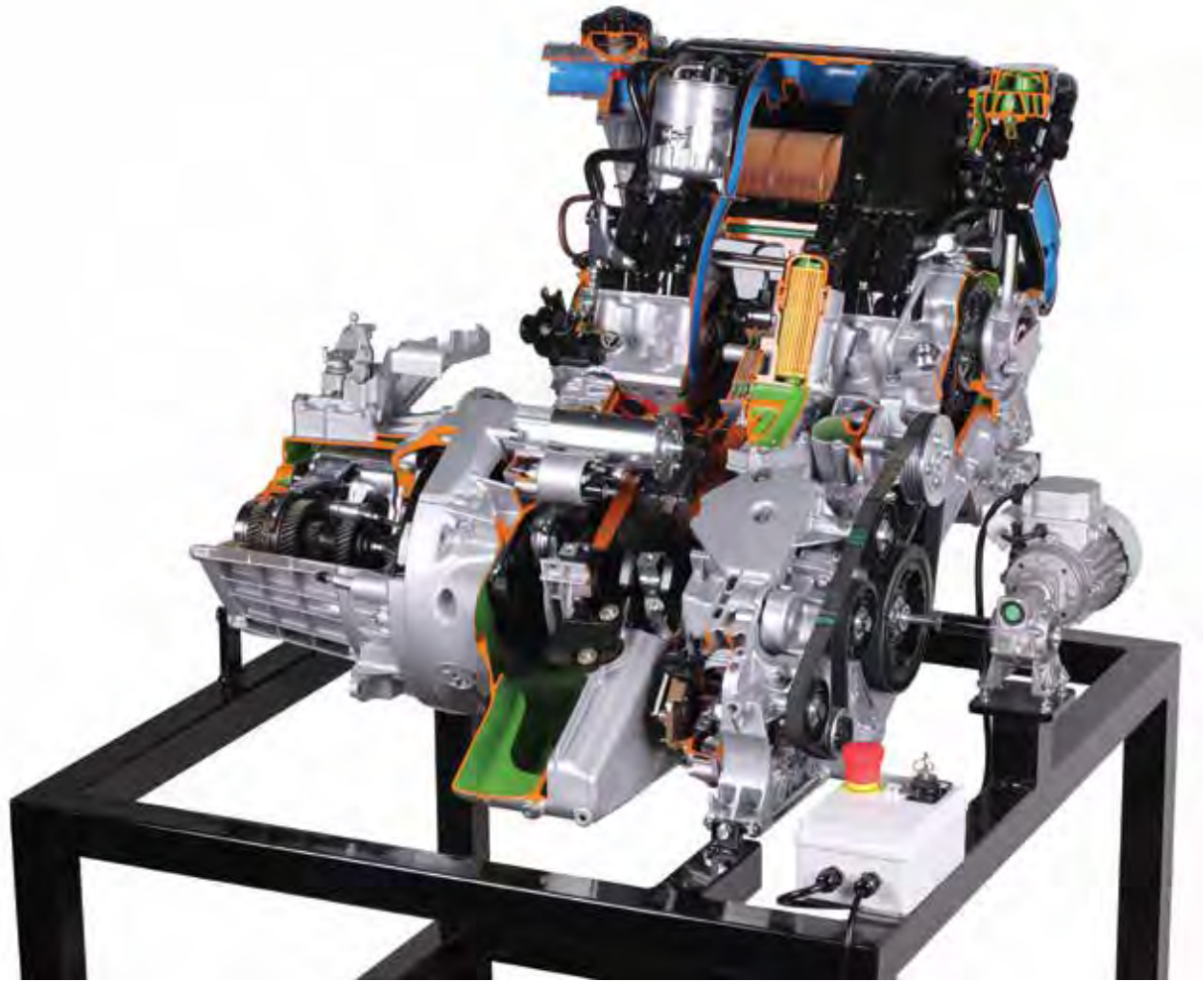
This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

Approx. weight and dim.:

Cm:	*90x100x100h*
Net Weight:	*kg 280*
Gross Weight:	*kg 340*

VB 6078E MERCEDES A CLASS TURBO DIESEL ENGINE 16 VALVES + GEARBOX (on stand with wheels) – electrical

VB 6078M MERCEDES A CLASS TURBO DIESEL ENGINE 16 VALVES + GEARBOX (on stand with wheels) – manual



Indicative picture for reference only

Main technical specifications:

- *Mercedes A class diesel engine*
- *Direct injection*
- *4 stroke, 4 cylinders*
- *Displacement: 1700 cc*
- *Double overhead camshaft (DOHC)*
- *16 valves*
- *Timing chain*
- *Common rail turbo diesel*
- *Oil pump, water cooling*
- *Air filter with box*
- *Intake manifold, Air mass flow sensor*
- *Starter motor alternator*
- *Clutch*
- *Gearbox 5 forward speeds + reverse*
- *Differential*

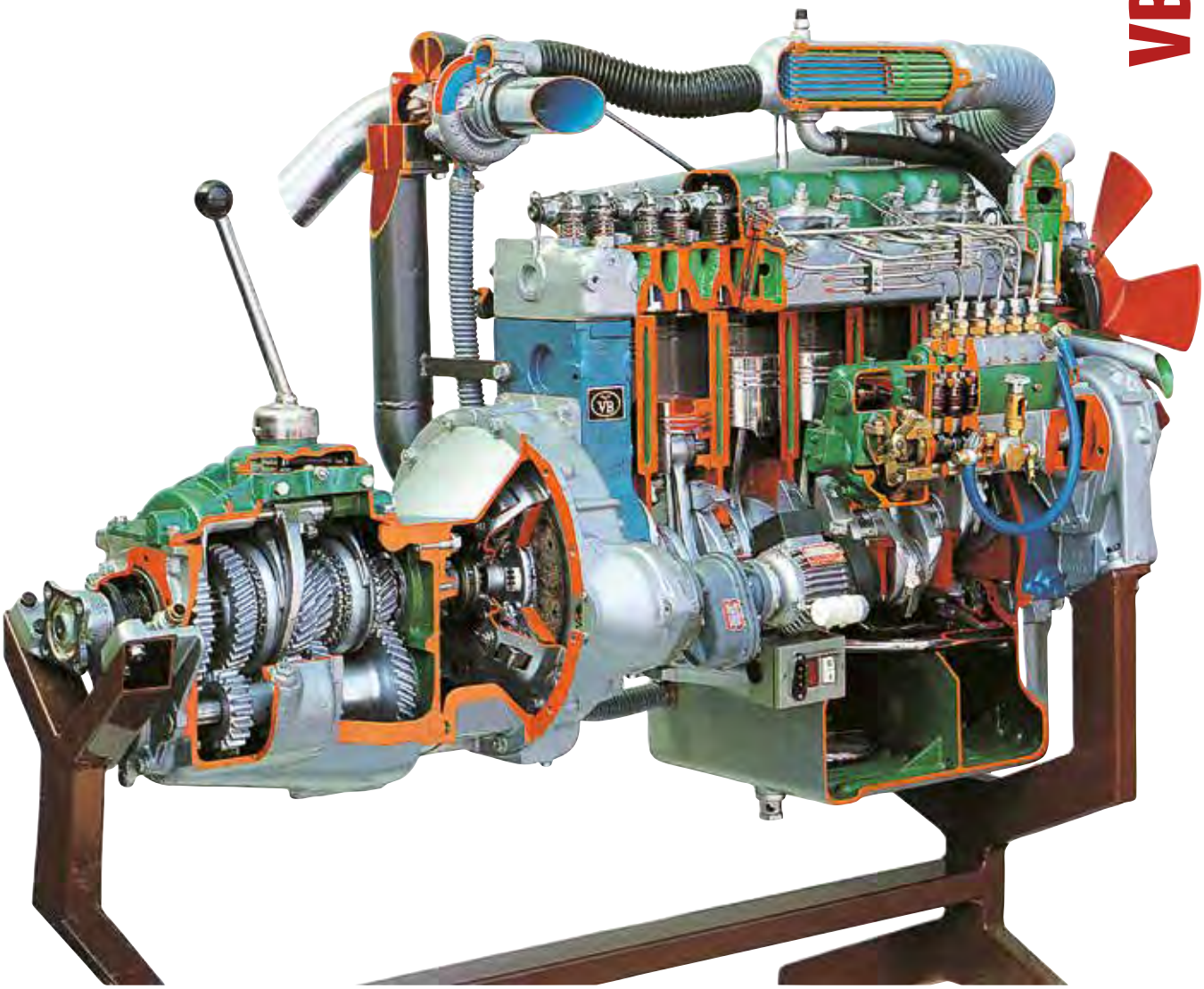
The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

Approx. weight and dim.:

Cm:	*110x110x150h*
Net Weight:	*kg 200*
Gross Weight:	*kg 280*

VB 6080E 6 CYLINDERS INTERCOOLER TURBO DIESEL ENGINE 5200 CU.CM (for trucks) (on a sturdy stand with wheels) - electrical



Indicative picture for reference only

Main technical specifications:

- *4 stroke engine; 6 in-line cylinders*
- *Displacement: 5200 cu. cm*
- *Direct injection*
- *Bosch type in-line injection pump with mechanical governor*
- *Intercooler air-air*
- *Camshaft in the crankcase*
- *Spring single-plate clutch*
- *Fuel fed by turbo-supercharger and intercooler*
- *Gearbox: 4 forward speeds + reverse*
- *Geared distribution*

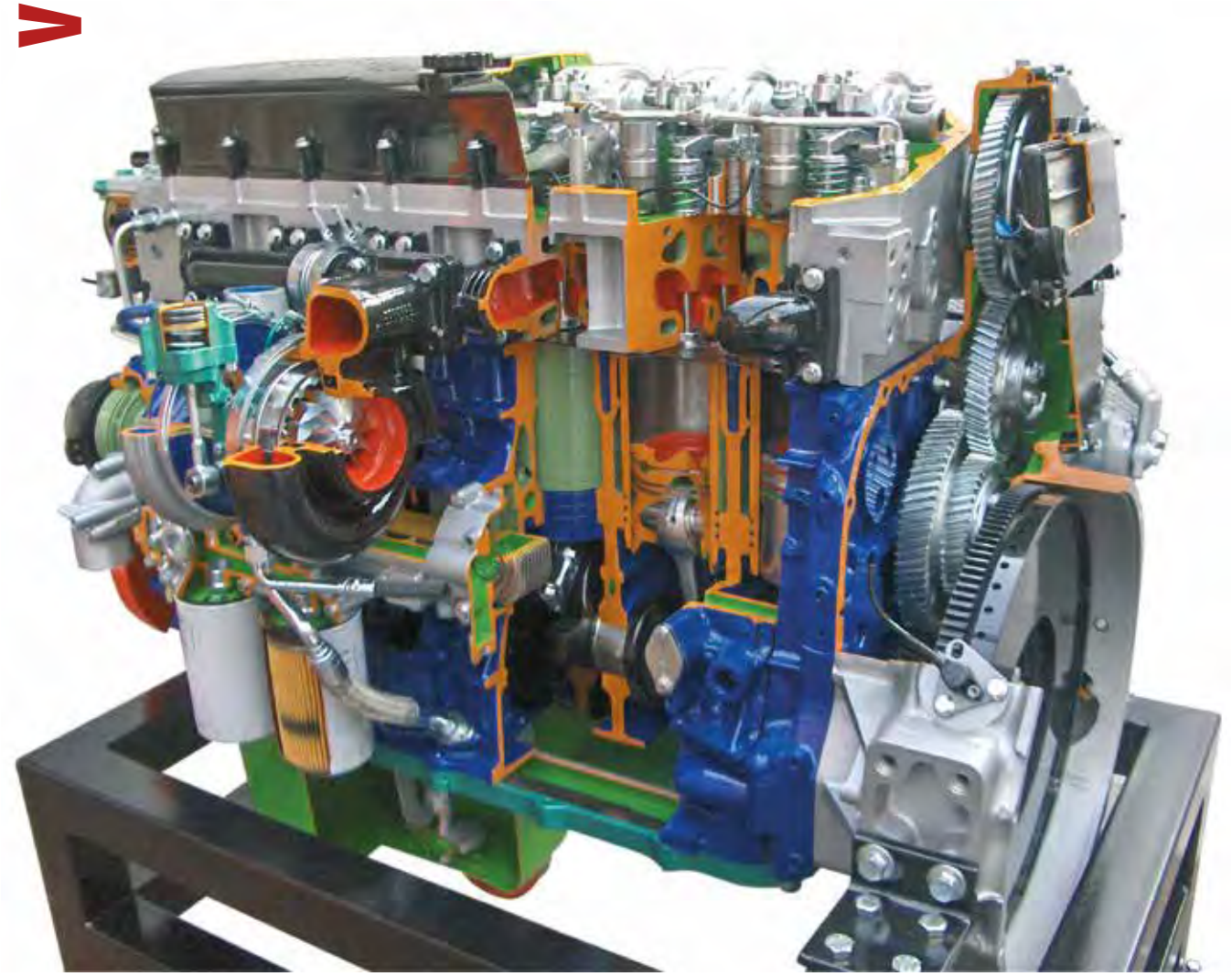
The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

Approx. weight and dim.:

Cm:	*90x180x170h*
Net Weight:	*kg 450*
Gross Weight:	*kg 560*

VB 6083E 6 CYLINDERS DIESEL ENGINE TRUCK "IVECO" CURSOR WITH ELECTRONICALLY CONTROLLED PUMP INJECTORS (on a sturdy stand with wheels) - electrical



Indicative picture for reference only

Main technical specifications:

- *Displacement: 7790/10380 cu. Cm. according to what is available*
- *4 stroke; 6 in-line cylinders*
- *4 valves per cylinder*
- *Overhead camshaft (OHC)*
- *Water cooling*
- *Turbo-compressor*
- *Pump injectors electronically controlled*
- *Pre-heating device*

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

Approx. weight and dim.:

Cm:	*200x105x150h*
Net Weight:	*kg 950*
Gross Weight:	*kg 1200*

VB 6084E 8 V CYLINDERS TURBO DIESEL ENGINE FOR TRUCK "IVECO TURBOSTAR 190-38" 17.200 CU.CM (on a sturdy stand with wheels) - electrical

Indicative picture for reference only

Main technical specifications:

- *4 strokes, 8 V cylinders*
- *Displacement: 17.200 cu. cm*
- *Power: 380 hp*
- *Direct injection*
- *Bosch type in-line injection pump with mechanical governor*
- *Intercooler water-oil*
- *4 valves per cylinder*
- *Camshaft in the crankcase*
- *2 turbo-superchargers*
- *Geared distribution*

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

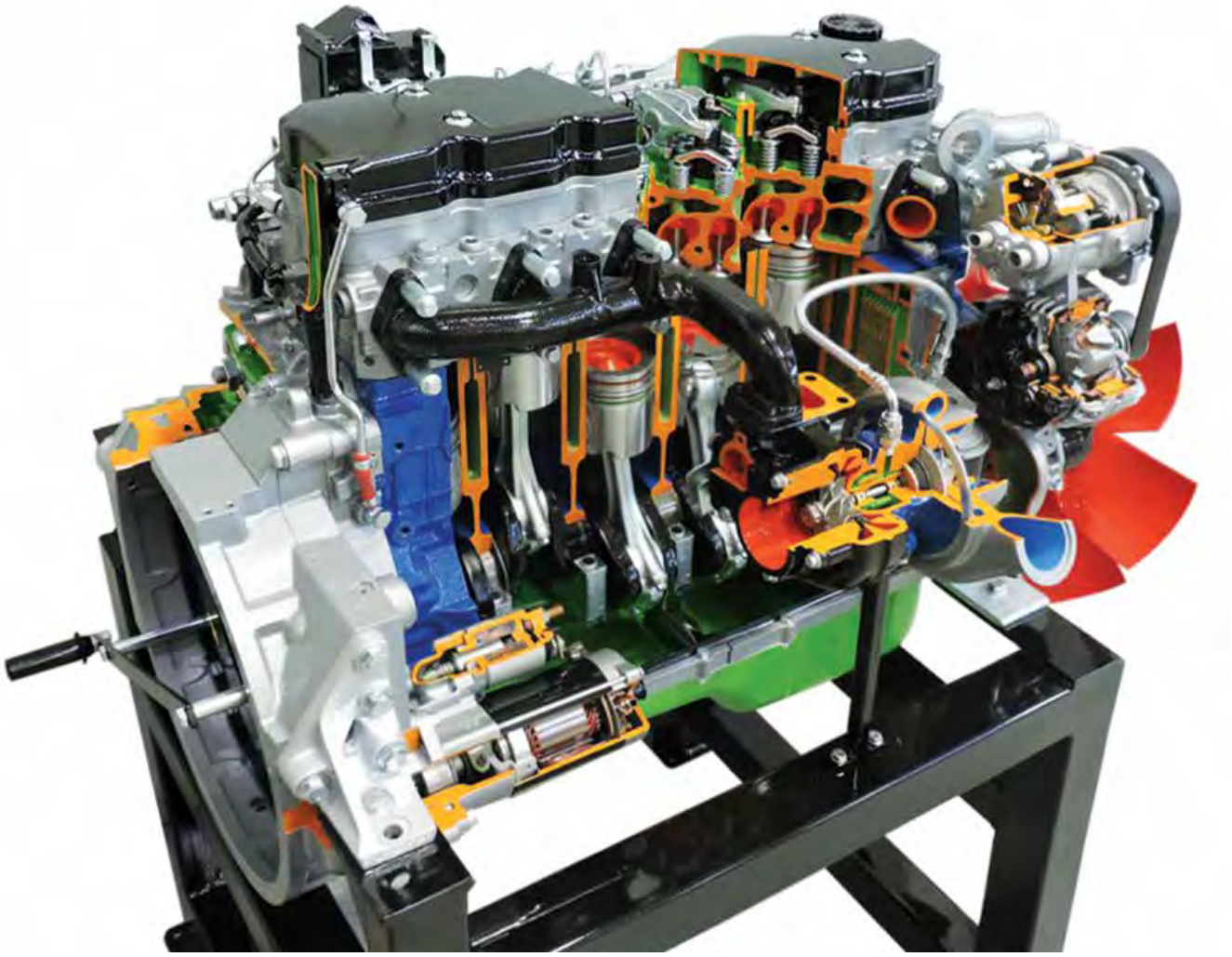
Approx. weight and dim.:

Cm:	*120x185x150h*
Net Weight:	*kg 1100*
Gross Weight:	*kg 1400*

VB 6091

VB 6091E 6 CYLINDERS TURBO DIESEL COMMON RAIL ENGINE FOR IVECO TRUCKS (on stand with wheels) – electrical

VB 6091M 6 CYLINDERS TURBO DIESEL COMMON RAIL ENGINE FOR IVECO TRUCKS (on stand with wheels) – manual



Indicative picture for reference only

Main technical specifications:

- *Displacement: 5900 Cm. cu*
- *6 cylinders in-line with direct injection*
- *Camshaft in the crankcase (OHV)*
- *Geared timing*
- *4 valves per cylinder*
- *Bosch common-rail injection*
- *Waste-gate turbocharger*
- *Alternator*
- *Air compressor*
- *Engine oil rotor pump*
- *Flange power steering pump*
- *Air conditioning pump*
- *Cooling fan with viscous joint*

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

Approx. weight and dim.:

Cm:	*140x100x165h*
Net Weight:	*kg 510*
Gross Weight:	*kg 630*

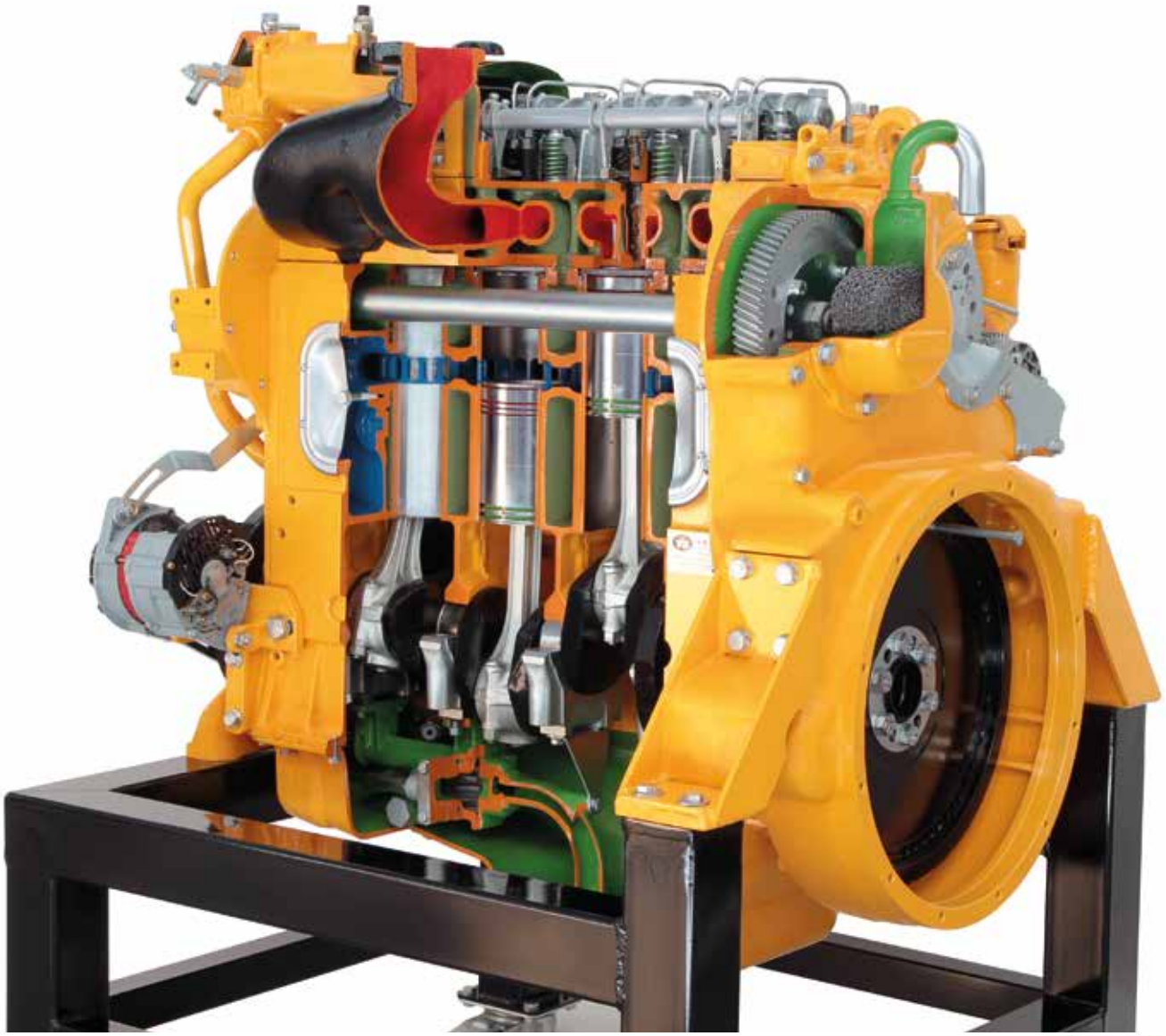
VB 6122E 2 STROKE 4 CYLINDERS DETROIT DIESEL ENGINE (on stand with wheels) - electrical

Accurate section of a real industrial engine produced by the American Detroit Diesel; this engine is widely used in industrial and nautical fields.

The following components are clearly shown and highlighted:

- Air intake channels
- Lobe-type volumetric compressor
- Exhaust valves (2 or 4 per cylinder) controlled by camshaft in the monobloc
- Direct injection by means of a pump/injector for each cylinder
- Vibration-damping balancing shafts
- Water cooling with centrifugal pump
- Lubrication circuit with geared oil pump

Indicative picture for reference only



The engine operates electrically by means of a 220V gear-motor.

Approx. weight and dim.:

Cm:	*110x100x150h*
Net Weight:	*kg 630*
Gross Weight:	*kg 780*

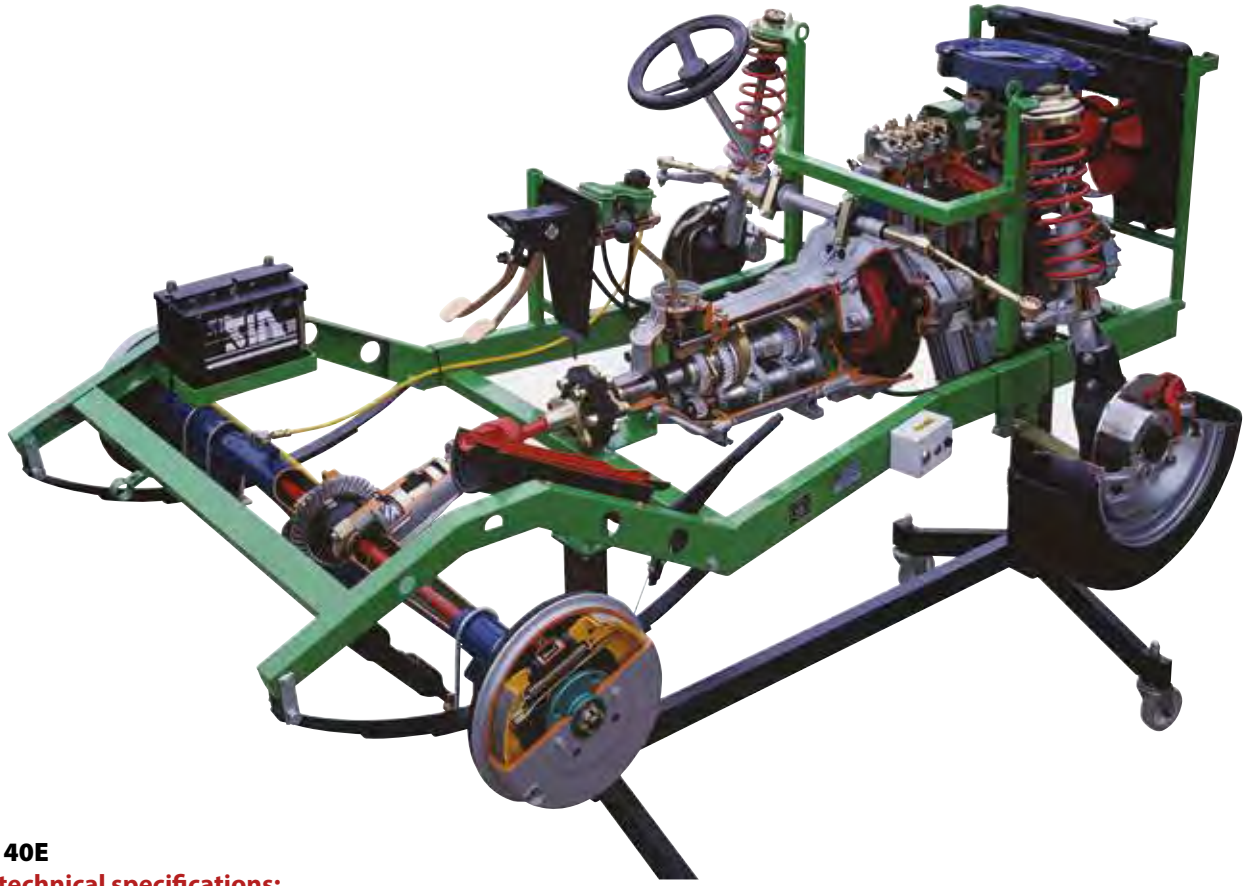
VB 6140 - VB 6150 - VB 6160 - VB 6170

VB 6140E FIAT TURBO DIESEL REAR DRIVE CHASSIS (on a sturdy stand with wheels) - electrical

VB 6150E FIAT DIESEL REAR DRIVE CHASSIS WITHOUT TURBOSUPERCHARGER (on a sturdy stand with wheels) - electrical

VB 6160E FIAT TURBO DIESEL REAR DRIVE CHASSIS WITH WORKING LIGHT SYSTEM (on a sturdy stand with wheels) - electrical

VB 6170E FIAT DIESEL REAR DRIVE CHASSIS WITHOUT TURBOSUPERCHARGER + WORKING LIGHT SYSTEM (on a sturdy stand with wheels) - electrical



Indicative picture for reference only

VB 6140E

Main technical specifications:

- *4 stroke engine; 4 in-line cylinders*
- *Displacement: 1700 cc*
- *Gearbox: 5 forward speeds+reverse*
- *Single-plate clutch with diaphragm*
- *Propeller shaft with mechanical and flexible joint*
- *Hypoid differential*
- *Front disc brakes; rear drum brakes with double circuit*
- *Rear leaf spring suspension*
- *McPherson suspension front*
- *Rack steering gear*

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

VB 6150E

Same as VB 6140E without turbo-supercharger.

VB 6160E

Same as VB 6160E complete with working light system, regulation light, rear fog lights, reverse and emergency lights, etc…
The electrical controls are assembled on a dashboard complete with warning lights.

VB 6170E

Same as VB 6150E complete with working lighting system, regulation light, rear fog lights, reverse and emergency lights, etc…
The electrical controls are assembled on a dashboard complete with warning lights.

VB 6140E - VB 6150E - VB 6160E - VB 6170E

Approx. weight and dim.:

Cm:	*145x220x100h*
Net Weight:	*kg 420*
Gross Weight:	*kg 560*

VB 6175E FIAT TURBO DIESEL CHASSIS WITH FRONT DRIVE AND WORKING LIGHT SYSTEM (on a sturdy stand with wheels) - electrical

VB 6176E FIAT TURBO DIESEL CHASSIS WITH FRONT DRIVE (on a sturdy stand with wheels) - electrical

Indicative picture for reference only

VB 6175E

Main technical specifications:

- *Fiat chassis with front drive (engine transversally mounted)*
- *Diesel engine displacement: 1700 cu. Cm.; 4 cylinders*
- *Indirect injection with pre-chamber*
- *Bosch VE rotary injection pump*
- *Turbo-compressor with waste-gate valve*
- *Gearbox: 5 forward speed+reverse+differential*
- *Hydraulic power steering with double-jointed steering column*
- *Radiator with electric fan*
- *Front disc brake*
- *Rear drum brake*
- *Independent wheels McPherson front suspension with oscillating arms*
- *Rear independent suspension with coil spring and gas shock absorbers*
- *Front and rear working light system controlled by a dashboard*

The engine operates electrically at 230 volts/50Hz and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts. ELECTRICAL SYSTEM IN COMPLIANCE WITH EC STANDARDS

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium plated and galvanized for a longer life.

VB 6176E

Same as VB 6175E, without light system.

Upon Customer's request, it can be provided with ABS

The electrical controls are assembled on a dashboard complete with warning lights.

VB 6175E - VB 6176E

Approx. weight and dim.:

Cm:	*220x160x115h*
Net Weight:	*kg 400*
Gross Weight:	*kg 545*

VB 7800

VB 7800E "MOTO GUZZI" MOTORCYCLE 2 CYLINDERS 4 STROKES OHV SHAFT DRIVE TRANSMISSION WITH IGNITION PLUGS (on stand with wheels) - electrical

Indicative picture for reference only

Careful and complete section of the "Guzzi" motorcycle with V-type twin-cylinder 350/500 cu. cm. engine. All internal parts are clearly shown: battery, tank, silencer, suspensions, carburettor, coil, pistons, connecting rods, driving shaft, gearbox, selector, etc.

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

Approx. weight and dim.:

Cm:	*200x70x130h*
Net Weight:	*kg 160*
Gross Weight:	*kg 230*

VB 7850M 2/3/4 CYLINDERS MOTORCYCLE DOHC CHAIN TIMING KAWASAKI -HONDA-YAMAHA BRAND (on stand with wheels) - manual

According availability

Main technical specifications:

- *DOHC engine*
- *Chain timing*
- *Electronic ignition*

Indicative picture for reference only

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

VB 7810M CVT ENGINE 4 STROKES SINGLE-CYLINDER with CARBURETTOR (on stand with wheels)

VB 7815M CVT ENGINE 4 STROKES SINGLE-CYLINDER with ELECTRONIC INJECTION (on stand with wheels)

VB 7830M CVT ENGINE 2 STROKES SINGLE-CYLINDER with CARBURETTOR (on stand with wheels)

Main technical specifications:

- *Electronic ignition*
- *Water cooling system*
- *CVT automatic clutch*
- *Disc brake*
- *Silencer*
- *Manual functioning through crank handle*

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium plated and galvanized for a longer life.

Approx. weight and dim.:

Cm:	*100x60x80h*
Net Weight:	*kg 50*
Gross Weight:	*kg 75*

Indicative picture for reference only

VB 7831S CVT TRANSMISSION (on stand with wheels) – static

Static model of a Continuously Variable Transmission used on small motorcycle.
The following components are shown:
- Driving wheels
- Driven pulley
- Centrifugal masses
- Belt

Approx. weight and dim.:

Cm:	*160x30x40h*
Net Weight:	*kg 12*
Gross Weight:	*kg 18*

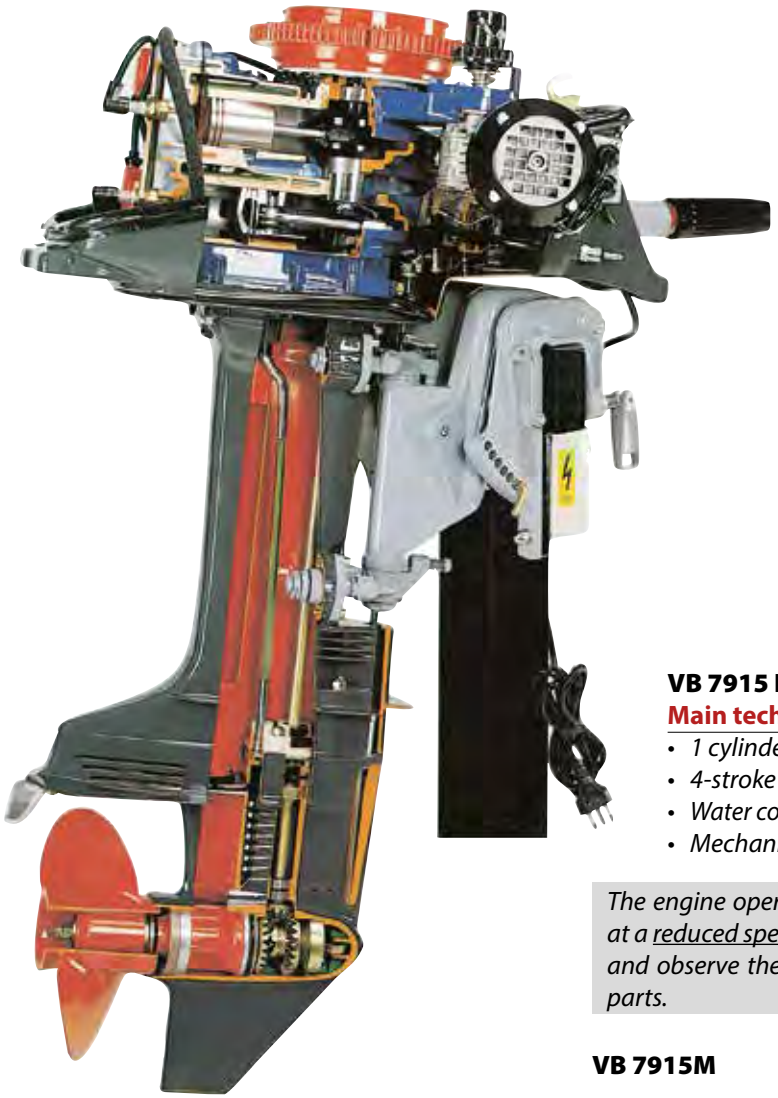
VB 7900 - VB 7915

VB 7900E MARINE OUTBOARD ENGINE 2 STROKES (on stand with wheels) - electrical

VB 7900M MARINE OUTBOARD ENGINE 2 STROKES (on stand with wheels) - manual

VB 7915E MARINE OUTBOARD ENGINE 4 STROKES (on stand with wheels) - electrical

VB 7915M MARINE OUTBOARD ENGINE 4 STROKES (on stand with wheels) - manual



Indicative picture for reference only

VB 7900E

Main technical specifications:

- *2/3 cylinders*
- *2-stroke engine*
- *Water cooling system with centrifugal pump*
- *Mechanical type converter*

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

VB 7900M

Same as VB 7900 but operated manually through a crank handle.

VB 7915 E

Main technical specifications:

- *1 cylinder*
- *4-stroke engine*
- *Water cooling system with centrifugal pump*
- *Mechanical type converter*

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

VB 7915M

Same as VB7915E but operated manually through a crank handle.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

VB 7900E - VB 7900M - VB 7915E - VB 7915M

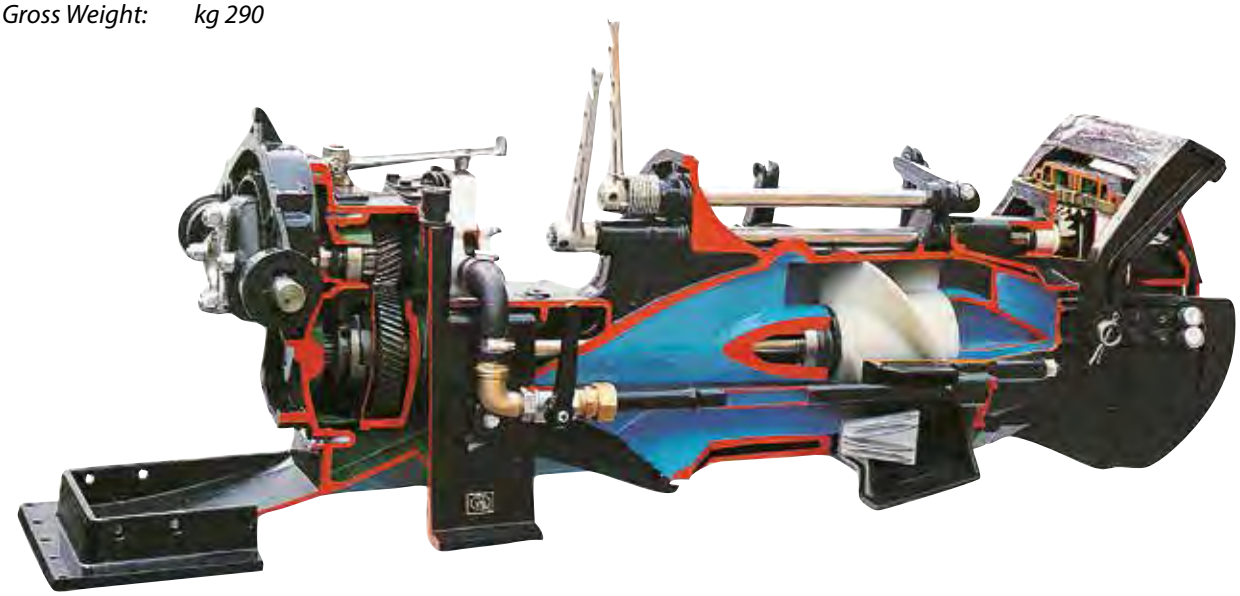
Approx. weight and dim:

Cm:	*80x80x150h*
Net Weight:	*kg 60*
Gross Weight:	*kg 100*

VB 7920M HYDROJET (on stand with wheels) - manual

Approx. weight and dim:

Cm:	*200x60x120h*
Net Weight:	*kg 220*
Gross Weight:	*kg 290*



"Castoldi" jet drive marine propeller. The unit is carefully sectioned to show every detail.

The engine is operated manually through a crank handle.

VB 7920

VB 7930M OUTBOARD MARINE REVERSER (on base) - manual

Mechanical type reverse, universal type, installed on marine outboard motors.

The engine is operated manually through a crank handle.

Approx. weight and dim:

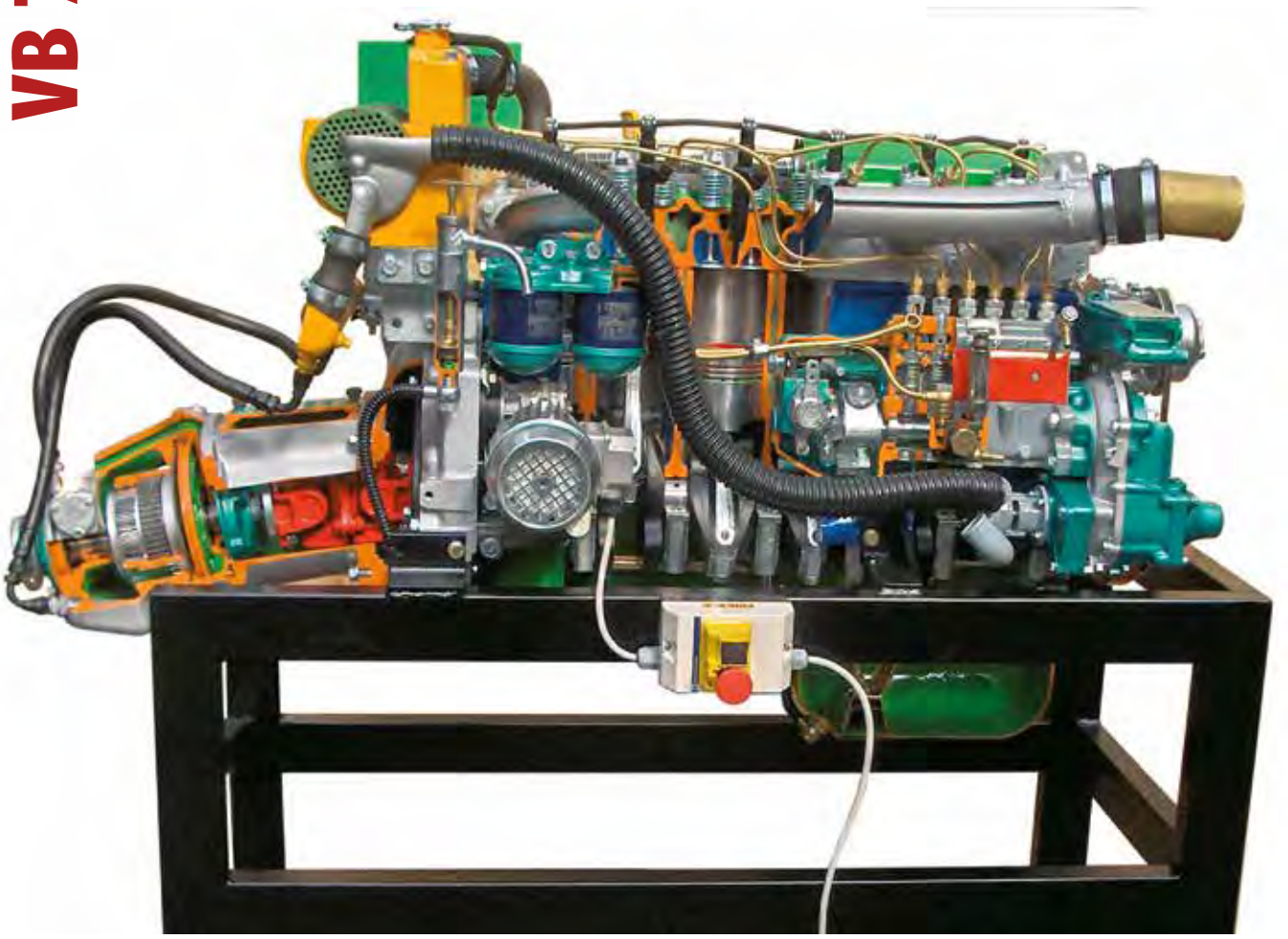
Cm:	*50x40x75h*
Net Weight:	*kg 8*
Gross Weight:	*kg 15*

These cutaway models are carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits. Many parts have been chromium, plated and galvanized for a longer life.

VB 7930

Indicative picture for reference only

VB 7940E MARINE INBOARD DIESEL ENGINE WITH INVERTER - 4/6 CYLINDERS (on stand with wheels) - electrical



Indicative picture for reference only

Main technical specifications:

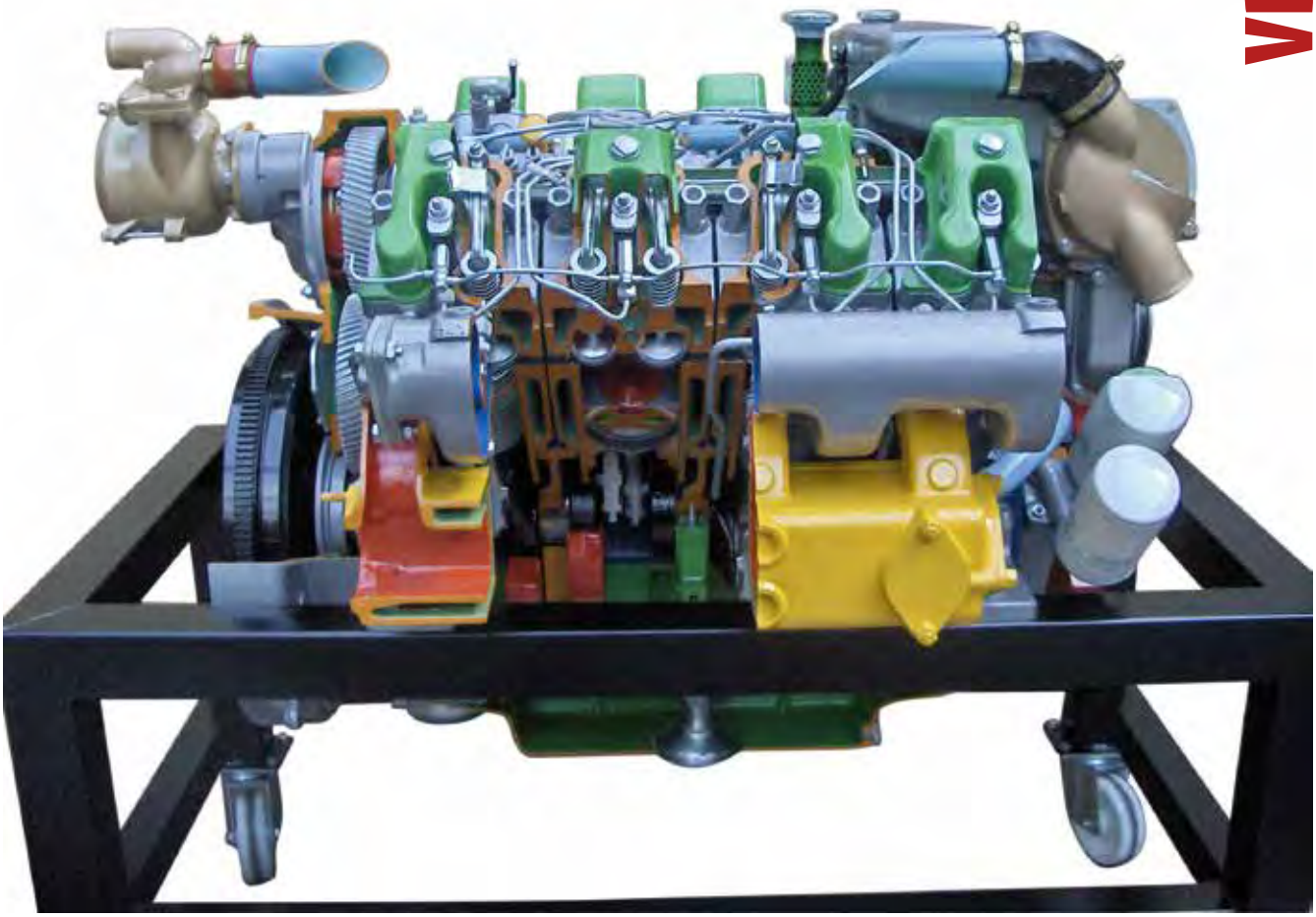
4 cylinders in line engine or 6 cylinders in line engine according to market availability.
Complete of accessories and closed circuit.

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

Packing details are provided upon request according to the engine type (4 or 6 cylinders).

VB 7950E MARINE INBOARD DIESEL ENGINE 6/8 V-CYLINDERS WITHOUT INVERTER (on stand with wheels) - electrical



Indicative picture for reference only

Main technical specifications:

6 V-cylinders engine or 8 V-cylinders engine according to market availability.
Complete of accessories and closed cooling circuit.

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

Packing details are provided upon request according to the engine type (6 or 8 cylinders).

VB 8000E 4 DRIVING WHEEL TRACTOR "KUBOTA" (on stand with wheels) - electrical

Indicative picture for reference only

Accurate section of a small tractor with several interesting technical features for educational purposes.

Main technical specifications:

- *4-stroke diesel engine 20hp/ 16Kw*
- *water cooling system*
- *lubrication of trochoid pump*
- *in-line injection pump*
- *dry single-disc clutch*
- *Gearbox: 6 speeds + 2 reverse with gear reducer*
- *2 speed power take-off*
- *rear differential with mechanical locking*
- *possibility of disengaging the front drive*
- *rear drum brakes*
- *sector steering gear box*
- *hydraulic lifter*

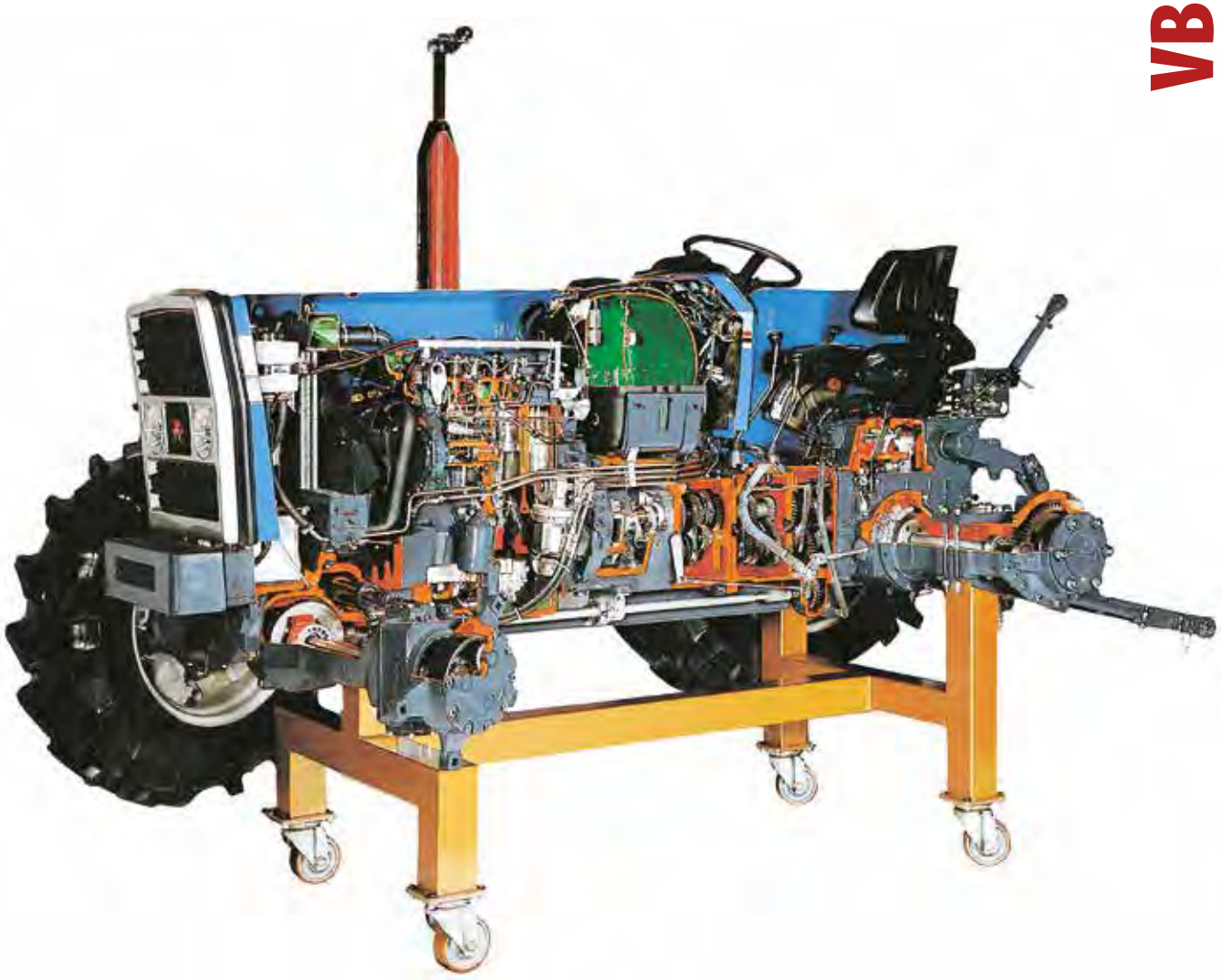
The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

Approx. weight and dim.:

Cm:	*190x110x160h*
Net Weight:	*kg 345*
Gross Weight:	*kg 500*

VB 8300E "MASSEY-FERGUSON"/"LANDINI" FARM TRACTOR 4 DRIVING WHEELS (on stand with wheels) - electrical



Indicative picture for reference only

Main technical specifications:

- *4 cylinders Perkins diesel engine*
- *direct injection*
- *CAV rotary injection pump*
- *single-disc clutch*
- *speed gear with reduction unit*
- *rear hydraulic lifter with rear differential locking and insertion of the front drive*
- *PTO*

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

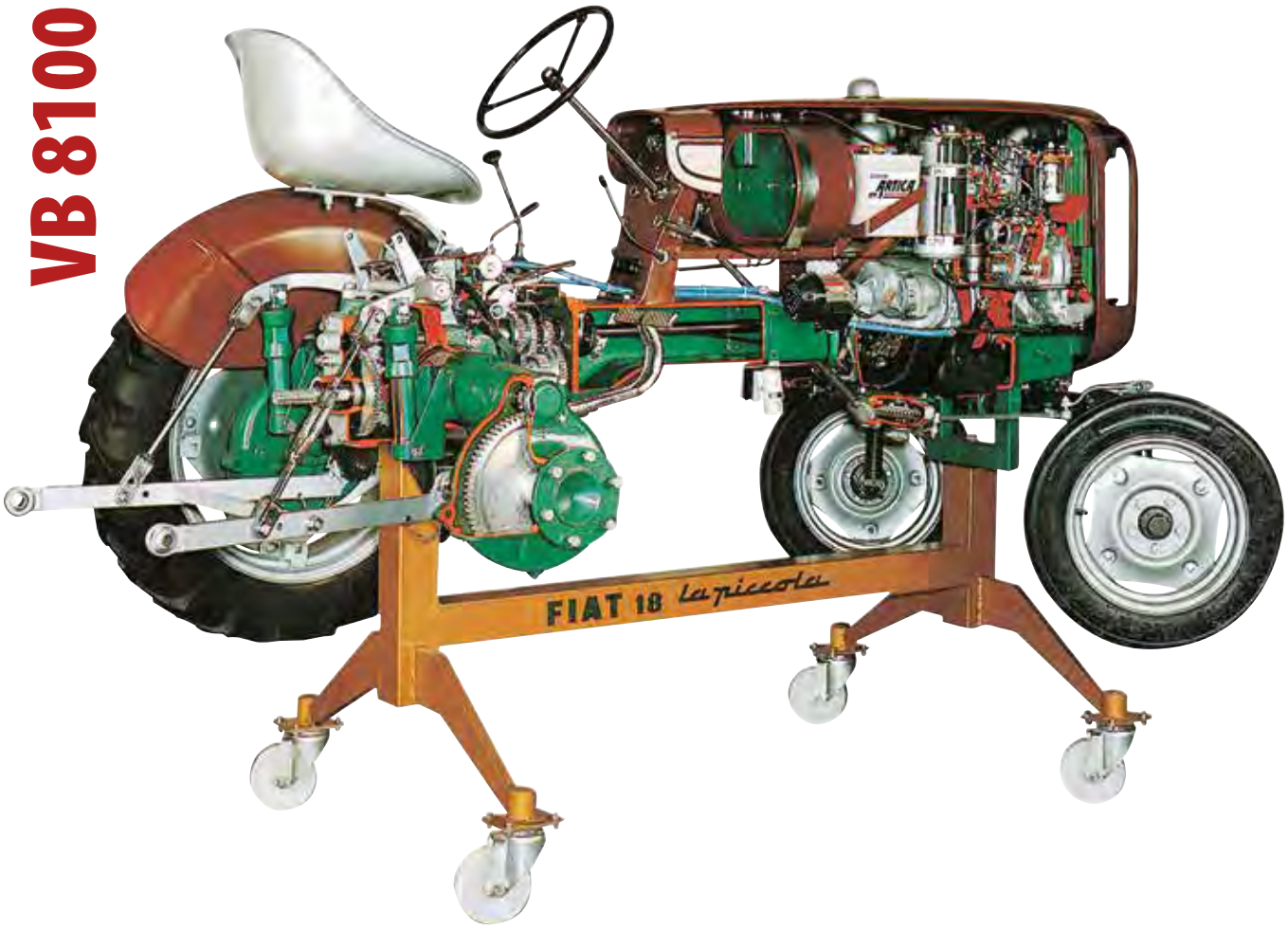
This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

Approx. weight and dim.:

Cm:	*360x185x215h*
Net Weight:	*kg 2000*
Gross Weight:	*kg 2470*

VB 8100E TYRE-WHEELED FARM TRACTOR WITH DIESEL ENGINE - FIAT "La Piccola" (on stand with wheels) - electrical

VB 8110E TYRE-WHEELED FARM TRACTOR WITH DIESEL ENGINE - FIAT "La Piccola" + HYDRAULIC HOIST (on stand with wheels) - electrical



Indicative picture for reference only

VB 8100E

Main technical specifications:

- *4-stroke – 2 cylinders engine*
- *Indirect injection*
- *Water cooling system*
- *Overhead valves*
- *In-line injection pump*
- *Conical and sector and pinion type steering system*
- *Gearbox: 6 forward speeds + 2 reverse*

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

VB 8110E

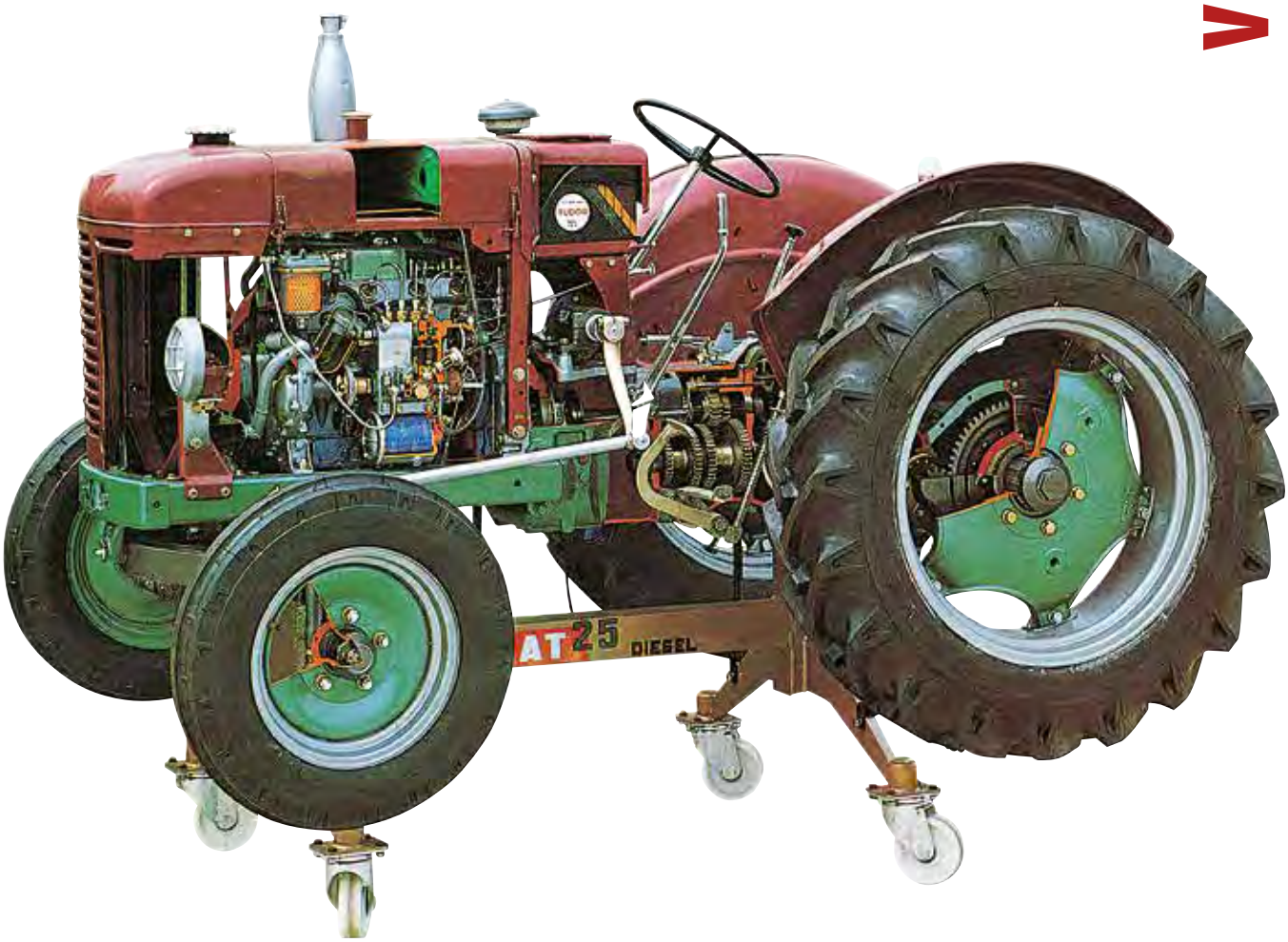
Same as VB 8100E with hydraulic hoist.

VB 8100E - VB 8110E

Approx. weight and dim.:

Cm:	*265x160x180h*
Net Weight:	*kg 650*
Gross Weight:	*kg 830*

VB 8200E TYRE-WHEELED FARM TRACTOR WITH DIESEL ENGINE - FIAT 25R (on stand with wheels) - electrical



Indicative picture for reference only

Main technical specifications:

- *4-stroke – 4 cylinders engine*
- *Displacement: 2000 cu.cm*
- *Indirect injection*
- *Water cooling system*
- *Overhead valves*
- *In-line injection pump*
- *Globe-shaped steering box*
- *Gearbox: 4 forward speeds + reverse*

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

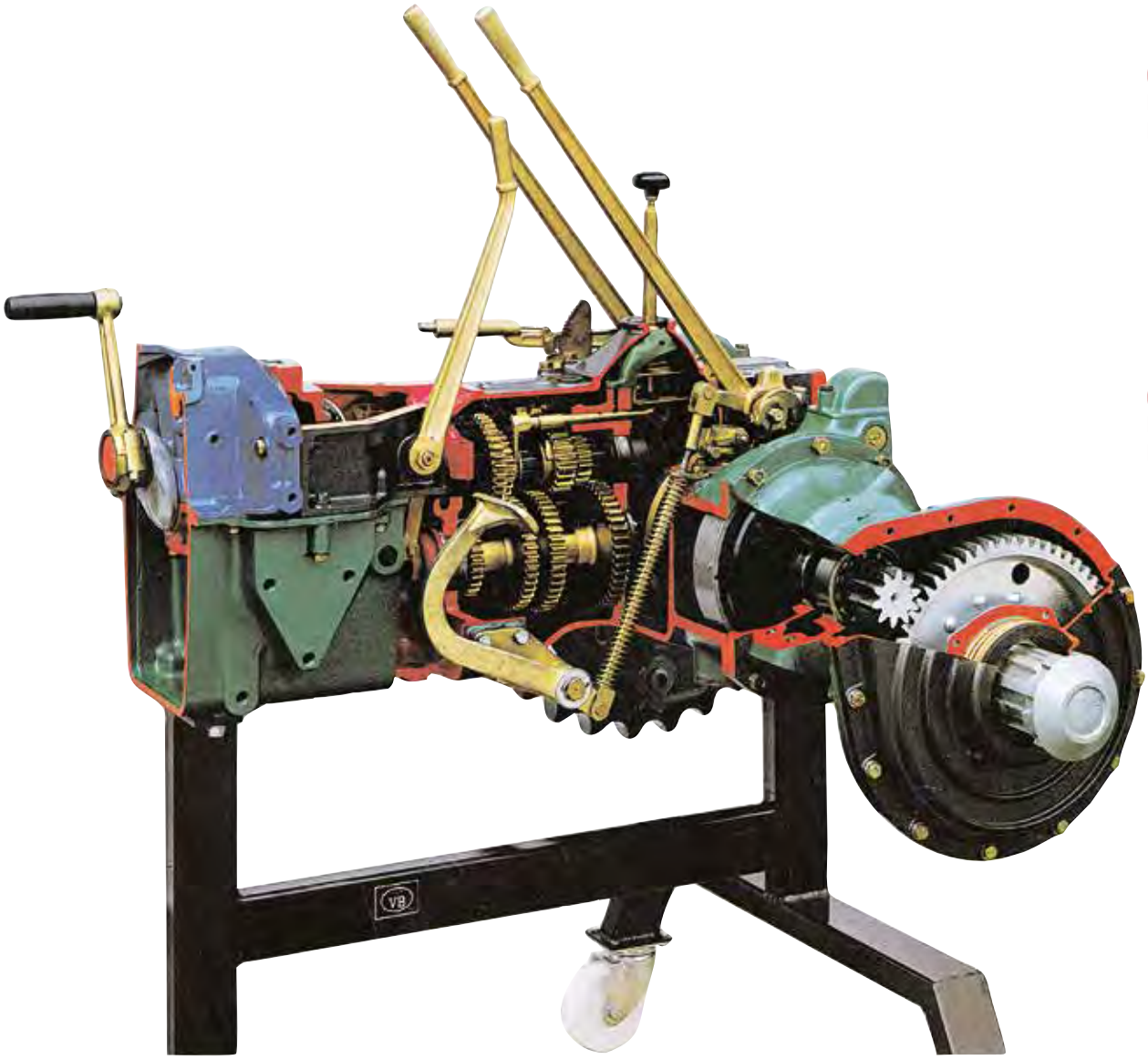
This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

Approx. weight and dim.:

Cm:	*220x172x180h*
Net Weight:	*kg 1030*
Gross Weight:	*kg 1250*

VB 8360M TRACKED TRACTOR TRANSMISSION (on stand with wheels) - manual

VB 8370M WHEELED TRACTOR TRANSMISSION (on stand with wheels) - manual



Indicative picture for reference only

VB 8360M

Main technical specifications:

- *Clutch unit*
- *Gearbox*
- *Pinion gear – ring gear*
- *Steering clutch*
- *Final reducer*

The engine is operated manually through a crank handle.

VB 8360M

Approx. weight and dim.:

Cm:	*140x125x150h*
Net Weight:	*kg 450*
Gross Weight:	*kg 610*

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits. Many parts have been chromium, plated and galvanized for a longer life.

VB 8370M WHEELED TRACTOR TRANSMISSION

Main technical specifications:

- *Clutch unit*
- *Gearbox*
- *Pinion gear – ring gear*
- *Differential units axle shafts with band brakes*
- *Final reducer*

The engine is operated manually through a crank handle.

VB 8370M

Approx. weight and dim.:

Cm:	*145x170x120h*
Net Weight:	*kg 480*
Gross Weight:	*kg 590*

VB 8380M ENGINE POWERED CHAINSAW - manual

Main technical features:

- *2 stroke engine with carburettor*
- *Centrifugal clutch*
- *Oil pump for chain lubrication*
- *Electronic ignition*
- *Safety system*

Operated manually through a crank handle.

Approx.weight and dim.:

Cm:	*90x30x35h*
Net Weight:	*kg 5*
Gross Weight:	*kg 10*

Indicative picture for reference only

VB 8600E MOTOR CULTIVATOR (on stand with wheels) - electrical

Accurate section of a modern petrol motor cultivator with single-cylinder engine, air cooling, 6/10 HP approx.

Main technical features:

- *Petrol engine 4 strokes single cylinder*
- *Power: 6 Kw*
- *Recoil starter*
- *Dry clutch with manual control*
- *Gearbox MTC 3+2*
- *Reverse command by lever*
- *PTO*
- *Handlebars adjustable both in height and width*
- *Motor-stop safety device*

Indicative picture for reference only

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

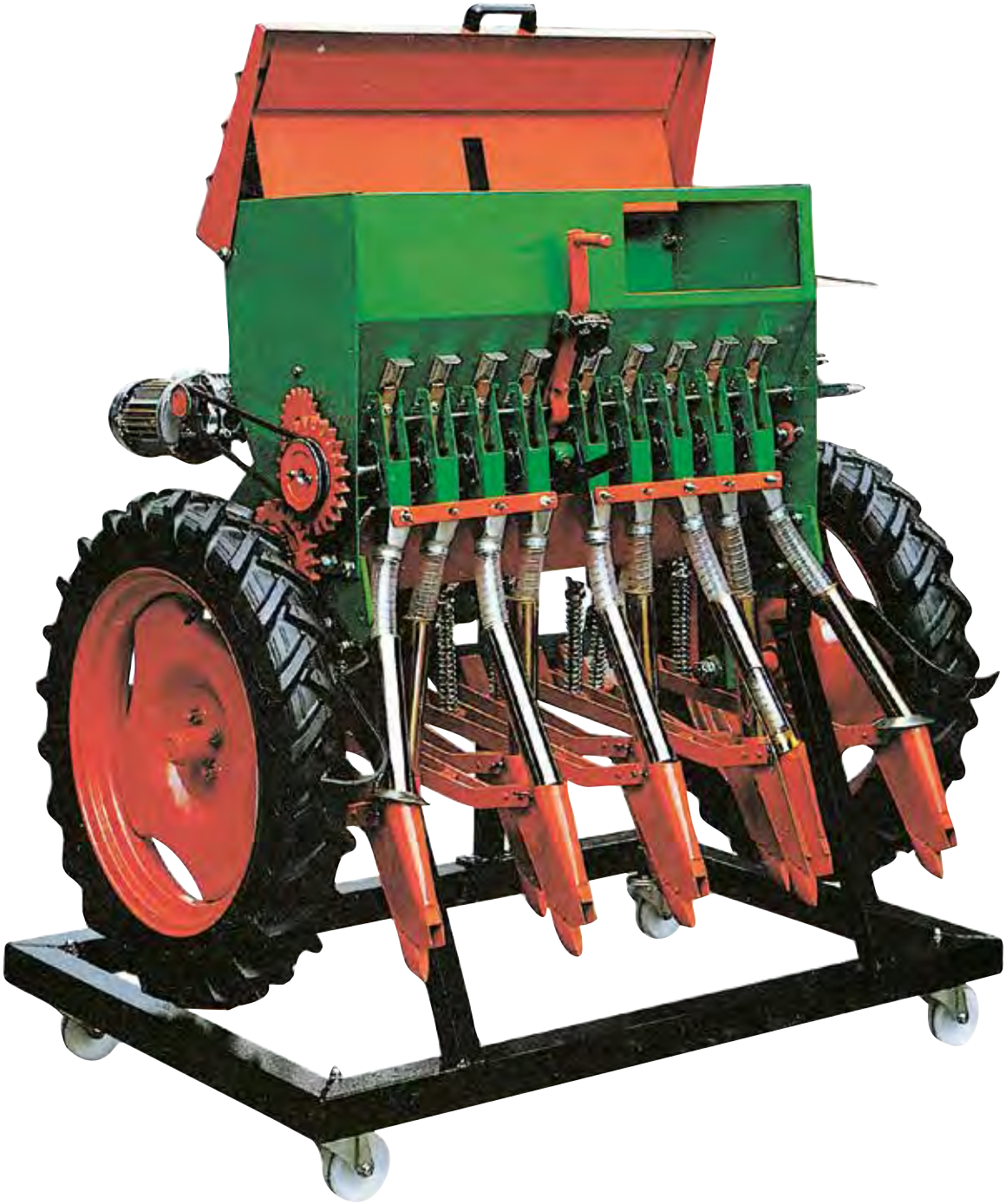
This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc.

Many parts have been chromium, plated and galvanized for a longer life.

Approx. weight and dim.:

Cm:	*70x180x110h*
Net Weight:	*kg 100*
Gross Weight:	*kg 160*

VB 8610E 9-ROW MECHANICAL SEEDER (on stand with wheels) - electrical



Indicative picture for reference only

Accurate section of a towed universal seeder showing:

- *Seed hopper*
- *Distributor*
- *Inlet pipes*
- *Coulter*

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

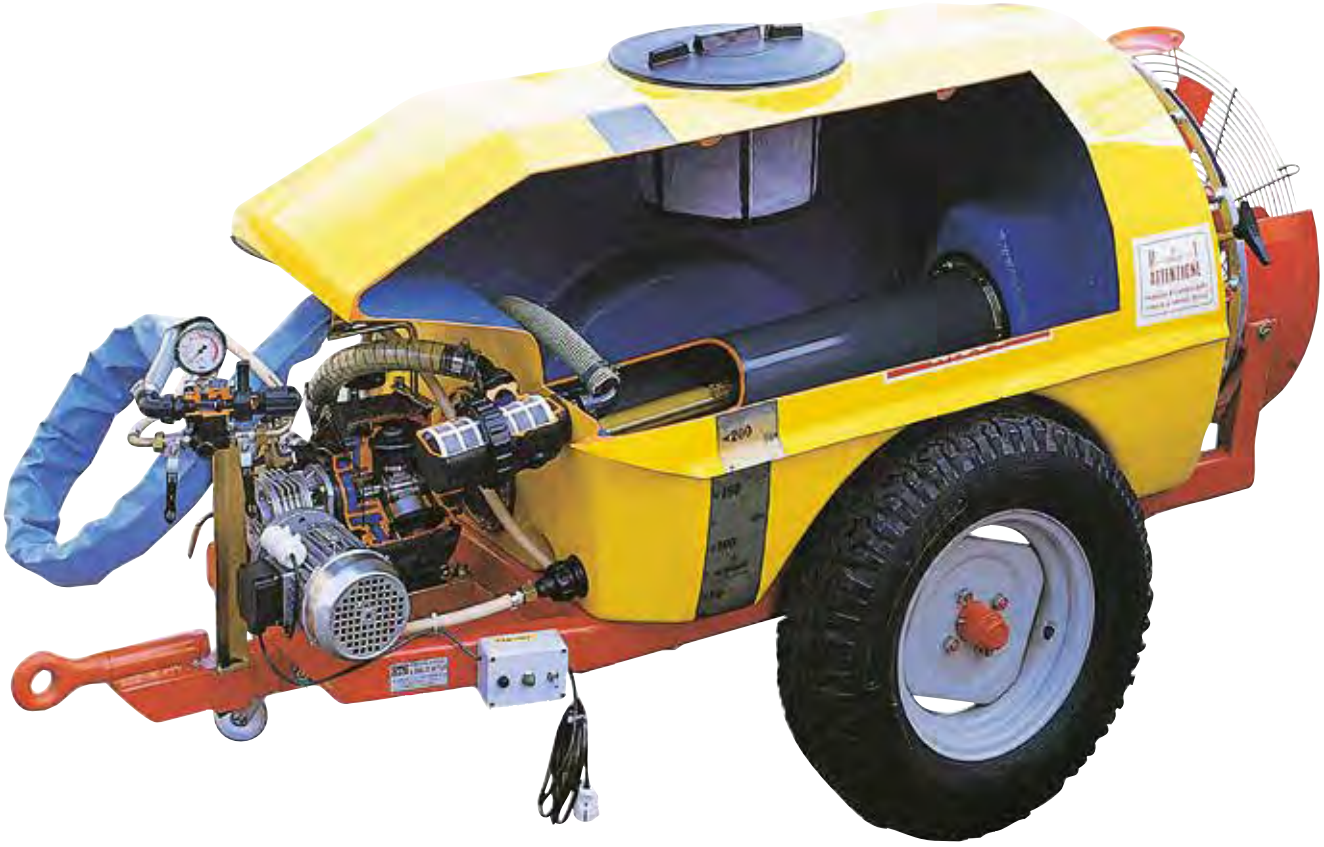
This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts.

Approx. weight and dim.:

Cm:	*105x135x145h*
Net Weight:	*kg 200*
Gross Weight:	*kg 300*

VB 8620E ATOMIZER - electrical

Accurate section of a real agricultural sprayer, used to spray crops with fungicides.



Indicative picture for reference only

Main technical specification:

- *Radial piston pump*
- *Fibreglass tank with filter*
- *Control unit*
- *Overdrive with fan*
- *Hydraulic stirrer*
- *Cardan shaft*
- *Adjustable nozzles*

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits. Many parts have been chromium, plated and galvanized for a longer life.

Approx. weight and dim.:

Cm:	*220x110x130h*
Net Weight:	*kg 220*
Gross Weight:	*kg 330*

VB 8640E MANURE SPREADER (on stand with wheels) - electrical

Accurate section of a pulled manure spreader.

The following parts are shown:

- *Hopper*
- *Spreader disc with blades*
- *Bevel gear pair*
- *Spread control*

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

Indicative picture for reference only

Approx. weight and dim.:

Cm:	*150x140x160h*
Net Weight:	*kg 135*
Gross Weight:	*kg 230*

VB 9000A PETROL ENGINE FOR ASSEMBLING & DISASSEMBLING OPERATIONS (on rotating workbench with wheels)

Educational training equipment for assembling and disassembling operations on modern petrol engines for cars.

Main technical features:

- *Petrol engine, 4 stroke*
- *Displacement: 1242 cu Cm*
- *4 cylinders in line with overhead camshaft*
- *Two valves per cylinder*
- *Timing system with toothed belt*
- *Electronic ignition with 4 spark plugs*
- *Electronic injection*
- *Alternator*
- *Lubrication system with mechanical oil pump*
- *Oil filter*
- *Flywheel*
- *Clutch-mechanical dry, single disc*

DIESEL ENGINE ON DEMAND

Indicative picture for reference only

Approx. weight and dim.:

Cm:	*90x60x120h*
Net Weight:	*kg 100*
Gross Weight:	*kg 140*

PETROL AND DIESEL ENGINES IN WORKING CONDITIONS (on stand with wheels)

Indicative picture for reference only

Engines in working conditions ready to be started, mounted on a strong steel painted stand with anti-vibration rubber caps. Each support is equipped with 4 nylon wheels with brake system.

Complete with:

- *Fuel tank*
- *Fuel filter*
- *Battery with relevant electric system*
- *Silencer*
- *Accelerator command*
- *Starting key*
- *Rpm counter*
- *Water temperature device*
- *Voltmeter*
- *Oil pressure indicator*
- *Alternator charger indicator*
- *Radiator with fan/electro-fan*
- *Coolant tank*
- *Mesh guards*
- *Diagnostic connector (where provided)*
- *Instruction manual*
- *Trouble-shooting device simulating 5 faults (upon request)*

Showing:

- *no-load operation*
- *fault simulation on request*
- *repair demonstrations*
- *assembly-disassembly*

Perfectly working overhauled engines.

FOR DETAILED DESCRIPTIONS, PLEASE SEE NEXT PAGE

Indicative picture for reference only

VB 9005F IAW-MARELLI MULTI-POINT ELECTRONIC INJECTION - functioning

- *4 cylinders FIAT engine*
- *2 valves per cylinder*
- *Overhead camshaft (OHC)*
- *Electronic ignition*
- *Displacement: 1242 cu. Cm*
- *diagnostic connector OBD*

Approx. weight and dim.:

Cm:	*115x120x140h*
Net weight:	*kg 250*
Gross weight:	*kg 330*

VB 9009F BOSCH MULTI-POINT MOTRONIC ELECTRONIC INJECTION - functioning

- *4 cylinders FIAT engine*
- *4 valves per cylinder*
- *2 Overhead camshaft (DOHC)*
- *Electronic ignition*
- *Displacement: 1300 cu. Cm*
- *Diagnostic connector OBD*

Approx. weight and dim.:

Cm:	*130x130x140h*
Net weight:	*kg 300*
Gross weight:	*kg 400*

VB 9011F CARBURETTOR - functioning

- *4 cylinders FIAT/SEAT engine*
- *Overhead camshaft (OHC)*
- *Electronic ignition*
- *Displacement: 1000/1500 cu. Cm*

Approx. weight and dim.:

Cm:	*115x120x140h*
Net weight:	*kg 240*
Gross weight:	*kg 340*

DIESEL ENGINES COMPLETELY RECONDITIONED AND IN WORKING CONDITIONS

Indicative picture for reference only

VB 9070F FIAT 1700/2500 CU.CM DIESEL ENGINE (indirect injection) - functioning

- *4 cylinders, 4 strokes*
- *Indirect injection*
- *Overhead camshaft (OHC)*
- *Rotating injection pump*
- *Displacement: 1700/2500 cu. Cm*

Approx. weight and dim.:

Cm:	*140x75x110h*
Net weight:	*kg 380*
Gross weight:	*kg 460*

VB 9080F FIAT 2500 CU.CM TURBO DIESEL ENGINE (direct injection) - functioning

- *4 cylinders 4 strokes*
- *Direct injection*
- *Overhead camshaft (OHC)*
- *Rotating injection pump*
- *Displacement: 2500 cu. Cm*
- *Turbo-supercharger with relief valve*

Approx. weight and dim.:

Cm:	*140x75x110h*
Net weight:	*kg 400*
Gross weight:	*kg 480*

VB 9095F FIAT COMMON RAIL JTD UNIJET - functioning

- *4 cylinders FIAT engine*
- *2 valves per cylinder*
- *Overhead camshaft (OHC)*
- *Turbo-compressor*
- *Displacement: 1900 cu. Cm*
- *Diagnostic socket OBD*
- *On request: multi-jet, 1300 cc, DOHC, 4 valves per cylinder*

Approx. weight and dim.:

Cm:	*120x130x140h*
Net weight:	*kg 350*
Gross weight:	*kg 450*

CHASSIS TRAINER IN WORKING CONDITIONS

Approx. weight and dim.:

Cm:	*300x150x140h*
Net weight:	*kg 450*
Gross weight:	*kg 730*

Indicative picture for reference only

The chassis trainer is realized from a medium displacement vehicle which is particularly useful for the study of the main components, the repair operations and the diagnostic, by means of the OBD socket (VB 9100 and VB 9110). All the mechanical parts are carefully revised and assembled on a chassis produced by us. This chassis allows an easy display and the possibility of assemble and disassemble each part. Engine, gearbox, clutch, brakes, lubricating circuit, cooling system, injection, ignition, suspensions, electric system, exhaust, etc. ARE COMPLETELY FUNCTIONING.
The chassis is supplied with a stand with wheels in order to move it easily.

VB 9100F PETROL INJECTION CHASSIS TRAINER - functioning

- *Petrol engine 4 cyl. 4 strokes*
- *Displacement: 1242 cu.Cm*
- *Multipoint electronic injection*
- *Electronic ignition*
- *Gearbox: 5 speeds + reverse*
- *Front drive*
- *Catalytic silencer*
- *Electric fuel pump*
- *Depression servo-brake*
- *Front disc brakes*
- *Rear drum brakes*
- *McPherson front suspension*
- *Independent wheels rear suspension with oscillating arms*
- *Hand brake*
- *Tank*
- *Battery*
- *Radiator with electric fan*
- *Dashboard*
- *Diagnostic socket*

VB 9105F TURBO DIESEL CHASSIS TRAINER - functioning

- *Turbo diesel engine 4 cyl. 4 strokes*
- *Displacement: 1700 cu.Cm*
- *Gearbox: 5 speeds + reverse*
- *Front drive*
- *Silencer*
- *Bosch VE injection pump*
- *Depression servo-brake*
- *Front disc brakes*
- *Rear drum brakes*
- *McPherson front suspension*
- *Independent wheels rear suspension with oscillating arms*
- *Hand brake*
- *Tank*
- *Battery*
- *Radiator with electric fan*
- *Dashboard*

INDUSTRIAL FUNCTIONING ENGINES (on metallic table-stand support)

SMALL INDUSTRIAL ENDOTHERMIC ENGINES VARIOUS TYPES.
Perfectly functioning engines on a metallic table-stand support with silent block, support for table fixing.
Complete with tank, silencer, air filter, recoil and all the accessorizes.

VB 8900F – SINGLE-CYLINDER 2 STROKE PETROL ENGINE AIR COOLED (on metallic table-stand support)

Main technical specifications:

- displacement 52 cm3.
- air cooled
- electronic ignition
- carburattor

Approx. weight and dim:

Cm:	*45x45x50h*
Net Weight:	*kg 10*
Gross Weight:	*kg 20*

*-> For the same item, cutaway see item **VB 7450** at page **A-77***

VB 8910F – SINGLE-CYLINDER 4 STROKE PETROL ENGINE AIR COOLED (on metallic table-stand support)

Main technical specifications:

- *displacement 163 cc*
- *power 5,5 hp at 2500 rpm*
- *recoil starting system*
- *TCI transistorized magneto ignition*
- *forced air cooling system*
- *camshaft in the crankcase*
- *overhead valves*

Approx. weight and dim:

Cm:	*48x48x60h*
Net Weight:	*kg 20*
Gross Weight:	*kg 40*

*-> For the same item, cutaway see item **VB 5245** at page **A-73***

VB 8920F – SINGLE-CYLINDER 4 STROKE DIESEL ENGINE AIR COOLED (on metallic table-stand support)

Main technical specifications:

- *displacement 211 cc*
- *direct injection – in-line injection pump*
- *power 3,8 hp at 3000 rpm*
- *recoil ignition*
- *forced air cooling system*
- *camshaft in the crankcase*
- *overhead valves*

Approx. weight and dim:

Cm:	*50x50x60h*
Net Weight:	*kg 30*
Gross Weight:	*kg 50*

*-> For the same item, cutaway see item **VB 6120** at page **A-73***

Indicative picture for reference only

VB 5245M SINGLE-CYLINDER 4 STROKE PETROL ENGINE AIR COOLED (on base) - manual

VB 5245

Main technical specifications:

- *displacement 160cc*
- *power 6 hp*
- *camshaft in the crankcase*
- *overhead valves*
- *rpm regulator*
- *oil pump*
- *carburettor*
- *air filter*
- *silencer*
- *tank*

Approx. weight and dim:

Cm:	*48x48x50h*
Net Weight:	*kg 16*
Gross Weight:	*kg 25*

Indicative picture for reference only

VB 6120M SINGLE-CYLINDER 4 STROKE DIESEL ENGINE AIR COOLED (on base) - manual

VB 6120

Main technical specifications:

- *displacement 210cc*
- *power 4 hp direct injection*
- *camshaft in the crankcase*
- *overhead camshafts*
- *rpm regulator*
- *toroidal oil pump*
- *injection pump*
- *injector*
- *silencer*

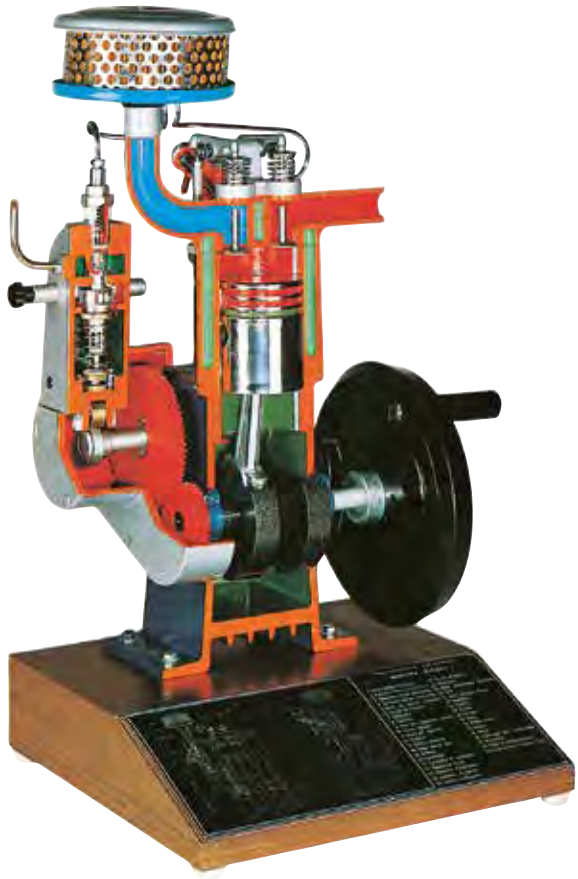
Approx. weight and dim:

Cm:	*48x48x50h*
Net Weight:	*kg 25*
Gross Weight:	*kg 35*

VB 7000

VB 7000M INDIRECT INJECTION 4 STROKE DIESEL ENGINE MODEL (on base) - manual

The most rational training model of a 4-stroke diesel engine sectioned for training purposes. Indirect injection, complete with injection pump, injector, pre-chamber, preheating glow plug, cooling system, distribution circuit, etc. Operated manually through a crank handle. In order to simulate the active stage of the cycle a small bulb lights up during the expansion phase.



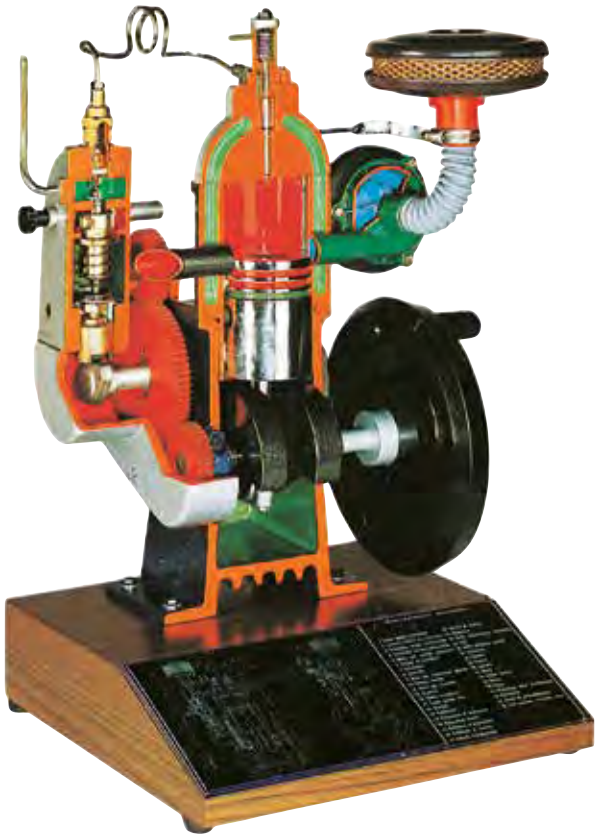
Approx. weight and dim.:

Cm:	*40x40x65h*
Net Weight:	*kg 10*
Gross Weight:	*kg 14*

VB 7100

VB 7100M DIRECT INJECTION 2 STROKE DIESEL ENGINE MODEL (on base) - manual

The most rational training model of a 2-stroke diesel engine sectioned for training purposes. Direct injection, complete with injection pump, injector, volumetric compressor, cooling system, etc. Operated manually through a crank handle.
In order to simulate the active stage of the cycle a small bulb lights up during the expansion phase.



Approx. weight and dim.:

Cm:	*40x40x65h*
Net Weight:	*kg 9*
Gross Weight:	*kg 13*

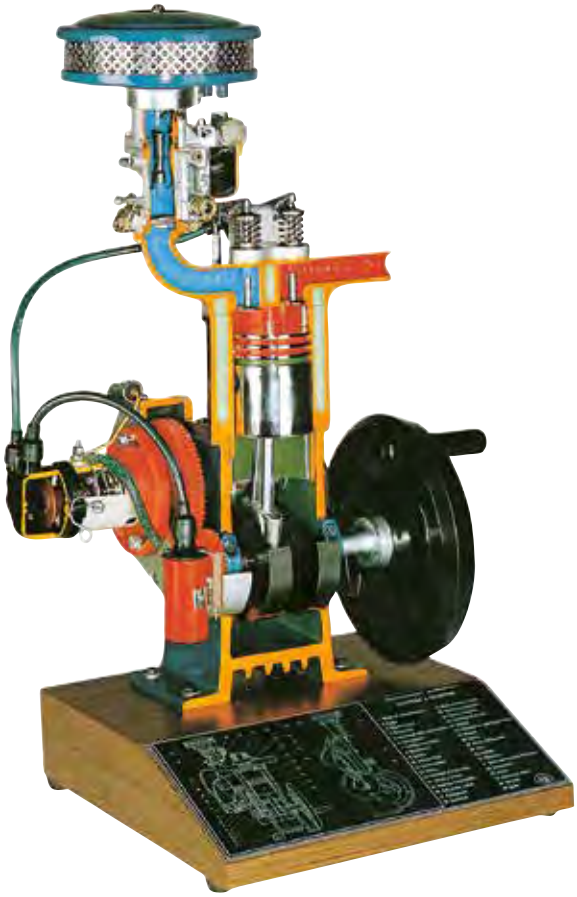
Indicative picture for reference only

These cutaway models are carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

VB 7200M 4 STROKE PETROL ENGINE MODEL (on base) - manual

The most rational training model of a 4-stroke petrol engine. Complete with sectioned carburettor and coil ignition, cooling system, distribution system, spark coil, etc. During the combustion phase a bulb lights up to simulate the mixture ignition.

The engine is operated manually through a crank handle.



Approx. weight and dim.:

Cm:	*40x40x70h*
Net Weight:	*kg 10*
Gross Weight:	*kg 14*

Indicative picture for reference only

VB 7460M 4 STROKE PETROL ENGINE MODEL WITH ELECTRONIC INJECTION MONOJETRONIC (on base) - manual

The most rational training model of a 4-stroke petrol engine. During the combustion phase a bulb lights up to simulate the mixture ignition.

Main technical specifications:

- *Mono-jetronic*
- *Lambda probe*
- *Coil single ignition*
- *Sensor*

The engine is operated manually through a crank handle.

Approx. weight and dim.:

Cm:	*40x40x70h*
Net Weight:	*kg 10*
Gross Weight:	*kg 14*

These cutaway models are carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

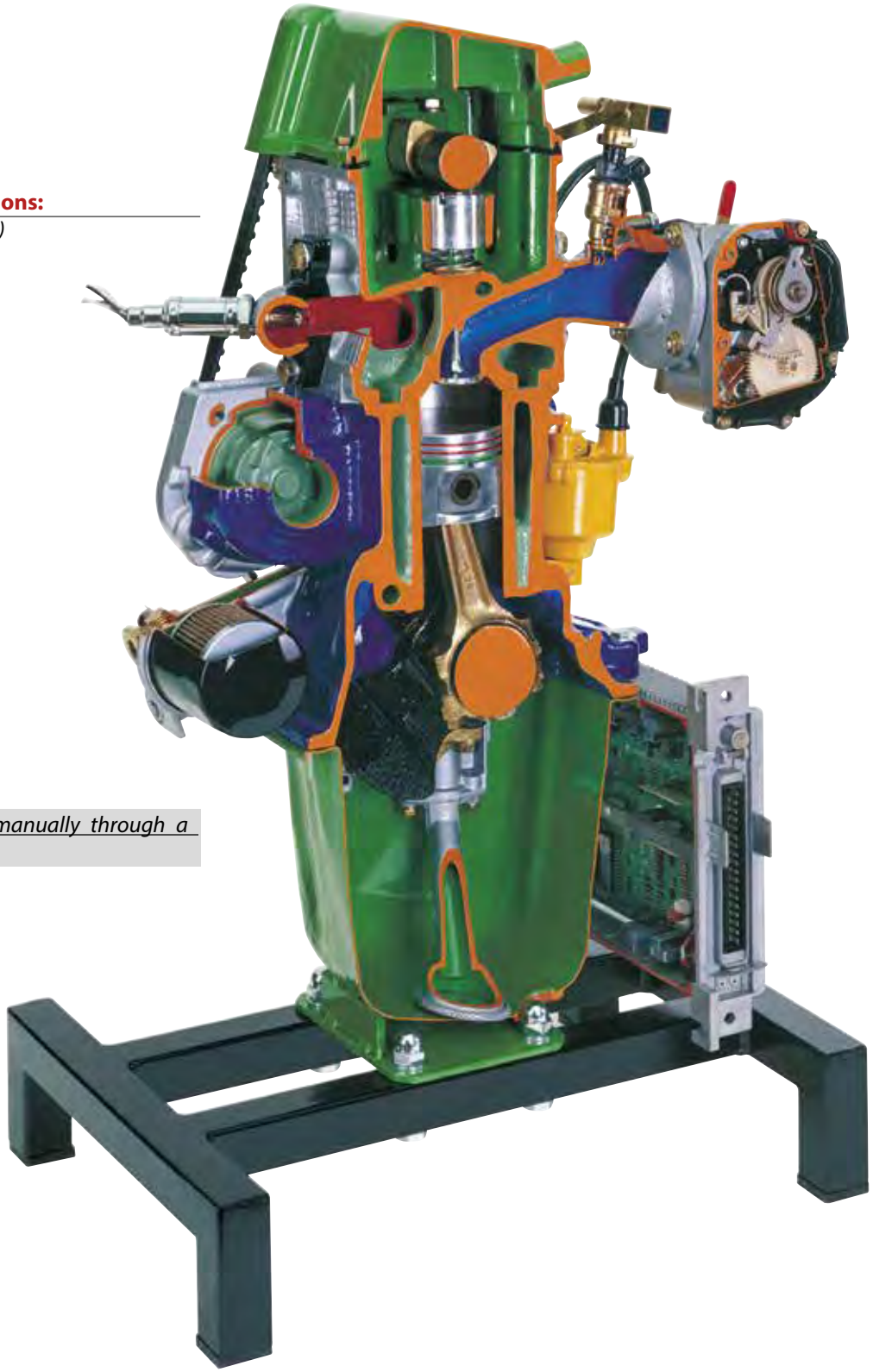
VB 7490

VB 7490M MULTI-POINT ELECTRONIC INJECTION I.C. ENGINE MODEL (on a table support) - manual

Built using original parts, this single-cylinder model reunites all the main parts making up a modern petrol engine with multipoint electronic injection and ignition-integrated control unit. Special care has been taken with the cutaway views of the electro-injector, throttle body, control unit and LAMBDA probe.

Main technical specifications:

- *Overhead camshaft (OHC)*
- *Toothed belt timing*
- *Cartridge oil filter*
- *Centrifugal water pump*
- *Air temperature sensor*
- *Throttle potentiometer*
- *Idling adjustment motor*
- *Ignition coil*
- *LAMBDA probe*



Indicative picture for reference only

The engine is operated manually through a crank handle.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

Approx. weight and dim.:

Cm:	*50x45x80h*
Net Weight:	*kg 21*
Gross Weight:	*kg 40*

VB 7450M 2 STROKE PETROL ENGINE (on base) - manual

VB 7450

Accurate section of a real 2-Stroke engine, showing every detail, carburettor, ignition, etc.
The suction-exhaust-transfer channels are especially highlighted so as to make is easy to learn the cycle.

Main technical specifications:

- *Piston displacement 52 cu. cm*
- *Air cooling system*
- *Electronic ignition*
- *Box carburettor*

The engine is operated manually through a crank handle.

Approx. weight and dim.:

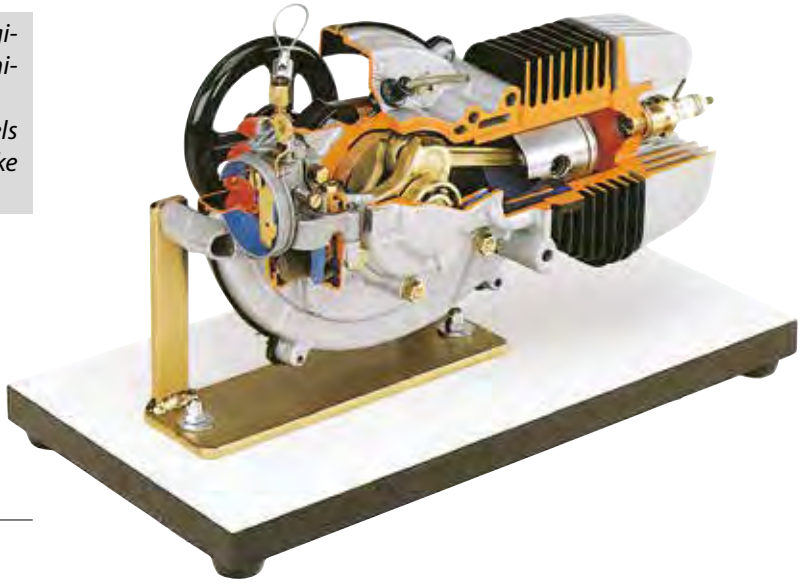
Cm:	*30x30x40h*
Net Weight:	*kg 8*
Gross Weight:	*kg 15*

Indicative picture for reference only

VB 7400M 2 STROKE MOTORCYCLE PETROL ENGINE (on base) - manual

VB 7400

Accurate section of a real 2-Stroke engine, cut in every detail, carburettor, ignition, etc.
The suction-exhaust-transfer channels are especially highlighted so as to make it easy to learn the cycle.



Main technical specifications:

- *Piston displacement 48 cu. cm*
- *Air cooling*
- *Plug point and magnet flywheel ignition*
- *Box carburettor*

The engine is operated manually through a crank handle.

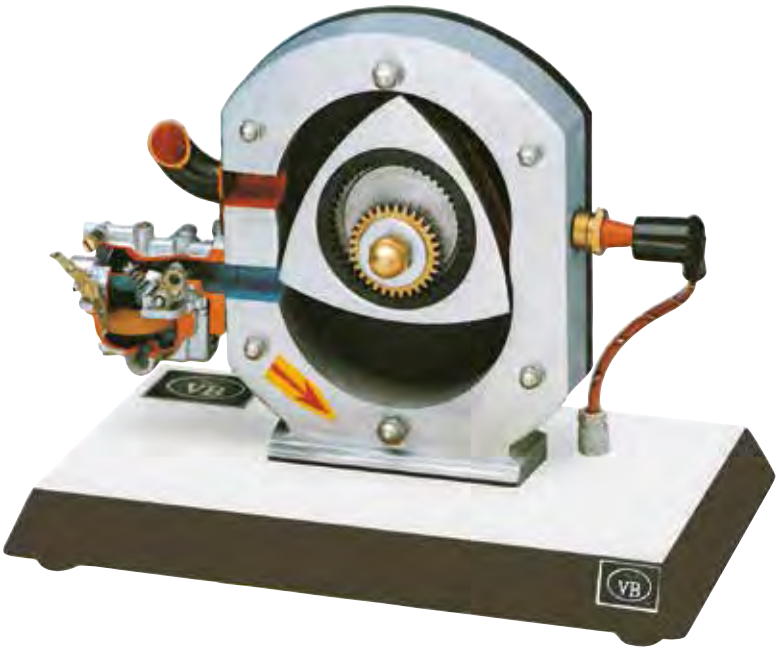
Approx. weight and dim.:

Cm:	*24x42x28h*
Net Weight:	*kg 6*
Gross Weight:	*kg 10*

These cutaway models are carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

VB 7500

VB 7500M WANKEL ENGINE MODEL (on base) - manual



Rotating engine model, true to the original and complete with cutaway carburettor.
The rotor (triangular piston), operated by the driving shaft, rotates inside the stator thus clearly showing the different phases.
During the compression phase a small bulb lights up to simulate the petrol ignition.
Light metal construction.

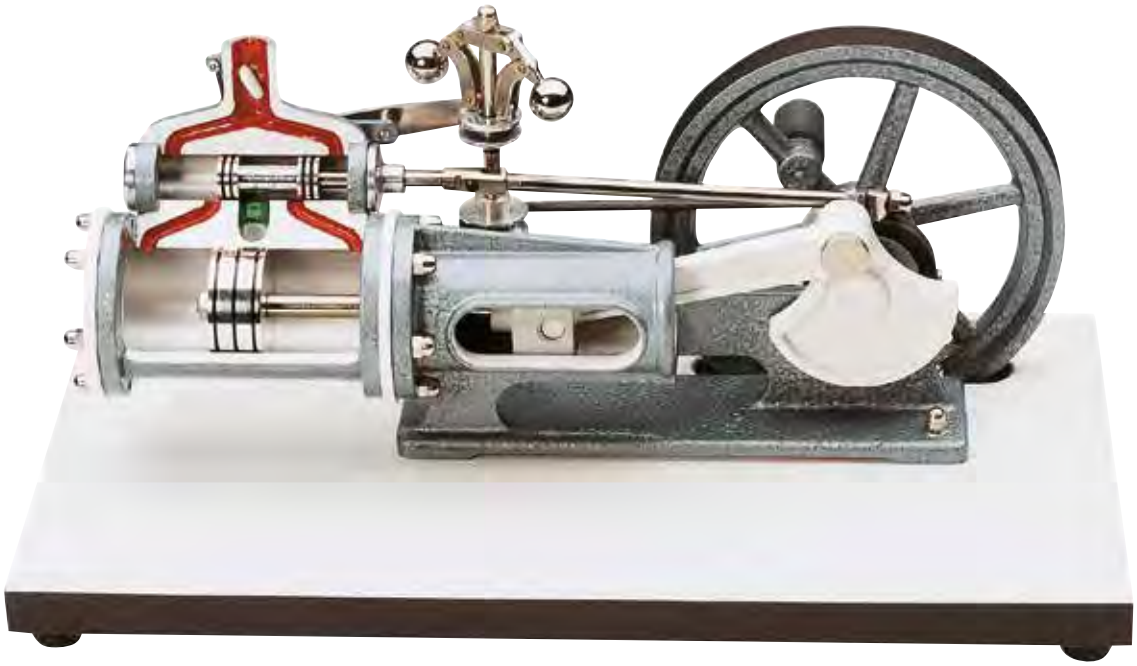
The engine is operated manually through a crank handle.

Approx. weight and dim.:

Cm:	*20x40x30h*
Net Weight:	*kg 6*
Gross Weight:	*kg 7*

VB 9220

VB 9220M STEAM ENGINE MODEL (on base) - manual



Educational model of a modern horizontal steam engine with piston valve control. The model can be put in motion by turning the flywheel, thus showing the manner of operation of the engine and of the built-on centrifugal governor.

Approx. weight and dim.:

Cm:	*36x22x24h*
Net Weight:	*kg 3*
Gross Weight:	*kg 8*

Indicative picture for reference only

VB 9200E TURBO JET ENGINE MODEL (on base) - electrical

This super-model of a modern two-wave turbine shows in detail the construction and the operating system of such a motor. Low-pressure and high-pressure compressor, low-pressure and high-pressure turbine are readily recognisable, as also are the combustion chambers with the injection nozzles and starting plugs.

These can be readily seen thanks to the section cut housing. The turbines can be set in motion with the built-in electro-motor.

Approx. weight and dim.:

Cm:	*70x28x45h*
Net Weight:	*kg 13*
Gross weight:	*Kg 30*

Indicative picture for reference only

VB 9211M

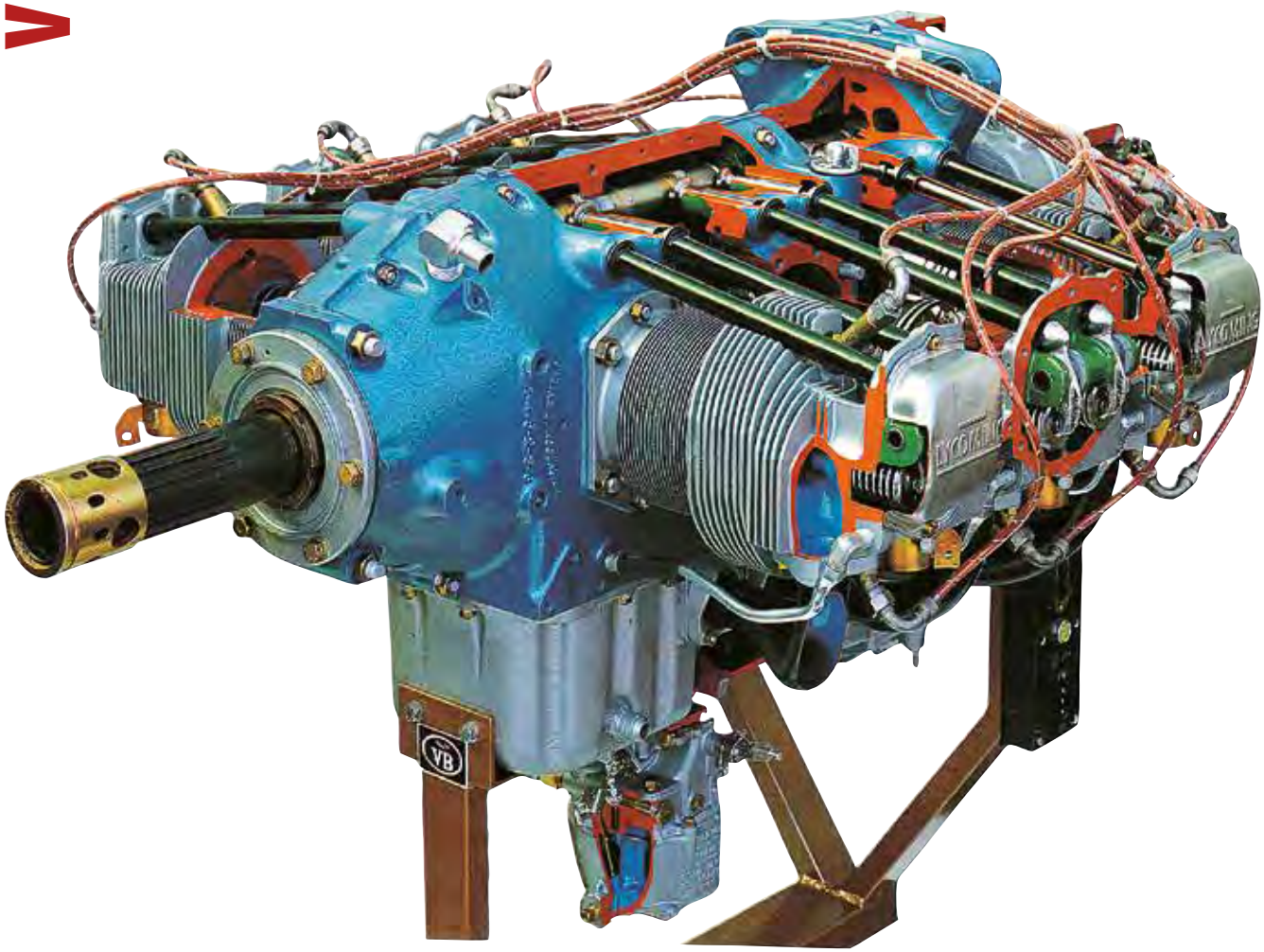
INSTRUCTION MODEL OF A TURBOJET ENGINE

This model clearly shows the construction of a modern jet turbine.
The compressor, the combustion, the combustion chambers and the turbines are readily recognisable and their operation explained.

Approx. weight and dim.:

Cm:	*60x40x40h*
Net weight:	*Kg 10*
Gross weight:	*Kg 20*

VB 9260E OPPOSED-PISTON ENGINE (on stand with wheels) - electrical



Indicative picture for reference only

Main technical specifications:

- *Lycoming/Piaggio/Continental 4/6-opposed cylinders engine*
- *Air cooling system*
- *Gear distribution with camshaft in the crankcase*
- *Ignition with magneto*
- *Single-body carburettor*

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

Approx. weight and dim.:

Cm:	*140x110x150h*
Net Weight:	*kg 190*
Gross Weight:	*kg 280*

VB 9280E RADIAL ENGINE (on stand with wheels) - electrical

This kind of engine was largely used in aeronautic before the introduction of reaction engines. As it is mechanically simple and sturdy, it is used for tanks, hovercrafts, etc.

Indicative picture for reference only

Main technical specifications:

- *Driving shaft with integral master rod and moving connection rods*
- *Air cooling system*
- *Double ignition (2 spark plugs per cylinder and 2 magnetos)*

The engine operates electrically at 220 volts and runs at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts.

This cutaway model is carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.

Approx. weight and dim.:

Cm:	*150x140x180h*
Net Weight:	*kg 700*
Gross Weight:	*kg 850*

Indicative picture for reference only