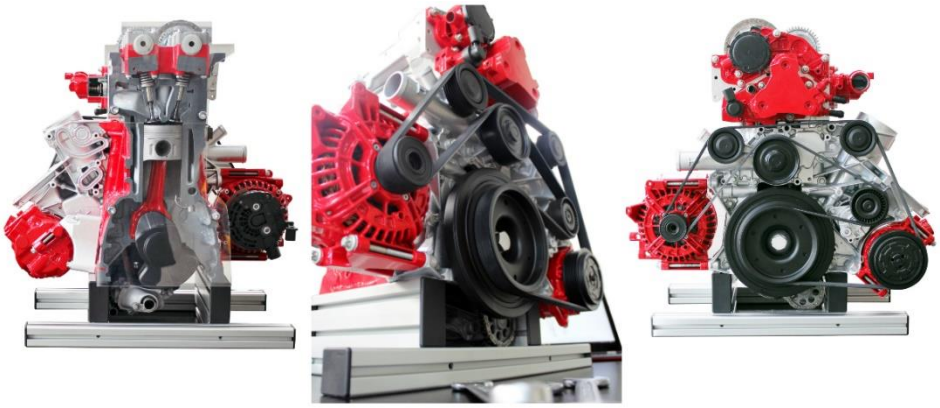
AutoEDU
MAKING PRACTICE PERFECT



PRICE LIST OF TRAINING EQUIPMENT

AutoEDU Automotive training equipment

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2024

Pricelist of AutoEDU equipment

N°	Model	Description	Indicative image for reference only
1.	MSMPI01	Engine control system MOTRONIC M 3.8.X (MPI) • Fully functional system • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
2.	MSFSI01	Engine control system BOSCH MOTRONIC MED 7.5.10 (FSI) • Fully functional system • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
3.	MSCR01	Diesel engine control system CR/EDC 15 • Fully functional system6010 • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
4.	MSLPG01	LPG training board • Open contacts for measuring system components and circuits • <u>To run as a functional system, MSMPI1 should be ordered together</u> • Diagnosis and programming through diagnostic socket	
5.	MSCAN01	CAN BUS training board • Fully functional system • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	

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6.	MSCAN02	CAN BUS training dashboard • Fully functional system with dashboard • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring CAN bus signals • Activations by sending commands via CAN network	
7.	MSABS01	Anti-Lock Braking system BOSCH ABS 5.3 training board • Fully functional system • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
8.	MSABS-ASR01	ABS/ASR training board • Fully functional system • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
N°	Model	Description	Indicative image for reference only
9.	MSSRS01	SRS BOSCH AB 8.4 (AIRBAG) training board • Fully functional system • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
10.	MSSRS02	SRS SIEMENS III (AIRBAG) training board • Fully functional system • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
11.	MSAIRB01	CAR AIRBAG SRS demonstration stand • AIRBAG SRS operation demonstration • The expansion of the airbag is demonstrated by using compressed air • Power supply 220V	

12.	MSAS01	Lighting training board • Fully functional system • Open contacts for measuring system components and circuits • Diagnosis of dashboard through OBD 16 pole diagnostic socket	
13.	MSAS01-TEL	Lighting training board • Fully functional system • Open contacts for measuring system components and circuits • Diagnosis of dashboard through OBD 16 pole diagnostic socket • Adjustable telescopic legs	
14.	MSAS01-T7	Lighting training board • Fully functional system • Open contacts for measuring system components and circuits • Diagnosis of dashboard through OBD 16 pole diagnostic socket Trailer 7-pin socket package (ISO1724)	
15.	MSAS01-T13	Lighting training board • Fully functional system • Open contacts for measuring system components and circuits • Diagnosis of dashboard through OBD 16 pole diagnostic socket • Trailer 13-pin socket package (ISO11446)	
16.	MSAS02	Lighting training board • Fully functional system with CAN and LIN • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
17.	MSAS02-A	Lighting training board • Fully functional system with CAN and LIN • Diagnosis through OBD 16 pole diagnostic socket	

		• Open contacts for measuring system components and circuits • Fault code simulations • Auto lights sensor	
18.	MSAS02-T7	Lighting training board • Fully functional system with CAN and LIN • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations Trailer 7-pin socket package (ISO1724)	
19.	MSAS02- T13	Lighting training board • Fully functional system with CAN and LIN • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations • Trailer 13-pin socket package (ISO11446)	
20.	MSAS03	Lighting training board • Fully functional system with CAN and LIN • Xenon light + LED • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
21.	MSAS03-T7	Lighting training board • Fully functional system with CAN and LIN • Xenon light + LED • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations • Trailer 7-pin socket package (ISO1724)	
22.	MSAS03-T13	Lighting training board • Fully functional system with CAN and LIN • Xenon light + LED • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	

		• Trailer 13-pin socket package (ISO11446)	
23.	MSD01	Sensors and actuators training board • Fully functional system • Open contacts for measuring system components and circuits • Real, not simulated signals	
24.	MSATDSG01	**DSG Automatic transmission training strand** • Fully functional automatic gearbox with dual clutch system • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring of system's components and circuits • Fault code simulations	
25.	MSC01	Air conditioning and climate control trainer • Air-conditioning system trainer • System with an orifice tube • Electronic climate control system CLIMATRONIC • Fully functional system with R134a refrigerant • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring of system's components and circuits • Fault code simulations	
26.	MSC02	Air conditioning and climate control trainer • Air-conditioning system trainer • System with an expansion valve • Electronic climate control system CLIMATRONIC • Fully functional system with R134a refrigerant • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring of system's components and circuits • Fault code simulations	

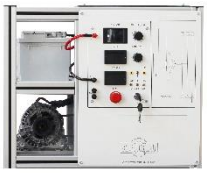
27.	MSAE01	Assembly of various modules of automotive components that can be easily rearranged and removed. · Open contacts for measuring system components and circuits	
28.	MSC03-B	Dual zone Air conditioning and climate control trainer with auxiliary heater • Air-conditioning system trainer • With auxiliary petrol heating unit • Electronic climate control system CLIMATRONIC • Fully functional system with R134a refrigerant • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring of system's components and circuits • Fault code simulations	
29.	MSC03-D	Dual zone Air conditioning and climate control trainer with auxiliary heater • Air-conditioning system trainer • With auxiliary diesel heating unit • Electronic climate control system CLIMATRONIC • Fully functional system with R134a refrigerant • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring of system's components and circuits • Fault code simulations	
30.	MSC04-R1234YF-D	Dual zone Air conditioning and climate control trainer with R 1234yf gas • Air-conditioning system trainer • With auxiliary diesel heating unit • Electronic climate control system • Fully functional system with R1234yf refrigerant • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring of system's components and circuits • Fault code simulations	

31.	MSC04-R1234YF-B	Dual zone Air conditioning and climate control trainer with R 1234yf gas • Air-conditioning system trainer • With auxiliary petrol heating unit • Electronic climate control system • Fully functional system with R1234yf refrigerant • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring of system's components and circuits • Fault code simulations	
32.	MSC-F	Hidden fault simulation for air conditioning and climate control trainer: • 6 fault simulation (hidden from students) Should be ordered together with the stand!	
33.	MSC-FW	Hidden fault simulation for air conditioning and climate control trainer: • 6 fault simulation with WI-FI module (hidden from students) Should be ordered together with the stand!	
34.	MSUS01	Ignition system training board • Fully functional system • 3 different types of systems • Open contacts for measuring system components and circuits	
35.	MSPPS-EBS-D	Truck trailer WABCO EBS D 2S/2M braking system training stand • Fully functional Wabco EBS system • Functional pneumatic system • Diagnosis through OBD 16 pole diagnostic socket • Driving simulation • 6 measuring gauges • Fault simulation	
36.	MSSPPS01	Truck Airbrake stand • Fully functional system based on the real components • Functional pneumatic system truck and trailer • 6 measuring gauges for truck lines and 3 for a trailer • Number of the pneumatic component same like on the real vehicles	

37.	MSSPPS01-ABS	Truck Airbrakes stand with ABS • Functional pneumatic braking system truck and trailer • Functional truck and trailer ABS system based on the real WABCO components • 6 measuring gauges for truck lines and 3 for a trailer • Number of the component same like on the real vehicles • ABS sensors on track and trailer • Diagnostics and faults simulation *Indicative picture	
38.	MSSPPS01-EBS	Truck Airbrakes stand with EBS system • Functional pneumatic braking system truck and trailer • Functional truck and trailer EBS system based on the real WABCO components • 6 measuring gauges for truck lines and 3 for a trailer • Number of the component same like on the real vehicles • ABS sensors on track and trailer • Diagnostics and faults simulation *Indicative picture	
39.	MSPPS01	Truck Air suspension training stand Fully operational ECAS air suspension trainer • The system includes: - Fully operational ECAS air suspension - Air reservoir tank - ECAS ECU - Height sensors front and rear axle -Remote control pad • Height adjustments • Diagnosis through diagnostic socket • Fault code simulations	
40.	HYBBAT01	High Voltage Battery training stand • Based on original car parts • High voltage unit is ready for safe use in the training process • Clearly visible device structure, arrangement of components, controllers, control units, battery blocks / cells and other elements • Battery model with high-voltage disconnect fuse is easily accessible for training purposes	

		• Based on battery Ni Mh • Training board is designed for safe preparation, repair and maintenance procedures of hybrid or electric high voltage cars • Training board is designed for safe fuse on/off demonstration and training	
41.	HYBBAT01-TR	High Voltage Battery training stand on a trolley • Based on original car parts • High voltage unit is ready for safe use in the training process • Clearly visible device structure, arrangement of components, controllers, control units, battery blocks / cells and other elements • Battery model with high-voltage disconnect fuse is easily accessible for training purposes • Based on battery Ni Mh • Training stand is designed for safe preparation, repair and maintenance procedures of hybrid or electric high voltage cars • Training board is designed for safe fuse on/off demonstration and training	
42.	MSAE1019	High Voltage Source Safe Disconnection training stand • The stand is designed for safety training with electric cars • The stand is designed for high voltage fuse disconnection of electric cars before starting repair or maintenance procedures • The stand is designed to explain safety procedures when working with electric cars	
43.	MSAE1020	High Voltage Source Safe Disconnection training stand • The stand is designed for safety training with hybrid cars • The stand is designed for high voltage fuse disconnection of hybrid cars before starting repair or maintenance procedures • The stand is designed to explain safety procedures when working with hybrid cars	

44.	MSEV01	Electric vehicle training stand Training stand based on real Nissan vehicle The system includes: • Electric motor • Electric controller • Electric battery • Electric Air conditioner compressor • All systems and components are connected by high voltage cables • All components covered with protective plexiglass for safety reasons • All components are mounted on an aluminium frame with castors. • Diagnosis through OBD 16 pole diagnostic socket • High voltage unit is ready for safe use in the training process • Battery with high-voltage disconnect fuse is easily accessible for training purposes	
45.	MSEV02	Electric vehicle training stand Training stand based on real Nissan vehicle The system includes: • Electric motor • Electric controller • Electric battery • Electric Air conditioner compressor • All systems and components are connected by high voltage cables. All components are covered with protective plexiglass for safety reasons • All components are mounted on an aluminium frame with castors. • Diagnosis through OBD 16 pole diagnostic socket • High voltage unit is ready for safe use in the training process	

		• Battery with high-voltage disconnect fuse is easily accessible for training purposes Including : - 10 faults on EV CONTROL SYSTEM; - Open contacts (break – out – box) on EV CONTROL SYSTEM for a measurement (CAN including); - Prepared measurement procedures for a high voltage measurement + instructions in manuals with pictures and explanations;	
46.	AVS01	Automotive 12V Starter functional model • Starter model on the aluminum base • Complete with the bendix drive, ignition switch, protection plexiglass, connection cables • Real automotive components • Starter running without the load	
47.	AVS02	Automotive 12V Starter functional model • Starter model on the aluminum base • Complete with the bendix drive, ignition switch, protection plexiglass, connection cables • Real automotive components • Electric diagram of the starter • Demonstration of bendix drive • Possible to measure the current during the operation, with current clamp meter (tools should be ordered separately) Starter runs without the load	
48.	MSMSG01	Automotive charging system training stand • Fully functional system with the 12V alternator in light aluminum frame Real automotive components • Battery charging/discharging with the alternator • Alternator loading simulation • Negative terminal fault simulation • Adjustable rotation speed of the alternator • Information panels withe loading, charging, RPM and voltage • Open contacts for a measurement	

49.	**MSAPZ01**	Headlight training stand • Electric wiring diagram with for measurements and connecting or disconnecting the components • High beam • Low beam • Turn signal • Standing light • Headlight switch Power supply 12V battery (not included)	
50.	**MSLV01**	Windshield wipers mechanism training stand • Designed to demonstrate the principal Power supply 12V battery (not included)	
51.	AEPWS22A	Power supply unit • For AutoEDU made training boards to use instead of 12V Batteries • 13,5V/22A/100-230 V	
52.	AEPWS37A	Power supply unit • For AutoEDU made training boards to use instead of 12V Batteries • 12V/37,5A/100-230 V	
53.	DBP02	Dual Banana Plug Connector set - 2 mm with open contacts - 10 pcs in set	
54.	DDBP02	Dummy dual banana plug connector set - 2 mm with open contacts - 10 pcs in set	
55.	DBP04	Dual Banana Plug Connector set - 4 mm with open contacts - 10 pcs in set	
56.	DDBP04	Dummy dual banana plug connector set - 4 mm with open contacts - 10 pcs in set	
Working engine models – passenger car			
57.	MVMPI01	Educational petrol engine with multipoint injection system (MPI) EURO 3 • Fully functional system • Diagnosis through OBD 16 pole diagnostic socket	

		• Open contacts for measuring system components and circuits • Fault code simulations	
58.	MVMPI01-ECO	Economy line petrol engine model • Fully functional system	
59.	MVMPI-V6-ECO	Economy line petrol engine V6/V8 • Fully functional system • V6/V8 cylinders	
60.	MVMPI02-TOY	Educational petrol engine with multipoint injection system (MPI) (EURO 4-5) • Based on Toyota engine 4 cylinders in line • Fully functional system • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
61.	MVMPI03	Educational petrol engine with direct multipoint injection system (EURO 5) • Based on 4 cylinders in line engine • Fully functional system • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
62.	MVMPI04	Educational petrol engine with direct multipoint injection system (EURO 6) • Based on 4 cylinders in line engine • Fully functional system • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	

63.	MVGDI01	Educational petrol engine with direct injection system (GDI) EURO 3 • Fully functional system • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits Fault code simulations	
64.	MVFSI01	Educational petrol engine with direct injection system (FSI) EURO4 • Fully functional system • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
65.	MVTSI01	Educational petrol engine with direct injection system (TSI) EURO 5 • Fully functional system • 4 cylinders in line , 1.4 TSI • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
66.	MVTSI02	Educational petrol engine with direct injection system (TSI) EURO 5 • Fully functional system • 4 cylinders in line, 1.2 TSI, 8 Valve, OHC • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
67.	MVTSI03	Educational petrol engine with direct injection system (TSI) EURO 6 • Fully functional system • 4 cylinders in line, 1.2 – 2.0 TSI • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
68.	MVHY01	Educational hybrid engine model • Fully functional system • Diagnosis through OBD 16 pole diagnostic socket	

		• Open contacts for measuring system components and circuits • Fault code simulations	
69.	MVMPI01-LPG01	Educational petrol engine with LPG system (MPI+LPG) EURO 3 • Fully functional system • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
70.	MVMPI01-LPG02	Educational petrol engine with LPG system (MPI+LPG) EURO 4 • Fully functional system • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations on engine management system	
NEW 71.	MVMPI03-AT	Educational petrol engine with direct multipoint injection system (EURO 5) and automatic transmission • Based on 4 cylinders in line engine and automatic transmission • Fully functional system • Diagnosis through OBD 16 pole diagnostic socket Fault code simulations	
72.	MVVE01	Educational diesel engine with VE pump (TDI) EURO 2 • Fully functional system • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
73.	MVPD01	Educational diesel engine with PD system EURO 3 • Fully functional system • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	

74.	MVCR01	Educational Diesel engine with CR (common rail) system EURO 3 • Fully functional system • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
75.	MVCR01-ECO	Economy line diesel engine with CR (Common rail) system EURO 3 • Fully functional system	
76.	MVCR02	Educational Diesel engine with CR (common rail) system EURO 4 • Fully functional system • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
77.	MVCR03	Educational Diesel engine with CR (common rail) system EURO 5 • Fully functional system • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
78.	MVCR04	Educational Diesel engine with CR (common rail), EURO 6 • Fully functional system • EURO 6 system (No AdBLue) • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
NEW 79.	MVCR05	Educational Diesel engine with CR (common rail), AD Blue EURO 6 • Fully functional system • AD Blue EURO 6 system • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits	

		• Fault code simulations	
80.	MVCARB01-ECO	Educational petrol engine with carburettor · Fully functional engine with carburetor · Educational engine based on the 1.6L - 2.0L vehicles engine · Economy line	
81.	MVMPI01-DYNO	Educational petrol engine with multipoint injection system + Dyno • Fully functional system • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations Educational engine connected with the engine dynamometer complete with: • Eddy current brake • Frame on 4 wheel, with the protection guards • Assembly flange at flywheel of the engine • Drive shaft with coupling • PC based software compatible with Win 7, 8 • Eddy current brake controlling device with information screen • Emergency stop button	
82.	MVTSI01-DYNO	Educational petrol engine with direct injection system (TSI) EURO 5 + Dyno • Fully functional system • 4 cylinders in line , 1.2 TSI, 8 Valve, OHC • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations Educational engine connected with the engine dynamometer complete with: • Eddy current brake • Frame on 4 wheel, with the protection guards • Assembly flange at flywheel of the engine	

		• Drive shaft with coupling • PC based software compatible with Win 7, 8 • Eddy current brake controlling device with information screen • Emergency stop button	
83.	AE12F-ENG	Hidden fault simulation for engine control system • 12 fault simulation (hidden from students) • Closed box Should be ordered together with the stand!	
84.	AEVAC-ENG	Vacuum measuring gauge Should be ordered together with the stand!	
85.	AEPRES-B-ENG	Fuel pressure gauge The pressure gauge in the low fuel supply line for petrol engine (systems with the fuel pump in tank only) Should be ordered together with the stand!	
86.	AEPRES-D-ENG	Fuel pressure gauge The pressure gauge in the low fuel supply line for diesel engines (systems with the fuel pump in tank only) Should be ordered together with the stand!	
87.	AECLUTCH	Complete clutch for a working engine • Clutch with the pedal and sensors installed in working engine Should be ordered together with the stand!	
Motorcycle engine models			
88.	MVMC01	Educational motorcycle engine with a fuel injection system • Fully functional system based on 2/4 cylinders motorcycle engine • With ignition, injection and exhaust system • Diagnosis through diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
Eddy current brake (Dynamometer)			

89.	DYNO400	Eddy current brake • Frame on 4 wheel, with the protection guards • Assembly flange at flywheel of the engine • Drive shaft with coupling • PC based software compatible with Win 7, 8 • Eddy current brake controlling device with information screen • Emergency stop button ! Should be ordered with the educational engine at once!	
90.	DYNO800	Eddy current brake • Frame on 4 wheel, with the protection guards • Assembly flange at flywheel of the engine • Drive shaft with coupling • PC based software compatible with Win 7, 8 • Eddy current brake controlling device with information screen • Emergency stop button ! Should be ordered with the educational engine at once!	
91.	DYNO1000	Eddy current brake • Frame on 4 wheel, with the protection guards • Assembly flange at flywheel of the engine • Drive shaft with coupling • PC based software compatible with Win 7, 8 • Eddy current brake controlling device with information screen • Emergency stop button ! Should be ordered with the educational engine at once!	
Working engine models - Truck			
92.	MVSPLD01	Educational Truck Diesel engine with PLD system • Fully functional system • 4 cylinders in line • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits	

		• Fault code simulations	
93.	MVSVR01	Educational Truck Diesel engine with VR type pump EDC system • Fully functional system • 4 cylinders in line • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
94.	MVSPLD02	Educational Truck Diesel engine with PLD system • Fully functional system • 6 cylinders in line • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
95.	MVSCR01	Educational Truck Diesel engine with CR system (common rail) • Fully functional system • 4 cylinders in line • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
96.	MVSCR06	Educational Truck Diesel engine with CR system (common rail) • Fully functional system • 6 cylinders in line • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations	
97.	MVSCR03	Educational Truck Diesel engine V8 • Fully functional system • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits	

		• Fault code simulations	
98.	MVSCR04-ADBLUE	Educational Truck Diesel engine with CR Ad Blue system • Fully functional system • 4 cylinders in line • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations Equipped with: - Exhaust catalytic converter/filter - Ad Blue (SCR)system; - Turbocharger	
NEW 99.	MSTRREF01	Truck Trailer Refrigeration system training stand • Fully functional system • With internal combustion engine • With electrical motor 400V • Diagnosis through, diagnostic socket • Mobile, with 4 casters	
Working engine models – Tractor (Farm)			
100.	MVTCR01	Educational Tractor (Farm) Diesel engine with CR system (common rail) • Fully functional system based on John Deer engine • 4 cylinders in line • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations Equipped with: • Turbocharger	
101.	MVTCR02	Educational Tractor (Farm) Diesel engine with CR system (common rail) AdBlue system · Fully functional system based on John Deer engine · 4 cylinders in line, · Diagnosis through OBD 16 pole diagnostic socket · Open contacts for measuring system components and circuits · Fault code simulations	

		• 24V system Equipped with: • Turbocharger • Exhaust filters DOC + DPF • SCR + DEF dosing system + Adblue tank (DEF) 30L	
NEW 102.	MVTCR03	Educational Diesel engine with CR (common rail) system • Fully functional system based on Cummins QSB 6.7 T3 engine • 6 cylinders in line, Common rail system • Diagnosis through OBD 16 pole diagnostic socket • Open contacts for measuring system components and circuits	
Working engine models – Marine			
103.	MVMIL03	Educational Marine Diesel engine with P3000 in-line pump • Fully functional system based on Cummins 6CTA 8.3 engine • 6 cylinders in line • Diagnosis through diagnostic socket • Open contacts for measuring system components and circuits • Fault code simulations Equipped with: • Turbocharger • Fuel System: Bosch P3000	
Truck tachograph simulator			
104.	MSTACH02	Truck tachograph simulator • Fully functional system • Driving speed simulation • Rest and driving time modes • 3 cards included: Driver Card, Workshop Card, Company Card • Print driving reports • Multilanguage	
105.	MSTACH03	Truck analogue educational tachograph simulator • Fully functional system • Driving speed simulation • Print driving reports • Multilanguage • With analogue paper tachograph charts	
Brake rigs			

106.	MSSS01	Brake rigs • Fully functional system with ABS • Brake booster, front and rear discs with calipers, cross diagonal hydraulic circuit, hand brake • Diagnosis through OBD 16 pole diagnostic socket • Driving simulation • 4 measuring gauges • Mobile, with 4 casters	
107.	MSSS03	Brake rigs (bench version) • Fully functional system with ABS • Brake booster, front and rear discs with calipers, cross diagonal hydraulic circuit, hand brake • Diagnosis through OBD 16 pole diagnostic socket • Driving simulation • 4 measuring gauges	
108.	MSEPS01	Electromechanical parking brake EPB stand • Functional electromechanical parking brake complete with the brake disc, brake caliper, multi stage gear mechanism, electric motor • Two electrical buttons for press and release brake pads • The brake operates electrically at 12V/ 220 volts • Cutaway of multi stage gear mechanism	
Steering system trainers			
109.	MSEVS01	Electronic steering rig • Fully functional system • Rack and pinion type • Electro hydraulic power steering system • Diagnosis through OBD 16 pole diagnostic socket • Driving simulation • Mobile, with 4 casters	
110.	MSHVS02	Hydraulic steering rig • Fully functional system • Rack and pinion type • Hydraulic power steering system • Power supply 220 volts • Mobile, with 4 casters	

111.	MSES01	Electric steering rig • Fully functional system electric steering column • Diagnosis through OBD 16 pole diagnostic socket • Driving simulation Mobile, with 4 casters	
Engine stands			
112.	VV01	Engine stand • Allows 360° rotation of engine or gearbox • Reducer with worm gear for engine rotation • Adjustable mounting brackets easily fit to engine block or gearbox • 4 adjustable supports for braking and stability • Mobile, with 4 casters • Stainless steel drain pan	
Engines and gearboxes for disassembling and assembling			
113.	VIVV01	Engines for disassembling and assembling • Passenger donor car diesel or petrol engines with different fuel supply systems (MPI, FSI, GDI, CR, VE and another on customer request) • On manually 360°rotating stand with worm and wheel gearboxes • Mobile, with 4 castors	
114.	VIVV01-ADRT	Petrol MPI Turbo Engine for disassembling and assembling • Passenger donor car petrol engines with MPI type fuel supply system and turbo • Complete timing an auxiliary belt • No wiring diagram or sensors • On manually 360°rotating stand with worm and wheel gearboxes • Mobile, with 4 castors	
115.	VIVV01-ADR	Petrol MPI Engine for disassembling and assembling • Passenger donor car petrol engines with MPI type fuel supply system • Complete timing an auxiliary belt • No wiring diagram or sensors • On manually 360°rotating stand with worm and wheel gearboxes • Mobile, with 4 castors	

116.	VIVV01-GDI	Engine with GDI direct petrol injection for disassembling and assembling • Complete passenger donor car engine • Complete timing an auxiliary belt • No wiring or sensors • On manually 360°rotating stand with worm and wheel gearboxes • Mobile, with 4 castors	
117.	VIVV01-FSI	Petrol FSI Engine for disassembling and assembling • Passenger VW/Audi donor car petrol engines (FSI) • No wiring diagram or sensors • On manually 360°rotating stand with worm and wheel gearboxes • Mobile, with 4 castors	
118.	VIVV01-RHX	Diesel CR Turbo Engine for disassembling and assembling • Passenger donor car Diesel engine with CR type fuel supply system and turbo • Complete timing an auxiliary belt • No wiring diagram or sensors • On manually 360°rotating stand with worm and wheel gearboxes • Mobile, with 4 castors	
119.	VIVI01-VETDI	Turbo diesel engine with VE/ER pump for disassembling and assembling • Passenger donor car Diesel engine with VE/VR type pump and turbo • Complete timing an auxiliary belt • No wiring or sensors • On manually 360°rotating stand with worm and wheel gearboxes • Mobile, with 4 castors	
120.	IVD-SPLIT	Turbo Diesel DOHC engine in split version on rotating stand • Passenger donor car diesel engine in split version • 6 cylinders in line, DOHC with the chain • Cutaway of 3 cylinders to chow the working order • Including the Common rail pump and injector • On manually 360°rotating stand with worm and wheel gearboxes • Mobile, with 4 castors	

121.	GDVV01-CVT	Gearboxes for disassembling and assembling • Passenger donor car, automatic CVT Multitronic gearbox • On manually 360°rotating stand with worm and wheel gearboxes • Mobile, with 4 castors	
122.	GDIVV01	Gearboxes for disassembling and assembling • Passenger donor car manual or automatic gearboxes in different configuration (4, 5, 6 – speed , automatic , DSG, multitronic, variable and another on customer request) • On manually 360°rotating stand with worm and wheel gearboxes • Mobile, with 4 castors	
Chassis training stands			
123.	MSVAZ01	Wheel alignment training stand • Suspension angles modification on front and rear axles • Toe angle modification on front and rear axles • Camber angle modification on front and rear axles • Caster angle modification, cradle adjustment, steering rack modification • All suspension components are visible and easily adjustable Wheels and tyres should be ordered separately!	
124.	MSVAZ02	Vehicle suspension training stand • McPherson type Suspension components, with brake discs, calipers and shafts (No gearbox) • Stand made for dismantling and assembling • Based on Audi/VW front suspension • Mobile, with 4 casters	
125.	MSRP01	Wheel alignment training stand wheels and tires set • Refurbished Wheels R14/R15 x 4 units (4x100) • New tires 195/55 R 14/R15 x 4 units	
Vehicle Functional model			

126.	PMTP01	Toyota PRIUS II Hybrid ½ • Educational fully operational vehicle. • Electrical system with the front end fully functional • Alternative to complete vehicle - space saving version, complete front end with complete back electrical part, the bumper and tail light • Two front wheels and rear mounted rollers for movement • Engine, ABS, AC, Air BAG's and etc. diagnostics	
127.	PMTPK01	Toyota PRIUS II Hybrid ½ (Cabrio version) • Electrical system with the front end fully functional • Alternative to complete vehicle - space saving version • Two front wheels and rear mounted rollers for movement • Engine, ABS, AC, Air BAG's and etc. diagnostics	
128.	PMTP03	Toyota PRIUS III Hybrid ½ • Educational fully operational vehicle. • Electrical system with the front end fully functional • Alternative to complete vehicle - space saving version, complete front end with complete back electrical part, the bumper and tail light • Two front wheels and rear mounted rollers for movement • Engine, ABS, AC, Air BAG's and etc. diagnostics	
129.	PMTP03-PLUG	Toyota PRIUS III PLUG-IN Hybrid ½ • Educational fully operational vehicle. • Electrical system with the front end fully functional • Alternative to complete vehicle - space saving version, complete front end with complete back electrical part, the bumper and tail light • Two front wheels and rear mounted rollers for movement • Engine, Hybrid system, ABS, AC, Air BAG's and etc. diagnostics • Based on Toyota Prius Plug-in (first generation) (2012-2016)	

130.	PMTP04-PLUG	Toyota PRIUS IV PLUG-IN Hybrid ½ • Educational fully operational vehicle. • Electrical system with the front end fully functional • Alternative to complete vehicle - space saving version, complete front end with complete back electrical part, the bumper and tail light • Two front wheels and rear mounted rollers for movement • Engine, Hybrid system, ABS, AC, Air BAG's and etc. diagnostics Based on Toyota Prius Plug-in (Second generation) (2016 - ...)	
131.	PMTPK05	Toyota Prius III Petrol/Electric/LPG HYBRID ¾ • Hybrid petrol / electric system TOYOTA HYBRID CONTROL SYSTEM – III (THS-III) and LPG system • Hybrid transmission system with a planetary reducer • Climate control system • CAN bus network • Exhaust system • ABS anti-lock brake system and driving stability system • SRS AIRBAG airbag system • Integrated emergency stop button to disconnect the high voltage battery	
132.	PMTPK06	Toyota Yaris HYBRID ¾ • Hybrid petrol / electric system • TOYOTA HYBRID CONTROL SYSTEM • Hybrid transmission system with a planetary reducer • Climate control system • CAN bus network • Exhaust system • ABS anti-lock brake system and driving stability system • SRS AIRBAG airbag system • Integrated emergency stop button to disconnect the high voltage battery	
Optional accessories for Functional models			
133.	PMTP-ENG-BOX	Built in measuring box with open contacts and wiring diagram for engine control system • Should be ordered together with the car	

		• Max 2 systems per car	
134.	PMTP-ENG-F	Fault simulation for engine control system (10 faults)	
135.	PMTP-ENG-FW	Fault simulation for engine control system with WI-FI module (10 faults)	
136.	PMTP-HB-BOX	Built in measuring box with open contacts and wiring diagram for Hybrid system (no high voltage side). • Should be ordered together with the car • *Max 2 systems per car	
137.	PMTP-HB-F	Fault simulation for Hybrid system (no high voltage side)	
138.	PMTP-HB-FW	Fault simulation for Hybrid system with WI-FI module (no high voltage side)(10 faults)	
139.	PMTP-AC-BOX	Built in measuring box with open contacts and wiring diagram for climate control • Should be ordered together with the car • Max 2 systems per car	
140.	PMTP-AC-F	Fault simulation for climate control (6 faults)	
141.	PMTP-AC-FW	Fault simulation for climate control with WI-FI module (6 faults)	
142.	PMTP-SRS-BOX	Built in measuring box with open contacts and wiring diagram for SRS AIRBAG • Should be ordered together with the car • Max 2 systems per car	
143.	PMTP-SRS-F	Fault simulation for SRS AIRBAG (6 faults)	
144.	PMTP-SRS-FW	Fault simulation for SRS AIRBAG with WI-FI module (6 faults)	

Vehicle Functional model (Hybrid Plug-In)			
145.	AHPLIN01	Hybrid Plug-in functional model • Educational fully operational hybrid vehicle based on FORD C-Max. • Hybrid system, Plug-in (PHEV) version • Engine, Hybrid system, ABS, AC, Air BAG's and etc. diagnostics • Built in measuring box with open contacts and wiring diagram for 2 electronic systems (chose 2 systems *PMTP-ENG /Box, PMTP-AC/Box, PMTP-SRS/Box or PMTP-HY/Box)* • Fault code simulations for 2 electronic systems • Faults on Hybrid HIGH VOLTAGE side should be ordered additionally (not included)	
146.	AHPLIN02	Hybrid Plug-in functional model • Educational fully operational hybrid vehicle based on Toyota Yaris model (2012- 2018). • Hybrid system, petrol/electric • Engine, Hybrid, ABS, AC, Air BAG's and etc. diagnostics • Built in measuring box with open contacts and wiring diagram for 2 electronic systems (choose 2 systems *PMTP-ENG /Box, PMTP-AC/Box, PMTP-SRS/Box or PMTP-HY/Box)* • Fault code simulations for 2 electronic systems Faults on Hybrid HIGH VOLTAGE side should be ordered additionally (not included)	
NEW 147.	AHPLIN03	Toyota PRIUS III PLUG-IN Hybrid • Educational fully operational vehicle based on Toyota Prius Plug – In (first generation) (2012-2016); • Plug – in system, ABS, AC, Air BAG's and etc. diagnostics • Built in measuring box with open contacts and wiring diagram for 2 electronic systems, (choose max 2 systems: AHPLIN-03-*ENG/Box, AHPLIN-03-AC/Box, AHPLIN-03-SRS/Box, AHPLIN-03-HY/Box);* • Fault code simulations for 2 electronic systems: choose max 2 systems; • Faults on Hybrid HIGH VOLTAGE side should be ordered additionally (not included);	

		• Factory charger for household included	
148.	AHPLIN04	Toyota PRIUS IV PLUG-IN Hybrid • Educational fully operational vehicle based on Toyota Prius Plug-in (Second generation) (2016 - ...); • Plug - in system, ABS, AC, Air BAG's and etc. diagnostics • Built in measuring box with open contacts and wiring diagram for 2 electronic systems, (choose max 2 systems: *AHPLIN-04-ENG/Box, AHPLIN-04-AC/Box, AHPLIN-04-SRS/Box);* • Fault code simulations for 2 electronic systems: choose max 2 systems; • Faults on Hybrid HIGH VOLTAGE side should be ordered additionally (not included); • Factory charger for household included	
Optional accessories for Functional models			
149.	AHPLIN-ENG-BOX	Built in measuring box with open contacts and wiring diagram for engine system (no high voltage side). • Should be ordered together with the car • *Max 2 systems per car	
150.	AHPLIN-ENG-F	Fault simulation for engine system (no high voltage side) 10 faults	
151.	AHPLIN-ENG-FW	Fault simulation for engine system with WI-FI-module (no high voltage side) 10 faults	
152.	AHPLIN-HB-BOX	Built in measuring box with open contacts and wiring diagram for Hybrid system (no high voltage side). • Should be ordered together with the car • Max 2 systems per car	
153.	AHPLIN-HB-F	Fault simulation for Hybrid system (no high voltage side)	
154.	AHPLIN-HB-FW	Fault simulation for Hybrid system (no high voltage side) with WI-FI module	
155.	AHPLIN-BR-BOX	Built in measuring box with open contacts and wiring diagram for braking system	

156.	AHPLIN-BR-F	Fault simulation for braking system (10 faults)	
157.	AHPLIN-BR-FW	Fault simulation for braking system with WI-FI module (10 faults)	
158.	AHPLIN-AC-BOX	Built in measuring box with open contacts and wiring diagram for climate control • Should be ordered together with the car • Max 2 systems per car	
159.	AHPLIN-AC-F	Fault simulation for climate control (6 faults)	
160.	AHPLIN-AC-FW	Fault simulation for climate control with WI-FI module (6 faults)	
161.	AHPLIN-HV-BOX	Built in measuring box with open contacts and wiring diagram for Hybrid system (high voltage side). • Should be ordered together with the car • Max 2 systems per car	
162.	AHPLIN-HV-F	Fault simulation for Hybrid system (high voltage side)	
163.	AHPLIN-HV-FW	Fault simulation for Hybrid system with WI-FI module (high voltage side)	
164.	AHPLIN-SRS-BOX	Built in measuring box with open contacts and wiring diagram for SRS AIRBAG • Should be ordered together with the car • Max 2 systems per car	
165.	AHPLIN-SRS-F	Fault simulation for SRS AIRBAG (6 faults)	
166.	AHPLIN-SRS-FW	Fault simulation for SRS AIRBAG with WI-FI module(6 faults)	
Vehicle Functional model (EV)			
NEW 167.	AE01	Electrical vehicle functional model • Educational fully operational electric vehicle based on Nissan Leaf • EV system, ABS, AC, Air BAG's and etc. diagnostics • Built in measuring box with open contacts and wiring diagram for 2 electronic systems, (choose max 2	

		systems: *PMTP-ENG-EV/Box, PMTP-AC/Box, PMTP-SRS/Box)* • Fault code simulations for 2 electronic systems: choose max 2 systems • Faults on Hybrid HIGH VOLTAGE side should be ordered additionally (not included)	
NEW 168.	AE02	Electrical vehicle functional model • Educational fully operational electric vehicle based on Nissan Leaf II • EV system, ABS, AC, Air BAG's and etc. diagnostics • Built in measuring box with open contacts and wiring diagram for 2 electronic systems (choose 2 systems *PMTP-ENG-EV/Box, PMTP-AC/Box, PMTP-SRS/Box)* • Fault code simulations for 2 electronic systems Faults on Hybrid HIGH VOLTAGE side should be ordered additionally (not Included)	
169.	AE-FV	Functional vehicle • Educational fully operational vehicle. • Cutaway of different body and internal parts	
Optional accessories for Functional models			
170.	AE-EV-BOX	Built in measuring box with open contacts and wiring diagram for EV system (no high voltage side). • Should be ordered together with the car • *Max 2 systems per car	
171.	AE-EV-F	Fault simulation for Electric Vehicle (no high voltage side)	
172.	AE-EV-FW	Fault simulation for Electric Vehicle with WI-FI module (no high voltage side)	
173.	AE-BR-BOX	Built in measuring box with open contacts and wiring diagram for EV car braking system. • Should be ordered together with the car • *Max 2 systems per car	
174.	AE-BR-F	Fault simulation for braking system (10 faults)	

175.	AE-BR-FW	Fault simulation for braking system with WI-FI module (10 faults)	
176.	AE-AC-BOX	Built in measuring box with open contacts and wiring diagram for climate control • Should be ordered together with the car • Max 2 systems per car	
177.	AE-AC-F	Fault simulation for climate control (6 faults)	
178.	AE-AC-FW	Fault simulation for climate control with WI-FI module (6 faults)	
179.	AE-HV-BOX	Built in measuring box with open contacts and wiring diagram for EV system (high voltage side). • Should be ordered together with the car • Max 2 systems per car	
180.	AE-HV-F	Fault simulation for EV system (high voltage side)	
181.	AE-HV-FW	Fault simulation for EV system with WI-FI module (high voltage side)	
182.	AE-SRS-BOX	Built in measuring box with open contacts and wiring diagram for SRS AIRBAG • Should be ordered together with the car • Max 2 systems per car	
183.	AE-SRS-F	Fault simulation for SRS AIRBAG (6 faults)	
184.	AE-SRS-FW	Fault simulation for SRS AIRBAG with WI-FI module (6 faults)	
185.	AEHVS01	Protective tool set for working with high voltage vehicles • Protective gloves • Digital voltage tester • Protective glasses • Fencing tape • 3-sided warning sign • 2-sided warning sign • Multimeter	

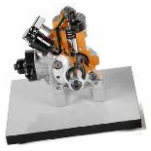
* Max 2 systems per car – when car is ordered it could be installed only two different systems, for example PMTP-ENG /Box + PMTP-AC/Box			
Platforms for quadracycle			
186.	PKX2	Platform for a Quadracycle • Platform with the fixing points for a quadracycle (ATV) 2 wheels drive • Mobile on 4 wheels • Possible to use in workshop or in classroom Exhaust ventilation not included!	
187.	PKX4	Platform for a Quadracycle • Platform with the fixing points for a quadracycle (ATV) 4x4 wheels drive • Mobile on 4 wheels • Possible to use in workshop or in classroom Exhaust ventilation not included!	
Timing belt and chain replacement trainers			
188.	IVDD01-CR02	Diesel DOHC Common Rail engine ½ cutaway model • For timing chain replacement training • Auxiliary drive belt replacement training • 4 valves per cylinder • Water cooling • 12V alternator	
189.	IVDB01	Petrol DOHC engine ½ cutaway model • For timing belt replacement training • Auxiliary drive belt replacement training • DOHC twin overhead camshaft • 4 valves per cylinder • Water cooling • 12V alternator • Including the special tools for timing	
190.	IVOD01-CR01	Diesel OHC Common Rail engine ½ cutaway model • For timing belt replacement training • Auxiliary drive belt replacement training • 2 valves per cylinder • Water cooling • 12V alternator • Including the special tools for timing	

191.	IVDB02	Petrol DOHC MPI engine ½ cutaway model • For timing chain replacement training • Auxiliary drive belt replacement training • DOHC twin overhead camshaft • 4 valves per cylinder • Water cooling, 12V alternator	
Cutaway and other educational models			
NEW 192.	AERZ65	EV Electric vehicle junction box and electric motoreducer cutaway model • The EV components mounted on aluminum frame • The stand is based on Renault vehicle • Electric motoreducer manual rotation • Internal electric and electronic components covered with the plexiglass • This cutaway model is carefully sectioned for training purposes, painted with different colors to better differentiate the various parts	 
193.	AEMBA170	Diesel Common rail INJECTION + GEARBOX cutaway model • 4 in-line cylinders • Camshaft • Gearbox 5 forward speeds + reverse • The engine operates electrically at 220 volts and runs at a reduced speed. • Operation of the various mechanical parts • The cutaway engine model on aluminium stand with the wheels	
194.	AECE Guard	Additional protection for diesel engine cutaway from aluminum and plex glass from polycarbonate 8mm.	
195.	AECE Guard Full cover	Additional protection for diesel engine cutaway from aluminum and plex glass from polycarbonate 8mm.	
196.	AE1064	Direct shift gearbox cutaway model • The DSG gearbox model is mounted on the stand • Manual rotation • The cutaway gearbox model on aluminium base;	

197.	IVDB01-Q	Petrol DOHC engine ¼ cutaway model • DOHC twin overhead camshaft • 4 valves per cylinder • Piston with the rings • 1 cylinder • The cutaway model on aluminium base	
198.	IVOD01-Q	Diesel engine ¼ cutaway model • 2 valves per cylinder • Piston with the rings • 1 cylinder • The cutaway model on aluminium base	
199.	IDSS01	Membrane spring clutch cutaway functional model • On the base • Complete with the flywheel, clutch disc, pressure plate, throw out bearing and release fork and pressing handle • Rotation of the clutch disk by hand • The cutaway clutch model on aluminum base	
200.	AEDMF01	Dual mass flywheel with the clutch cutaway model • On the base • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
201.	AEDMFS01	Truck dual mass flywheel with the clutch cutaway • On the base For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
202.	AETTC	Truck Turbo charger cutaway model • on the base • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
203.	AE410000E	Ignition & Charging System A plastic-plated wooden base is the support of the main components of the coil ignition of a 4-stroke engine: battery, spark coil, coil, spark plugs. Rotating the flywheel, it shows the operation of the whole unit (the action of the platinum points and of the distributor can be observed through the section) and the spark flashing in the respective spark plugs is shown as well.	

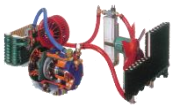
204.	AE410010	Electronic ignition system model • A model showing the operating principles of the electronical ignition system for four cylinders, four-stroke engine. • Original vehicles components: sparkplugs, distributor, ignition coil, ignition wirings and etc. • A plastic-plated wooden base is the support of the main components of the system • Clearly visible components • Manual operation by hand	
205.	AE410030	IGNITION SYSTEM cutaway model • A model showing the operating principles of the mechanically timed ignition system for four cylinders four-stroke engine. • Original vehicles components: sparkplugs, distributor, ignition coil, ignition wirings and etc. • Clearly visible components • Manual operation by hand • Cutaway model on the base	
206.	AE410040S	12 Volt Battery cutaway model • Battery type lead / acid	
207.	AE410041	12 Volt AGM Battery cutaway • Battery type Absorbed Glass Matte • Mostly used for Start/Stop systems	
208.	AE410070M	STARTER MOTOR FOR CARS cutaway model • Passenger cars • On the base • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
209.	AE410070ME	STARTER MOTOR FOR CARS cutaway model • Passenger cars • With electrical Bendix drive (from 12V battery) On the base	
210.	AE410071M	Starter motor with reduction gears cutaway model • Passenger cars • On the base	

		• For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
211.	AETS01	Starter motor for trucks cutaway model • On the base • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
212.	AE410080M	ALTERNATOR SINGLE-FLOW COOLING cutaway model • On the base • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
213.	AE410081M	ALTERNATOR Double-FLOW COOLING cutaway model • On the base • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
214.	AESALT01	Trucks engine alternator cutaway model • On the base For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
215.	AE410104M	CP1 BOSCH HIGH PRESSURE PUMP cutaway model • Radial-piston pump for common rail engines • Pressure up to 1350 bar • Fuel lubricated • Three plungers • Cutaway model on the base	
216.	AE410106M	CP3 BOSCH HIGH PRESSURE PUMP cutaway model (on the base) • Radial-piston pump for common rail engine • Pressure up to 1600 bar • Fuel lubricated • Three plungers	

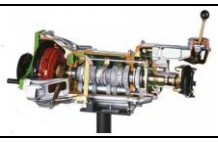
217.	AE410108M	CP4 BOSCH HIGH PRESSURE PUMP cutaway model • Radial-piston pump for common rail engine, • Pressure up to 2000 bar • Fuel lubricated • Two plungers • Cutaway model on the base	
218.	AE410110S	INJECTOR PUMP cutaway model Accurate section of a unit injector system for commercial vehicle, where it is possible to observe: • Electromagnetic valve HD • Pumping element • Duster, etc. • Cutaway model on the base	
219.	AE410112S	Common Rail PIEZO injector cutaway model • On the base • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
220.	AE410180M	Diesel injection pump with 6 IN-LINE cylinders and centrifugal governor cutaway model • Small piston • Cylinder • Sector gear • Rock • Camshaft • Check valve • Centrifugal governor • Manual operation • Cutaway model on the base	
221.	AE410181M	Diesel injection pump with 4 IN-LINE cylinders and centrifugal governor cutaway model Visible components: • Small piston • Cylinder • Sector gear • Rock • Camshaft • Check valve • Centrifugal governor • Manual operation	

		• Cutaway model on the base	
222.	AE410200M	INJECTION PUMP WITH 6 IN-LINE CYLINDERS cutaway model Small piston, Cylinder, Sector gear, Rock, Camshaft, Check valve, Centrifugal governor, 2 injectors of different type, Fuel filter, Fuel pump, Operated manually through a crank handle. • Cutaway model on the base	
223.	AE410220M	BOSCH INJECTION PUMP WITH 4 IN-LINE CYLINDERS + PNEUMATIC SPEED GOVERNOR cutaway model Accurate section of a pump suitable for medium displacement engine (FIAT, Mercedes) with pneumatic speed governor (rock rod or acceleration rod controlled by a diaphragm connected to the suction collector).It is provided with a feeding pump. • Cutaway model on the base	
224.	AE410230M	Single cylinder injection pump cutaway model • On the base • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
225.	AE410240M	BOSCH VE rotary injection pump cutaway • Distributor plunger • Injection phase • Supplied complete with an indirect injector • Manual operation • Cutaway model on the base	
226.	AE410250M	CAV DPA-DPS ROTARY INJECTION PUMP cutaway model Careful section of a CAV rotary pump for training purposes, showing all its operating parts. The transfer pump, the speed governor, the automatic advance regulator, the hydraulic sensor device, the fuel circuit and the pumping small piston are clearly shown. It is supplied complete with an indirect injector. • Manual operation • Cutaway model on the base	
227.	AE410260M	CAV DPC injection pump cutaway model Cross sectioned according to the criteria to show its main parts. It is provided with an indirect injector. • Manual operation	

		• Cutaway model on the base	
228.	AE410270M	Diesel injection VP 44 Bosch pump cutaway • Distributor plunger • Injection phase • Electronic control unit, etc. • Manual operation • Cutaway model on the base	
229.	AE410280S	Diesel injector cutaway model Careful section of two different injectors (direct and indirect injection type) showing their internal parts and relevant operation • Cutaway model on the base	
230.	AE410300M	DIESEL COMMON-RAIL (on base) – manual Accurate cross-section of the high pressure (1600 bar) fuel system known as Common-rail. This circuit consists of a radial piston pressure pump, one delivery manifold and an electro-injector, all connected via high pressure hoses. • Cutaway model on the base	
231.	AE410305S	Diesel Common Rail injector with solenoid valve cutaway model Section of electro injector for modern diesel engines. The main interesting components from the educational point of view are displayed.	
232.	AE410380S	ELECTRICAL FUEL PUMP (on base) - static • On the base • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
233.	AE410430M	TURBOSUPERCHARGER WITH WASTE-GATE VALVE (on base) • On the base • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
234.	AE410520S	LPG FUEL CIRCUIT (on base) – static Layout of a car LPG fuel system with single-body type carburettor for educational purposes included: Filler Plug, LPG tank, Level gauge, LPG solenoid valve, Petrol solenoid valve, Vaporizer reduction gear, Carburettor. • Cutaway model on the base	

235.	AE410525S	LPG TIMED SEQUENTIAL INJECTION FOR ELECTRONIC INJECTION ENGINES (wall-mounted) – cutaway training model LPG timed sequential injection for petrol engine with multi-point electronic injection, complete with the following components: • ECU • Injection rail • L.P.G. solenoid valve • Reducer – vaporizer • Pressure sensor • Pressure stabilizer • Switch commutator • Nozzles for manifold • Water temperature sensor • Gas temperature sensor • Refuelling valve • Level indicator	
236.	AE410636	Hydraulic shock absorber cutaway model • McPherson type • Complete with the damper spring • On the base	
237.	AE410638	Gas shock absorber cutaway model • On the base • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
238.	AETSA01	Truck shock absorber model cutaway • On the base For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
239.	AE410650M	AIR CONDITIONING SYSTEM (on base) – manual Radial piston compressor, Condenser, Filter, Expansion valve, Evaporator, Electric fans, High and low pressure connecting hose	
240.	AE410730M	RACK and pinion, STEERING BOX cutaway model • On the base • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	

241.	AE410401S	Engine cooling system (on base) cutaway model Complete Cooling System unit Technical specifications: • Block-head canalization • Water pump • Thermostatic valve • Water temperature bulb • Expansion tank • Radiator Connecting pipe	
242.	AE410750	Power steering with RE-CIRCULATING BALL system cutaway model • A cutaway model showing the operating principles of the mechanical steering system with the re-circulating ball. • Cutaway model equipped with rotating handle that simulates the action of a steering wheel and ball type steering box and hydraulic vane type pump. Clearly visible oil filter and connecting pipes • Original vehicles components • Manual operation • Cutaway model on the base	
243.	AE410760M	RACK POWER STEERING – training model • Rack type steering box • Hydraulic pump • Oil tank with relevant filter • Connecting pipes • For cars • On base	
244.	AE410778	Electric power assisted steering (EPS) system with suspension • A model showing the operating principles of the electronic power assisted system in a working condition with the operational McPherson suspension • Adjustment of the steering effort directly on the rack • Vehicle speed simulation from 0 to 120 km/h • Normal/city push-button • Alternator simulation • Indicator lamp and voltage/current display	

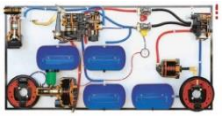
		• Body computer with diagnostic socket (with low speed CAN) • Original vehicles components • The model on stand with the wheels	
245.	AE410782M	ELECTRICAL RACK AND PINION STEERING cutaway model • Manual operation • Cutaway model on the base	
246.	AE410990M	GEARBOX Cutaway model • 5 speed forward and one reverse • With possibility of selecting any speed • Operated manually through a hand wheel • Gearbox cutaway model on stand with wheels	
247.	AE411005M	GEARBOX cutaway model • 5 speed forward and one reverse • With the differential • With possibility of selecting any speed • Operated manually through a hand wheel • Gearbox cutaway model on stand with wheels	
248.	AE411030	GEARBOX WITH CLUTCH 5 FORWARD SPEEDS + REVERSE cutaway model This cutaway model is carefully sectioned for training purposes, professionally painted with different colors to better differentiate the various parts and cross-sections. Many parts have been chromium-plated and galvanized for a longer life. • Dry single-plate clutch with spring and diaphragm. The clutch is operated mechanically by means of a foot pedal for training purposes. • Operated manually through a hand wheel • Gearbox cutaway model on stand with wheels	
249.	AE411040M	AUTOMATIC TRANSMISSION cutaway model • Operated manually through a hand wheel • Gearbox cutaway model on stand with wheels	

250.	AE411060M	AUTOMATIC TRANSMISSION • Rear drive 4 Forward + reverse • Rotation manually, by handle • Casing • Torque converter • Oil pump • Stationary plate clutch • Rotary plate clutch • Planetary gear train • Hydraulic circuit valve; Centrifugal regulator • The gearbox cutaway model is mounted on the stand with wheels	
251.	AE411068M	CONTINUOUSLY VARIABLE TRANSMISSION (CVT) cutaway model Special gearbox that can change continuously through an infinite number of effective gear ratios between maximum and minimum values. There are two V-belt pulleys that are split perpendicular to their axes of rotation, with a V-belt running between them. • Operated manually through a hand wheel • Gearbox cutaway model on stand with wheels	
252.	AE411069M	ZF 16S ECOSPLIT GEARBOX FOR HEAVY TRUCKS 16F + 2R cutaway model The gearbox is composed of a central box containing 4 forward speeds gearings and 2 reverse speeds gearings, epicyclic unit for selecting the speed-gears mounted on the base and over-gear on top. The over-gear allows to divide each gear into slow or fast obtaining 16 forward gears which can be inserted and geared down in sequence. • Heavy vehicles gearbox • With possibility of selecting any speed • Operated manually through a hand wheel; • Gearbox cutaway model on stand with wheels; • Weight approx. – 400 kg	
253.	AE411070M	FULLER 13 SPEED GEARBOX cutaway model Quick change gear box used in 300/400HP heavyweight vehicles with mechanical and pneumatic control. It is a non-synchronized gearbox, the box is divided in 2 parts: On the engine side there are 1st 2nd 3rd and 4th speed gears, reverse speed gears and extra low ratio pick-up speed gears. All these gears are mechanically controlled by the change gear lever. In the other part of the gearbox (on the output shaft side), there	

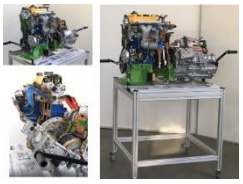
		are the standard, low ratio and semi low ratio speed gears, pneumatically controlled by the pre-selectors provided on the gear lever. This gearbox is made very sturdy by the presence of 2 auxiliary shafts sharing stress to an equal degree. • Heavy vehicles gearbox • With possibility of selecting any speed • Operated manually through a hand wheel • Gearbox cutaway model on stand with wheels • Weight approx. – 400 kg	
254.	AE411071M	HEAVY TRUCK GEARBOX ZF 5HP cutaway model • Sectioned heavy truck gearbox. Composed by: • Torque converter with lock-up clutch • Hydrodynamic retarder • Rotating multi-disc clutches • Fixed-position multi-disc brakes • Oil cooler with oil-water exchanger • Electro- valves • Operated manually through a hand wheel • Gearbox cutaway model on stand with wheels • Weight approx. – 350 kg	
255.	AE411080M	GEARBOX WITH TRIPLE REDUCTION GEAR cutaway model • Heavy vehicles gearbox • With possibility of selecting any speed • Operated manually through a hand wheel • Gearbox cutaway model on stand with wheels • Weight approx. – 200 kg	
256.	AE411082M	HYBRID TRANSMISSION MG (MOTOR/GENERATOR) Toyota Prius The Motor Generator 1 (MG1) operates as the control element for the power splitting planetary gear set. It recharges the HV battery and also supplies electrical power to drive Motor Generator 2 (MG2). MG1 effectively controls the continuously variable transmission function of the transaxle and operates as the engine starter. • Operated manually through a hand wheel • Gearbox cutaway model on stand with wheels	

257.	AE411110M	Single disc clutch coil spring model • Clutch disc, pressure plate, throw out bearing and release fork and pressing handle • Rotation of the clutch disk by hand • Clutch cutaway model on the base	
258.	AE411100S	HYDRAULIC CONTROL CLUTCH cutaway model This panel shows the hydraulic circuit which controls a diaphragm clutch. The pump, cylinder and clutch units are fully sectioned	
259.	AE411141M	CENTRIFUGAL CLUTCH cutaway model • On the base • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
260.	AE411198M	REAR AXLE HEAVY TRUCK WITH LOCKING DIFFERENTIAL cutaway model • Rear axle for heavy truck with locking differential. • Complete section of the rear axle. The main components are: • Bevel gear (pinion – crown) • Differential (satellite and planetary) with locking differential • Axle shafts • Reducer and planetary on the hub • Brakes with jaws/drum • Double air brake element • Operated manually • Truck axle cutaway model on stand with wheels	
261.	AE411199M	REAR AXLE HEAVY TRUCK WITHOUT LOCKING DIFFERENTIAL cutaway model • Rear axle for heavy truck with locking differential. • Complete section of the rear axle. • Bevel gear (pinion – crown) • Differential (satellite and planetary) with locking differential • Axle shafts • Reducer and planetary on the hub • Brakes with jaws/drum • Double air brake element • Operated manually	

		• Truck axle cutaway model on stand with wheels	
262.	AE411204M	Rear suspension model Rear suspension with the sectioned shock absorbers, springs an brake drums • Suspension model mounted on stand with wheels	
263.	AE411200M	Rear axle with differential (on stand with wheels) – manual Rigid rear axle complete with differential unit, axle shafts and rear drum brakes, carefully sectioned to show the operation of the differential unit where planetary gears, the ring gear and the pinion are clearly displayed. A brake drum and a cylinder are sectioned too.	
264.	AE411210M	Sectioned Front Suspension Unit • McPherson Strut Type Suspension • Shock absorber, spring • Rack and pinion steering box • Disc brake • Steering wheel • Sectioned suspension mounted on the stand with wheels	
265.	AE411220M	Hydraulic Brake Chassis Trainer • McPherson suspension • Shock absorber • Spring • Rack and pinion steering box • Disc brake • Drum brake • Hydraulic pump • Brake lever • Steering wheel • Sectioned chassis mounted on the stand with wheels	
266.	AE411280M	HYPOID DIFFERENTIAL cutaway model • On stand • For training purposes, the model section is carefully divided into parts,	

		professionally painted in different colors to distinguish the various parts	
267.	AE411300M	4X4 VEHICLE TRANSMISSION ASSEMBLY WITH 5 SPEED MECHANICAL • Gearbox: 5 forward speeds+ reverse • 2-Speeds reduction gear • Movement restorer with front wheel drive manual control • Drive shafts with universal joints • Self-locking hypoid differentials • Manual operation • Sectioned transmission assembly mounted on the stand with wheels	
268.	AE412010M	DRUM BRAKE cutaway model • Section of a drum brake • The cylinder and shoes are clearly shown. • Brake cutaway model on the base	
269.	AE412030M	DISC and DRUM BRAKE cutaway model A cutaway model of a hydraulic brakes. Composed of brake master cylinder, brake tank and brake lever. Caliper with the brake disc with the drum brake inside • Sectioned brake model mounted on the base;	
270.	AE412050M	Hydraulic Dual Circuit Brake with Servo Brake training unit Cut-away model used for training on servo double circuit mechanism hydraulic circle. Real parts of a car installed on a panel. When we press on brake pedal, hydraulic system start and turn on brake light and able to see the mechanism of brake. It shows brake pressure at the same time. • Wall mounted training unit	
271.	AE412065S	Pneumatic Air Brake Trainer Wall panel showing the hydro-pneumatic braking elements of a truck (tractor-trailer) complete with: air compressor, triplex distributor with adjusting and control unit, pressure brake booster, tractor-trailer coupling joint, hydraulic control braking element, mechanical and air control braking element for parking braking, servo-distributor valve for the trailer, no. 4 air reservoirs (3 for the tractor). All elements are connected with rubber pipes of different colours to distinguish the various circuits. • Wall mounted training unit	
272.	AE411140S	Torque converter • On stand • For training purposes, the model section is carefully divided into parts,	

		professionally painted in different colors to distinguish the various parts	
273.	AE410790M	Model of PLANETARY-GEAR - manual : • On stand • This model shows very clearly and instructively the operating system of a planetary gear and the available gearshift possibilities. • Topical as in every automatic motorcar transmission there is a planetary gear pistons • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
274.	AE411197M	IVECO Truck disc brake with pneumatic control cutaway model – static It is mounted on a Iveco Stralis truck produced from 2002. • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
275.	AE41299M	IN-LINE PISTON PUMP cutaway model Accurate section of an in-line piston pump showing: • Pump head • Suction and discharge valves • Pistons • Piston rods • Bearings	
276.	AE413092M	ANGLE REDUCER cutaway model • On stand • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
277.	AE413094M	WORM GEAR REDUCER cutaway model • On stand • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
278.	AE413096M	SINGLE-STAGE REDUCER cutaway model • On stand • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	

279.	AE413110M	BEVEL HELICAL REDUCER (on base) – manual • On stand • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
280.	AE34500M	Hybrid system petrol/electric system cutaway model • 4 in-line cylinders, 1500 cm^3 • Toyota hybrid system (THS) • VVT-I system (Variable Valve Timing) • Multi point injection • Engine + Electrical motors • Transmission with the differential group • The engine and the generator could be rotated manually • The Engine and the generator can operate together or separately. • The cutaway hybrid engine model mounted on the stand with the wheels.	
281.	AE34501	Hybrid system petrol/electric system cutaway model • 4 in-line cylinders, 1500 cm^3 • Toyota hybrid system (THS) • VVT-I system (Variable Valve Timing) • Multi point injection • Engine + Electrical motors • Transmission with the differential group • The engine and the generator operates electrically at 220 volts and runs at a reduced speeds. • The Engine and the generator can operate together or separately. • The cutaway hybrid engine model mounted on the stand with the wheels	
282.	AE34501WM	Hybrid system petrol/electric system cutaway model • 4 in-line cylinders, 1500 cm^3 • Toyota hybrid system (THS) • VVT-I system (Variable Valve Timing) • Multi point injection • Engine + Electrical motors • Transmission with the differential group • The engine and the generator operate electrically at 220 volts and runs at a reduced speed.	

		• Show the working modes with the LED lights of the hybrid system and petrol engine • The Engine and the generator can operate together or separately. The cutaway hybrid engine model mounted on the stand with the wheels	
283.	AECE Guard	Additional protection for hybrid engine cutaway from aluminum and plex glass from polycarbonate 8mm.	
284.	AECE Guard Full cover	Additional protection for diesel engine cutaway from aluminum and plex glass from polycarbonate 8mm.	
285.	AE34400M	MAZDA RX TWIN-ROTOR WANKEL ENGINE cutaway model 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 · The Twin Rotor Wankel cutaway engine mounted on the stand with the wheels.	
286.	AE34800E	16 VALVE 4 CYLINDERS FIAT ENGINE WITH MULTI-POINT ELECTRONIC INJECTION cutaway model Main technical specifications: • 4 in-line cylinders, DOHC twin overhead camshaft • Displacement: 2000 cu. Cm • Multipoint electronic injection with ignition- integrated control unit • Vibration-damping balancing shafts • Manual operation • The cutaway engine model mounted on the stand with the wheels.	

287.	AE34805E	16 VALVE 4 CYLINDERS FIAT ENGINE WITH MULTI-POINT ELECTRONIC INJECTION + GEARBOX 5 FORWARD SPEEDS + REVERSE cutaway model Main technical specifications: • 4 in-line cylinders, 2000 cm^3, DOHC twin overhead camshaft • Multipoint electronic injection • Vibration-damping balancing shafts • 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. • The engine and the gearbox cutaway model is mounted on the stand with the wheels.	
288.	AE35195M	6 V CYLINDERS PETROL ENGINE WITH MULTI-POINT ELECTRONIC INJECTION cutaway model • 6 V cylinders • Displacement: 2000-3000 cc • DOHC • Multi-point electronic injection • Centrifugal water pump • 12V alternator • Manual operation • The cutaway engine mounted on the stand with the wheels.	
289.	AE35195E	6 V CYLINDERS PETROL ENGINE WITH MULTI-POINT ELECTRONIC INJECTION cutaway model • 6 V cylinders • Displacement: 2000-3000 cc • OHC • Multi-point electronic injection • Centrifugal water pump • 12V alternator • 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. • The cutaway engine mounted on the stand with the wheels.	

290.	AE35220 CE	FIAT PETROL ENGINE WITH CARBURETTOR + GEARBOX cutaway model • 4 in-line cylinders • Displacement: 1000/1300 cm^3 • Camshaft in head, 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 • The cutaway engine mounted on the stand with the wheels.	
291.	AE35220 IEM	FIAT PETROL ENGINE WITH ELECTRONIC INJECTION - MONOJETRONIC + GEARBOX cutaway model • 4 in-line cylinders, Displacement: 1000/1300 cm^3 • Camshaft in head, injection system, 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 • The cutaway engine mounted on the stand with the wheels.	
292.	AE35222 IEE	FIAT PETROL ENGINE WITH MULTI-POINT ELECTRONIC INJECTION + GEARBOX cutaway model • 4 in-line cylinders, Displacement: 1000/1300 cm^3 • Camshaft in head, electronic injection, 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 • The cutaway engine mounted on the stand with the wheels.	

293.	AE35230	2 CYLINDERS PETROL ENGINE cutaway model • Air cooling • Displacement: 500 cu. Cm • Camshaft in the crankcase • Single body carburettor • Overhead valves • Manual operation • The cutaway engine mounted on the base	
294.	AE35245M	SINGLE-CYLINDER 4 STROKE PETROL ENGINE AIR COOLED cutaway model (on the base) • Displacement 160cc, power 6 hp • Camshaft in the crankcase • Overhead valves • RPM regulator • Oil pump, Carburettor, Air filter, Silencer, Tank • Manual operation	
295.	AE35272E	PETROL MULTI-POINT ENGINE CHASSIS WITH ABS - chassis trainer • Fiat chassis with front drive with working light system • Hydraulic power searing • 4 cylinders, 1200 cm^3, petrol • Electronic injection MPI (Multipoint) • Gearbox: 5 forward speeds + reverse+ differential • Hydraulic power steering with double-jointed steering column; Brake system with 4 sensors ABS • 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. 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. The chassis trainer and the cutaway components is mounted on the stand with the wheels	

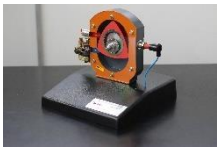
296.	AE35274E	STANDARD PETROL MULTI-POINT ENGINE CHASSIS WITH WORKING LIGHT SYSTEM chassis trainer • Fiat chassis with front drive 4 cylinders, 1200 cm³, petrol, electronic injection MPI (Multi-point) • Gearbox: 5 forward speeds + reverse+ differential • Double circuit brake system with servo brake • Front-disc brake, Rear-drum brake, Working front and rear light system controlled by a dashboard • 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. 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. The chassis trainer and the cutaway components is mounted on the stand with the wheels.	
297.	AE35340E	FIAT DOUBLE SHAFT (DOHC) ENGINE WITH MULTI-POINT ELECTRONIC INJECTION WITH LIGHT SYSTEM chassis trainer • 4-stroke petrol engine 4-cylinders • Displacement 2000 cu Cm • Gearbox: 5 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 • Rack steering box, Rear leaf spring suspension • Working front and rear light system controlled by a dashboard • 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. 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. The chassis trainer and the cutaway components is mounted on the stand with the wheels.	
298.	AE35350E	STANDARD PETROL MULTI-POINT ENGINE CHASSIS Trainer • Fiat chassis with front drive 4 cylinders • 1200 cm^3, petrol, electronic injection MPI (Multi-point) • Gearbox: 5 forward speeds + reverse+ differential • Double circuit brake system with servo brake • Front-disc brake, Rear-drum brake • 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. 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. The chassis trainer and the cutaway components is mounted on the stand with the wheels.	
299.	AE36010M	16 VALVE CHRYSLER TURBO DIESEL ENGINE WITH COMMONRAIL INTERCOOLER • 4 stroke engine; 4 in-line cylinders; 4 valves per cylinder • Displacement: 2500/2800 cu. Cm • Power: 150-170 hp At 4000 RPM • Twin overhead camshaft (DOHC) with timing belt • 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 run at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts	

		• The cutaway engine model components is mounted on the stand with the wheels.	
300.	AE36015E	FIAT/ALFA ROMEO 8 VALVE ENGINE WITH TURBO DIESEL COMMON-RAIL cutaway model • 4 stroke engine; 4 in-line cylinders, 2 valves per cylinder • Turbo-supercharger • Alternator-oil filter-oil pump • 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	
301.	AE36070E	Rear drive turbo diesel engine with clutch gearbox (on stand with wheels) – electrical • 4 stroke engine; 4 cylinders in line • Displacement: 1400/1700 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	
302.	AE36081	SECTIONED ENGINE MERCEDES ATEGO, PLD SYSTEM (INJECTION PUMP) COMPLETE WITH ALL PARTS NOT INCLUDED: GEARBOX • 4 in-line cylinders • Camshaft • Operation of the various mechanical parts • On stand with wheels • 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. • 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 • The truck cutaway engine is mounted on the stand with the wheels.	
303.	AE36082	SECTIONED ENGINE IVECO, COMMON RAIL SYSTEM (CR) COMPLETE WITH ALL PARTS NOT INCLUDED: GEARBOX • 4 – 6 in-line cylinders • Camshaft • 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. • 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 • The truck cutaway engine is mounted on the stand with the wheels.	
304.	AE36083E	6 CYLINDERS DIESEL ENGINE TRUCK "IVECO" CURSOR WITH ELECTRONICALLY CONTROLLED PUMP INJECTORS cutaway model • Displacement: 7790/10380 cu Cm. according to what is available • 4 stroke; 6 in-line cylinders, 4 valves per cylinders • maximum power 310/450hp according to what is available • water cooling • turbo-compressor • pump injectors electronically controlled • pre-heating device • 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. • The engine operates electrically at 220 volts and run at a reduced speed to let the student easily understand and	

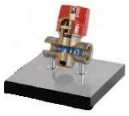
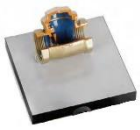
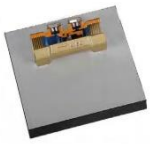
		observe the operation of the various mechanical parts • The truck cutaway engine is mounted on the stand with the wheels.	
305.	AE36084E	8 V CYLINDERS TURBO DIESEL ENGINE FOR TRUCK IVECO TURBOSTAR 190-38 CU.CM cutaway model • 4 stroke, 8 cylinders, 4 valves per cylinder • Displacement: 17.200 cu.cm • Power: 380 hp • Direct injection • Bosch type in-line injection pump with mechanical governor • Intercooler water-oil • Camshaft in the crankcase • 2 turbo-superchargers • Geared distribution • 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. • 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 • The truck cutaway engine is mounted on the stand with the wheels.	
306.	AE36120	SINGLE-CYLINDER 4 STROKE DIESEL ENGINE AIR COOLED cutaway model • A model showing the operating principles of the 4 stroke diesel air cooled engine. • displacement 210cc • power 4 hp direct injection • camshaft in the crankcase • overhead camshafts • rpm regulator • trochoidal oil pump • injection pump • injector • silencer • Manual operation	

		• Cutaway model on the base	
307.	AE37100M	DIRECT INJECTION 2 STROKE DIESEL ENGINE cutaway model The most rational training model of a 4-stroke diesel engine sectioned for training purposes. Direct 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. • The cutaway engine model is mounted on the base	
308.	AE37400	2 STROKE MOTORCYCLE PETROL ENGINE cutaway model • Piston displacement 48 cu. Cm • Air cooling • Plug point and magnet flywheel ignition • Box carburettor • The cutaway engine model is mounted on the base	
309.	AE37450M	2 STROKE PETROL ENGINE cutaway model • Piston displacement 46 cu. Cm • Air cooling system • Electronic ignition • Box carburettor • The cutaway engine model is mounted on the base	
310.	AE37500M	WANKEL ENGINE MODEL 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 Wankel engine model is mounted on the base	
311.	AE37900	MARINE OUTBOARD ENGINE 2 STROKES cutaway model • A model showing the operating principles of the marine outboard engine • 2/3 cylinders, 2-stroke engine • Water cooling system with centrifugal pump • Mechanical type converter	

		• 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. The cutaway engine model components is mounted on the stand with the wheels.	
312.	AE38000E	4 wheel drive farm tractor “KUBOTA” CUTAWAY MODEL • 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 Kubota tractor engine cutaway model operates electrically at 220V and run at a reduced speed to let the student easily understand and observe the operation of the various mechanical parts. The farm tractor cutaway is mounted on the stand with the wheels.	
313.	AE38110E	TYRE-WHEELED FARM TRACTOR WITH DIESEL ENGINE - FIAT “La Piccola” + HYDRAULIC HOIST (on stand with wheels) – electrical • 4-stroke – 2 cylinders engine • Indirect injection • Water cooling system • Overhead valves • In-line injection pump • Globe-shaped steering box • Gearbox: 6 forward speeds + 2 reverse	
314.	AE38200E	TYRE-WHEELED FARM TRACTOR WITH DIESEL ENGINE - FIAT 25R CUTAWAY MODEL TRACTOR ENGINE • 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 • 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. • 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 • The farm tractor cutaway is mounted on the stand with the wheels.	
315.	AE38300E	MASSEY-FERGUSON"/"LANDINI" FARM TRACTOR 4 DRIVING WHEELS (on stand with wheels) - electrical • 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 • The MASSEY-FERGUSON farm tractor engine cutaway model 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 • The farm tractor cutaway is mounted on the stand with the wheels.	
316.	AE38360M	TRACKED TRACTOR TRANSMISSION • Clutch unit • Gearbox • Pinion gear – ring gear • Steering clutch • Final reducer • The transmission is operated manually through a crank handle. • The tractor transmission cutaway model is mounted on the stand with the wheels.	

317.	AE39260E	OPPOSED-PISTON ENGINE • Air cooling system • Gear distribution with camshaft in the crankcase • Ignition with magneto • Single-body carburettor • The opposited pistons cutaway engine model is mounted on the stand with the wheels	
318.	AE39280E	Radial engine (on stand wheels) – electrical Driving shaft with integral master rod and moving connection rods • Air cooling system • Double ignition (2 spark plugs per cylinder and 2 magnetos) 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.	
Fluid Mechanics & Refrigeration			
319.	AE513120S	Cutaway hydraulic/pneumatic ball valve • On the base • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
320.	AE513122S	Cutaway steam gate valve • On the base • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
321.	AE513124S	Cutaway two-way valve with electric motor • On the base	
322.	AE513126S	Cutaway three-way ball valve • On the base	
323.	AE513128S	Cutaway ball valve with drain OFF/COCK • On the base	

324.	AE513130S	Cutaway standard bore ball valve • On the base	
325.	AE513132S	Cutaway straight-way plug valve • On the base	
326.	AE513134S	Cutaway gate valve • On the base	
327.	AE513136S	Cutaway compression valve • On the base	
328.	AE513138S	Cutaway line strainer valve • On the base	
329.	AE513140S	Cutaway standard clapet full non-return valve • On the base	
330.	AE513142S	Cutaway check valve with drain • On the base	
331.	AE513144S	Cutaway pressure valve reducer with female connection • On the base	
332.	AE513146S	Cutaway throttle valve • On the base	
333.	AE513148S	Cutaway circulation pump • On the base • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	

334.	AE513150S	Cutaway water meter • On the base • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
335.	AE513152S	Cutaway filter • On the base • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
336.	AESKF01	Truck fuel filter model cutaway • On the base For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
337.	AE513160S	Cutaway solenoid membrane electro valve • On the base • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
338.	AE513161S	Cutaway needle twin directional flow valve • On the base • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
339.	AE513162S	Cutaway safety valve – static • On the base • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
340.	AE513163S	Cutaway balancing valve – static • On the base • For training purposes, the model section is carefully divided into parts, professionally painted in different colors to distinguish the various parts	
Automotive Locktronics			

341.	AELK4500CUS	Automotive Combination kit This kit provides a comprehensive set of experiments for learning AC principles, motors, generators and hybrid basics and an introduction to digital electronics.	
342.	AELK8416 (Former AELK7629)	CAN bus systems and operation (DIN) This kit allows a fully functioning CAN bus system, mimicking vehicle operation, to be set up using 4 MIAC Electronics Control Units representing Instrument panel, Front ECU, Powertrain control, and Rear ECU. A fifth MIAC is used for system diagnosis, releasing faults and viewing CAN bus messages. Students are tasked with setting up a fully working CAN bus system, inserting faults and using hardware and software tools to understand fault diagnosis procedures and practice. The solution includes component carriers, baseboard, power supplies and storage trays. Curriculum, including experiments and teachers notes, is available from our resources page. Topics include: • Advantages of CAN • ECU action and function • CAN message structure • Start up routines • Wiring in CAN bus systems • Intelligent design • CAN bus diagnosis Scan tool use in fault diagnosis and release	
343.	AELK8416A (Former AELK7629A)	CAN bus systems and operation (ANSI) This kit allows a fully functioning CAN bus system, mimicking vehicle operation, to be set up using 4 MIAC Electronics Control Units representing Instrument panel, Front ECU, Powertrain control, and Rear ECU. A fifth MIAC is used for system diagnosis, releasing faults and viewing CAN bus messages. Students are tasked with setting up a fully working CAN bus system, inserting faults and using hardware and software tools to understand fault diagnosis procedures and practice. The solution includes component carriers, baseboard, power supplies and storage trays. Curriculum, including experiments and teachers notes, is available from our resources page. Topics include: • Advantages of CAN • ECU action and function • CAN message structure • Start up routines • Wiring in CAN bus systems	

		• Intelligent design CAN bus diagnosis – Scan tool use in fault diagnosis and release	
344.	AELK2240 (Former AELK9071-2)	Electricity, magnetism and materials solution V2 This kit provides a comprehensive range of practical assignments into electricity and magnetism and is ideal for those who are studying science and electricity within a wide variety of academic or vocational courses. Curriculum, including experiments and teachers notes, is available from our resources page and covers the electrical properties of materials, electricity and electrical circuits. The solution includes component carriers, baseboard, power supply and storage trays. Suitable for Science in the UK at Key Stages 3 and 4. Topics students can study include: • Electrical properties of materials • Simple circuits • Heat and magnetism • Basic circuit symbols • Current flow • Series and parallel circuits • Patterns of voltage and current • Electrical sensors Relays and electromagnets	
345.	AELK2240A (Former AELK9071-2A)	Electricity, magnetism and materials solution V2 (ANSI) This kit provides a comprehensive range of practical assignments into electricity and magnetism and is ideal for those who are studying science and electricity within a wide variety of academic or vocational courses. Curriculum, including experiments and teachers notes, is available from our resources page and covers the electrical properties of materials, electricity and electrical circuits. The solution includes component carriers, baseboard, power supply and storage trays. Suitable for Science in the UK at Key Stages 3 and 4. Topics students can study include: • Electrical properties of materials • Simple circuits • Heat and magnetism • Basic circuit symbols • Current flow • Series and parallel circuits	

		• Patterns of voltage and current • Electrical sensors Relays and electromagnets	
346.	AELK2095 (Former AELK9834-2)	Sensors and control in automotive solution (DIN) This solution provides an introduction to the role of an Electronic Control Unit. Students use a number of prewritten programs for the MIAC Electronic Control Unit (ECU) to enable them to construct a wide variety of Input - Process - Output circuits using sensors and actuators typically found in vehicles. Curriculum, including experiments and teachers notes, is available from our resources page. The solution includes component carriers, baseboard, a power supply and storage trays. Topics covered include: • DC motors with speed control • Stepper motors • Temperature sensor • Light sensor • Potential dividers and their use • Transistors as switches • Use of relays • ECU action and function • Automotive control systems • Sensor and actuator waveforms and signals Sensor and motor faults	
347.	AELK2095A (Former AELK9834-2A)	Sensors and control in automotive solution (ANSI) This solution provides an introduction to the role of an Electronic Control Unit. Students use a number of prewritten programs for the MIAC Electronic Control Unit (ECU) to enable them to construct a wide variety of Input - Process - Output circuits using sensors and actuators typically found in vehicles. Curriculum, including experiments and teachers notes, is available from our resources page. The solution includes component carriers, baseboard, a power supply and storage trays. Topics covered include: • DC motors with speed control • Stepper motors • Temperature sensor • Light sensor • Potential dividers and their use	

		• Transistors as switches • Use of relays • ECU action and function • Automotive control systems • Sensor and actuator waveforms and signals Sensor and motor faults	

All the automotive training equipment goes with the HS 90230010 CODE FOR Customs

Remarks:

Package: Not included in the price (if it is not written in offer different)

Delivery time: 8-12 weeks after advanced payment (if it is not written in offer different) Warranty: 12 months form factory defects only

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