



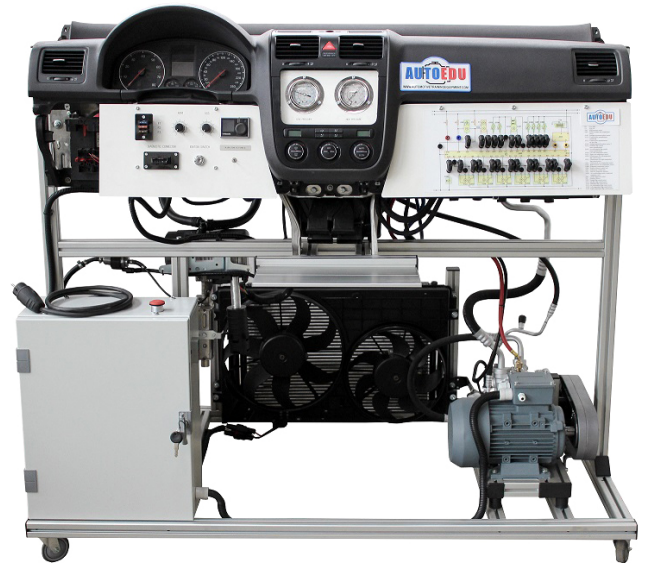
DUAL ZONE AIR CONDITIONING AND CLIMATE CONTROL WITH AUXILIARY HEATER

A7

Product number
MSC03-D



Fully functional dual-zone air conditioning system with integrated 2C Climatronic heating, utilizing R134a refrigerant. Built with Audi/VW OEM components, it includes an auxiliary heating unit (diesel), visible HVAC components such as the compressor and airflow flaps, and offers comprehensive diagnostic capabilities through an OBD 16-pin connector. The trainer allows for real-time monitoring of system parameters, fault code simulations, and hands-on practice with tools like an oscilloscope or multimeter, making it an essential resource for technical education.



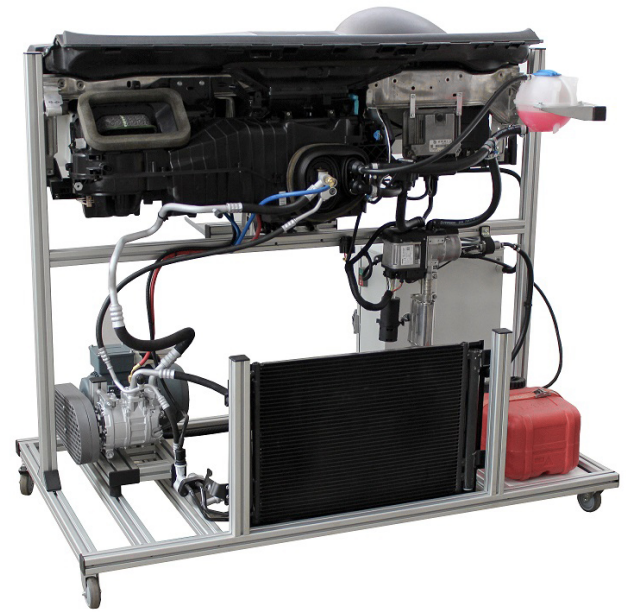
Features

- Dual-Zone Air Conditioning System: Fully operational system with R134a refrigerant, capable of demonstrating various climate control modes.
- Electronic Climatronic System: Integrated 2C Climatronic heating and air conditioning with real-time monitoring of operation modes.
- Auxiliary Heating Unit: Installed diesel heating unit (optional), delivering heated coolant fluid to simulate real-world heating conditions.
- OBD Diagnostics: OBD 16-pin diagnostic connector for system diagnostics, fault code management, and live data display.
- Visible Components: Exposed HVAC compressor, electromagnetic compressor clutch, mixing unit, airflow flaps, and pressure gauges for hands-on learning.
- Fault Simulation Capabilities: Simulate over 15 system faults using banana plug jumpers, allowing for comprehensive diagnostic practice.
- Measurement Tools: Integrated connections for oscilloscope and multimeter to measure electrical signals and system parameters.



Value for Students

- Gain a comprehensive understanding of the dual-zone air conditioning and climate control systems, including electronic control, refrigerant distribution, and airflow management.
- Enhance your diagnostic and troubleshooting skills by engaging with real-time system parameters via OBD diagnostics, including reading/erasing fault codes, ECU identification, and live data analysis.
- The training stand provides visible HVAC components such as the compressor, electromagnetic clutch, airflow flaps, and mixing unit, allowing you to monitor their operation modes, airflow control, and temperature regulation.
- Learn to simulate and diagnose more than 15 system faults through banana plug jumpers, enabling you to monitor and analyze electrical signal parameters using tools like an oscilloscope or multimeter.
- Understand the operation of auxiliary heating units (diesel) and their impact on climate control, observing how heated coolant fluid influences the heating and cooling processes.



Value for Instructors

- Utilize the fully functional dual-zone air conditioning and climate control system to demonstrate the principles of HVAC in modern vehicles, including the integration of auxiliary heating systems.
- Provide students with an authentic learning experience using OEM components, ensuring that students are working with systems identical to those in real vehicles.
- The ability to simulate multiple system faults and monitor changes in real-time allows for effective teaching of diagnostic procedures and fault code management.
- The trainer's ability to visually display the internal workings of HVAC components encourages student interaction and collaborative learning, enhancing overall educational outcomes.
- Board on castors version, which is mobile and space saving in the classroom, allows concurrent use by multiple students, promoting collaborative learning and practical training opportunities.
- The training stand is designed for simplicity, requiring only small adjustments to reset to default parameters, making it easy to prepare and start each lesson quickly and efficiently.
- Educators can guide students through manual and automated diagnostic procedures, enhancing their understanding of electronic control unit (ECU) identification, fault code management, and live data interpretation.
- Plug and play design, requiring no additional mountings, assembly, or special preparation for operation.

Specifications

- Dimensions: 1460 x 930 x 1350 mm (57.48 in×36.61 in×53.15 in)
- Weight: 161 kg (355 lb)
- Power Supply: 220V (110 V)
- Product Number: MSC03-D