

Aero-thermodynamic test benches for air conditioning systems

Testing of the air conditioning systems under normal and extreme conditions

KEY BENEFITS:

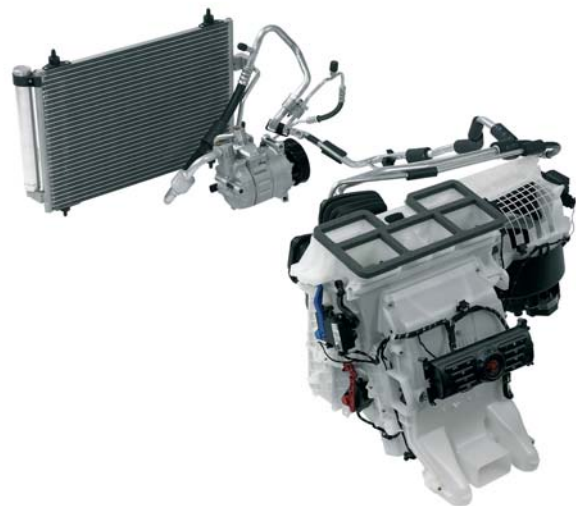
- The laboratory ensures the advance development of complete loop mock-ups
- Assessment of components and system interaction through simulation of real-life conditions
- Repeatability of standardized tests
- Worldwide coordination for the development and maintenance of the aero-thermodynamic testing



View of aero-thermodynamic test benches

MISSIONS:

- Testing of components: evaporator, condenser, compressor, heater coil, and expansion device
- Measuring of thermal performance and fluid dynamic for components and systems
- Evaluating A/C loop energy consumption
- Developing new designs for A/C systems and heat pumps



Air conditioning system

TECHNOLOGY:

- Evaporator and condenser supplied by two air streams to control temperature, flow rate and hygrometry
- Driving compressor simulating rolling cycle (engine stabilized and dynamic)
- MORPHEE: control and data acquisition system developed specifically for Valeo