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CASE STUDY—SINAMICS DCM DC CONVERTER

Audi modernizes wind tunnel using Siemens technology

Ingolstadt, Germany Audi AG commissioned Siemens to upgrade its wind tunnel center located in Ingolstadt (Bavaria) in line with the very latest technology. The drive of the 4 megawatt fan has been modernized using the latest converter and control technology from Siemens.

Above: Audi in the Wind Tunnel Center with state-of-the-art technique—optimum economy and convenience

Aerodynamics plays a pivotal role in the development of a new vehicle. Today's consumers are demanding ever lower fuel consumption—which can only be achieved with minimized drag. The Wind Tunnel Center in Ingolstadt is used to test the aerodynamic and aeroacoustic properties of VW Group vehicles. It uses a 2.5 megawatt fan to generate the required wind to simulate vehicle speed. The latest drive and automation components such as SINAMICS DCM DC Converters, SIMATIC S7 PLC and ET 200M are used to control its speed.

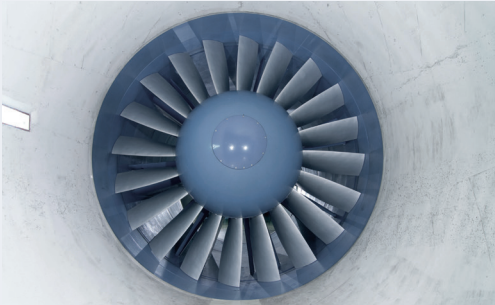
The vehicle under test is placed in the wind tunnel, where it's exposed to different wind levels to re-create vehicle speeds. This allows a variety of aerodynamic and acoustic measurements to be performed, which evaluate the vehicle's aerodynamic characteristics—in other words its air resistance (cw value), commonly known as drag. The acoustic properties of a vehicle, such as noise development inside and out, are also tested.

SIEMENS

| Wind Tunnel Center

The **Audi Wind Tunnel Center** in Ingolstadt, Germany is one of the most modern facilities of its kind in the world. It has three wind tunnels: the aeroacoustic wind tunnel for aerodynamic and acoustic measurements, the thermal wind tunnel which enables thermo-management of a vehicle and the climatic wind tunnel to test the effects of vehicle exposure to extremely high and low temperatures.

For more information: [Click here](#)



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| SINAMICS DCM DC drive technology

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