



YOUR DEVELOPMENT PARTNER

TESTING CENTER IDIADA CZ

June 2020

01_ TESTING CENTER IDIADA CZ

02_ BODY & COMPONENTS

03_ NVH, VEHICLE DYNAMICS, POWERTRAIN

04_ DURABILITY

05_ BRAKE DURABILITY AND NVH

TESTING CENTER IDIADA CZ

CTPark Mladá Boleslav - MB6, 293 01 Mladá Boleslav - Bezděčín, Czech Republic

- ⊕ Complete solutions for automotive engineering
- ⊕ 60 Engineers from CAS, CAD, CAE and Testing departments in one location
- ⊕ Offices 1.400 m², Workshop 2.200 m²
- ⊕ Start of operation 4/2018

- ⊕ Laboratory Accreditation
ISO 17025:2018



- ⊕ Prototypes protection audit – TISAX
Participant ID PF2T6Y



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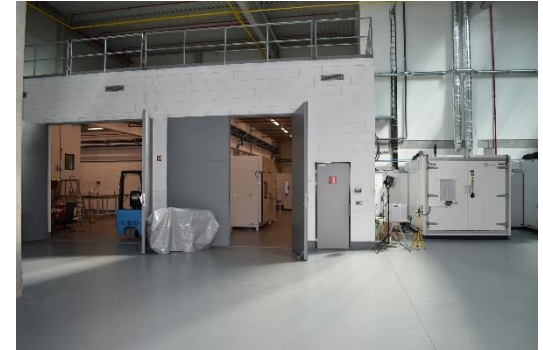
04_ DURABILITY

05_ BRAKE DURABILITY AND NVH

BODY & COMPONENTS

MAIN ACTIVITIES

- ⊕ Thermal and Climatic Tests
 - ⊕ Solar Simulation Tests
 - ⊕ Vibration and Vibration-Climatic Tests
 - ⊕ Functional, Misuse and Durability Tests
 - ⊕ Photogrammetry
 - ⊕ 3D Scanning with Laser Arm
 - ⊕ Electrical, Pressure, Leakage and Material Tests
-
- ⊕ Development and production of the measuring and testing jigs
 - ⊕ Design and development of the new test methods and procedures
 - ⊕ Testing and measurements at the customers locations



BODY & COMPONENTS

EQUIPMENT

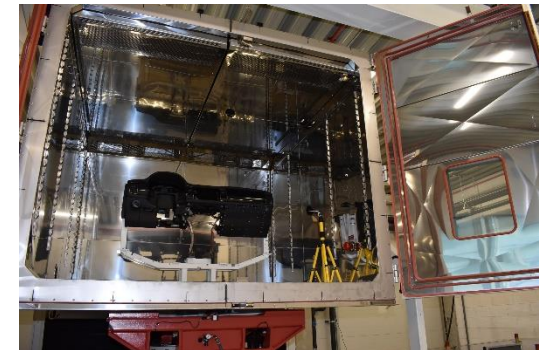
⊕ Vibration System LDS V8

- Sine force peak 60 kN
- Displacement 63,5mm (pk-pk)
- Load support capability 700 kg
- Horizontal slip table 1200x1200mm
- Guided head expander 1200x1200mm



⊕ Vibration Climatic Chamber Vötsch 12m3

- Internal dimensions 2500x2450x2000mm (d x w x h)
- PV 1200, temperature range -70/+180°C
- Additional thermal emitters for local increasing of temperature



BODY & COMPONENTS

EQUIPMENT

⊕ 2x Walk-in Climatic Chamber Vötsch VK 14'60-150

- Internal dimensions 3100x2200x2000mm (14m³)
- -60 ÷ +150 °C, PV 1200, PV 2005



⊕ Climatic Chamber Vötsch ClimeEvent C/1500/70/5

- Internal dimensions 950x1100x1475mm (1,5m³)
- -70 ÷ +180 °C, 5 K/min., PV 1200, PV 2005



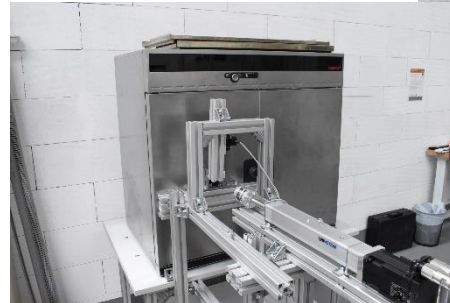
⊕ SoSi Climatic Chamber Vötsch SUN 3600

- Internal dimensions 1995x1150x1510mm (3,6m³)
- -70 ÷ +120 °C, MH emitter 2 x 4 kW, PV1200



⊕ Heating Ovens Memmert UF 750m and UFE 600

- 750L and 250L, +30 ÷ +250 °C



BODY & COMPONENTS

EQUIPMENT

- ⊕ DAQ Dewetron DEWE-43 and SIRIUS (up to 32 universal channels)
- ⊕ DAQ for Temperature Measurements (up to 24 channels)
- ⊕ Digital Force and Moment Gauge Devices Mecmessin AFG
- ⊕ Absolute and Differential Pressure Measuring Devices
- ⊕ Differential Pressure Measurement Device for Air Leakage Tests
- ⊕ Air Consumption Meter
- ⊕ Force and Moment Sensors (ranges 100N up to 50kN)
- ⊕ Displacement Sensors – Contact, Non/Contact and Draw Wire
- ⊕ Position Sensors – Contact, Magnetic, Laser
- ⊕ Temperature, Humidity and SoSi (pyranometer) Sensors
- ⊕ Pressure Sensors, Accelerometers, Water Conductivity Tester, ...



BODY & COMPONENTS

EQUIPMENT

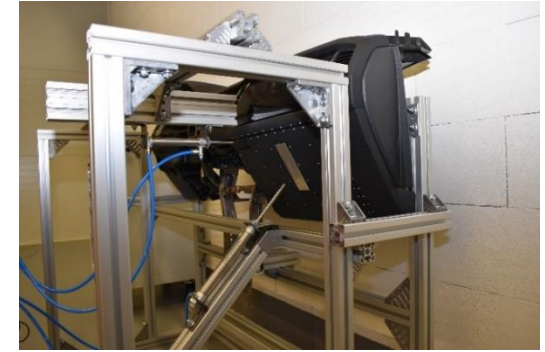
- ⊕ PLCs and Programmable Time Relays
- ⊕ Digital and Analog Controllers (Electric and Pneumatic)
- ⊕ Linear and Rotational Pneumatic and Electric Actuators
- ⊕ Laboratory Power Supplies – up to 30V/10A
- ⊕ Function Generators
- ⊕ Voltage Adapters for DAQ – Ranges $\pm 25/\pm 50/\pm 100/\pm 200/\pm 400$ V
- ⊕ Current Adapters for DAQ – Ranges $\pm 1/\pm 5/\pm 10$ A
- ⊕ Precision Fastening Systems INSIGHTqcx (0,8-4 Nm + 2,6-18 Nm)
- ⊕ Aluminium and Steel Testing Beds, Cameras for DAQ up to 600 fps
- ⊕ Photogrammetry, 3D Laser Scan Hexagon, Cylindrical Measuring Pins



BODY & COMPONENTS

PROJECT EXAMPLES

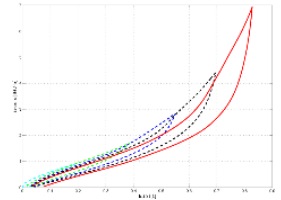
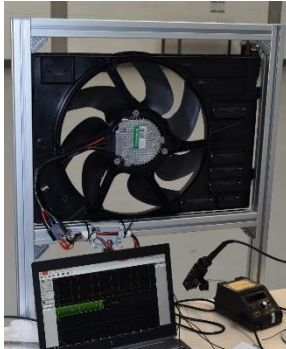
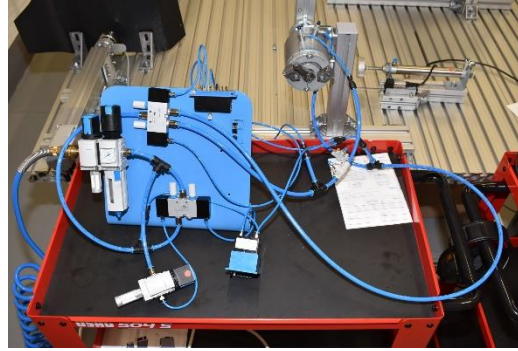
- ⊕ Dashboards, Bumpers, Vents, Spoilers, Arm Rests, Interior Trims, Side Doors, Tailgates, ...
- ⊕ Climatic, SoSi and Vibration tests
- ⊕ Functional Tests
- ⊕ Subjective Evaluations
- ⊕ Assembly Tests
- ⊕ Actuating Force Measurements
- ⊕ Mechanical Resistance and Rigidity
- ⊕ Misuse Tests
- ⊕ Endurance Tests – Durability
- ⊕ Air Leakage Tests for Vents



BODY & COMPONENTS

PROJECT EXAMPLES

- ⊕ Various automotive and non-automotive components
- ⊕ Climatic, SoSi, Vibration, Mechanical and Material Tests
- ⊕ Transportation tests ASTM D4332



BODY & COMPONENTS

TOOLSHOP

- ⊕ Equipment for manufacturing of steel and aluminium jigs, sensor brackets, etc.
- ⊕ Bandsaw OPTIsaw S 131 GH
- ⊕ Drilling-Milling machine OPTImill BF 20 L Vario
- ⊕ Lathe machine OPTItturn TU 2506
- ⊕ Drilling machine OPTIdrill B 23 Pro
- ⊕ Bench grinder OPTIgrind GU 20
- ⊕ Shear cutter Opti PS 150
- ⊕ Bending machine AKM320
- ⊕ Welding machine ESAB Rebel 215ic
- ⊕ Hydraulic press and hand tools



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04_ DURABILITY

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NVH, VEHICLE DYNAMICS, POWERTRAIN

MAIN ACTIVITIES

- ⊕ Full Vehicle and Component Instrumentation
- ⊕ Vehicle Dynamics Measurements
- ⊕ Noise and Vibration Measurement
- ⊕ Suspension Analyses and Optimization
- ⊕ Engine Mountings Analyses and Optimization
- ⊕ Modal Measurements including
Advanced Modal Analyses
- ⊕ Driving Tests in Public Roads
and Proving Grounds
- ⊕ Multi Body Dynamics Simulations
(MSC.Adams, Simpack)
- ⊕ Correlation with FEM and MBS



NVH, VEHICLE DYNAMICS, POWERTRAIN

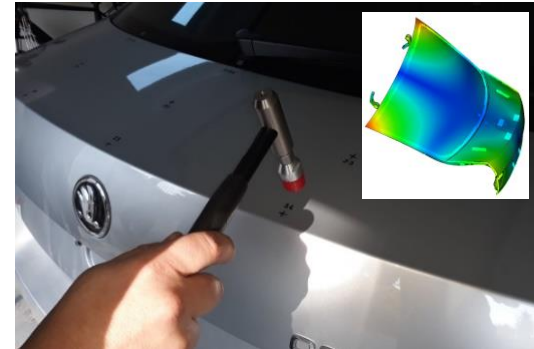
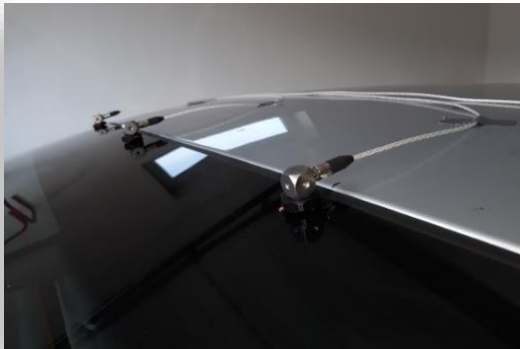
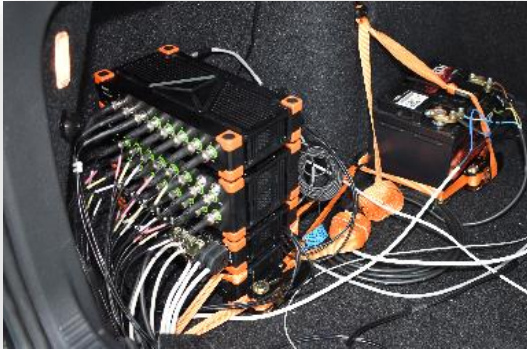
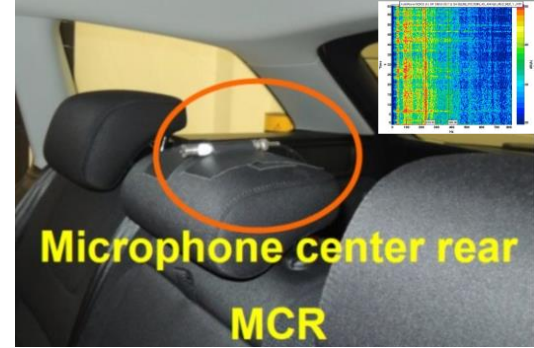
EQUIPMENT

- ⊕ DAQ Dewetron SIRIUS
 - 40 ICP and 16 universal channels
 - Analog Output, Counters, GPS
- ⊕ Vibration System K2100E100
- ⊕ Sensors
 - Accelerometers, Modal Hammer
 - Strain Gauges, Load Cells
 - Displacement sensors
 - Microphones
 - Thermal sensors
 - Camera, Gyro, ...



NVH, VEHICLE DYNAMICS, POWERTRAIN

PROJECTS



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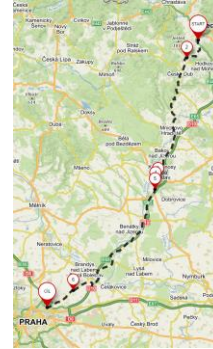
04_ DURABILITY

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DURABILITY

MAIN ACTIVITIES

- ⊕ Long Time Durability Tests in Public Roads / Fleet Test
- ⊕ Quality tests – Highway, District roads, City
- ⊕ Vehicle Inspections
- ⊕ Market Driving Assessment
- ⊕ Driver Activity Assistant Tests
- ⊕ Adaptive Frontlight System Tests
- ⊕ ADAS Tests
- ⊕ Brake Durability
- ⊕ Vehicle Service, Tire Changing



DURABILITY

EQUIPMENT

- ⊕ 2-poster Lifts and Scissor Lift
- ⊕ Alignment Equipment
- ⊕ Equipment for Vehicle Service
- ⊕ Diagnostics Systems
- ⊕ Exhaust Extraction System
- ⊕ Tire Changing Equipment



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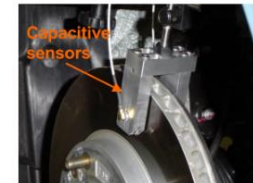
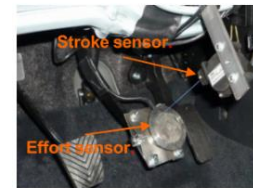
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BRAKE DURABILITY AND NVH

EQUIPEMENT

- ⊕ dB brake (data acquisition system) and dB soft (software tool)
- ⊕ Environmental temperature and humidity
- ⊕ GPS with integrated IMU
- ⊕ Speed and distance (Vbox III GPS)
- ⊕ Brake pressure (vacuum and hydraulic)
- ⊕ Capacity sensors (run out and DTV)
- ⊕ Accelerometers (caliper vibrations)
- ⊕ Strain gages (strength measure)
- ⊕ Thermocouple (disc and pads)
- ⊕ Pedal effort and stroke
- ⊕ Steering Wheel (angle)
- ⊕ Microphones



Thank you for your kind attention



YOUR DEVELOPMENT PARTNER

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