

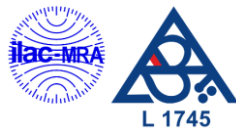


TEST CENTER IDIADA CZ

October 2022

 PUBLIC

- 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
- Prototypes protection audit – TISAX participant ID PF2T6Y
- Prototypes laboratory accreditation ISO 17025:2018



TEST CENTER IDIADA CZ - MLADÁ BOLESLAV

- Next to the highway between Prague and Liberec
- Large parking spots for cars and trucks next to the workshop
- Prague airport - 70 km (1 hour)
- Address

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TESTING

BODY AND COMPONENTS

- Complex tests of bumpers, dashboards, consoles, arm rests, interior trims, side doors, tailgates, headlamps, airbags, sun visors, mirrors, electronic components, ...
- 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



TESTING

BODY AND COMPONENTS

- Environmental tests
 - thermal, climatic and solar simulation
 - pressure, air and water leakage, dust, salt spray, water splash, muddy water spray, condensation, ...
- Vibration and vibration-climatic tests
- Functional, misuse and durability tests
- Electrical tests, Testing of transport packages
- Photogrammetry,
- 3D laser scanning and printing
- Spectrophotometry (color, gloss)



TESTING

BODY AND COMPONENTS

- Two walk-in climatic chambers Vötsch 14m³
 - Test space 3100x2200x2000mm, -60 to +150°C, PV 1200, PV 2005
- Climatic chambers Vötsch
 - Volumes from 250L up to 1500L, -70 to +180°C, 5 K/min., PV 1200, PV 2005
- Shock chamber Vötsch 300L
 - Test space 770x650x610mm, Hot +50 to +220° C, Cold -80 to +70° C
- SoSi climatic chamber Vötsch 3600L
 - 1995x1150x1510mm, -40 to +120 °C, MH emitters 2 x 4 kW, PV1200
- Heating ovens Memmert and Binder
 - Volumes from 250 to 750L, +30 to +300° C



TESTING

BODY AND COMPONENTS

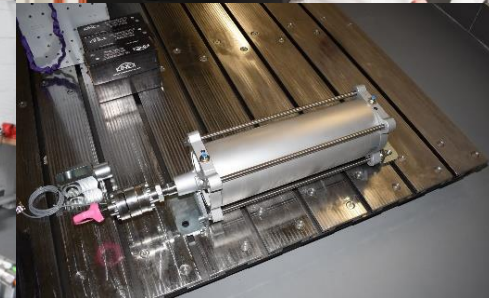
- Corrosion chamber Vötsch 450L
 - Test space 850x570x740mm, PV 1209, PV 1210
- Water splash chamber
 - R1600mm, ISO20653: IPX4K
- Dust chambers
 - VW82511, VW 80101/ISO 20653, ISO 12103-1 Fine and Coarse Dust A.2, A.4, ...
- Vacuum chambers, water condensation chamber
- Muddy water splash test equipment
- Drop tower for free fall tests
- Ball drop test and drop tower for various impactors



TESTING

BODY AND COMPONENTS

- Photogrammetry GOM Tritop
- 3D laser scanner with arm Hexagon
- 3D SLS printer Fuse 1 – 159x159x295mm
- Spectrophotometer Konica Minolta
- High speed and thermal cameras
- PLCs for pneumatic and electric actuators
- Wide range of actuators and sensors
- Precision fastening systems INSIGHTqcx
- Aluminium and steel testing beds



TESTING

BODY AND COMPONENTS

- Programmable power supplies up to 1000V/15kW
- Laboratory power supplies up to 30V/100A
- Voltage DAQ – up to 100 channels, up to 400 V
- Current DAQ – up to 100 channels, up to 10A
- Laboratory multimeters, DC milli-ohm meter
- AC safety and insulation resistance testers
- Function generators, oscilloscopes
- DC electronic loads
- Signal generators for airbag testing



TESTING

BODY AND COMPONENTS

- Vibration system LDS V8
 - displacement 63,5mm (pk-pk)
 - load support capability 700 kg
 - horizontal slip table 1200x1200mm
 - guided head expander 1200x1200mm
- Vibration climatic chamber Vötsch 12m3
 - test space
2500x2450x2000mm (d x w x h)
 - PV 1200, temperature range -70 to +180°C
 - additional thermal emitters for local increasing of temperature



TESTING

BODY AND COMPONENTS

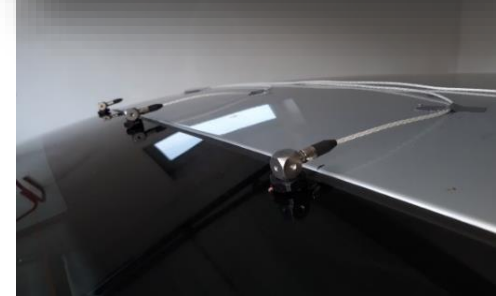
- Vibration system Dongling
 - sine force 40kN, Shock Force 120N (100G/11ms)
 - displacement 100mm (pk-pk)
 - horizontal slip table 900x900mm + 400x400mm
 - head expander 900x900mm
 - Silent mode
- Vibration climatic chamber Vötsch 1,2m3
 - Test space 1100x1100x950mm (d x w x h)
 - PV 1200, temperature range -70 to +180°C



- Modal measurements
- Full vehicle and component instrumentation
- Vehicle dynamics measurements
- Noise and vibration measurement
- Suspension analyses and optimization
- Engine mountings analyses and optimization
- Tests in public roads and proving grounds
- Multi body dynamics simulations
- Correlation with FEM and MBS



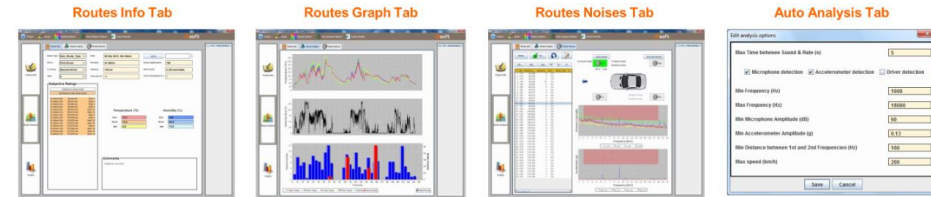
- DAQ Dewetron SIRIUS and DEWE 43 - 40 ICP and 32 universal channels
- Analog output, counters, GPS, cameras
- Vibration system K2100E100 (modal shaker)
- Sensors
 - accelerometers, microphones, modal hammer
 - load cells from 10N up to 50kN, Strain Gages
 - displacement sensors (laser, potentiometer, LVDT, rope)
 - pressure sensors and flow meters
 - thermal and humidity sensors
 - gyroscope



TESTING

BRAKES NVH AND DURABILITY

- dB soft (software tool)
- dB brake (data acquisition system)
 - environmental temperature and humidity
 - GPS with IMU, speed and distance
 - disc, pad and fluid temperature
 - brake pressure
 - capacity sensors for run out and DTV
 - accelerometers and microphones
 - pedal effort and stroke
 - steering wheel angle
- Brake regeneration research



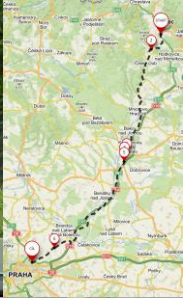
Final Report Generation and Comparison of Data



TESTING

DURABILITY

- Long time durability tests in public roads / fleet tests
- Quality tests – highway, district roads, city
- Vehicle inspections
- Market driving assessment
- Driver activity assistant tests
- Adaptive frontlight system tests
- ADAS tests and brake durability
- Vehicle service and tire changing





THANK YOU
FOR YOUR KIND ATTENTION



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