



**NVH TEST RIG**  
FOR DRIVE SHAFTS



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The NVH Test Rig is used to measure the forces and structure born noise generated or transmitted by automotive drive shafts.

## The rig can be used to simulate the following operating conditions:

- Axial force measurement with Piezo force sensors
- Torque loading applied to the test shaft
- Shaft rotation
- Articulation of fixed joint and plunge joint
- Axial displacement of plunge joint
- High frequency axial excitation of the test shaft with a hydraulic shaker



Axial excitation

## Technical data

|                                |  |
|--------------------------------|--|
| Speed                          | Nominal rotational speed $\pm 2000$ rpm  |
| Torque                         | Loading torque $\pm 2000$ Nm<br>max. power 200 kW  |
| Plunge Joint Axial Positioning | Displacement: $\pm 50$ mm   max. frequency: $\pm 10$ mm/1 Hz   |
| Fixed Joint Positioning        | Angle articulation range -5 to +55 deg.<br>max. articulation rate 20 deg./s<br>Linear displacement range -50 to +250 mm<br>Linear displacement rate (average) 100 mm/s |
| Axial Excitation               | Nominal range $\pm 5$ mm   max. frequency 100 Hz<br>max. axial force (plunge force) $\pm 5000$ N   |



Force measurement