

Driveline Test System

A flexible and configurable powertrain facility for performance, efficiency, durability of axles, transmissions, differentials and electric drivelines.

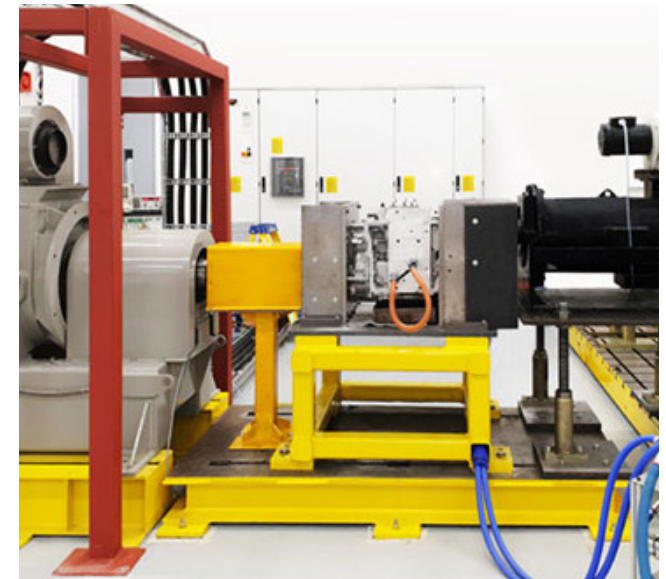
This highly flexible facility is capable of testing both light and heavy duty driveline configurations. The motive power provided by an AC dynamometer and multi-speed gearbox providing a range of speed and torque. This versatile system can be configured to match the testing requirements and needs of the unit under test.

Typical Applications

- Electric machine and transmission development
- Efficiency measurement testing
- REG 85 capable
- Power electronics assessment
- System durability and temperature survey
- ISO 16750 environmental
- NVH assessment (not semi-anechoic)
- CAN, LIN and Flexray communication capabilities

Specification

- AC Dyno 570kW, 3,000Nm, 5,000rpm continuous
- AC Dyno 200kW, 180Nm, 9,000rpm continuous
- Battery Simulator, 400kW, 760V, 540A continuous
- EC Dyno for axle absorption 700kW
- Reduction gearbox Ratio (5.55 or 21.65 to 1)
 - Max axle torque 37,500Nm
- Condition monitoring
- Invertor and EDU fluid conditioning
- Environmental enclosure capability (-40°C to 120°C) bespoke
- Climatically controlled environment (20°C to 100°C)
- HBM eDrive energy measurement
- Vector CANape



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E-drive Configurations

T Configuration (standard axle) using absorber dynos

Low Speed High Torque

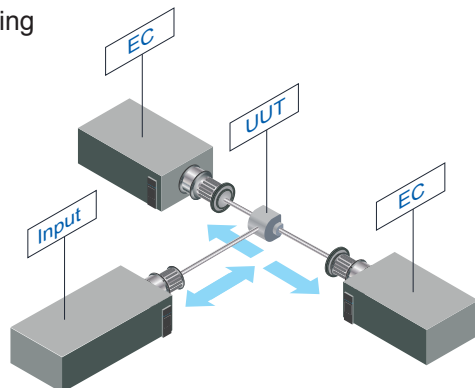
- 5,000rpm
 - 3,000Nm
 - 570kW
- Can be configured for higher torque lower speeds via a gearbox

High Speed Low Torque

- 9,000rpm
 - 180Nm
 - 200kW
- Can be configured for higher torque lower speeds via a gearbox

Typical Uses

- Lubrication studies - dry sump, additive pack analysis
- Temperature surveys
- Durability to fixed cycle, road load or block programme
- Environmental testing
- NVH assessments
- Efficiency testing



2E (e-drive) configurations with EC dynos

Battery Emulation

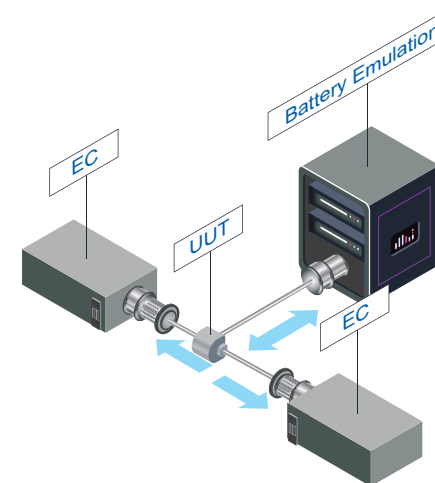
- 400kW
- 760VDC
- 540A

EC Dynos

- 10kW to 700kW

Typical Uses

- Lubrication studies - dry sump, additive pack analysis
- Temperature surveys
- Durability to fixed cycle, road load or block programme
- Environmental testing
- NVH assessments
- Efficiency testing



1E Low speed high torque / 1E High speed low torque

Low Speed High torque

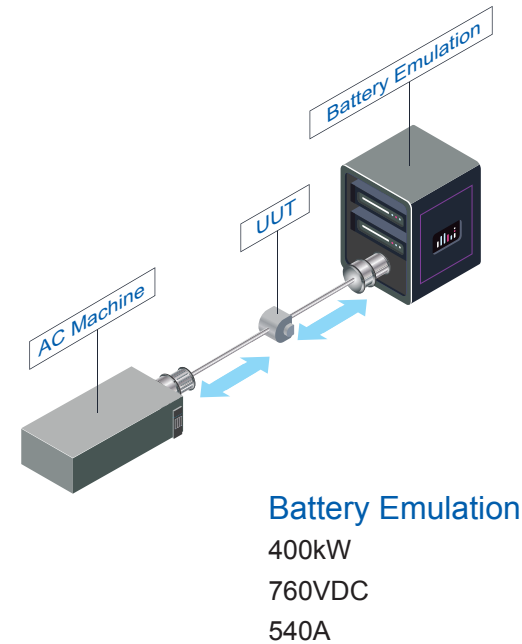
- 5,000rpm
- 3,000Nm
- 570kW
- Can be configured for higher torque lower speeds via a gearbox

High Speed Low Torque

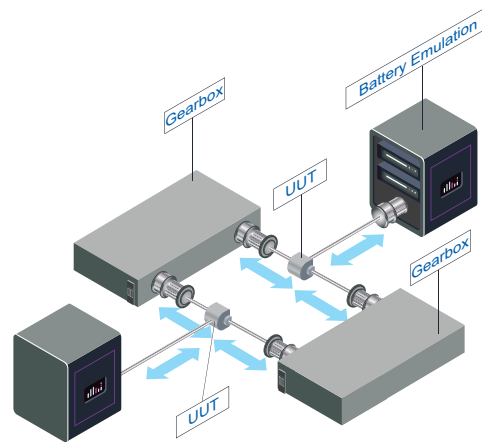
- 9,000rpm
- 180Nm
- 200kW
- Can be configured for higher torque lower speeds via a gearbox

Typical Uses

- Machine characterisation / calibration
- Durability to fixed cycle, road load or block programme
- Power electronics assessments
- Temperature surveys
- Reg 85 power measurements
- ISO 16750 environmental testing
- NVH assessments
- Efficiency testing



B2B (e-drive) configurations with or without environmental enclosures



Battery Emulation

400kW
760VDC
540A

B2B (e-drive) configurations with locked diff and AC drive

