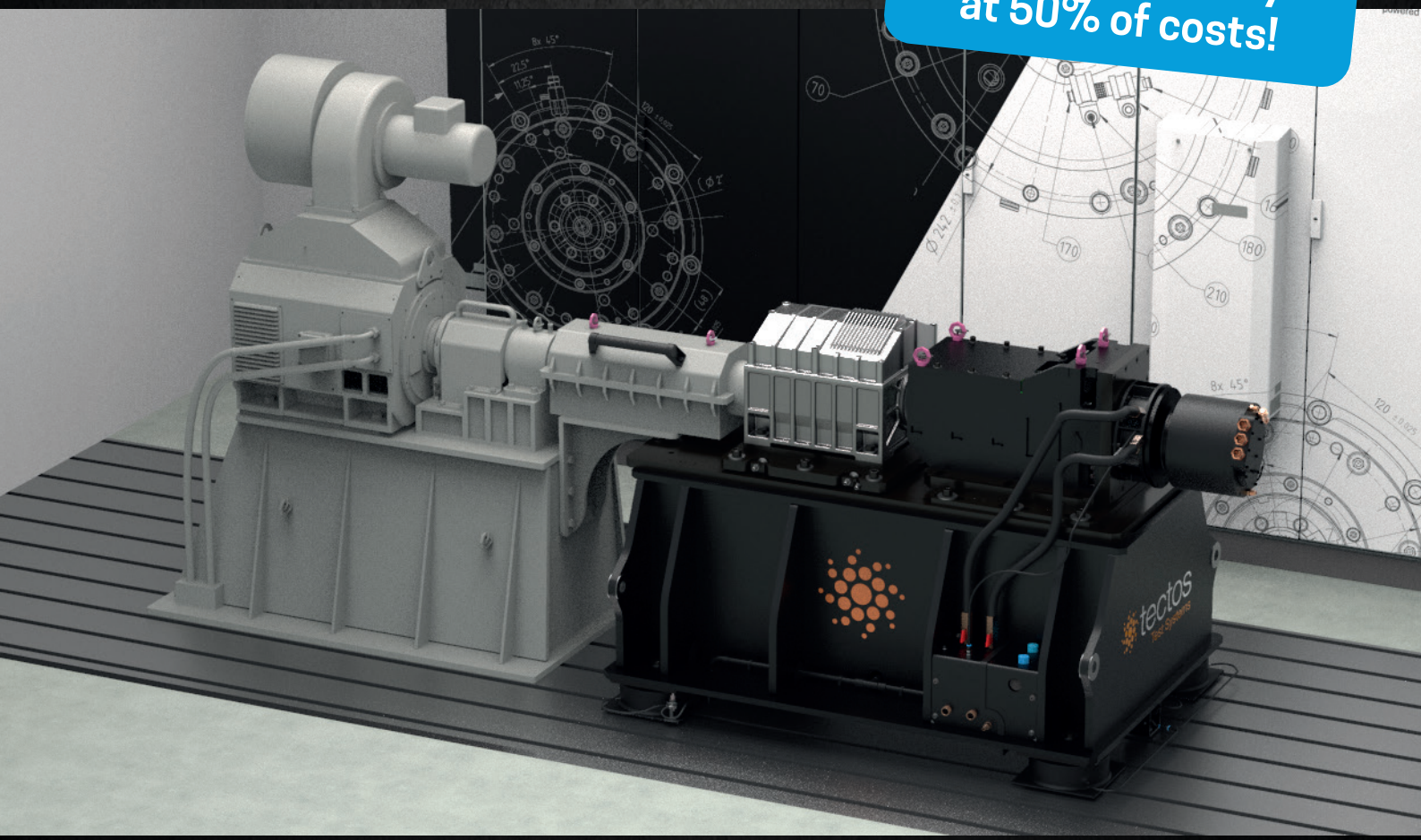
tectos
technologies | tools | solutions

You have MORE e-motor testbeds than you can imagine!

100% E-Mobility at 50% of costs!



tectos

E-TRACTION-MODULE

E-Traction-Module by tectos enables you to „convert“ your conventional combustion testbed into a high performance e-motor testbed.

And thus **cost-effictive, available within a few months and easy to implement**.

E-Traction-Module by tectos consists of:

High-Speed-Gearbox
P_{in}= max. 600kW;
max. 8000 rpm

Torque-Meter

Vibration and electrically insulated bearing block

vibration optimized frame

CV-Shaft t701

Optional with Battery-Simulator
- e.g. 255kW (306 kW Overload) - 1000A -1100Vdc
- other performance classes on request

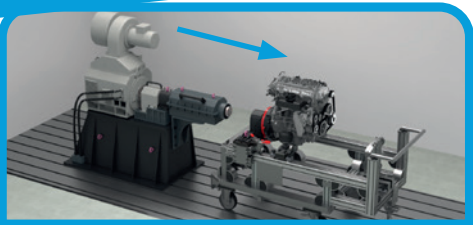
This is your new e-engine testbed by implementing E-Traction-Module by tectos:

- Torque: up to 600 Nm
- Power: up to 600 kW
- Speed: up to 25000 rpm

Your advantages at a glance:

- Modular Design - for traction motors, e-axle and gearbox testing
- Ready for use within a few months of order
- Vibration optimized
- Customer-proven quality and reliability
- Minimization of life-cycle-costs by using existing resources and invests

Turning your combustion into an e-motor testbed is as simple as that:



1

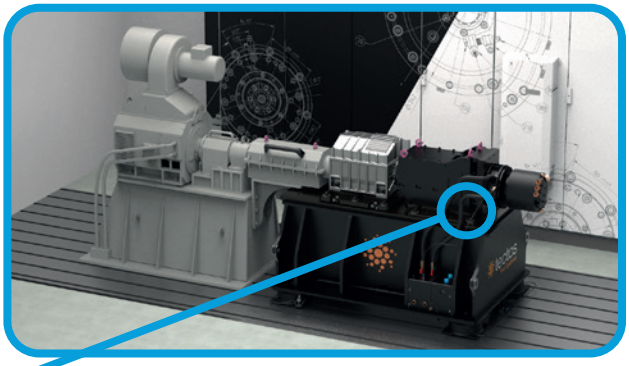
Remove your combustion engine from your existing testbed

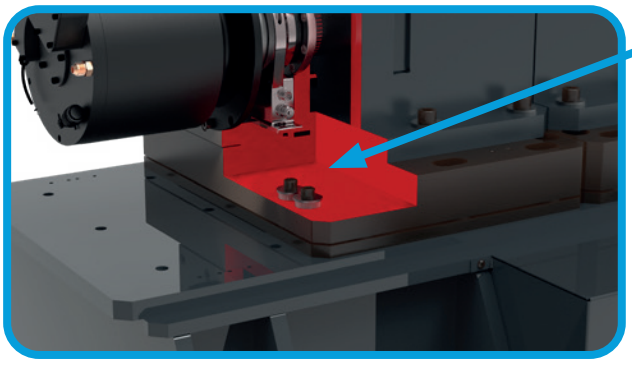
2

Connect E-Traction-Module and start your E-Testing

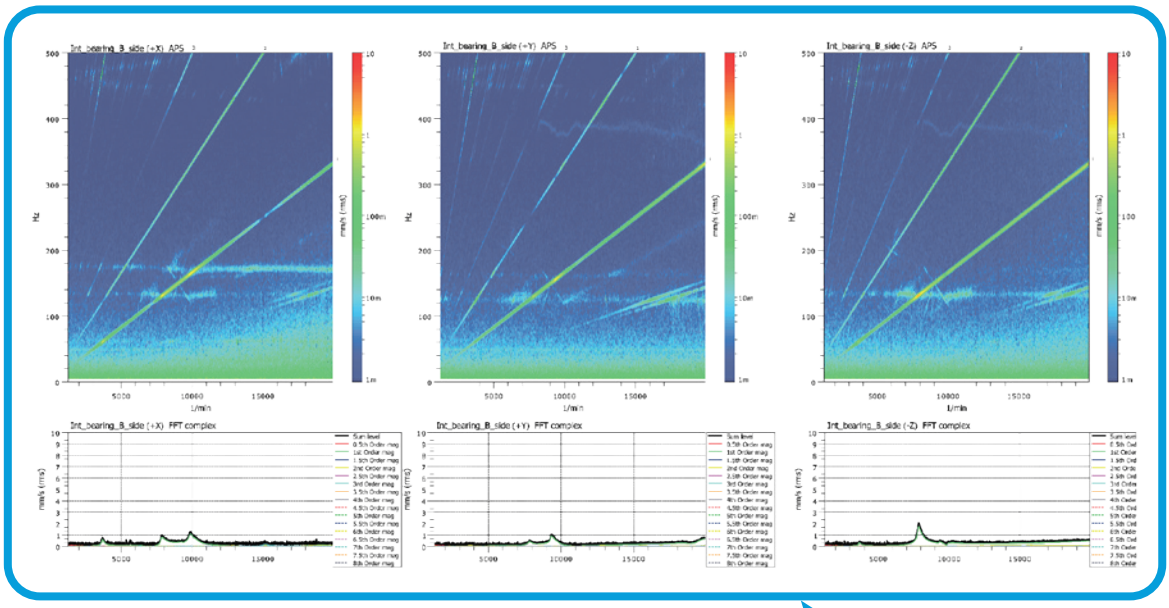
Perfect vibration decoupling

The **patent-pending system for decoupling the bearing block** from the frame using damping elements ensures the best possible vibration behavior for the entire testbed.





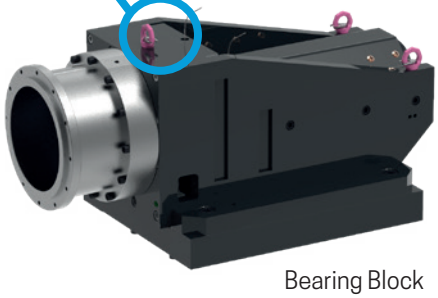
Vibration and in particular galvanic separation of the test device from the drive to be tested is achieved.



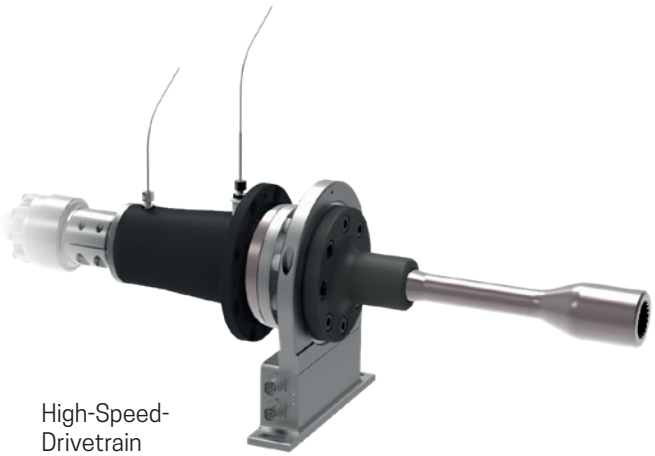
Measured vibration velocities on bearing block of E-Traction during operation

Vibration and electrically insulated bearing block

The bearing block guides the high-speed drive train in the E-Traction-Module and also serves as shaft protection to guarantee safe testing.



Bearing Block



High-Speed-Drivetrain

High-Speed-Drivetrain:

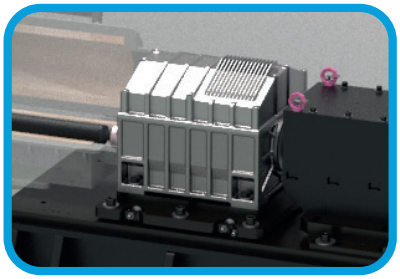
The drive train of the E-Traction-Module, which is precisely tailored to this application, consists of

- High-speed intermediate bearing,
- HBM T40B torque meter,
- t800 High-Speed CV-Shaft and
- Appropriate joint for your unit under test

Built-in temperature sensors guarantee constant temperature monitoring and thus protect against damage to the unit under test and the testbed as well.

Specially developed: High-Speed-Gearbox

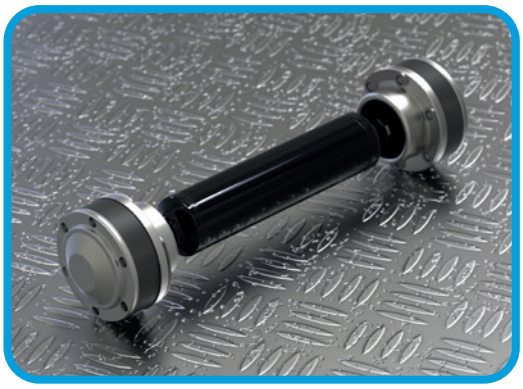
tectos High-Speed-Gearbox was developed to upgrade combustion testbeds into high-speed e-mobility test applications.

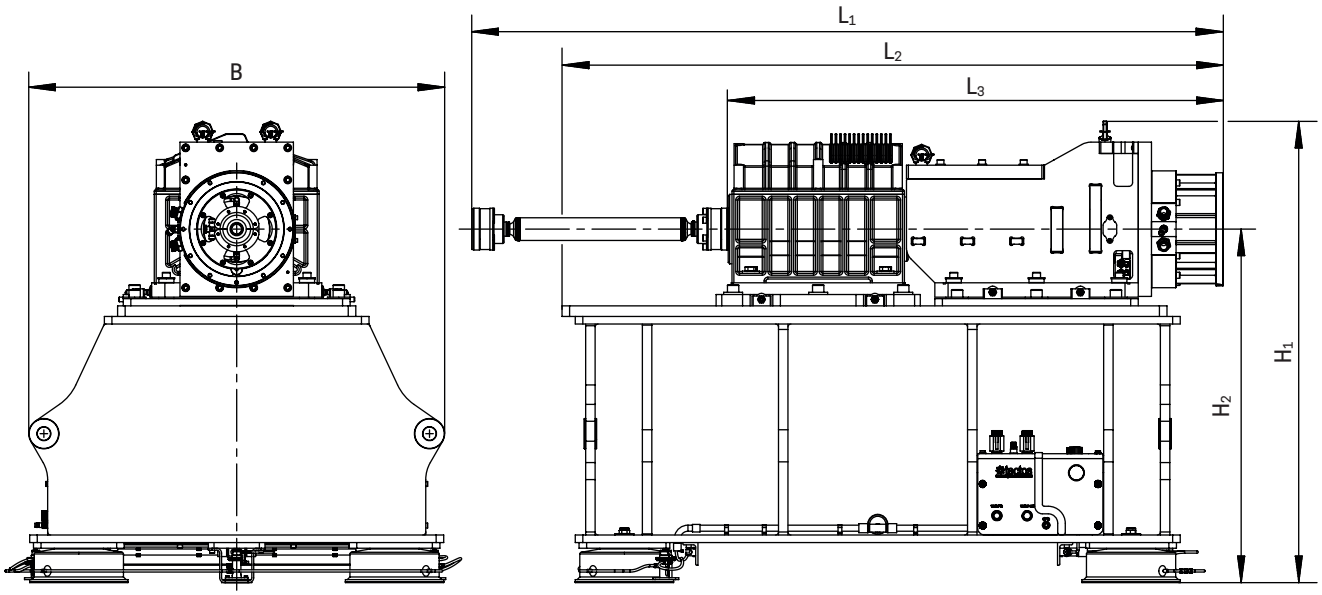


- Lubricating oil integrated
- Vibration optimized design with backlash free gear stages
- No radial gear loads on in- and output due to torque split

t701 CV-Shaft provides a large amount of longitudinal and angular compensation at maximum torque and speed. It is the perfect connection between the existing testbed and E-Traction-Module.

- Outstanding vibration decoupling
- Low weight
- Integrated load-insensitive longitudinal compensation
- Precise concentricity





E-Traction-Module[1]		
Height E-Traction-Module	H_1	customerspecific; H_2 + 285mm
Axle Height	H_2	customerspecific
Total Length	L_1	customerspecific; L_3 + L_s
Length E-Traction-Module	L_2	1750mm
Length Gearbox incl. Drivetrain	L_3	1310mm
Shaft Length	L_s	440mm - 875mm @ 8000 rpm; L_1 - L_3
Width	B	1100mm
Weight (without Dynometer)	-	2500kg

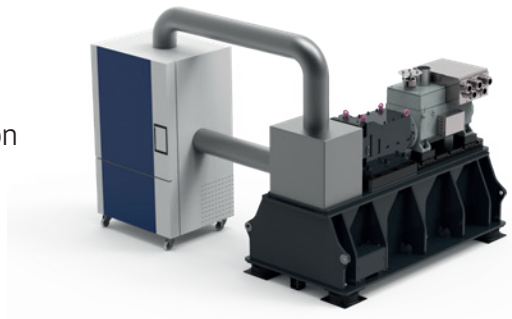
[1] Actual values may be different from those given here, depending on customer specifications and requirements.

With these options, you are equipped for further test situations:

It's your choice!

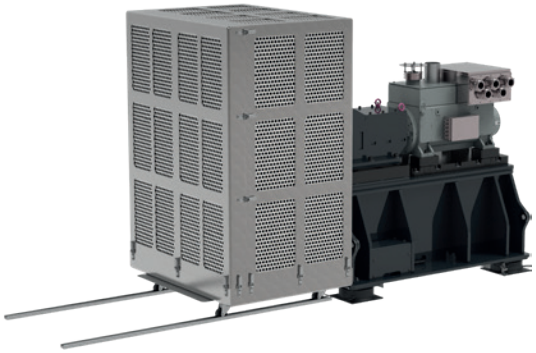
Climatic Chamber/Hood

- Mobile and highly flexible device
- Potential-free contact for fault message
- 2 digital-Out, potential-free, for on-site test material control
- Lockable door; one-hand operation with integrated safety function against unintentional closing
- -60°C to +200°C in temperature testing
- +10°C to 90°C for climatic testing
- Heat compensation (Standard): 5000 W at +20°C
- Temperature change rate (heating and cooling): 4 to 9 K/min



Accoustic Chamber/Hood Solution

- Mobile and highly flexible design
- Adaptable to customer requirements to meet established norms (e.g. ISO3744)
- Isolation frequency of (200Hz – 10000Hz)
- Possible RwdB = 40dB (Lab rated internal noise level inside chamber)



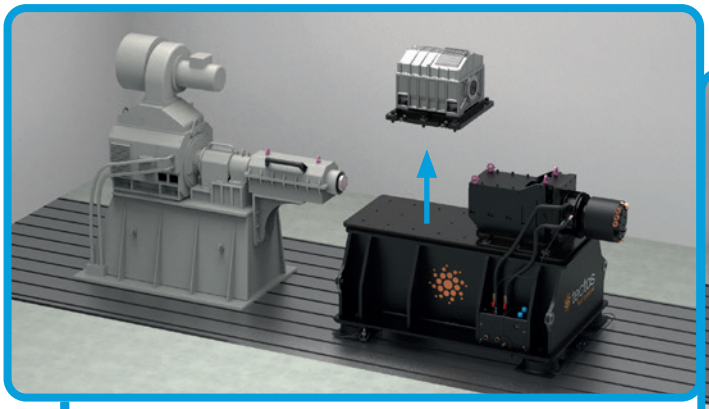
Converting E-Traction-Module to E-Traction „Stand alone“!

You are not sure whether you will need an independent e-testbench in the future?

No problem, because the **E-Traction-Module can be turned into E-Traction „Stand alone” easiliy.**

There might be different reasons for the need of E-Traction “Stand alone” like increased demand for test capacities, equipping new test cells etc. With E-Traction-Module by tectos you can be sure that you are prepared for futures eventualities.

Turning your E-Traction-Module into an E-Traction „Stand alone“ is as simple as that:



1 Remove High-Speed-Gearbox and intermediate frame.

2 Assemble dynometer

tectos E-Traction is also the right choice if you are looking for new e-testbeds.
The modular system and design offers you a wide range of applications:

	Traction Motors	Back-To-Back	E-Axle & Gearbox Testing
Torque	up to 1000 Nm	up to 1000 Nm	up to 1000 Nm
Power	up to 500 kW (depends on dyno)	-	up to 500 kW (depends on dyno)
Speed	up to 27000 rpm	up to 27000 rpm	up to 27000 rpm
Dynometer	Specification depending on your requirements		

Our technical sales team will be glad to provide you with detailed information, available options and is at your disposal for any requests!

For any further information please contact:
Phone: +43 316 22 86 17-81 or **E-Mail:** sales@tectos.at

tectos
technologies | tools | solutions

tectos gmbh
gradnerstrasse 145
8054 graz, austria

www.tectos.at

T +43 316 228617
F +43 316 228617-15
E info@tectos.at