

System Engineering  
for the automotive industry

# End of Line test

for transmission -  
hybrid and conventional



thyssenkrupp



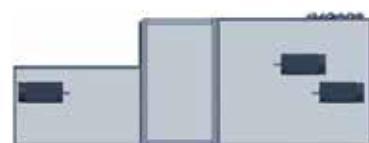


# 100% quality control – all integrated

Transmissions must run smoothly– the potential damage is too expensive. This is why there should be no compromises in quality. Whether it is a manual or automatic transmission, hybrid or conventional, passenger car or a truck – the same criterion applies to all transmissions. Our families of test stations are technically mature and consistent modularity allows optimal adaptation to customer needs.

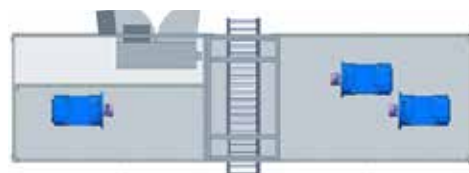
Our core competencies in all key topics distinguish us, e.g. in NVH (Noise Vibration Harshness), shiftrobot, oil management, drive technology, TCU communication and residual bus simulation. These topics are consistently bundled in a universal automation solution – a software for all needs.

## Our product family – two different sizes with different power rates



TA-5	
Width	5,500 mm
Depth	1,950 mm
Height	2,200 mm
Weight	approx. 18 t

Input drive	
Torque	80-200 Nm
Speed	6,000 RPM
Output drive	
Torque	1,000 Nm
Speed	3,000 RPM



TA-7	
Width	7,000 mm
Depth	1,950 mm
Height	2,200 mm
Weight	approx. 25 t

Input drive	
Torque	200-460 Nm
Speed	6,000 RPM
Output drive	
Torque	1,650 Nm
Speed	3,000 RPM

### Auto shifting –

testing transmissions with manual shifting in full automatic mode. Having the adaptation to the transmission as well as the actuation in our hands we have been able to use an industrial robot for the automatic actuation and placing the measuring equipment directly to the gearbox for high accurate shift evaluation.

### Oil flushing –

automatic transmission needs high quality standards for oil. Therefore oil flushing is often a must have. thyssenkrupp System Engineering has a modular concept for all needs (level tolerances, cleaning classes, temperatures).

### Hybrid testing –

testing transmissions with integrated hybrid motor. Standardized solutions for testing all electrical parameters, like “winding resistance”, “isolation resistance” or “resolver teaching” as well as integrated power supply for e-motor load test (with or w/o inverter).

### Output adjustment –

testing different transaxle variants with different center distances and different output positions is possible with our pre-defined automatic output adjustment, linear OR area (window).

### NVH system –

thyssenkrupp System Engineering can offer a complete solution. Since 2002 test stand software includes an NHV package, an integrated NVH analysis system of its own. Thus you can equip your NVH final function test stand with only one test stand software package.

“We don’t consider ourselves suppliers who simply process requests, we will remain at our customers’ side with advice and practical support.”

Ingo Steinkrüger  
thyssenkrupp System Engineering

### Hybrid testing - power rates

AC-feed (regular)	100 kW	30-600 V AC	8 kHz	± 150 A (± 200 A for 30 s max.)
AC-feed (upgrade)	250 kW	30-600 V AC	8 kHz	± 450 A (± 650 A for 30 s max.)
DC-feed (regular)	100 kW	30-600 V AC		± 200 A (± 240 A for 30 s max.)
DC-feed (upgrade)	250 kW	30-600 V AC		± 380 A (± 450 A for 30 s max.)



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