

# Titanium Wheel Force Transducer, 6-Axis

## Model LW12.8-T-20

- 4,500 lbf (20 kN) radial load capacity
- Lightweight assembly
- Measures 3 forces and 3 moments
- Measures X & Z accelerations\*
- Simple assembly & test set-up
- Available in slip ring or telemetry versions
- Adapts to 13" to 18" wheels
- Strong & lightweight titanium material
- Weatherproof system IP67



## Description

The *Lightweight LW12.8-T Wheel Force Transducer (WFT) System* is capable of measuring all of the wheel forces and moments on medium and small cars. When the LW12.8-T-20 is fully assembled with a titanium hub adapter, 6x15" solid machined aluminum rim adapter, amplifier, slip ring, and titanium bolts, the system weight is max 9.6 kg (21.16 lb) which is less than most standard aluminum rims. It is important in durability testing and simulation to match the unsprung mass of the test vehicle to the unsprung mass of the production vehicle, so that relative damage from durability testing is an accurate representation of the production vehicle.

The *Lightweight Telemetry version Wheel Force Transducer, LW12.8-T-20-TEL*, when fully assembled with a titanium hub adapter, 6x15" solid machined rim adapter, and titanium bolts. the system weight is max 10.0 kg (22.0 lb)

Both slip ring and telemetry versions are completely weatherproof, making them ideal for on-road and off-road measurements in all conditions. They can also be used to monitor and control laboratory simulator tests.

The *CT2 Transducer Interface Box* performs real-time coordinate transformation and cross-talk compensation, and outputs analog, CAN, and Ethernet signals. An embedded web page allows the user to configure the WFT system.

## Specifications

Maximum Force Capacity, [Fx, Fz] Radial	4,500 lbf (+/-20 kN)
[Fy] Lateral at Tire Patch	3,400 lb (+/-15 kN)
Maximum Torque Capacity [Mx, My, Mz]	3,000 lb-ft (+/-4,000 N-m)
Accelerometer range	+ 55g
Sensor	4 arm strain gage bridges
Transducer Weight	5.8 lb (2.7 kg)
Assembly Weight (6x15" rim)	22.0 lb max (10.0kg max)
Nonlinearity	<0.5% of full scale output
Hysteresis	<0.5% of full scale output
Cross Axis Sensitivity after correction	<0.5% of full scale output
Temperature Range, Operating	-40°F to 257°F (-40°C to 125°C)

\* Internal accelerometers only available in the slip ring version



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Capteurs et Systèmes de mesure

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