

# MTS Flat-Trac® CT Plus Tire Test System



## Function

The Flat-Trac CT Plus system is engineered to deliver highly accurate and repeatable measurements of tire force and moment properties under steady-state and dynamic conditions. It is optimized for testing passenger vehicle tires on a flat surface with or without wheel torque applied.

The Flat-Trac CT Plus systems features numerous enhancements, effectively expanding the measurement and simulation capabilities of the Flat-Trac platform to better meet industry demands for improved tire characterization.

## Key improvements

- » Increased Torque capacity and speed range
- » Increased Fx and Fy capacity
- » Improved Flat-Trac roadway control
- » Improved spindle torque response
- » Improved water bearing
- » Electric Drive to reduce maintenance
- » Reduced setup time for wheel torque testing
- » Support of wet traction testing

## Key Capabilities

- » Steady-State Force and Moment Measurement
- » Dynamic Force and Moment measurement:
  - » Slip Angel Sweeps Tests
  - » Tractive Tests
  - » Sinusoidal Slip Angle Tests
  - » Sinusoidal Radial Deflection Tests
- » Simulation Testing
- » Effective Rolling Radius Measurement

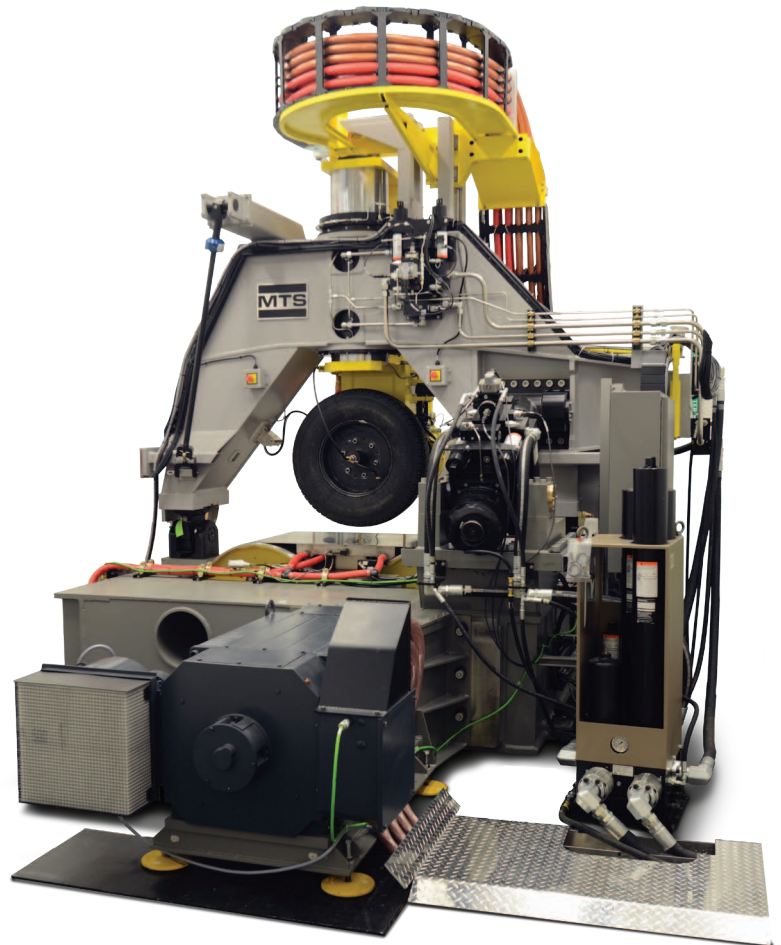
## Essential Benefits

### STREAMLINED SET-UP:

A PC-based test definition and automated control interface provides the ability to define, store and recall standard and customer tests. The wheel torque drive motor remains connected to eliminate machine test setup time for tractive testing. Tests are defined and data is acquired in a standard tire axis system.

### ACCURACY/RELIABILITY:

Robust multi-axis load and torque cells ensure highly accurate and repeatable force and moment measurement. Inertial compensation, compliance compensation and custom control features serve to minimize measurement and control errors.



## Comparative Specification (FTCT Plus vs. FTCT)\*

	Capacity Change	FTCT Plus	FTCT
Frame	↑	Increased stiffness	FTII Design
Fx** (longitudinal)	↑	± 18,000 N	± 10,000 N
Fy** (lateral)	↑	± 20,000 N	± 15,000 N
Fz** (vertical)	↔	25,000 N	25,000 N
Wheel Torque**	↑	± 6000 Nm	± 2800 Nm
Slip Angle (50 deg/sec max velocity)	↓	± 20 degrees	± 30 degrees
Camber Angle (8 deg/sec max velocity)	↓	± 10 degrees	-12 to +45 degrees
Roadway Velocity	↔	± 250 km/h	± 250 km/h
Loaded Radius Range	↓	225 - 475 mm	200 - 475 mm
Maximum Tire Outside Diameter	↔	910 mm	910 mm
Drive System	Electric	Electric	Hydraulic

\* Specifications are subject to change without notice

\*\* Rated Capacity

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ISO 9001 Certified QMS

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