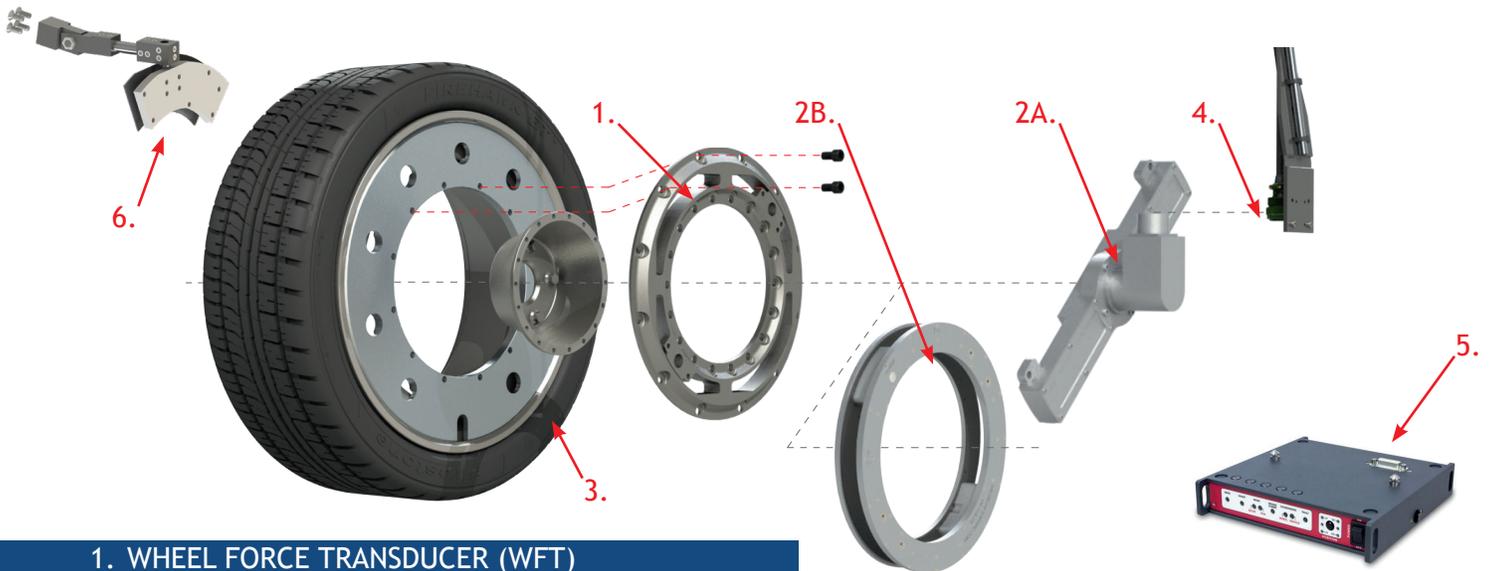


Wheel Force Transducers





1. WHEEL FORCE TRANSDUCER (WFT)

Measures: longitudinal (F_x), lateral (F_y), and vertical (F_z) forces, camber (M_x), torque (M_y), and steer (M_z) moments

2. SIGNAL CONDITIONING

A) Integrated Slip Ring & Amplifier Subassembly

Spinning amplifier package digitizes all signals before being transmitted through a slip ring assembly, reducing noise and allowing for a small, flexible signal cable
Slip Ring Assembly contains a high resolution encoder

OR

B) Wireless Telemetry Transmitter Subassembly

Compact, inductively powered transmitter digitizes and transmits signals via radio frequency to the Telemetry Stator

3. CUSTOM HUB & WHEEL ADAPTERS

Lightweight rim adapters are made from aluminum or carbon fiber and hub adapters are made from titanium

4. STATOR RESTRAINING ROD

Prevents rotation of the slip ring stator

5. CT2 TRANSDUCER INTERFACE BOX

Performs real-time coordinate transformations and crosstalk compensation with quick system set-up to provide analog, CAN, or Ethernet signal outputs for data acquisition

6. TELEMETRY STATOR RESTRAINT AND BRACKET

Receives telemetry signal, contains magnetic encoder pick-ups, and induction primary coil

Features:

- Durability
- Computer Model Validation
- Brake Development
- Traction Studies
- Coefficient of Friction Measurements
- High Speed Courses
- Off-Road Driving
- 3 Year Warranty on Transducers, Amplifiers, & User interface Boxes

Michigan Scientific Corporation Wheel Force Transducers (WFT) output three forces, three moments, two accelerations, wheel speed, and wheel position signals to provide complete spindle load data with extreme accuracy. Every system combines a high strength, lightweight transducer with weatherproofed protective coatings for superior reliability in a variety of driving conditions. A dedicated and knowledgeable customer support system makes installation quick and easy.

LIGHT & MEDIUM DUTY TRANSDUCER SPECIFICATIONS

	LW-MC-3.5K	LW9.5	LW12.8-T-20	LW12.8-T-35	LW12.8-50	LW12.8-60	LW9.5-HS	LW-2T-20K
Application	Motorcycle	ATV & Small Vehicle	Light Car	Passenger Car, SUV, & Light Duty Truck			Forklift	Pick-up Truck & Heavy SUV
Rim Size	≥ 11" (280 mm)	≥ 10" (254 mm)	≥ 13" (330 mm)	≥ 13" (330 mm)	≥ 13" (330 mm)	≥ 13" (330 mm)	≥ 10" (254 mm)	≥ 16" (406 mm)
Nonlinearity (% of Full Scale)	≤0.5	≤0.25	≤0.75					≤0.5
Weight	5.0 lb (2.3 kg)	8.0 lb (3.6 kg)	6.2 lb (2.8 kg)	6.65 lb (3.0 kg)	10.25 lb (4.65 kg)	11.35 lb (5.2 kg)	8.5 lb (3.9 kg)	23.4 lb (10.6 kg)
Fx, Fz Load Capacity	3,500 lb (15.6 kN)	8,000 lb (35 kN)	4,500 lb (20 kN)	8,000 lb (35 kN)	11,200 lb (50 kN)	13,500 lb (60 kN)	21,000 lb (93 kN)	20,000 lb (90 kN)
Fy Load Capacity	1,200 lb (5.3 kN)	4,000 lb (17.8 kN)	3,400 lb (15.1 kN)	4,000 lb (18.0 kN)	5,600 lb (25 kN)	6,750 lb (30 kN)	10,000 lb (45 kN)	10,000 lb (45 kN)
Mx, Mz Load Capacity	1,200 lb-ft (1.6 kN-m)	4,000 lb (17.8 kN)	3,000 lb-ft (4.0 kN-m)	3,700 lb-ft (5.0 kN-m)	4,800 lb-ft (6.5 kN-m)	6,600 lb-ft (9.0 kN-m)	7,000 lb-ft (9.5 kN-m)	11,000 lb-ft (15.0 kN-m)
My Load Capacity	2,500 lb-ft (3.4 kN-m)	4,000 lb-ft (5.4 kN-m)	3,000 lb-ft (4.0 kN-m)	3,700 lb-ft (5.0 kN-m)	4,800 lb-ft (6.5 kN-m)	6,600 lb-ft (9.0 kN-m)	7,000 lb-ft (9.5 kN-m)	15,000 lb-ft (20 kN-m)
Version	Telemetry	Slip Ring	Slip Ring or Telemetry				Slip Ring	

HEAVY DUTY TRANSDUCER SPECIFICATIONS

	LW-2T-30K	LW-2T-40K	LW-2T-50K	LW-2T-60K-S	LW-2T-100K-S	LW-2T-100K
Application	Medium Duty Truck & Bus, Skid Steer	Forklift	Class 8 Truck, Agricultural & Construction Equipment			
Rim Size	≥ 15" (381 mm)		≥ 19.5" (495 mm)	≥ 20" (508 mm)		≥ 22.5" (572 mm)
Hub Size (PDC)	≤ 11"* (275 mm)		≤ 11.2" (285 mm)	≤ 13" (335 mm)		≤ 13"* (335 mm)
Nonlinearity (% of Full Scale)	≤0.75		≤1			
Weight	22.0 lb (10.0 kg)		35.5 lb (16.1 kg)	58 lb (26 kg)		62 lb (28 kg)
Fx, Fz Load Capacity	30,000 lb (130 kN)	40,000 lb (178 kN)	50,000 lb (222 kN)	67,400 lb (300 kN)	100,000 lb (445 kN)	
Fy Load Capacity	15,000 lb (65 kN)	20,000 lb (89 kN)	25,000 lb (111 kN)	33,700 lb (150 kN)	50,000 lb (225 kN)	
Mx, Mz Load Capacity	22,000 lb-ft (30 kN-m)	30,000 lb-ft (40 kN-m)	50,000 lb-ft (68 kN-m)	60,000 lb-ft (81 kN-m)	80,000 lb-ft (108 kN-m)	100,000 lb-ft (135 kN-m)
My Load Capacity	22,000 lb-ft (30 kN-m)	30,000 lb-ft (40 kN-m)	50,000 lb-ft (68 kN-m)	60,000 lb-ft (81 kN-m)	80,000 lb-ft (108 kN-m)	100,000 lb-ft (135 kN-m)
Version	Slip Ring					

*LARGER HUB PCDs CAN BE ACCOMMODATED BY USING TWO-PIECE HUB ADAPTERS



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