



SERIES FT9000 & FTA9000

FASTENER TESTING LOAD CELLS

FOR TENSION AND TORQUE-TENSION

- Fastener tension load cell capacities range from 3.3 to 112 klbf (15 to 500 kN)
- Fastener Torque-Tension load cell capacities range from 4.5 to 405 klbf (20 to 1 800 kN)
- Uses standard Skidmore-Wilhelm plates
- Slotted base allows fast and easy securing to existing test fixtures

APPLICATIONS

- Measure/analyze threaded fastener characteristics
- Perform laboratory evaluation of fastener tension & thread torque characteristics
- Measure fastener tension and/or thread friction torque during rundown operations
- Test special devices (such as locknuts, serrated underheads, etc.)
- Measure effects of materials, surface finishes, platings, and coatings

PCB's Load & Torque Division's RS Technologies Series FT9000 & FTA9000 Fastener Tension and Fastener Torque-Tension Load Cells use a full bridge strain gage design. This complete line of fastener testing load cells provides a signal proportional to the tension developed in a test fastener when the tightening torque is applied. In addition, the fastener torque-tension version, also referred to as a research head, measures the thread torque (pitch torque plus thread friction torque) at the same time. The tension or torque-tension output signals from either type of load cell are read using conventional strain gage readout device or recorded by a data acquisition system. These load cells serve as an integral part of a torque-tension fastener test system when used with a torque-angle sensor and a suitable data acquisition instrument; Model 962 Portable Transient Data Recorder is recommended.

COMMON SPECIFICATIONS	
Output ($\pm 10\%$)	2.0 mV/V FS
Non-linearity	$\pm 0.25\%$ FS
Overload Capacity	150% FS
Hysteresis	$\pm 0.25\%$ FS
Excitation Voltage	Calibrated at 10 VDC, usable 5 to 20 VDC or VAC RMS
Bridge Resistance	350 Ohms, Full Bridge, Bonded Strain Gage
Supplied Accessories	
Shunt Calibration Resistor, Clamp Assembly, A2LA Accredited Calibration Certificate	

SERIES FT9000 TENSION LOAD CELLS		
Model	Capacity	Tabletop Slide
059810-01153	3372 lbf (15 kN)	Single
059810-01253	5620 lbf (25 kN)	Single
059810-01104	22.5 k lbf (100 kN)	Single
059810-01304	67.5 k lbf (300 kN)	Single
059810-01504	112 k lbf (500 kN)	Single

SERIES FTA9000 TORQUE-TENSION LOAD CELLS			
Model	Thread Torque Capacity	Fastener Tension Capacity	Tabletop Slide
059400-01024	15 lbf-ft (20 Nm)	4.5 k lbf (20 kN)	Single
059500-01044	44.3 lbf-ft (60 Nm)	9.0 k lbf (40 kN)	Single
059600-01104	110.6 lbf-ft (150 Nm)	22.5 k lbf (100 kN)	Single
059625-01304	590 lbf-ft (800 Nm)	67.4 k lbf (300 kN)	Single
059650-01604	1475 lbf-ft (2000 Nm)	135 k lbf (600 kN)	Single
059720-01095	2950 lbf-ft (4000 Nm)	202 k lbf (900 kN)	Dual
059740-01185	5900 lbf-ft (8000 Nm)	405 k lbf (1800 kN)	Dual

FASTENER TENSION & TORQUE-TENSION LOAD CELL PLATE SETS			
METRIC		ENGLISH	
Model	Description	Model	Description
100M6-30429	M6 Plate Set	100008-02000	#8 Plate Set
100M8-30430	M8 Plate Set	100010-02000	#10 Plate Set
100M10-30431	M10 Plate Set	100250-02000	¼ inch Plate Set
100M12-30432	M12 Plate Set	100313-02000	5/16 inch Plate Set
100M14-30433	M14 Plate Set	100375-02000	3/8 inch Plate Set
100M16-30434	M16 Plate Set	100500-02000	7/16 inch Plate Set
100M18-30435	M18 Plate Set	100563-02000	½ inch Plate Set
100M20-30436	M20 Plate Set	100625-02000	9/16 inch Plate Set
100M22-30438	M22 Plate Set	100750-02000	5/8 inch Plate Set
100M25-30437	M25 Plate Set	100875-02000	¾ inch Plate Set
100M27-30440	M27 Plate Set	101000-02000	7/8 inch Plate Set
100M30-30443	M30 Plate Set	101125-02000	1 inch Plate Set
		101250-02000	1-1/8 inch Plate Set
		100010-02000	1-¼ inch Plate Set
		101500-02000	1-½ inch Plate Set

RECOMMENDED ACCESSORIES	
Model	Description
080962-01000	Model 962 Portable Transient Data Recorder
097000-34149	Cable Assembly, 2-ft coiled (9-ft straight), DB-15P to PT06A-8-4S (Series FT9000)
099404-34011	Cable Assembly, 3-ft straight, DB-15P to PT06A-8-4S (Series FT9000)
099404-30610	Cable Assembly, 10-ft straight, DB-15P to PT06A-8-4S (Series FT9000)
099404-30566	Cable Assembly, 10-ft straight, (2) DB-15P to PT06A-12-10S (Series FTA9000)
090970-31583	Cable Assembly, 6-ft straight, PT06A-8-4S to Pigtail Leads (Series FT9000)
090900-31163	Cable Assembly, 20-ft straight, PT06A-12-10S to Pigtail Leads (Series FTA9000)
097000-0015P	DB-15P Connector w/ Strain Relief & Thumbscrews
4242R-000600	PT06A-8-4S(SR) Connector
4242R-000630	PT06A-12-10S(470) Connector