DAYTRONIC

QUALITY, TRUSTED PRODUCTS SINCE 1954

LOAD CELLS

"PANCAKE-THIN" LOAD CELLS [441 SERIES]



"PANCAKE-THIN" GENERAL-PURPOSE LOAD CELLS

With ranges of ±5 through ±50000 pounds*, the tension/compression load cells of the **441** Series employ two stabilizing diaphragms which are welded to the sensing member to reduce off-axis and side-loading effects.** Cased in 17-4 PH stainless steel, they have a threaded hole running completely through the center of the cell. These models must be used on a flat, smooth surface to achieve rated specifications.

An optional 1"-thick Center Pull Plate is available for attachment to any Series **441** unit. This allows the applied force to be directed along the load axis. Separate load buttons may also be obtained, to be threaded directly into the center hole. If required, any Series **441** load cell can be supplied with a clearance hole instead of a thread.

Table LC.3

441 Series Models*

Load Cell Model	Nominal Load Capacity	Load Cell Model	Nominal Load Capacity
441-5	±5 lb.	**441-3K**	±3000 lb.
441-10	±10 lb.	**441-4K**	±4000 lb.
441-25	±25 lb.	**441-5K**	±5000 lb.
441-50	±50 lb.	**441-7500**	±7500 lb.
441-100	±100 lb.	**441-10K**	±10000 lb.
441-250	±250 lb.	**441-15K**	±15000 lb.
441-500	±500 lb.	**441-20K**	±20000lb.
441-1K	±1000 lb.	**441-30K**	±30000 lb.
441-2K	±2000 lb.	**441-50K**	±50000 lb.

* Ranges above 50000 pounds are available on request.

** Allowable extraneous forces without damage, as % of load capacity, are as follows (see Fig. LC.3):

	Bending Moment (lb.-in.)	Shear (lb.)	Torque (lb.-in.)	Total Extraneous Force
5 - 500 lb.	40%	50%	25%	100%
1000 - 7500 lb.	25%	30%	25%	100%
10000 - 50000 lb.	20%	20%	15%	100%

AGT Absolute Gauge Technologies™

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"PANCAKE-THIN" LOAD CELLS [441 SERIES]

SPECIFICATIONS

Full-Scale Deflection: 0.003"

Bridge: Four-arm bonded foil gages, 350 ohms nominal

Insulation Resistance: 5000 M½ at 50 V-DC

Excitation: 10 V-DC (calibration); up to 15 V-DC or AC acceptable

Output (standard):

Models 441-5 through 441-25: 2 mV/V, full scale

Models 441-50 through 441-50K: 3 mV/V, full scale

Linearity:

Models 441-5 through 441-25: ±0.2% of full scale

Models 441-50 through 441-50K: ±0.1% of full scale

Hysteresis:

Models 441-5 through 441-25: ±0.1% of full scale

Models 441-50 through 441-50K: ±0.08% of full scale

Repeatability:

Models 441-5 through 441-25: ±0.1% of full scale

Models 441-50 through 441-50K: ±0.03% of full scale

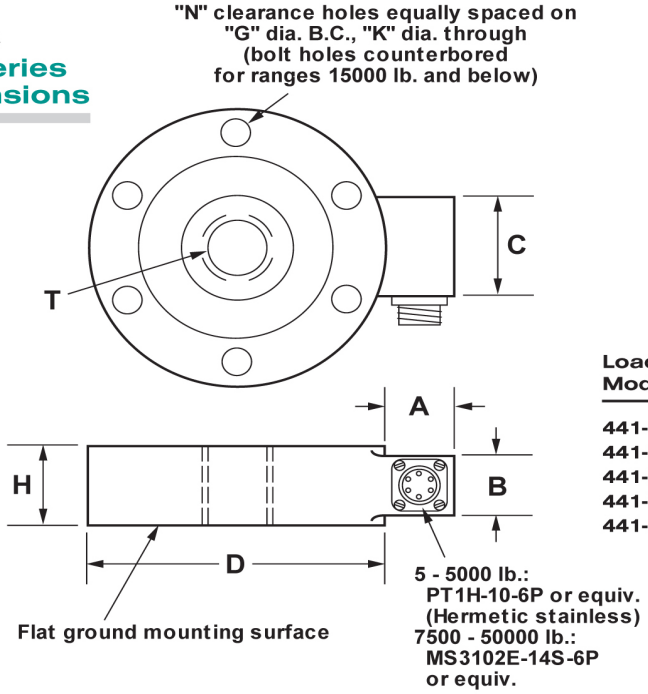
Overload Capacity: 150% of nominal rating (static)

Temperature Coefficient (Zero and Span): ±0.002% of full scale/°F

Compensated Temperature Range: +60° F to +160° F (+16°C to +71°C)

Operating Temperature Range: -65° F to +250° F (-54°C to +121°C)

Fig. LC.6
441 Series Dimensions



Load Cell Model	No. of Holes "N"	Thread "T"
441-5 through 441-25	6	1/4-28 UNF
441-50 through 441-1K	6	3/8-24 UNF
441-2K through 441-5K	6	1/2-20 UNF
441-7500 through 441-15K	8	1-14 UNS
441-20K through 441-50K	8	1 1/2-12 UNF

Load Cell Model	Dimension "A" (in. / cm)	Dimension "B" (in. / cm)	Dimension "C" (in. / cm)	Dimension "D" (in. / cm)	Dimension "G" (in. / cm)	Dimension "H" (in. / cm)	Dimension "K" (in. / cm)
441-5 through 441-25	0.82 / 2.08	0.75 / 1.91	1.25 / 3.18	2.50 / 6.35	2.000 / 5.080	0.80 / 2.03	0.19 / 0.48
441-50 through 441-1K	0.82 / 2.08	0.75 / 1.91	1.25 / 3.18	3.00 / 7.62	2.250 / 5.715	1.00 / 2.54	0.28 / 0.71
441-2K through 441-5K	0.82 / 2.08	0.75 / 1.91	1.25 / 3.18	3.50 / 8.89	2.625 / 6.668	1.00 / 2.54	0.34 / 0.86
441-7500 through 441-15K	1.25 / 3.18	1.50 / 3.81	2.00 / 5.08	5.50 / 13.97	4.500 / 11.43	1.80 / 4.57	0.40 / 1.02
441-20K through 441-50K	1.25 / 3.18	1.50 / 3.81	2.00 / 5.08	6.00 / 15.24	4.875 / 12.38	1.80 / 4.57	0.53 / 1.35

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