

MODEL 3173

Tension and compression 200 lbs. to 3,000 lbs.



3173 WITH TENSION BASE



**Consult factory
for specials.**

FEATURES :

- High accuracy
- Low deflection
- Proven fatigue resistant design and performance
- Low full-scale capacity
- Low profile
- Minimal sensitivity to extraneous loading

The Model 3173 is the newest member of a low profile tension and compression family of load cells. The Model 3173 covers the lower capacity ranges of 200 pounds force to 3,000 pounds force, while exhibiting the superior characteristics of stiffness and low profile. These load cells are well suited to materials testing machines and other applications requiring a rugged load sensor.

PERFORMANCE SPECS :

3173

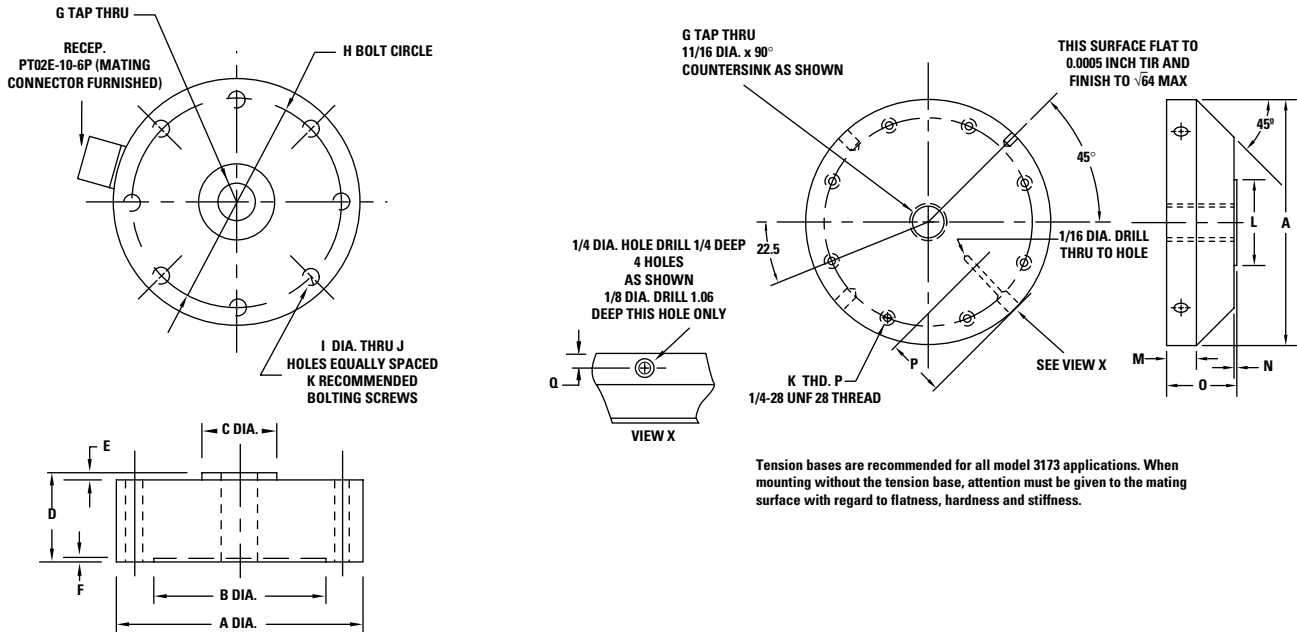
SPECIFICATIONS

| | |
|--|-------------------------|
| Capacity: lbs. | 200, 500, 1K, 2K, 3K |
| Output: millivolts per volt, nominal | 1.50 |
| Output: millivolts per volt, nominal (2K and 3K units) | 2.00 |
| Overload: at rated capacity | 150% |
| Nonlinearity best fit: of rated output | $\leq \pm 0.05\%$ |
| Creep: in 20 minutes of rated output | $\leq \pm 0.025\%$ |
| Hysteresis: of rated output | $\leq \pm 0.05\%$ |
| Repeatability: of rated output | $\pm 0.02\%$ |
| Input resistance: nominal, ohms | 700 |
| Output resistance: nominal, ohms | 700 |
| Excitation voltage: maximum | 20V |
| Temperature range, compensated: °F | +70 to +170 |
| Temperature range, usable: °F | -65 to +200 |
| Temperature effect on output: of reading per °F | $\leq 0.002\%$ |
| Temperature effect on zero: of rated output per °F | $\leq 0.002\%$ |
| Fatigue life: 0 to full fatigue load (cycles x 10 ⁶) | ≥ 100 |
| Fatigue life: full fatigue tension to full fatigue comp. (cycles x 10 ⁶) | ≥ 50 |
| Deflection: at rated capacity (200-1K) | .003 inch |
| Deflection: at rated capacity (2K-3K) | .001 inch |



| MODEL NUMBER | CAPACITY lbs. (N) | DIMENSIONS | | | | | | G English (Metric) | H in. (cm.) | I in. (cm.) | NO. OF HOLES J | BOLTING SCREWS K | DIMENSIONS | | | | | |
|--------------|-------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------------|-------------------|-------------------|-------------------|------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | | A in. (cm.) | B in. (cm.) | C in. (cm.) | D in. (cm.) | E in. (cm.) | F in. (cm.) | | | | | | L in. (cm.) | M in. (cm.) | N in. (cm.) | O in. (cm.) | P in. (cm.) | Q in. (cm.) |
| 3173 | 200-3K | 4.12 | 2.85 | 1.27 | 1.37 | 0.12 | 0.06 | 5/8-18 UNF-3B | 3.50 | 0.28 | 8 | 1/4-28 hexhead | 1.25 | 0.50 | 0.03 | 1.13 | 0.87 | 0.25 |
| 3173-101 | (900-13.5K) | (10.47) | (7.24) | (3.23) | (3.48) | (0.31) | (0.15) | (M16 x 15mm-6H) | (8.89) | (0.71) | 8 | 1 1/2 inches long | (3.18) | (1.27) | (0.08) | (2.87) | (2.21) | (0.64) |

Tighten to
200 in. lbs.



Tension bases are recommended for all model 3173 applications. When mounting without the tension base, attention must be given to the mating surface with regard to flatness, hardness and stiffness.

SENSOR CHARACTERISTICS : 3173

| MODEL NUMBER | NOMINAL LOAD LIMIT CAPACITY F_z | | STATIC OVERLOAD CAPACITY % OF NOM. CAPACITY | FATIGUE CAPACITY % OF NOM. CAPACITY | STATIC EXTRANEIOUS LOAD LIMITS | | | DEFLECTION AT NOM. LOAD LIMIT INCHES | RINGING FREQUENCY H_z |
|--------------|-----------------------------------|---------|---|-------------------------------------|--------------------------------|-----------------------------------|-------------------------|--------------------------------------|-------------------------|
| | LBS. | NEWTONS | | | SHEAR F_x OR F_y LBS. | BENDING M_x OR M_y LB. INCHES | TORQUE M_z LB. INCHES | | |
| 3173 | 200 | 1K | 150 | 100 | 4,471 | 185 | 3,477 | 0.003 | 1,500 |
| | 500 | 2K | 150 | 100 | 15,625 | 466 | 5,208 | 0.003 | 2,440 |
| | 1K | 5K | 150 | 100 | 15,500 | 911 | 7,750 | 0.003 | 3,900 |
| | 2K | 10K | 150 | 100 | 4,000 | 2,133 | 1,523 | 0.001 | 5,500 |
| | 3K | 15K | 150 | 100 | 5,166 | 2,818 | 2,214 | 0.001 | 7,200 |