LOAD WASHERS
FOR MEASURING BOLT COMPRESSIONAL FORCES
STANDARD AND METRIC MODELS

Compressed
0-200 lb to 0-200,000 lb
0-1000 to 0-200 kN

1 Newton = 0.2248 lb
1 daNewton = 10 Newtons
1 lb = 454 g
1 t = 1000 kgf = 2204 lb

Spherical Washers
Included

Load Button Recommended
When Used as
Compression Load Cell

SPECIFICATIONS
Excitation: 10 Vdc (15V maximum)
Output:
<500 lb/2kN: 1 mV/V nominal
≥500 lb/2kN: 2 mV/V nominal
Accuracy (Linearity, Hysteresis and
Repeatability Combined):
≤10K lb/50 kN: ±0.5% BFSL
>10K lb/50 kN: ±0.75% BFSL
Zero Balance: ±0.4% FSO
Operating Temp Range:
-40 to 127°C (-40 to 260°F)
Compensated Temp Range:
16 to 71°C (60 to 160°F)
Thermal Effects:
Zero: ±0.018% FSO/°C
Span: ±0.018% FSO/C
Safe Overload: 120% of capacity
Ultimate Overload: 200% of capacity
Bridge Resistance:
<50K lb/200 kN: 350 Ω min
g≥50K lb/200 kN: 700 Ω
Full Scale Deflection: 0.001" typical
Construction: Stainless steel
Electrical:
1.5 m (5') insulated shielded cable

STANDARD MODELS
To Order

<table>
<thead>
<tr>
<th>CAPACITY</th>
<th>MODEL NO.</th>
<th>COMPATIBLE METERS</th>
<th>SPHERICAL WASHERS†</th>
</tr>
</thead>
<tbody>
<tr>
<td>lb N</td>
<td>LCWD-200</td>
<td>DP41-S, DP25B-S, DPIS</td>
<td>SPW-2 8.7 (0.34)</td>
</tr>
<tr>
<td>200 890</td>
<td>LCWD-500</td>
<td>DP41-S, DP25B-S, DPIS</td>
<td>SPW-2 8.7 (0.34)</td>
</tr>
<tr>
<td>500 2224</td>
<td>LCWD-50K</td>
<td>DP41-S, DP25B-S, DPIS*</td>
<td>SPW-2 8.7 (0.34)</td>
</tr>
<tr>
<td>1000 4448</td>
<td>LCWD-100K</td>
<td>DP41-S, DP25B-S, DPIS*</td>
<td>SPW-7 24 (0.94)</td>
</tr>
<tr>
<td>200,000 889,680</td>
<td>LCWD-200K</td>
<td>DP41-S, DP25B-S, DPIS*</td>
<td>SPW-10 33 (1.31)</td>
</tr>
</tbody>
</table>

Caution
This unit is not field serviceable. Modifying and/or tampering will forfeit
the warranty and may be dangerous. Use appropriate protective equipment
and/or garments when testing or installing, including safety glasses.

METRIC MODELS

CAPACITY MODEL COMPATIBLE SPHERICAL WASHERS†

<table>
<thead>
<tr>
<th>CAPACITY</th>
<th>ID</th>
<th>OD (mm)</th>
<th>H (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤10K lb (50 kN)</td>
<td>10.2 (0.40)</td>
<td>25 (1.0)</td>
<td>9.0 (0.35)</td>
</tr>
<tr>
<td>20K lb (100 kN)</td>
<td>12.7 (0.50)</td>
<td>30 (1.2)</td>
<td>10 (0.40)</td>
</tr>
<tr>
<td>50K lb (200 kN)</td>
<td>19.3 (0.76)</td>
<td>44 (1.75)</td>
<td>13 (0.50)</td>
</tr>
<tr>
<td>100K lb</td>
<td>25.7 (1.01)</td>
<td>57 (2.25)</td>
<td>18 (0.70)</td>
</tr>
<tr>
<td>200K lb</td>
<td>38.4 (1.51)</td>
<td>77 (3.00)</td>
<td>32 (1.25)</td>
</tr>
</tbody>
</table>

 Comes complete with 4-point NIST-traceable calibration and 59 kΩ shunt data.

* 4-digit meter. ** Visit us online for compatible meters.
† One set of spherical washers and one set of load buttons supplied with each load cell.

Ordering Examples:
LCWD-500, 500 lb capacity load washer supplied with 2 load buttons
and a set of spherical washers.
LCWD-100K, 100,000 lb capacity load washer supplied with 2 load buttons and set of
spherical washers.

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**STANDARD AND METRIC MODELS**

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**METRIC MODELS**

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<tr>
<th>CAPACITY</th>
<th>MODEL NO.</th>
<th>COMPATIBLE METERS</th>
<th>SPHERICAL WASHERS*</th>
<th>ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>lb</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td>225</td>
<td>LCMWD-1KN</td>
<td>DPiS, DP41-S, DP25B-S</td>
<td>SPW-2 8.7 (0.34)</td>
</tr>
<tr>
<td>2000</td>
<td>450</td>
<td>LCMWD-2KN</td>
<td>DPiS, DP41-S, DP25B-S</td>
<td>SPW-2 8.7 (0.34)</td>
</tr>
<tr>
<td>5000</td>
<td>1124</td>
<td>LCMWD-5KN</td>
<td>DPiS, DP41-S, DP25B-S</td>
<td>SPW-2 8.7 (0.34)</td>
</tr>
<tr>
<td>10,000</td>
<td>2248</td>
<td>LCMWD-10KN</td>
<td>DPiS*, DP41-S, DP25B-S</td>
<td>SPW-2 8.7 (0.34)</td>
</tr>
<tr>
<td>20,000</td>
<td>4496</td>
<td>LCMWD-20KN</td>
<td>DPiS*, DP41-S, DP25B-S</td>
<td>SPW-2 8.7 (0.34)</td>
</tr>
<tr>
<td>50,000</td>
<td>11,240</td>
<td>LCMWD-50KN</td>
<td>DPiS*, DP41-S, DP25B-S</td>
<td>SPW-2 8.7 (0.34)</td>
</tr>
<tr>
<td>100,000</td>
<td>22,481</td>
<td>LCMWD-100KN</td>
<td>DPiS*, DP41-S, DP25B-S</td>
<td>SPW-3 10 (0.41)</td>
</tr>
<tr>
<td>200,000</td>
<td>44,962</td>
<td>LCMWD-200KN</td>
<td>DPiS*, DP41-S, DP25B-S</td>
<td>SPW-5 17 (0.66)</td>
</tr>
</tbody>
</table>

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

* 4-digit meter. ** Visit us online for compatible meters.

† One set of spherical washers and one set of load buttons supplied with each load cell.

Ordering Examples: LCMWD-10KN, 10 kN capacity load washer supplied with 2 load buttons and a set of spherical washers.

LCMWD-200KN, 200 kN capacity load washer supplied with 2 load buttons and a set of spherical washers.

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**STRAIN GAGE/BRIDGE TRANSDUCER-SIGNAL CONDITIONERS**

The iDRN-ST and iDRX-ST signal conditioners provide highly accurate, stable, isolated measurement for strain gage transducers such as load cells, torque transducers, non-amplified pressure transducers, and other bridge based transducers. Both models can accept signals from 30 to 100 mV full scale and provide 10 Vdc reference voltage which may be used for transducer excitation.

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<table>
<thead>
<tr>
<th>MODEL NO.</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>iDRX-ST</td>
<td>Digital signal conditioner for strain gages and bridge transducers with RS485 output</td>
</tr>
<tr>
<td>iDRN-ST</td>
<td>Signal conditioner for strain gages and bridge transducers with analog output</td>
</tr>
<tr>
<td>-FS</td>
<td>Factory setup and scaling</td>
</tr>
</tbody>
</table>

Comes complete with operator’s manual.


For iDRN/iDRX accessories and power supplies, please visit us online.