



# WD

## DUAL SHEAR BEAM LOAD CELL

### *applications*

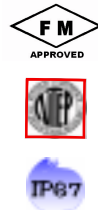
- Compression Measurements
- Truck Scales
- Railroad Track Scales
- Legal-For-Trade Certified Systems
- OEM and VAR Solutions

### *features*

- 25,000 to 200,000 lbs. Capacities
- Excellent Overall Performance
- Dual Shear Beam Technology
- 0.03% Accuracy Class
- Alloy Tool Steel Element
- Center-Mounted/End-Link Loaded
- High Eccentric Load Tolerance
- IP67 Environmental Sealing
- Matched Output Sensitivities
- Two Year Warranty

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NIST H-44 NTEP CERTIFIED "LEGAL-FOR-TRADE"


- CLASS IIIIL: 10,000D/Multiple
- 25,000 Through 125,000 lbs. Capacities

The WD Series is a high performance, bonded foil strain gage load cell constructed of alloy tool steel (WD1). The WD is designed to accurately measure compression loads in capacities ranging from 25,000 lbs. to 200,000 lbs. The robust, rectangular shear beam design readily tolerates angular, eccentric and side loading effects, with minimal sensitivity to these anomalies. To achieve a sealing rating of IP67 (thoroughly sealed against airborne particles and the effects of immersion up to 1 meter.) proprietary, multi-redundant environmental barriers are incorporated to protect the strain gage area. The cable is a durable polyurethane-jacketed cable, with a tin-copper braided shield for mechanical protection and to minimize the effects of RFI and EMI. The WD output sensitivities are calibrated to a close tolerance to facilitate their use with summing/junction devices for multiple load cell applications. In addition to non-standard mechanical and/or electrical variations of this product, options including specific cable lengths, Surge Voltage Protection (Lightning Protection) and High Temperature Operation are available to meet specific customer requirements. The attributes of the WD Series make it ideal for truck scale and railroad track scale weighing, as well as for O.E.M. situations where a rugged and high performance NTEP Certified load cell solution is needed.

*Innovative Measurement Solutions*



**performance**

 CLASS IIIIL: 10,000/Multiple  
20,000 Through 150,000 lbs. Capacities

Rated capacities <sup>(1)</sup> (lbs.):	25K, 40K, 50K, 60K, 75K, 100K, 125K, 150K & 200K
Rated output (FSO)	3 mV/V ± 0.25%
Combined error	≤ 0.03 % FSO
Non-linearity	≤ 0.03 % FSO
Hysteresis	≤ 0.02 % FSO
Non-repeatability	≤ 0.01 % FSO
Side Load Rejection Ratio	≤ 500:1
Creep (20 minutes)	≤ 0.03 % of load
Zero balance	≤ 1 % FSO
Zero return (20 minutes)	Better than 0.03 % FSO

<sup>(1)</sup> ("K" = thousand)

**mechanical**

Load Cell Material	Alloy tool steel (WD1)
Load Cell Finish	Electroless nickel plated (WD1)
Safe overload:	Compression/Tension: 150% FSO Side load: 100% FSO
Ultimate overload:	Compression/Tension: 300% FSO Side load: 150% FSO
Deflection	< 0.020" (0.5mm)
Weight	See table below

**electrical**

Input impedance	770 ± 10 ohms
Output impedance	700 ± 5 ohms
Insulation resistance	>5000 Megohms @ 50VDC
Excitation Voltage	10 V AC/DC (15 V maximum)
Cable Color code:	+ Excitation (red) - Excitation (black) + Output (green) - Output (white) Shield (bare)
Cable type	4-conductor; 22 AWG; tin-copper, braided shield; polyurethane jacket
Cable termination	Finished conductors

**environmental**

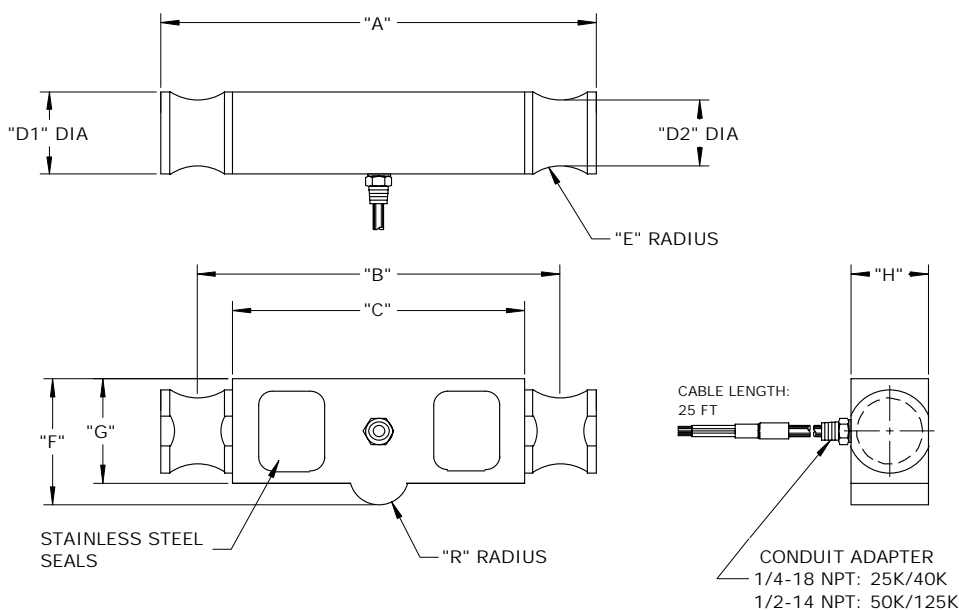
Temperature, operating	4 to +140 °F (-20 to +60°C)
Temperature, compensated	14 to +104 °F (-10 to +40°C)
Temperature effects:	Zero < 0.0015% FSO/°F < 0.0026% FSO/°C Output < 0.0008% of Rdg./°F < 0.0014% Rdg./°C
Sealing	IP67; Multi-redundant

**options**

Special Cable Lengths, Surge Voltage (Lightning) Protection, High Temperature Operation, Weigh Modules and Control Instrumentation.

**dimensions**

100%  
CUSTOMER  
SATISFACTION  
GUARANTEED



DIMENSIONAL TAB BLOCK

CAPACITY (LB)	"A"	"B"	"C"	"D1"	"D2"	"E"	"F"	"G"	"H"	"R"	WEIGHT (LB)
25K - 40K	8.25	7.25	6.25	2.00	1.63	0.50	2.97	2.44	1.94	0.50	7
50K - 75K	11.50	10.00	8.50	2.20	1.70	0.75	3.47	2.94	1.94	1.00	16
100K - 125K	14.50	12.50	10.50	3.20	2.44	1.00	4.68	3.86	2.90	1.50	32