

WEIGH-TRONIX

Batching Weight Sensors (Bin, Tank & Hopper)

Installation and Service Manual

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Installation

General Installation Notes



Caution

Installation of tank, hopper, conveyor and other batching systems must comply with local building codes and regulations. Seismic and other safety codes should be reviewed to insure compliance. Outside installations should accommodate wind shear and other factors to insure a safe, accurate weighing system.

*Anchor bolt kits
P/N 29486-0028*

All the weight sensors used in a particular batch weighing system must be

- Of adequate capacity to support live load plus weight of existing structure, and
- Of identical capacity and style.

A weight indicator and a junction box (J-box) will be required with the Weigh Bars in the installation procedure.

Weigh Bar assemblies are self-checking and do not require check rods. Simply move the existing bin, tank, or hopper structure so that the Weigh Bars can be placed on the floor to fit under the existing support legs. Legged structures anchored on concrete are not necessarily strong enough when placed on Weigh Bars. The legs must be adequately braced or designed strong enough to prevent buckling.

Position the Weigh Bar assemblies so that the bracket assembly is under the structure and not protruding out beyond the support legs, where it may be damaged. When installing Double-Ended Weigh Bars, make certain the structure support legs rest flat against the Weigh Bar top support plate to avoid "twisting" the Weigh Bar. Double-Ended Weigh Bars require no adjustments and can be configured under the support legs at will. Single-Ended Weigh Bars may be adjusted for side, end, and overload stop limits.

Single-Ended Weigh Bar Assemblies may be configured so that any horizontal movement will always be limited by at least one side stop or end stop adjustment.

Mount the Weigh Bar Assemblies on a solid surface which is both flat and leveled, so that floor bearing pads remain on the same level plane, within $\pm 1/16$ inch. A wood surface does not properly support a scale and is not recommended.

The Weigh Bar should not rock, and the floor surface should not give under loads. It is suggested an industrial grade non-shrink grout be used under the Weigh Bar brackets whenever the floor surface is not smooth and flat. It is permissible to place metal shims under the Weigh Bar Assembly to level it. These shims must provide support for the entire bracket, not just the ends. For additional level-adjusting, place shims between support legs and the top of the support plate on the Weigh Bar Assembly.

Bolt the bin, tank, or hopper structure into place. Each Weigh Bar or weight sensor requires four 1" diameter expansion type anchor bolts. Recommended length of the anchor bolts is 9". RED HEAD and WEJ-IT are two brand names of expansion anchor bolts but neither are endorsed by Weigh-Tronix, Inc. Optionally, you can drill oversize holes and use epoxy adhesive embedded 1" bolts. Be sure to follow manufacturer's specifications.

Check the chain links on Single-Ended Weigh Bar Assemblies to make sure they are taut. If necessary, tighten or loosen nuts on U-bolts at the end of the chain link to adjust tension and obtain an equal tension on all weight sensors. See FIGURE 1. Range of adjustment of U-bolt nuts is limited; you may also add metal shims between the structure support legs and Weigh Bar support plate to achieve equal stress on all Weigh Bars. After the U-bolt nuts are adjusted, the overload stops must be adjusted. To adjust overload stops, load the scale to full capacity with evenly distributed weight. Set each overload stop so that when the lock nut is tight there is a .040 inch gap under the stop.

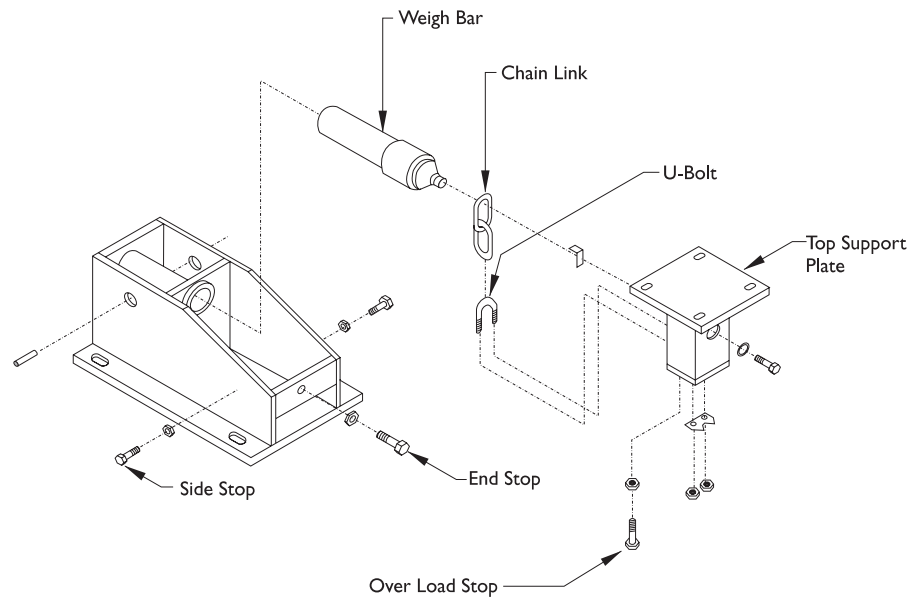


Figure 1
Exploded view of Weigh Bar Assembly

With the structure in place, adjust the side and end stop bolts on each Single-Ended Weigh Bar Assembly to allow a gap of 1/8 inch between bolt and Weigh Bar support plate. This 1/8" gap should also be checked with the scale fully loaded.

Junction Box Connections

You have one of two styles of junction boxes: one fitted with threaded cable connections and the other fitted with terminal strips to which wires will be connected. Regardless of the style of junction box used, any Weigh Bar cable may be connected to any terminal port, however, it is advisable to connect Weigh Bars to the junction box in an orderly manner for convenience of servicing. Arrange Weigh Bar cables so that each cable connection on the junction box matches the location of its corresponding Weigh Bar in the system.

J-Box with Threaded Cable Connections

To connect the Weigh Bar cables to the junction box, simply press the five pin connectors onto the appropriate cable receivers on the junction box (See FIGURE 2, J2-J5) and tighten the screw collars. The indicator cable attaches to this style junction box at J1, located on the back of the junction box.

J-Box with Terminal Strips

Use Weigh Bar cables having tinned wires to interface a junction box with terminal strips. For this style J-box, connect Weigh Bar cables to terminal strips on the outer edge of the junction box. Connect cable wires to their corresponding J-box terminal numbers according to TABLE 1.

- Pin 1 - Green Wire (+EXC)

Pin 2 - White Wire (+SIG)

Pin 3 - Orange/White Wire (SHIELD)

Pin 4 - Red Wire (-SIG)

Pin 5 - Black Wire (-EXC)

Table 1

Terminal Connections for Weigh Bar Cable to J-Box

Connect the indicator interface cable wires to the terminal strip-style J-box at the appropriate terminal numbers according to TABLE 2.

- Pin 1 - Green wire and Yellow wire (+EXC and +SENSE)

Pin 2 - White wire (+SIG)

Pin 3 - Orange/White wire (SHIELD)

Pin 4 - Red Wire (-SIG)

Pin 5 - Blue wire and Black wire (-EXC and -SENSE)

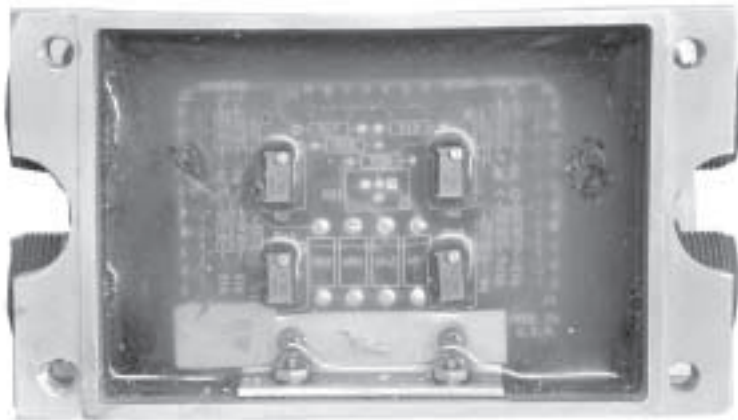
Table 2:

Terminal Connections for Indicator Cable to J-Box

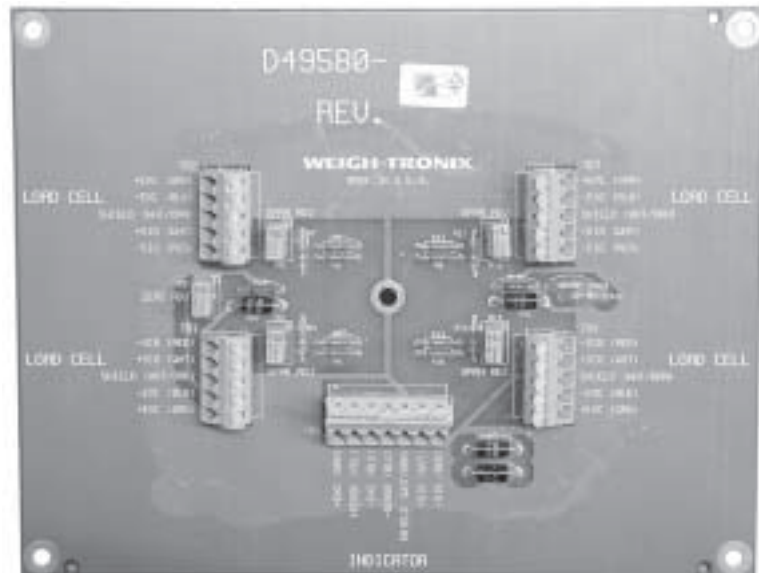
Balancing Weight Sensors with a Single-Pot System (Signal Trim)

- 49550-0019 - 4 WB signal trim (Shown at right)
- 49550-0035 - 4 WB signal trim w/lightning suppression
- 49550-0050 - 4 WB signal trim w/zero pot
- 49550-0076 - 4 WB signal trim w/zero pot and lightning suppression

R1 is the zero/deadload adjustment



- 49580-0039 - 4 WB signal trim
- 49580-0062 - 4 WB signal trim w/zero pot (Shown at right)
- 49580-0096 - 4 WB signal trim w/lightning suppression
- 49580-0120 - 4 WB signal trim w/zero pot and lightning suppression



- 49731-0029 - 4 WB signal trim (Shown at right)
- 49731-0037 - 4 WB signal trim w/lightning suppression
- 49731-0045 - 4 WB signal trim w/lightning suppression and summing
- 49731-0052 - 4 WB signal trim w/zero pot

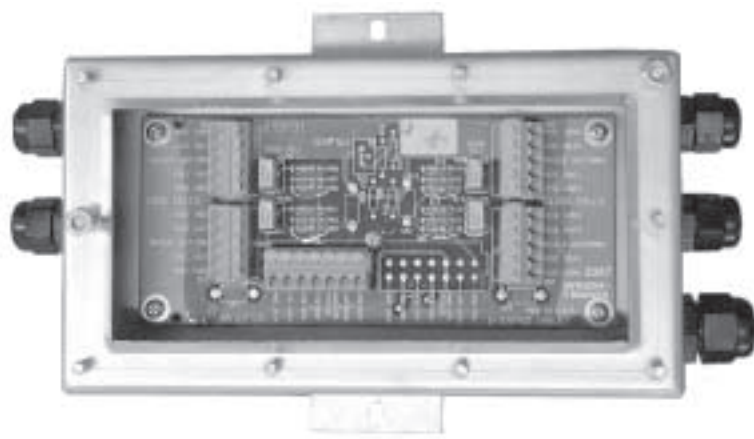


Figure 2
Single-Pot Junction Boxes

One potentiometer affects one weigh bar. You balance the weigh bars by adjusting the corresponding potentiometer in the junction boxes according to the steps listed below.

1. Remove J-Box cover to access potentiometers.
2. Disable the AZT on your indicator. Use R1 to set the deadload offset required by the indicator.
 - 2a. Exercise the scale system by loading and unloading the scale system three or four times with near 100% of capacity.
3. Use a test weight that does not exceed the capacity of one weight sensor, usually 1/4 scale capacity, and obtain a displayed weight value for the test weight applied to each weight sensor in the scale system, like this:
 - 3a. Place certified test weight directly above first weight sensor
 - 3b. Record displayed weight value.
 - 3c. Completely remove test weight and verify the display returns to zero before reloading above another weight sensor.
 - 3d. Repeat Steps 3a through 3c for each weight sensor in scale system.
4. If displayed weight values for all weight sensors equal each other, within ± 1 division, proceed now to appropriate manual with the calibration instructions for your indicator.
5. If displayed weight value for any weigh bar varies from the others by more than ± 1 division, adjust the appropriate potentiometer by turning it the number of 360 degree turns indicated by this formula:

$$\frac{\text{Certified Test Weight Value} - \text{Displayed Weight Value}}{\text{Certified Test Weight Value} \times 0.0028} = \text{Number of Turns}$$

If the **Number Of Turns** is a positive value, turn the potentiometer clockwise. If **Number Of Turns** is a negative value, turn the potentiometer counterclockwise.

6. Repeat Steps 3a through 3c, checking all weight sensors with test weights, to make sure you have properly adjusted J-Box potentiometers.

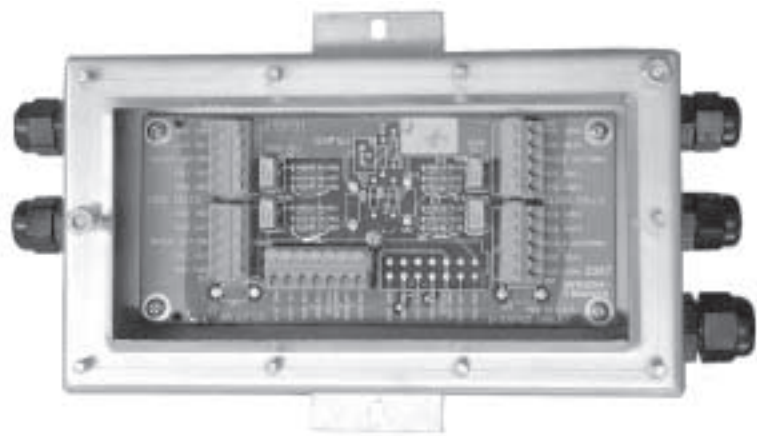
If displayed weight values for all weight sensors are equal, within ± 1 scale division, proceed to appropriate manual with the calibration instructions for the indicator being used.

If displayed weight value for any weight sensor varies from the others by more than ± 1 scale division, then repeat Steps 3 through 5 until you achieve equal readings.

Interface Connections

Remove the junction box cover plate. Attach the leads of the indicator interface cable to TB5 in the junction box per Figure 3.

*R2 is the corner balance for TB1.
R6 is the corner balance for TB2.
R10 is the corner balance for TB3.
R14 is the corner balance for TB4.*



W-T Wire Color	Signal
Green	+Excitation
Yellow	+Sense
White	+Signal
Orange/White	Shield
Red	-Signal
Blue	-Sense
Black	-Excitation

Figure 3
Junction box and wiring table

Weight Sensor Types

IMPORTANT

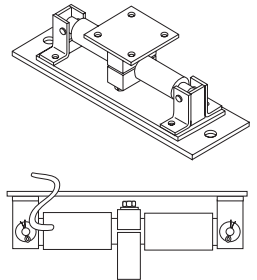
Legal-for-trade bars must be certified locally after installation and before use in a commercial transaction

Six types of batching weight sensors are available from Weigh-Tronix:

Double-Ended Batching Weigh Bar (DEBWB)

This model is not legal-for-trade.

The DEBWB is rigidly affixed at both ends of the bar. Weight is applied to the middle of the compression model DEBWB or suspended from the tension model.



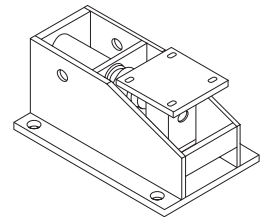
Batching Weigh Bar (BWB)

Legal-for-Trade Certificate #s:

#87-095 - 125 lb - 500 lb

#87-090 - 500 lb - 50,000 lb

A single-ended Weigh Bar rigidly affixed at one end that deflects at the other end, where force is applied. (Top plate is removed for viewing.)

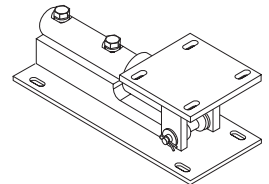


Low Profile Batching Weigh Bar (LPBWB)

Legal-for-Trade Certificate #:

Class III 5,000 Div. - #87-090A

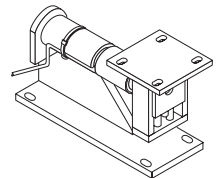
A low profile, single-ended cantilever type Weigh Bar.



100% Stainless Steel Pedestal Weigh Bar (BSS)

Legal for Trade CC#93-090, Class III 5,000 divisions

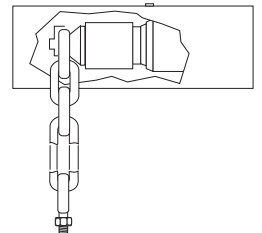
A single-ended cantilever-type stainless steel Weigh Bar.



Hopper Scale Weigh Bars (HSWB)

Legal for Trade CC#87-090A3, Class III 5,000 divisions

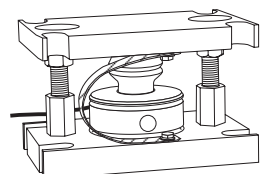
A single-ended Weigh Bar mounted in a bracket assembly and cover with chain links connected to the Weigh Bar. Hopper scale Weigh Bars are for use in applications in which the hopper is suspended.



Model 220 Tank Mount Weight Sensor

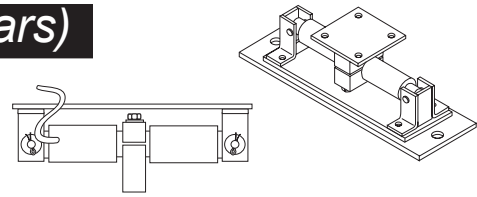
100% stainless steel compression weight sensor for heavy duty applications.

Each type is described in detail in the following pages.



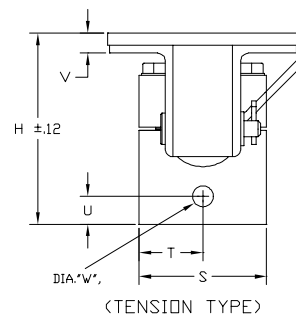
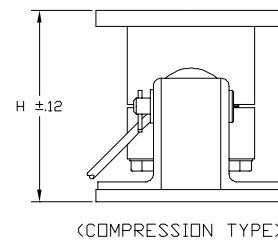
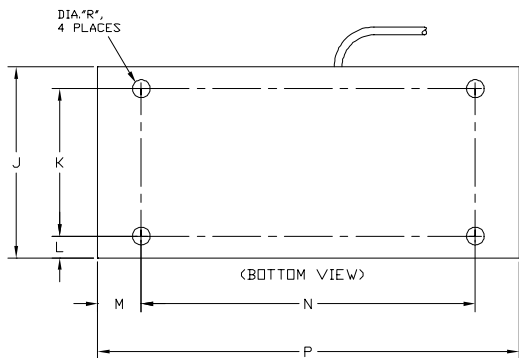
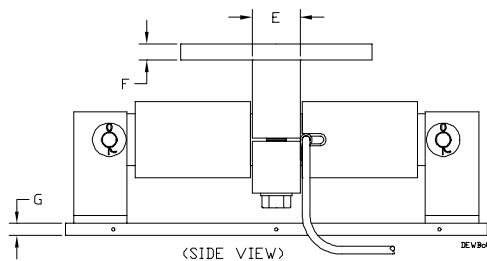
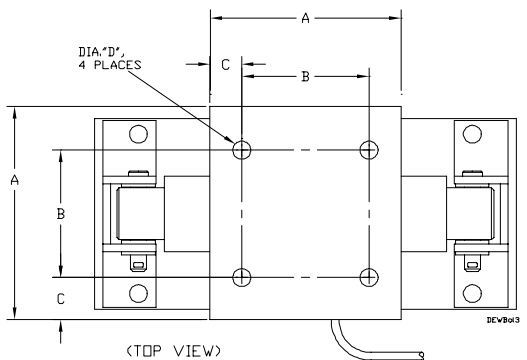
DEBWB (Double Ended Batching Weigh Bars)

Dimensions



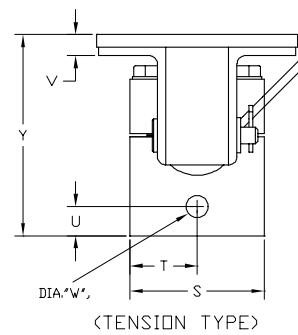
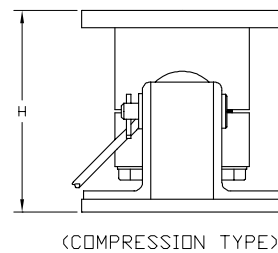
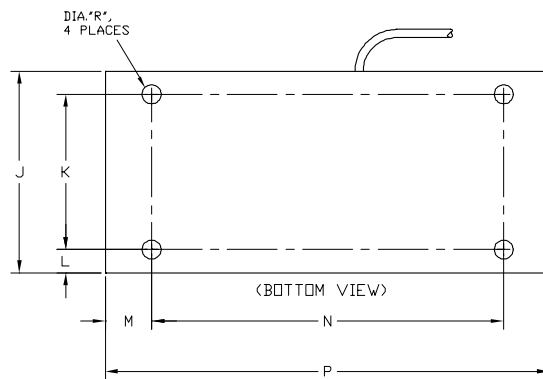
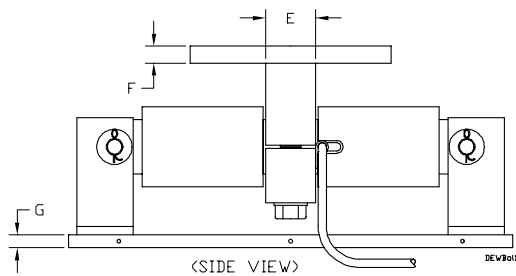
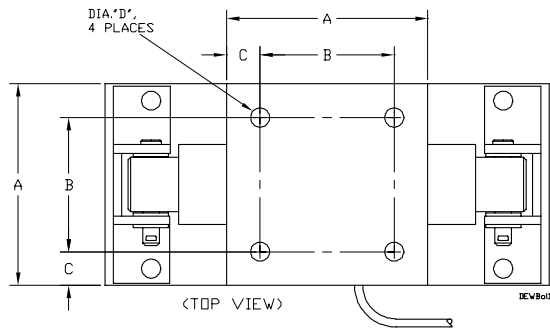
DEBWB WEIGH BAR DIMENSION CHART (250 lb THRU 2.5K lb)											
COMPRESSION	TENSION	CAP-LBS.	A	B	C	DIA. D	DIA. E	F	G	H	J
18306-0011	18306-0029	250	3.00	2.25	.38	.34	.75	.25	.18	3.00	2.50
18306-0037	18306-0045	500	3.00	2.25	.38	.34	.75	.25	.18	3.50	3.00
18395-0013	18395-0021	1,000	4.00	2.75	.62	.41	1.00	.25	.25	4.00	4.00
18395-0039	18395-0047	1,250	4.00	2.75	.62	.41	1.00	.25	.25	4.00	4.00
18545-0012	18545-0020	2,000	5.00	3.25	.87	.50	1.50	.38	.38	5.00	5.00
18545-0038	18545-0046	2,500	5.00	3.25	.87	.50	1.50	.38	.38	5.00	5.00

CONTINUED											
COMPRESSION	TENSION	K	L	M	N	P	S	T	U	V	DIA. W
18306-0011	18306-0029	1.75	.38	.75	9.00	10.50	2.00	1.00	.44	.31	.33
18306-0037	18306-0045	2.00	.50	.75	9.00	10.50	2.50	1.25	.56	.38	.39
18395-0013	18395-0021	2.87	.56	1.00	10.00	12.00	3.00	1.50	.62	.50	.47
18395-0039	18395-0047	2.87	.56	1.00	10.00	12.00	3.00	1.50	.62	.50	.47
18545-0012	18545-0020	3.75	.62	1.25	12.50	15.00	3.50	1.75	.75	.62	.53
18545-0038	18545-0046	3.75	.62	1.25	12.50	15.00	3.50	1.75	.75	.62	.53

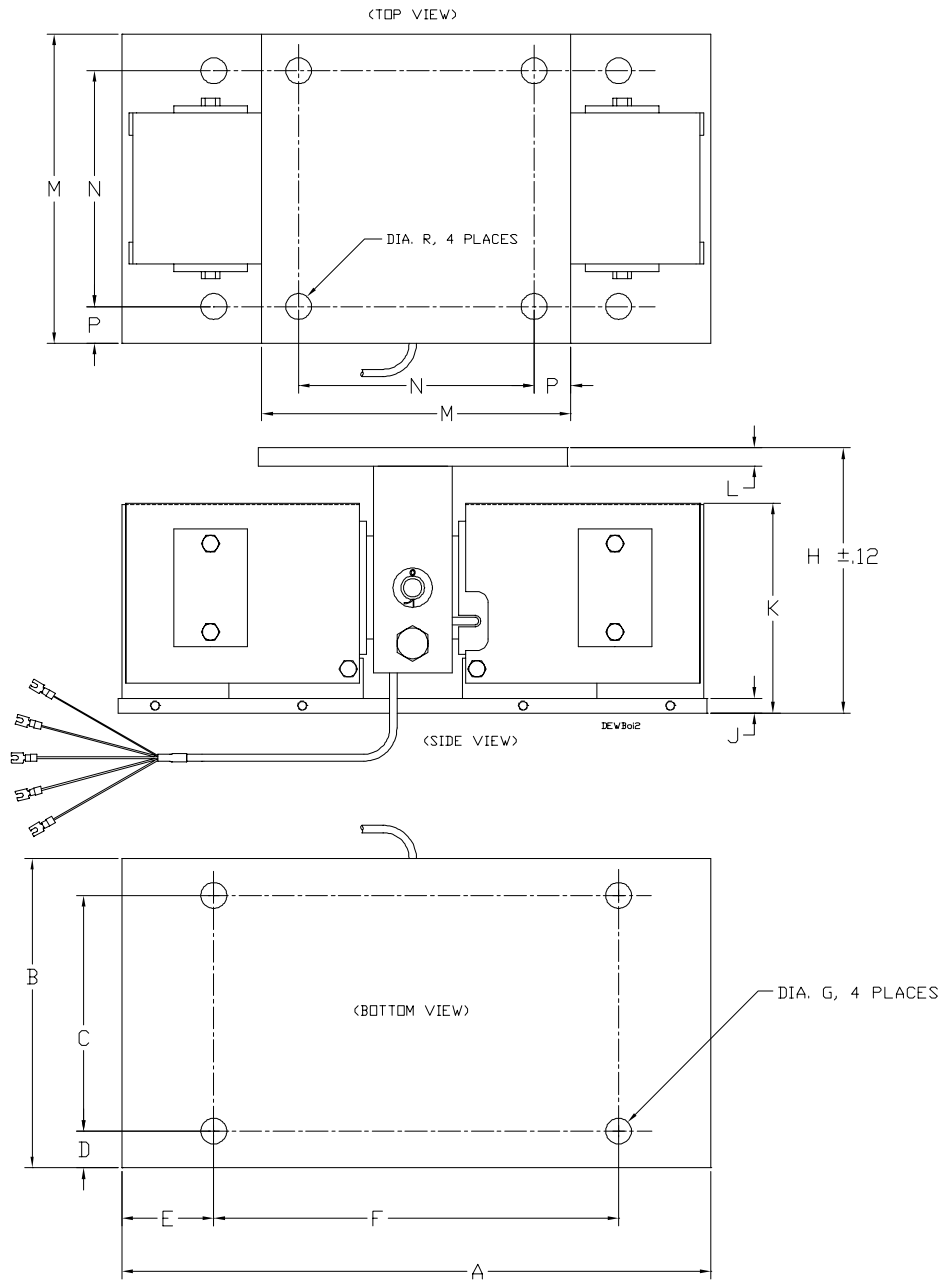


DEBWB WEIGH BAR DIMENSION CHART (5K THRU 25K (b))														
CPRSN.	TENSION	CAP-LBS.	A	B	C	D	E	F	G	H	J	K	L	M
17203-0033	17203-0041	5000	6.00	4.00	1.00	.56	1.50	.50	.38	6.00	6.0	4.63	.69	1.38
17203-0058	17203-0066	10,000	7.00	5.00	1.00	.69	1.75	.50	.50	7.00	7.5	5.50	1.00	1.63
17203-0074	17203-0082	12,500	7.00	5.00	1.00	.69	1.75	.50	.50	7.00	7.5	5.50	1.00	1.63
17203-0090	17203-0108	20,000	8.00	6.00	1.00	.81	3.00	.62	.50	8.75	9.0	7.00	1.00	2.50
17203-0116	17203-0124	25,000	8.50	6.50	1.00	.81	3.50	.62	.50	9.38	10.5	8.00	1.25	2.63

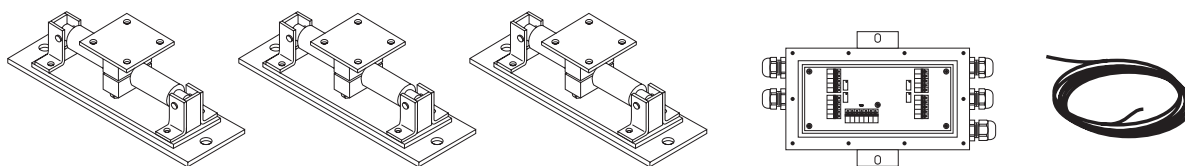
CONTINUED											
		N	P	R	S	T	U	V	W	Y	Z
17203-0033	17203-0041	10.50	13.25	.56	4.00	2.00	.88	.75	.66	6.00	.88
17203-0058	17203-0066	10.75	14.00	.69	5.00	2.50	1.13	1.00	1.06	7.63	1.31
17203-0074	17203-0082	10.75	14.00	.69	5.50	2.75	1.13	1.00	1.06	7.69	1.38
17203-0090	17203-0108	13.50	18.50	.81	5.50	2.75	1.50	1.13	1.44	8.75	1.69
17203-0116	17203-0124	14.63	19.88	1.06	6.00	3.00	1.63	1.25	1.56	9.38	1.88



DEBWB WEIGH BAR DIMENSION CHART (50K THRU 250K lb)																
PART NO.	CAPACITY-LBS	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R
13586-0021	50,000	20.00	10.50	8.00	1.25	3.12	13.75	.88	9.00	.50	7.12	.62	10.50	8.00	1.25	.88
18580-0018	75,000	22.00	12.00	9.50	1.25	3.12	15.75	.88	10.50	.62	8.25	.62	10.50	8.00	1.25	.88
-	-															
18613-0019	100,000	24.00	14.00	11.00	1.50	3.12	17.75	1.13	12.00	.62	9.19	.75	12.00	9.00	1.50	1.13
-	-															
21514-0013	150,000	28.00	17.00	13.50	1.75	4.00	20.00	1.38	14.00	.75	10.50	.88	15.50	12.00	1.75	1.38
-	-															
22548-0011	200,000	32.00	20.00	16.00	2.00	4.75	22.50	1.63	15.50	1.00	12.18	1.00	19.00	15.00	2.00	1.63
-	-															
51673-0017	250,000	35.00	22.50	18.00	2.25	5.00	25.00	1.63	17.00	1.00	13.35	1.00	22.00	18.00	2.00	1.63

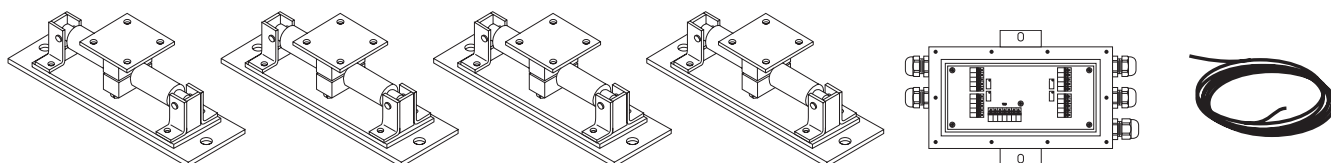


3-Bar Kit Part Numbers and Capacities



"3"- Bar Kit P/ N	Cell Cap. In LBS.	Kit Capacity	
		LB.	(KG)
53818-0019	250	750	(341)
53818-0027	500	1,500	(682)
53818-0035	1,000	3,000	(1,364)
53818-0047	1,250	3,750	(1,705)
53818-0050	2,000	6,000	(2,727)
53818-0068	2,500	7,500	(3,409)
53818-0076	5,000	15,000	(6,818)
53818-0084	10,000	30,000	(13,636)
53818-0092	12,500	37,500	(17,045)
53818-0100	20,000	60,000	(27,273)
53818-0118	25,000	75,000	(34,091)
53818-0126	50,000	150,000	(68,182)
53818-0134	75,000	225,000	(102,273)
53818-0142	100,000	300,000	(136,364)

4-Bar Kit Part Numbers and Capacities

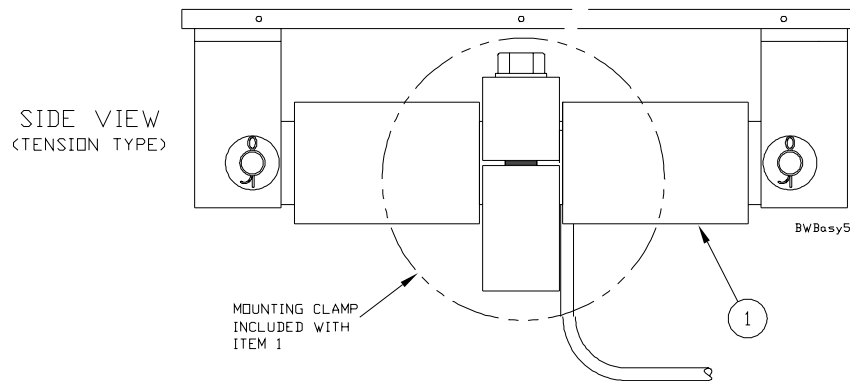
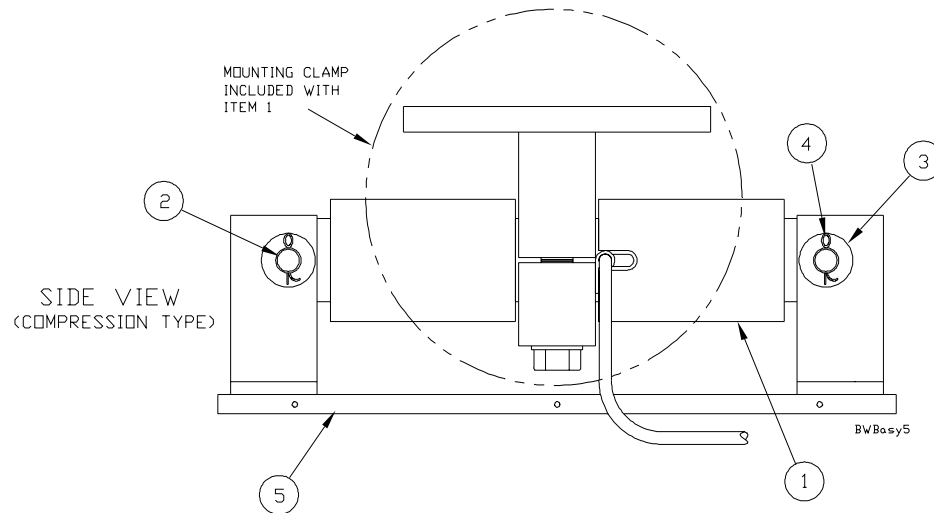


"4"- Bar Kit P/ N	Cell Cap. In LBS.	Kit Capacity	
		LB.	(KG)
53819-0018	250	1,000	(455)
53819-0026	500	2,000	(909)
53819-0034	1,000	4,000	(1,818)
53819-0042	1,250	5,000	(2,273)
53819-0059	2,000	8,000	(3,636)
53819-0067	2,500	10,000	(4,545)
53819-0075	5,000	20,000	(9,091)
53819-0083	10,000	40,000	(18,182)
53819-0091	12,500	50,000	(22,727)
53819-0109	20,000	80,000	(36,364)
53819-0117	25,000	100,000	(45,455)
53819-0125	50,000	200,000	(90,909)
53819-0133	75,000	300,000	(136,364)
53819-0141	100,000	400,000	(181,818)

DEBWB Specifications

General	Data/Specification	Units
Model No. or name:	DEBWB	
Serial No:	YYMMXXXX	
Mechanical Data		
Rated Capacity (R.C.):	250 - 25,000	lbs
Minimum dead load:	0.2% of R.C.	lbs
Safe load limit:	1.5 x R.C.	lbs
Ultimate load limit:	2 x R.C.	lbs
Direction of loading:	Bending beam	
Maximum platform size:	N/A	
Off center load error:	N/A	
Safe side load:	0.5 x R.C.	lbs
Deflection at R.C.:	approx. 0.060	in
Spring element material:	4140 alloy steel	
Spring element finish:	Epoxy paint	
Mounting	4 Bolt pattern	
Net Weight of load cell:	Varies by capacity	
Metrological Data -non-legal for trade		
Non-linearity:	.10	% of R.O.
Hysteresis:	.10	% of R.O.
Non-repeatability:	.05	% of Applied Load
Combined error:	±0.25	% of Applied Load
1 hour creep:	±0.15	% of Applied Load
Temperature effect on : Zero load output:	0.02 @ 1 mV/V	% / °C of R.O.
	0.01 @ 2 mV/V	% / °C of R.O.
Output:	.01	% of Applied Load
Electrical Data		
Rated Output: (< 2500 lb cap.)	1.015 ± 1%	mV/V @ R.C.
Rated Output: (>2500 lb cap.)	2.03 ± 1%	mV/V @ R.C.
Excitation voltage: Recommended:	10-15	Volt AC or DC
Maximum:	20	Volt AC or DC
Cable length:	25	ft
Color code: +/- Excitation	Green / Black	
+/- Signal	White / Red	
+/- Sense	Yellow / Blue	
Shield	Clear or Orange	
Terminal resistance: Excitation:	350 +20, -2	ohms
Signal:	350	ohms
Zero load output:	±5	% of R.O.
Insulation resistance (at 50 volts):	>1000	megaohms
Environmental Data		
Temperature compensation range:	-14 to +104	°F
Operating temperature range:	-30 to +120	°F
Safe storage temperature range:	+40 to +100	°F
Warm-up time:	30	sec.
Barometric pressure effect on zero load output:	N/A	

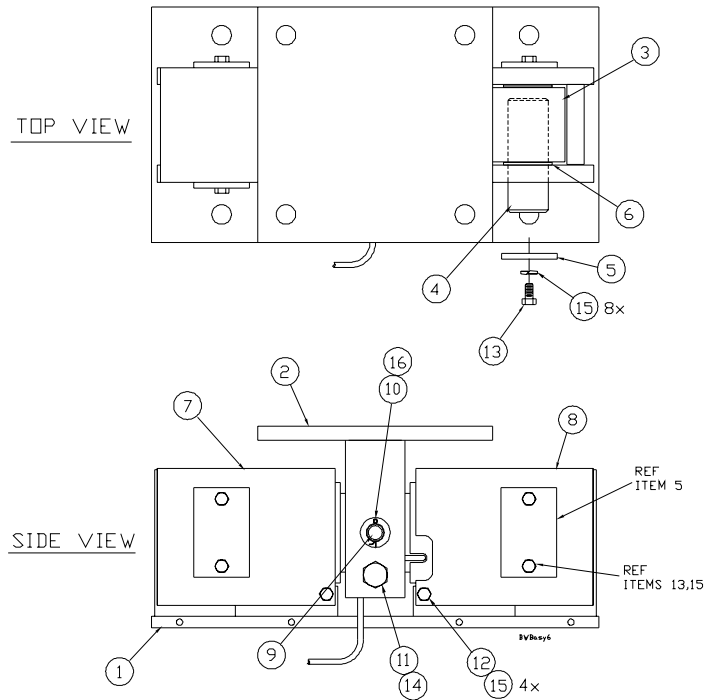
DEBWB Parts 250 lb to 25,000 lb



Item	Description		250 LB	500 LB	1,000 LB	1,250 LB	2,000 LB	2,500 LB
1	Weigh Bar & MTG Ass'y	C	18305-0012	18305-0038	18396-0012	18396-0038	18544-0013	18544-0039
		T	18305-0020	18305-0046	18305-0020	18305-0046	18305-0021	18305-0047
2	Clevis Pin (Qty. 2)		14447-0069	14447-0200	14447-0465	14447-0465	14447-0721	14447-0721
3	Washer (Qty. 6)		14475-0056	14475-0064	14475-0072	14475-0072	14475-0080	14475-0080
4	Cotter Pin (Qty. 2)		14448-0043	14448-0043	14448-0126	14448-0126	14448-0183	14448-0183
5	Base Plate		18283-0018	18283-0026	18302-0015	18302-0015	18325-0018	18325-0018

Item	Description		5000 LB	10,000 LB	12,500 LB	20,000 LB	25,000 LB
1	Weigh Bar & MTG Ass'y	C	17202-0018	17202-0026	17202-0034	17202-0042	17202-0059
		T	17202-0067	17202-0075	17202-0083	17202-0091	17202-0109
2	Clevis Pin (Qty. 2)		14447-1059	14447-1232	14447-1232	14447-2016	14447-1539
3	Washer (Qty. 6)		14475-0106	14475-0114	14475-0114	14475-0130	14475-0148
4	Cotter Pin (Qty. 2)		14448-0209	14448-0209	14448-0209	14448-0274	14448-0274
5	Base Plate		13938-0026	13938-0034	13938-0042	13938-0059	13938-0067

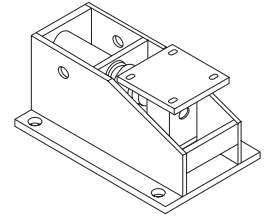
DEBWB Parts 50,000 lb to 250,000 lb



Item	Description	50,000 LB	75,000 lb	100,000 lb	150,000 lb	200,000 lb	250,000 lb
1	Base Plate Assy.	13585-0014	19436-0012	19436-0020	19436-0036	19436-0046	19436-0053
2	Bearing Block Assy.	13579-0012	18612-0010	18612-0028	18612-0036	18612-0044	18612-0051
3	Weigh Bar Assy.	18602-0012	18602-0020	18602-0038	18602-0046	18602-0053	18602-0061
4	Weigh Bar Pin (Qty. 2)	24245-0013	24245-0021	24245-0039	24245-0047	24245-0054	24245-0062
5	Cap Plate (Qty. 4)	13587-0012	13587-0020	13587-0038	13587-0046	13587-0046	13587-0053
6	Spacer (Qty. 4)	13590-0017	13590-0025	13590-0033	13590-0041	13590-0058	13590-0066
7	Cover w/o slot	13593-0022	13593-0048	13593-0063	13593-0069	13593-0105	13593-0113 (Qty.2)
8	Cover w/slot	13593-0014	13593-0030	13593-0055	13593-0071	13593-0097	N/A
9	Clevis Pin	14447-1257	18615-0017	18615-0025	18615-0033	18615-0041	18615-0058
10	Cotter Pin	14448-0209	14448-0217	14448-0225	14448-0225	14448-0233	14448-0290
11	Lock Nut	14480-0075	14480-0083	14480-0091	14480-0117	14480-0133	14480-0141
12	Cap Plate Assy. (Qty. 4)	14494-0269	14494-0269	14494-0269	14494-0269	14494-0269	14494-0269
13	Cap Plate Bolt (Qty. 8)	14494-0285	14494-0285	14494-0285	14494-0285	14494-0285	14494-0285
14	Bearing Block Bolt	14476-0980	14476-1152	16149-0537	16149-0727	16149-5023	16149-5031
15	Lock Washer (Qty. 12)	14474-0081	14474-0081	14474-0081	14474-0081	14474-0081	14474-0081
16	Flat Washer (Qty. 2)	14475-0114	14475-0122	14475-0130	14475-0148	14475-0163	14475-0189

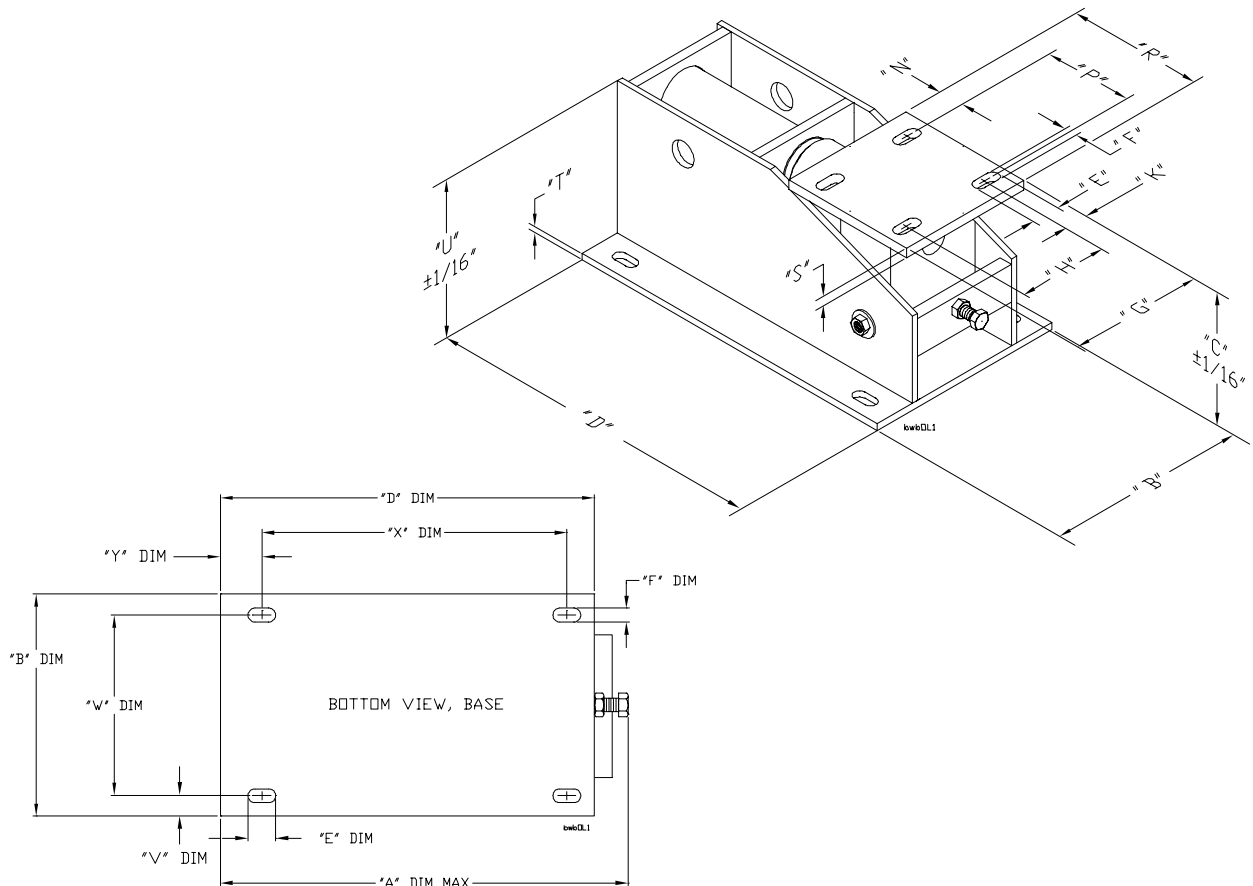
BWB (Batching Weigh Bars)

Dimensions

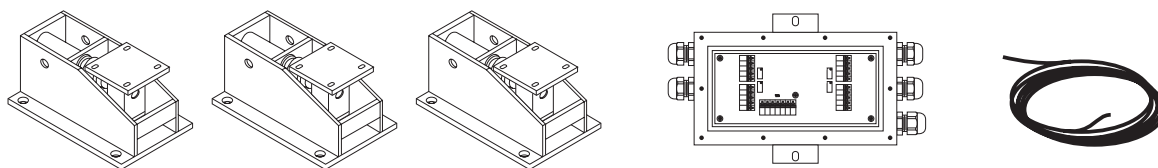


PART NO.	CAP-LBS.	OUTPUT	A	B	C	D	E	F	G	H	K	N
19175-0017	125	1 Mv/V	12.00	6.00	5.00	11.00	.75	.34	4.00	3.00	.50	.50
19175-0025	250	1 Mv/V	12.00	6.00	5.00	11.00	.75	.34	4.00	3.00	.50	.50
19175-0033	500	1 Mv/V	12.00	6.00	5.00	11.00	.75	.34	4.00	3.00	.50	.50
19175-0041	1,250	2 Mv/V	14.50	7.00	6.75	13.50	.88	.41	5.00	3.50	.75	.75
19175-0058	2,500	2 Mv/V	14.88	8.00	7.19	13.50	1.00	.50	5.50	4.00	.75	.75
19175-0017	5000	2 Mv/V	14.75	9.00	8.50	13.50	1.00	.56	6.00	4.00	1.00	1.00
19175-0025	10,000	2 Mv/V	17.75	10.50	11.25	16.00	1.25	.69	8.00	6.00	1.00	1.00
19175-0033	20,000	2 Mv/V	20.38	14.50	15.00	18.50	1.38	.81	10.00	7.50	1.25	1.25
19175-0041	25,000	2 Mv/V	20.50	14.50	15.00	18.50	1.38	.81	10.00	7.50	1.25	1.25
19175-0058	50,000	2 Mv/V	25.50	19.00	20.00	24.00	1.75	1.06	12.00	8.50	1.75	1.75

PART NO.	CAP-LBS.	OUTPUT	P	R	S	T	U	V	W	X	Y	
19175-0017	125	1 Mv/V	3.00	4.00	.25	.19	4.44	.38	5.25	9.00	1.00	
19175-0025	250	1 Mv/V	3.00	4.00	.25	.19	4.44	.38	5.25	9.00	1.00	
19175-0033	500	1 Mv/V	3.00	4.00	.25	.19	4.44	.38	5.25	9.00	1.00	
19175-0041	1,250	2 Mv/V	3.50	5.00	.38	.25	5.94	.50	6.00	11.00	1.25	
19175-0058	2,500	2 Mv/V	4.00	5.50	.38	.25	6.25	.62	6.75	11.00	1.25	
19175-0017	5000	2 Mv/V	4.00	6.00	.50	.38	7.50	.62	7.75	11.00	1.25	
19175-0025	10,000	2 Mv/V	6.00	8.00	.50	.50	10.25	.75	9.00	13.50	1.25	
19175-0033	20,000	2 Mv/V	7.50	10.00	.62	.50	14.00	1.25	12.00	16.00	1.25	
19175-0041	25,000	2 Mv/V	7.50	10.00	.62	.50	14.00	1.25	12.00	16.00	1.25	
19175-0058	50,000	2 Mv/V	8.50	12.00	.75	.75	18.75	1.50	16.00	20.00	2.00	

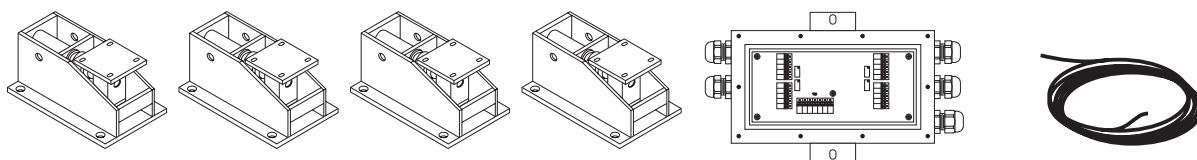


3-Bar Kit Part Numbers and Capacities



"THREE BAR KIT" PART NUMBER	KIT GROSS WEIGHT CAPACITY	
	lb	(kg)
53100-0016	375	(150)
53100-0024	750	(300)
53100-0032	1,500	(600)
53100-0040	3,750	(1,500)
53100-0057	7,500	(3,000)
53100-0065	15,000	(6,000)
53100-0073	30,000	(13,500)
53100-0081	60,000	(27,000)
53100-0099	75,000	(30,000)
53100-0107	150,000	(60,000)

4-Bar Kit Part Numbers and Capacities



"FOUR BAR KIT" PART NUMBER	KIT GROSS WEIGHT CAPACITY*		SENSITIVITY	KIT SHIP WT		KIT LIST PRICE
	lb	(kg)		lb	(kg)	
53101-0015	500	(200)	1 mV/V	60	(28)	\$ 1,583
53101-0023	1,000	(400)	1 mV/V	60	(28)	1,650
53101-0031	2,000	(800)	1 mV/V	80	(40)	1,775
53101-0049	5,000	(2,000)	2 mV/V	160	(72)	1,835
53101-0056	10,000	(4,000)	2 mV/V	180	(82)	1,965
53101-0064	20,000	(8,000)	2 mV/V	240	(110)	2,195
53101-0072	40,000	(18,000)	2 mV/V	450	(205)	3,030
53101-0080	80,000	(36,000)	2 mV/V	950	(430)	5,725
53101-0098	100,000	(40,000)	2 mV/V	1200	(545)	5,875
53101-0106	200,000	(80,000)	2 mV/V	2100	(955)	10,455

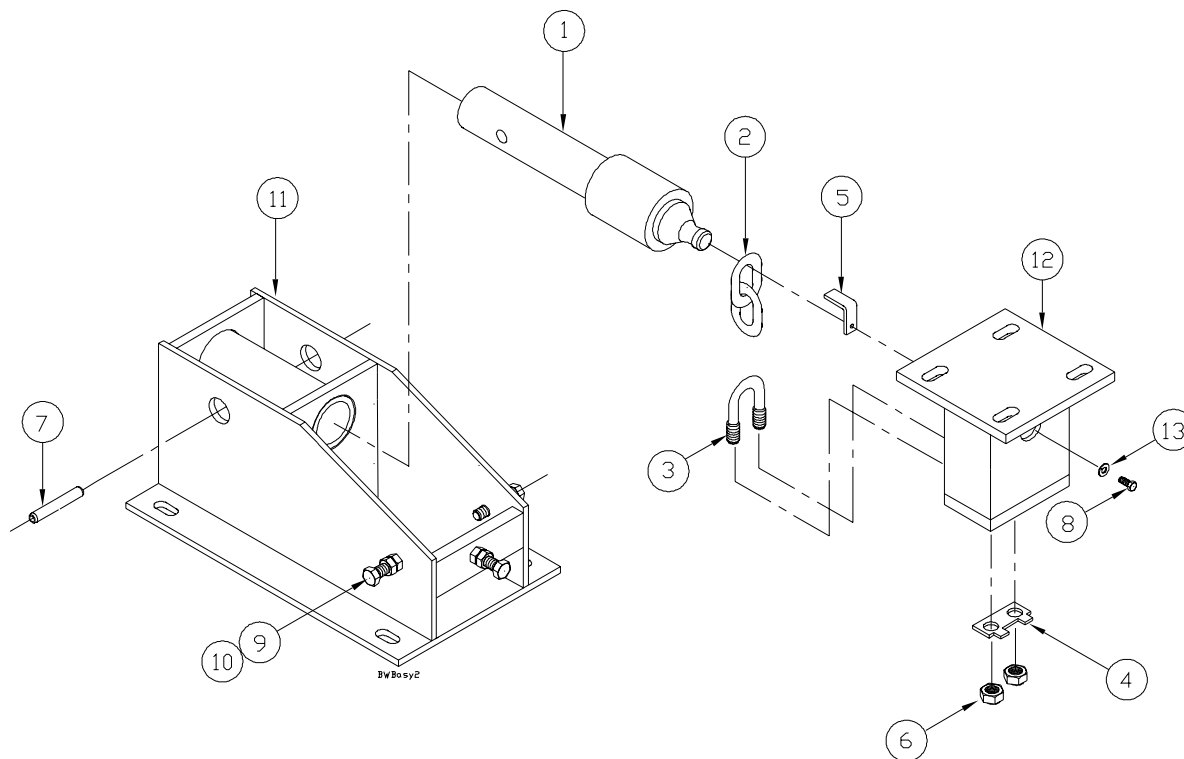
LIST PRICE includes "Model JBIT stainless steel junction box" and 60' interface cable.

(Ref. outline drawings in this price list)

BWB Specifications

Specifications apply to Weigh Bar only.

General	Data/Specification	Units
Model No. or name:	WBP	
Serial No:	YYMMXXXX	
Mechanical Data		
Rated Capacity (R.C.):	125 - 50,000	lbs
Minimum dead load:	0	lbs
Safe load limit:	1.5 x R.C.	lbs
Ultimate load limit:	2 x R.C.	lbs
Direction of loading:	Bending beam	
Maximum platform size:	N/A	
Off center load error:	N/A	
Safe side load:	0.5 x R.C.	lbs
Deflection at R.C.:	approx. 0.060	in
Spring element material:	4140 alloy steel	
Spring element finish:	Epoxy paint	
Mounting	4 Bolt pattern	
Net Weight of load cell:	Varies by capacity	
Certificate Data		
Certificate No.:	87-090.A3	
Issuing body:	NIST	
Accuracy class:	III	
Maximum No. of load cell intervals (Nmax):	5000	
Single/Multiple:	M	
Humidity symbol:	N/A	
Minimum load cell verification interval (Vmin):	per capacity	lbs
Metrological Data -non-legal for trade		
Non-linearity:	.02	% of R.O.
Hysteresis:	.02	% of R.O.
Non-repeatability:	.02	% of Applied Load
Electrical Data		
Rated Output: (< 500 lb cap.)	1.015 ± 1%	mV/V @ R.C.
Rated Output: (>500 lb cap.)	2.03 ± 1% @ R.C.	mV/V @ R.C.
Excitation voltage: Recommended:	10-15	Volt AC or DC
Maximum:	20	Volt AC or DC
Cable length:	25	ft
Color code: +/- Excitation	Green / Black	
+/- Signal	White / Red	
+/- Sense	Yellow / Blue	
Shield	Clear or Orange	
Terminal resistance: Excitation: (< 10K lb cap)	352 +20, -3	ohms
Excitation: (> 10K lb cap)	383 ±15	ohms
Signal:	350	ohms
Zero load output:	±5	% of R.O.
Insulation resistance (at 50 volts):	>1000	megaohms
Environmental Data		
Temperature compensation range:	-14 to +104	°F
Operating temperature range:	-30 to +120	°F
Safe storage temperature range:	+40 to +100	°F
Warm-up time:	30	sec.
Barometric pressure effect on zero load output:	N/A	



Single-ended Batching W/B (Mild Steel) 125 to 2,500 lb

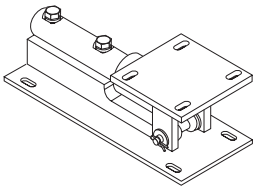
Item	Part	125 lb	250 lb	500 lb	1,250 lb	2,500 lb
1	Weigh Bar	19176-0016	19177-0015	19178-0014	19179-0013	19180*0010
2	Chain Link	14730-0024	14730-0024	14730-0024	14764-00230	14834*0029
3	U-Bolt	14770-0025	14770-0025	14770-0025	13703-0029	13703-0029
4	U-bolt Retainer	15044-0022	15044-0022	15044-0022	15043-0023	15043-0023
5	Chain link Clip Retainer	14731-0023	14731-0023	14731-0023	14769-0028	14769-0028
6	U-bolt Nuts (Qty. 2)	14480-0026	14480-0026	14480-0026	14480-0042	14480-0042
7	Roll Pin	14450-0634	14450-0634	14450-332	14450-1061	14450-1228
8	Retaining Clip Screw (Qty. 4)	14489-0233	14489-0233	14489-0233	14489-0233	14489-0233
9	Overload Stop Nuts (Qty. 4)	14471-0076	14471-0076	14471-0076	14471-0084	14471-0092
10	Overload Stop Bolts (Qty. 4)	14494-0178	14494-0178	14494-0178	14494-0319 (1) 14494-0301 (3)	14495-0474
11	Base Weldment	16435-0076	16435-0019	16435-0027	16435-0035	16435-0043
12	Top Bracket Weldment	16431-0021	16431-0021	16431-0021	16431-0039	16431-0047
13	Lock Washer	14474-0032	14474-0032	14474-0032	14474-0032	14474-0032

table continued on next page

Single-ended Batching W/B (Mild Steel)
5,000 to 50,000 lb

Item	Part	5,000 lb	10,000 lb	20,000lb	25,000 lb	50,000 lb
1	Weigh Bar	17257-0129	17255-0071	17256-0021	17604-0020	24203-0021
2	Chain Link	13518-0024	14201-0032	16513-0022	16513-0022	20780-0012
3	U-Bolt	15066-0025	14199-0036	18689-0034	18689-0034	20781-0011
4	U-bolt Retainer	14247-0020	14245-0029	16518-0027	16518-0027	20836-0016
5	Chain link Clip Retainer	13519-0023	14200-0025	16511-0024	16511-0024	16511-0024
6	U-bolt Nuts (Qty. 2)	14480-0059	14480-0088	14480-0177	14480-0117	14480-0133
7	Roll Pin	14452-1244	14450-1269	14450-1426	14450-1426	14450-1392 (2)
8	Retaining Clip Screw (Qty. 4)	14489-0357	14494-0012	14494-0137	14494-0137	14494-0152
9	Overload Stop Nuts (Qty. 4)	14471-0100	14471-0126	14471-0134	14471-0134	14471-0159
10	Overload Stop Bolts (Qty. 4)	14494-0640	14494-0830	14494-1028	14494-1028	14494-1366
11	Base Weldment	16435-0050	16435-0068	16435-0084	16435-0092	16435-0100
12	Top Bracket Weldment	16431-0054	16431-0062	16431-0070	16431-0070	16431-0088
13	Lock Washer	14474-0040	14474-0065	14474-0073	14474-0073	14474-0073

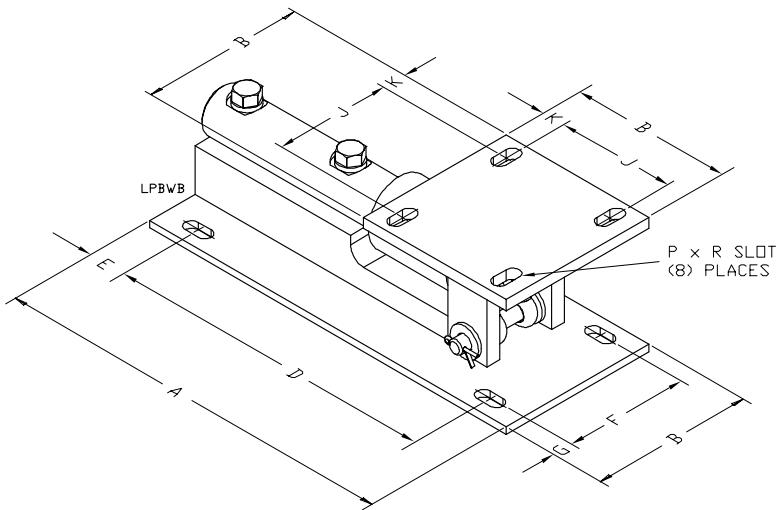
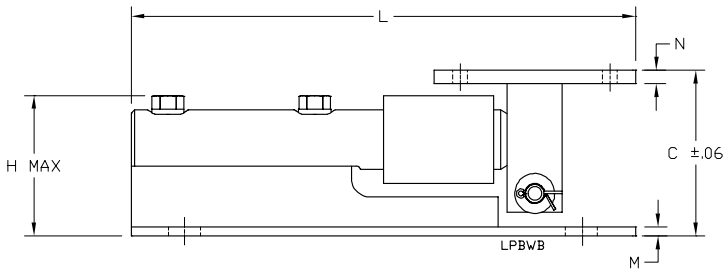
LPBWB (Low Profile Batching Weigh Bars)



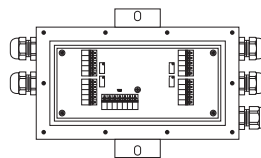
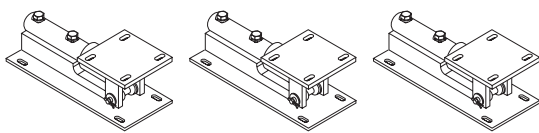
Dimensions

LPBWB DIMENSION CHART									
W/T PART NO.	CAPACITY (lbs.)	DIM "A" (Inches)	DIM "B" (Inches)	DIM "C" (Inches)	DIM "D" (Inches)	DIM "E" (Inches)	DIM "F" (Inches)	DIM "G" (Inches)	DIM "H" (Inches)
50756-0019	125	11.00	4.00	3.25	9.00	1.00	3.00	.50	2.60
50756-0027	250	11.00	4.00	3.25	9.00	1.00	3.00	.50	2.60
50756-0035	500	11.00	4.00	3.25	9.00	1.00	3.00	.50	2.60
50756-0043	1,250	13.50	5.00	3.72	11.00	1.25	4.00	.50	3.00
50756-0050	2,500	13.75	5.50	4.50	11.25	1.25	4.25	.62	3.90
50756-0068	5,000	14.50	6.00	5.92	12.00	1.25	4.50	.75	5.20
50756-0076	10,000	16.00	8.00	7.60	13.50	1.25	6.00	1.00	6.90

< CONTINUED >								
W/T PART NO.	CAPACITY (lbs.)	DIM "J" (Inches)	DIM "K" (Inches)	DIM "L" (Inches)	DIM "M" (Inches)	DIM "N" (Inches)	DIM "P" (Inches)	DIM "R" (Inches)
50756-0019	125	3.00	.50	10.88	.50	.50	.34	.75
50756-0027	250	3.00	.50	10.88	.50	.50	.34	.75
50756-0035	500	3.00	.50	10.88	.50	.50	.34	.75
50756-0043	1,250	3.50	.75	13.50	.75	.75	.41	.88
50756-0050	2,500	4.00	.75	13.75	.75	.75	.50	1.00
50756-0068	5,000	4.00	1.00	14.50	1.00	1.00	.56	1.00
50756-0076	10,000	6.00	1.00	16.00	1.00	1.00	.69	1.25



3-Bar Kit Part Numbers and Capacities

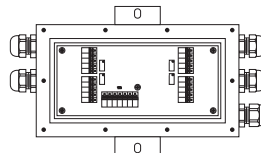
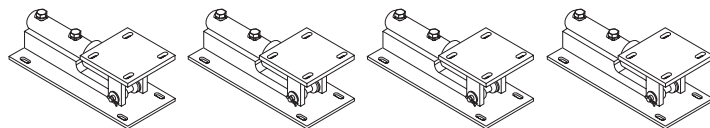


"THREE BAR KIT" **PART NUMBER**

KIT GROSS **WEIGHT CAPACITY** **lb (kg)**

53104-0012	375	(150)
53104-0020	750	(300)
53104-0038	1,500	(600)
53104-0046	3,750	(1,500)
53104-0053	7,500	(3,000)
53104-0061	15,000	(6,000)
53104-0079	30,000	(13,500)

4-Bar Kit Part Numbers and Capacities



"FOUR BAR KIT" **PART NUMBER**

KIT GROSS **WEIGHT CAPACITY** **lb (kg)**

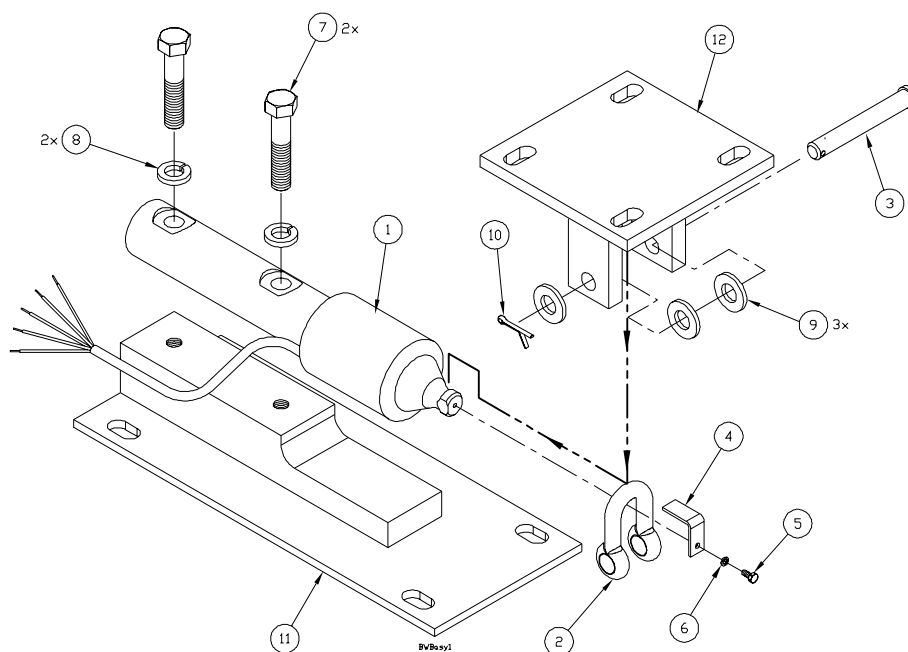
53105-0011	500	(200)
53105-0029	1,000	(400)
53105-0037	2,000	(800)
53105-0045	5,000	(2,000)
53105-0052	10,000	(4,000)
53105-0060	20,000	(8,000)
53105-0078	40,000	(18,000)

LPBWB Specifications

Specifications apply to Weigh Bar only.

General	Data/Specification	Units
Model No. or name:	WBP	
Serial No:	YYMMXXXX	
Mechanical Data		
Rated Capacity (R.C.):	125 - 50,000	lbs
Minimum dead load:	0	lbs
Safe load limit:	1.5 x R.C.	lbs
Ultimate load limit:	2 x R.C.	lbs
Direction of loading:	Bending beam	
Maximum platform size:	N/A	
Off center load error:	N/A	
Safe side load:	0.5 x R.C.	lbs
Deflection at R.C.:	approx. 0.060	in
Spring element material:	4140 alloy steel	
Spring element finish:	Epoxy paint	
Mounting	4 Bolt pattern	
Net Weight of load cell:	Varies by capacity	
Certificate Data		
Certificate No.:	87-090.A3	
Issuing body:	NIST	
Accuracy class:	III	
Maximum No. of load cell intervals (Nmax):	5000	
Single/Multiple:	M	
Humidity symbol:	N/A	
Minimum load cell verification interval (Vmin):	per capacity	lbs
Metrological Data -non-legal for trade		
Non-linearity:	.02	% of R.O.
Hysteresis:	.02	% of R.O.
Non-repeatability:	.02	% of Applied Load
Electrical Data		
Rated Output: (< 500 lb cap.)	1.015 ± 1%	mV/V @ R.C.
Rated Output: (>500 lb cap.)	2.03 ± 1% @ R.C.	mV/V @ R.C.
Excitation voltage: Recommended:	10-15	Volt AC or DC
Maximum:	20	Volt AC or DC
Cable length:	25	ft
Color code: +/- Excitation	Green / Black	
+/- Signal	White / Red	
+/- Sense	Yellow / Blue	
Shield	Clear or Orange	
Terminal resistance: Excitation: (< 10K lb cap)	352 +20, -3	ohms
Excitation: (> 10K lb cap)	383 ±15	ohms
Signal:	350	ohms
Zero load output:	±5	% of R.O.
Insulation resistance (at 50 volts):	>1000	megaohms
Environmental Data		
Temperature compensation range:	-14 to +104	°F
Operating temperature range:	-30 to +120	°F
Safe storage temperature range:	+40 to +100	°F
Warm-up time:	30	sec.
Barometric pressure effect on zero load output:	N/A	

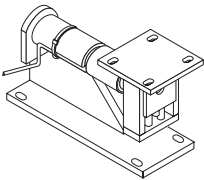
LPBWB Parts



Low Profile Batching W/B (all tinned leads)

Item	Part	125 LB	250 LB	500 LB	1,250 LB	2,500 LB	5,000 LB	10,000 LB
1	Weigh Bar	50661-0062	50662-0061	50663-0060	50664-0069	50665-0068	50666-0067	50667-0066
2	Clevis	48615-0014	48615-0014	48615-0014	48615-0022	48615-0048	48615-0063	48615-0089
3	Clevis Pin	14447-0481	14447-0481	14447-0481	14447-0754	14447-1067	14447-1356	14447-1539
4	Chain Link Clip Retainer	14731-0023	14731-0023	14731-0023	14769-0028	14769-0028	51995-0018	51996-0017
5	Retaining Clip Screw	14489-0233	14489-0233	14489-0233	14489-0233	14489-0233	14489-0357	14527-0013
6	Lock Washer	14474-0032	14474-0032	14474-0032	14474-0032	14474-0032	14474-0040	14474-0198
7	Bolt, (W/B)	14476-0253	14476-0253	14476-0253	14476-0410	14476-0576	14476-0923	14476-1228
8	Lock Washer	14474-0081	14474-0081	14474-0081	14474-0099	14474-0107	14474-0123	14474-0149
9	Flat Washer	14475-0072	14475-0072	14475-0072	14475-0080	14475-0106	14475-0122	14475-0148
10	Cotter Pin	15773-0227	15773-0227	15773-0227	15773-0227	15773-0227	15773-0334	15773-0441
11	Base Ass'y	50658-0018	50658-0018	50658-0018	50658-0026	50658-0034	50658-0042	50658-0059
12	Top Bracket	50657-0019	50657-0019	50657-0019	50657-0027	50657-0035	50657-0043	50657-0050

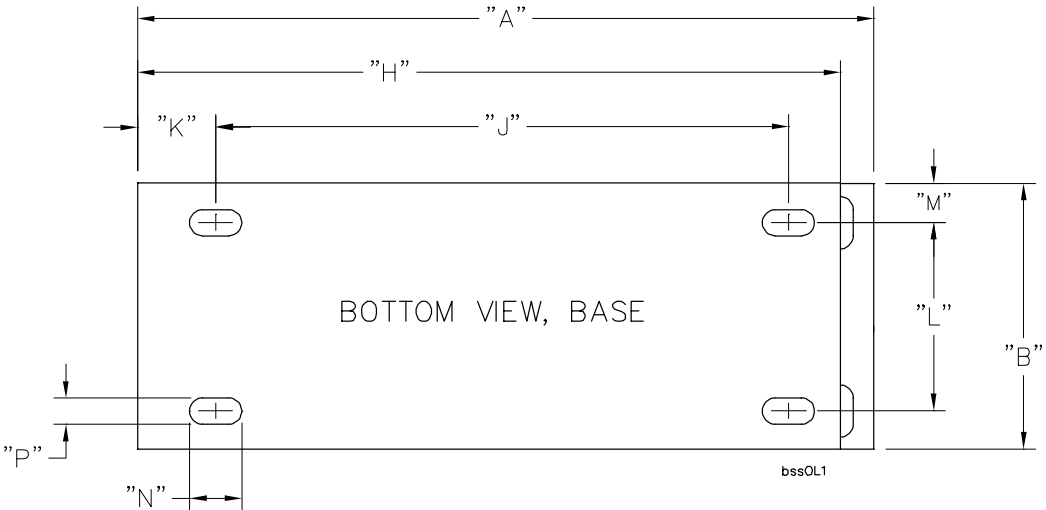
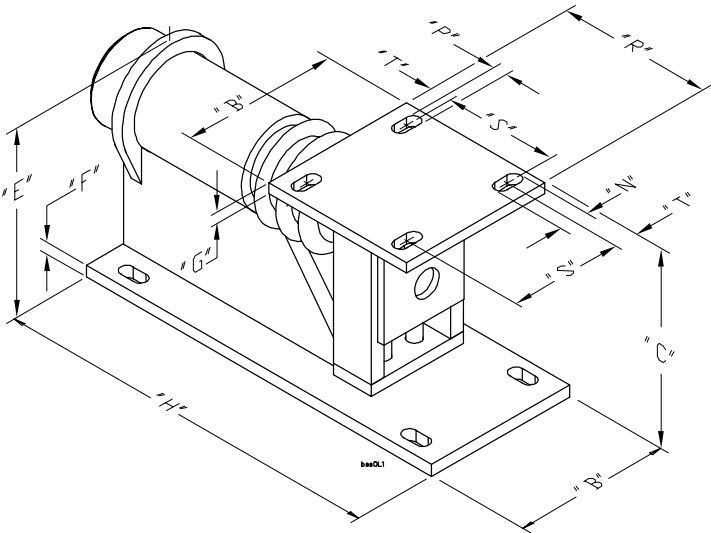
BSS (Stainless Steel Batching Weigh Bar)



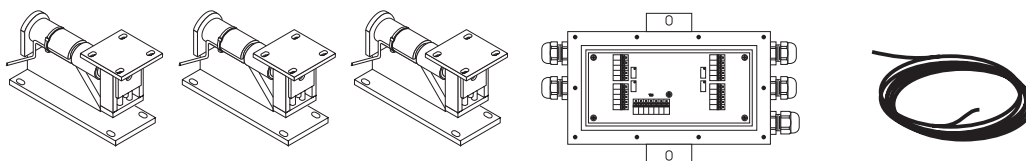
Dimensions

PART NO. WITH CONNECTORS	PART NO. W/ SPADE LUG TERMINALS	DATA CHART										
		W/B CAP.	OUTPUT	A	B	C	E	F	G	H	J	K
27959-0038	27964-0031	500 LB.	1 mV/V	11.50	4.00	5.38	N/A	.38	.25	11.00	9.00	1.00
27959-0046	27964-0049	1,250 LB.	2 mV/V	13.88	5.00	7.06	N/A	.50	.38	13.50	11.00	1.25
27959-0053	27964-0056	2,500 LB.	2 mV/V	14.12	5.50	7.44	6.75	.62	.38	13.50	11.00	1.25
27959-0061	27964-0064	5,000 LB.	2 mV/V	13.81	6.00	9.00	8.19	.75	.50	13.50	11.00	1.25
27959-0079	27964-0072	10,000 LB.	2 mV/V	16.88	8.00	12.50	11.50	1.00	.50	16.00	13.50	1.25
27959-0087	27964-0080	20,000 LB.	2 mV/V	19.62	10.00	16.00	15.38	1.00	.62	18.50	16.00	1.25

PART NO. WITH CONNECTORS	PART NO. W/ SPADE LUG TERMINALS	(CONTINUED)								
		W/B CAP.	OUTPUT	L	M	N	P	R	S	T
27959-0038	27964-0031	500 LB.	1 mV/V	3.25	.38	.75	.38	4.00	3.00	.50
27959-0046	27964-0049	1,250 LB.	2 mV/V	4.00	.50	.88	.44	5.00	3.50	.75
27959-0053	27964-0056	2,500 LB.	2 mV/V	4.25	.62	1.00	.50	5.50	4.00	.75
27959-0061	27964-0064	5,000 LB.	2 mV/V	4.75	.62	1.00	.56	6.00	4.00	1.00
27959-0079	27964-0072	10,000 LB.	2 mV/V	6.00	1.00	1.25	.69	8.00	6.00	1.00
27959-0087	27964-0080	20,000 LB.	2 mV/V	7.50	1.25	1.38	.81	10.00	7.50	1.25



3-Bar Kit Part Numbers and Capacities

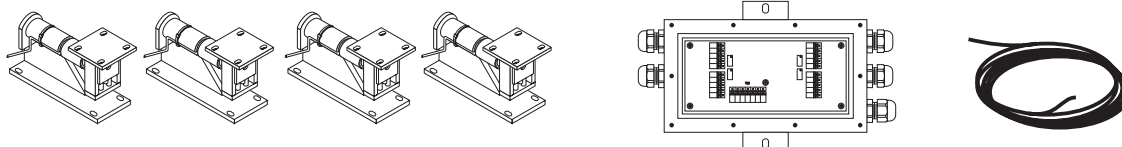


"THREE BAR KIT" **PART NUMBER**

KIT GROSS WEIGHT CAPACITY **lb (kg)**

53096-0012	1,500	(600)
53096-0020	3,750	(1,500)
53096-0038	7,500	(3,000)
53096-0046	15,000	(6,000)
53096-0053	30,000	(13,600)
53096-0053	60,000	(27,200)

4-Bar Kit Part Numbers and Capacities



"FOUR BAR KIT" **PART NUMBER**

KIT GROSS WEIGHT CAPACITY **lb (kg)**

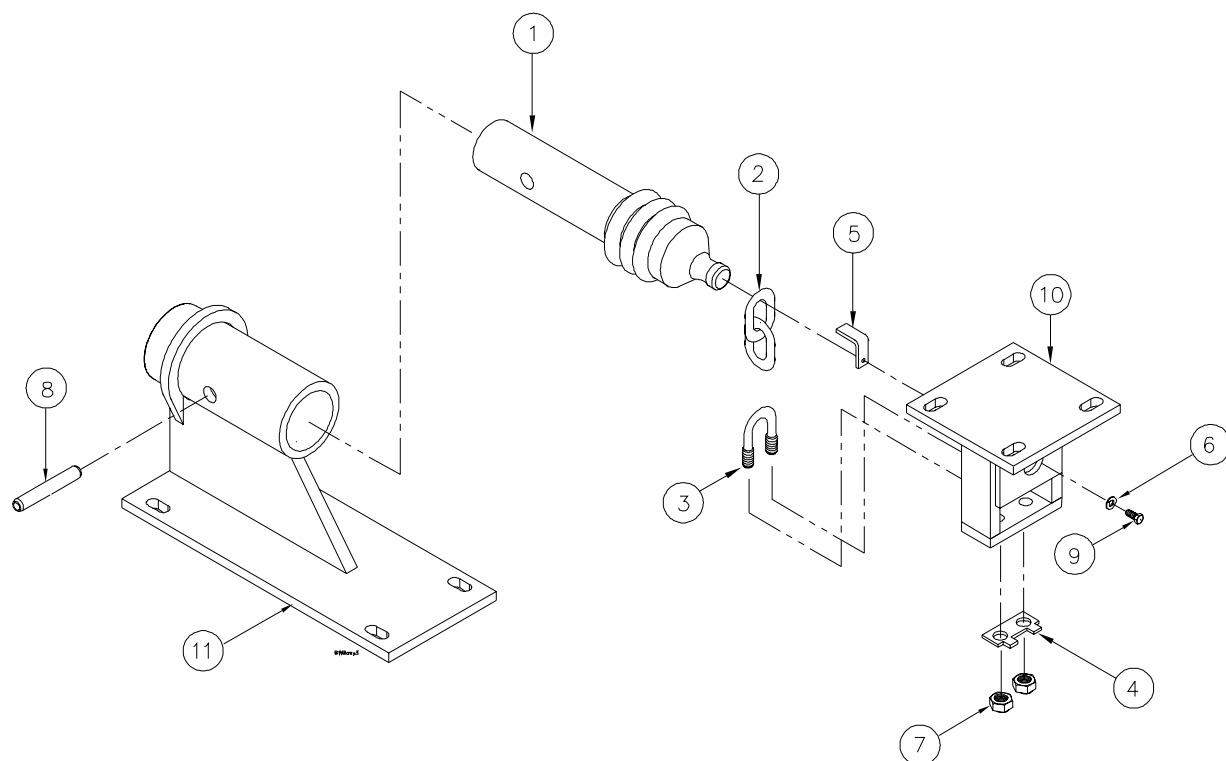
53097-0011	2,000	(800)
53097-0029	5,000	(2,000)
53097-0037	10,000	(4,000)
53097-0045	20,000	(8,000)
53097-0052	40,000	(18,000)
53097-0060	80,000	(36,000)

BSS Specifications

Specifications apply to Weigh Bar only.

General	Data/Specification	Units
Model No. or name:	WBPS	
Serial No:	YYMMXXXX	
Mechanical Data		
Rated Capacity (R.C.):	125 - 50,000	lbs
Minimum dead load:	0	lbs
Safe load limit:	1.5 x R.C.	lbs
Ultimate load limit:	2 x R.C.	lbs
Direction of loading:	Bending beam	
Maximum platform size:	N/A	
Off center load error:	N/A	
Safe side load:	0.5 x R.C.	lbs
Deflection at R.C.:	approx. 0.060	in
Spring element material:	17-4 SST	
Spring element finish:	Epoxy paint	
Mounting	4 Bolt pattern	
Net Weight of load cell:	Varies by capacity	
Certificate Data		
Certificate No.:	93-090	
Issuing body:	NIST	
Accuracy class:	III	
Maximum No. of load cell intervals (Nmax):	5000	
Single/Multiple:	M	
Humidity symbol:	N/A	
Minimum load cell verification interval (Vmin):	per capacity	lbs
Metrological Data -non-legal for trade		
Non-linearity:	.02	% of R.O.
Hysteresis:	.02	% of R.O.
Non-repeatability:	.02	% of Applied Load
Electrical Data		
Rated Output: (< 500 lb cap.)	1.015 ± 1%	mV/V @ R.C.
Rated Output: (>500 lb cap.)	2.03 ± 1% @ R.C.	mV/V @ R.C.
Excitation voltage: Recommended:	10-15	Volt AC or DC
Maximum:	20	Volt AC or DC
Cable length:	25	ft
Color code: +/- Excitation	Green / Black	
+/- Signal	White / Red	
+/- Sense	Yellow / Blue	
Shield	Clear or Orange	
Terminal resistance: Excitation: (< 10K lb cap)	352 +20, -3	ohms
Excitation: (> 10K lb cap)	383 ±15	ohms
Signal:	350	ohms
Zero load output:	±5	% of R.O.
Insulation resistance (at 50 volts):	>1000	megaohms
Environmental Data		
Temperature compensation range:	-14 to +104	°F
Operating temperature range:	-30 to +120	°F
Safe storage temperature range:	+40 to +100	°F
Warm-up time:	30	sec.
Barometric pressure effect on zero load output:	N/A	

BSS Parts

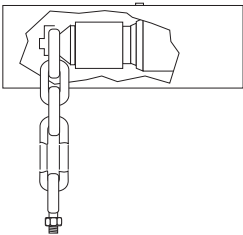


Single-ended Batching W/B (Stainless Steel)

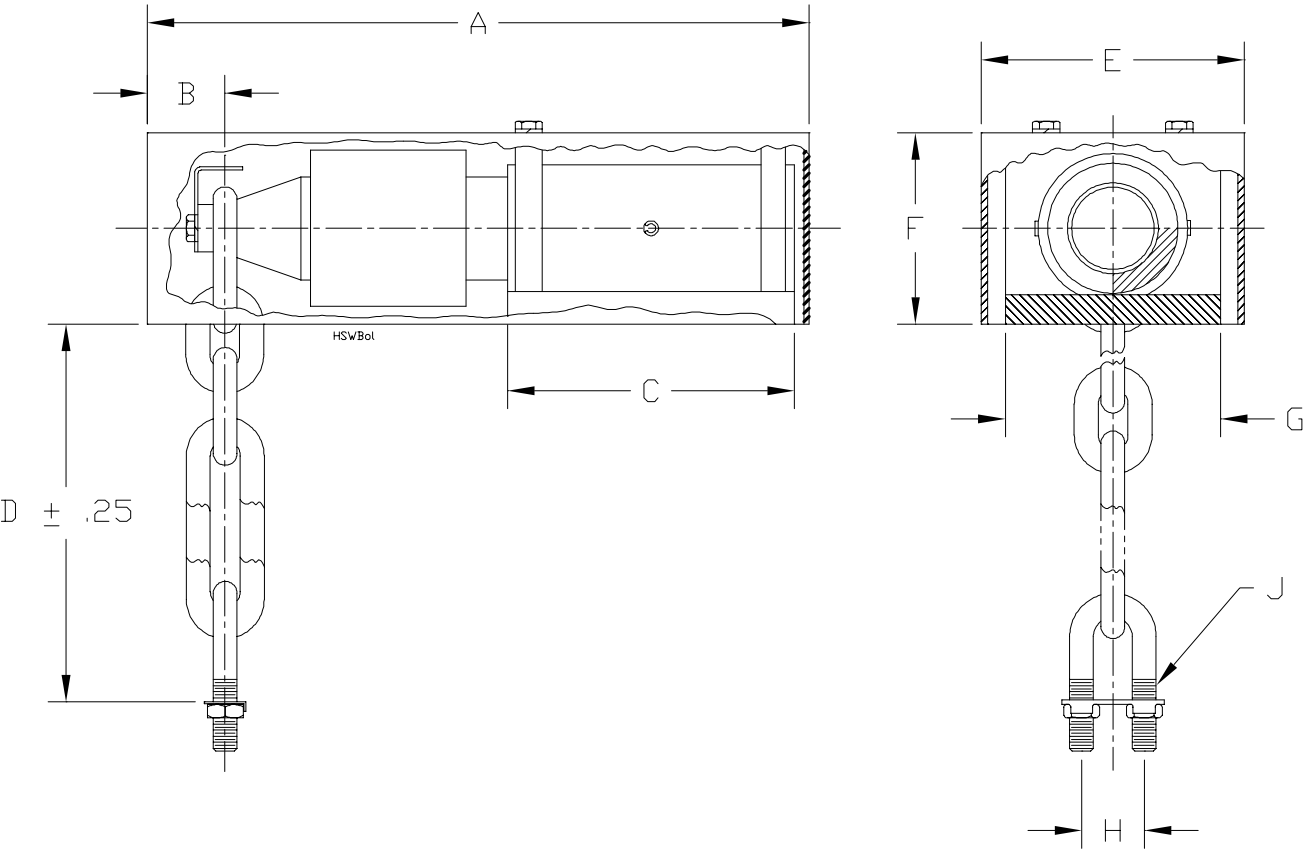
Item	Description	500 lb	1,250 lb	2,500 lb	5,000 lb	10,000 lb	20,000 lb
1	Weigh-Bar	46784-0013	46787-001	46790-0015	46793-0012	4813-0070	48120-0020
2	Chain Link	14730-0024	14764-0023	14834-0029	13518-0024	14201-0032	16513-0022
3	U-bolt	14770-0025	13703-0029	13703-0029	15066-0025	14199-0036	18689-0034
4	U-bolt Retainer	15044-0022	15043-0023	15043-0023	14247*0020	14248-0029	16518-0027
5	Chain Link Clip	14731-0023	14769-0028	14769-0028	13519-0023	14200-0025	16511-0024
6	Lock Washer	14474-0032	14474-0032	14474-0032	14474-0040	14474-0198	14474-0206
7	Nylon Lock Nut	14464-0083	14464-0109	14464-0109	14464-0133	14480-0083	14480-0117
8	Roll Pin	16179-1074	16179-1322	16179-1546	16179-1561	16179-1587	16179-1959 (2 required)
9	Retaining Clip Screw	14489-0233	14489-0233	14489-0233	14489-0357	14527-0013	14527-0146
10	Top Bracket Weldment	27954-0017	27954-0025	27954-0033	27954-0041	27954-0058	27954-0066
11	Base Weldment	27958-0039	27958-0047	27958-0054	27958-0062	46137-0017	48121-0011

HSWB (Hopper Scale Weigh Bar)

Dimensions



HSWB DATA CHART										
DESCRIPTION	P/N	A	B	C	D	E	F	G	H	J
5,000 LBS W/B-4 LINK	D17243-0019	12.00	1.62	6.00	5.62	5.50	4.00	4.50	1.31	.562-12UNC
5,000 LBS W/B-10 LINK	D17243-0027	12.00	1.62	6.00	14.20	5.50	4.00	4.50	1.31	.562-12UNC
10,000 LBS W/B-10 LINK	D17196-0024	14.50	2.12	6.75	20.50	6.00	4.50	5.00	2.31	.875-9UNC
20,000 LBS W/B-4 LINK	D17244-0018	16.50	2.50	7.00	16.00	8.00	6.00	6.00	3.38	1.250-7UNC

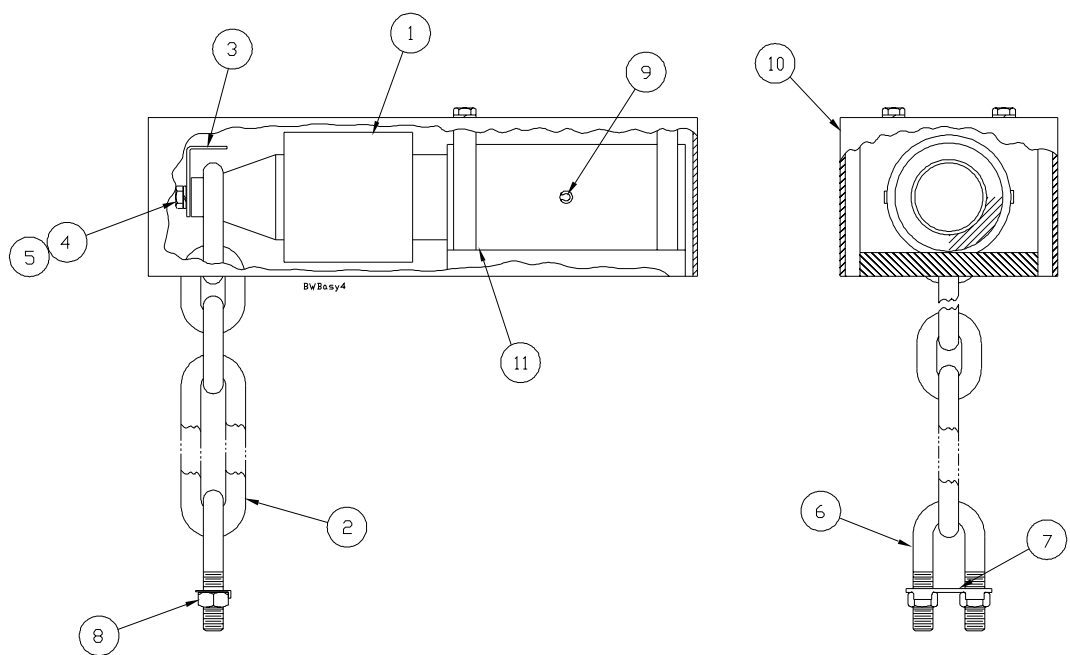


HSWB Specifications

Specifications apply to Weigh Bar only.

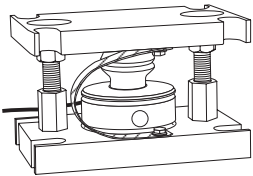
General	Data/Specification	Units
Model No. or name:	WBP	
Serial No:	YYMMXXXX	
Mechanical Data		
Rated Capacity (R.C.):	125 - 50,000	lbs
Minimum dead load:	0	lbs
Safe load limit:	1.5 x R.C.	lbs
Ultimate load limit:	2 x R.C.	lbs
Direction of loading:	Bending beam	
Maximum platform size:	N/A	
Off center load error:	N/A	
Safe side load:	0.5 x R.C.	lbs
Deflection at R.C.:	approx. 0.060	in
Spring element material:	4140 alloy steel	
Spring element finish:	Epoxy paint	
Mounting	4 Bolt pattern	
Net Weight of load cell:	Varies by capacity	
Certificate Data		
Certificate No.:	87-090.A3	
Issuing body:	NIST	
Accuracy class:	III	
Maximum No. of load cell intervals (Nmax):	5000	
Single/Multiple:	M	
Humidity symbol:	N/A	
Minimum load cell verification interval (Vmin):	per capacity	lbs
Metrological Data -non-legal for trade		
Non-linearity:	.02	% of R.O.
Hysteresis:	.02	% of R.O.
Non-repeatability:	.02	% of Applied Load
Electrical Data		
Rated Output: (< 500 lb cap.)	1.015 ± 1%	mV/V @ R.C.
Rated Output: (>500 lb cap.)	2.03 ± 1% @ R.C.	mV/V @ R.C.
Excitation voltage: Recommended:	10-15	Volt AC or DC
Maximum:	20	Volt AC or DC
Cable length:	25	ft
Color code: +/- Excitation	Green / Black	
+/- Signal	White / Red	
+/- Sense	Yellow / Blue	
Shield	Clear or Orange	
Terminal resistance: Excitation: (< 10K lb cap)	352 +20, -3	ohms
Excitation: (> 10K lb cap)	383 ±15	ohms
Signal:	350	ohms
Zero load output:	±5	% of R.O.
Insulation resistance (at 50 volts):	>1000	megaohms
Environmental Data		
Temperature compensation range:	-14 to +104	°F
Operating temperature range:	-30 to +120	°F
Safe storage temperature range:	+40 to +100	°F
Warm-up time:	30	sec.
Barometric pressure effect on zero load output:	N/A	

HSWB Parts

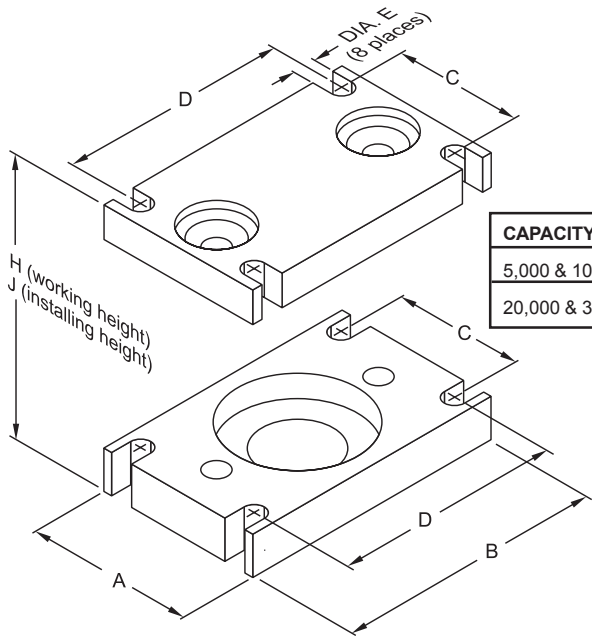


Item	Description	5,000 LB (4 Link)	5,000 LB (10 Link)	10,000 LB	20,000 LB
1	Weigh Bar	17257-0129	17257-0129	17255-0071	17256-0021
2	Chain Link Assy.	17250-0035	17250-0043	15166-0024	17251-0026
3	Chain Link Clip Retainer	13519-0023	13519-0023	14200-0025	16511-0024
4	Retaining Clip Screw	14473-0348	14473-0348	14527-0013	14494-0137
5	Lock Washer	14474-0040	14474-0040	14474-0065	14474-0073
6	U-bolt	13898-0024	13898-0024	14199-0036	17715-0190
7	U-bolt Retainer	14247-0020	14247-0020	14248-0029	16518-0027
8	Lock Nut	14480-0059	14480-0059	14480-0083	14480-0117
9	Roll Pin	14450-1244	14450-1244	14450-1260	14450-1426
10	Weigh Bar Cover	17099-0022	17099-0022	17099-0014	17099-0030
11	WB Mounting Ass'y	17258-0016	17258-0016	17191-0011	17254-0015

Model 220 (Tank Mount Weight Sensor)



Dimensions



CAPACITY	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "E"	DIM "H"	DIM "J"
5,000 & 10,000 kg	5"	8"	3 1/2"	6 3/4"	11/16"	4 1/4"	4 5/8"
20,000 & 30,000 kg	6"	9 5/8"	4 1/2"	8 1/4"	15/16"	5 3/4"	6"

Model 220 Specifications

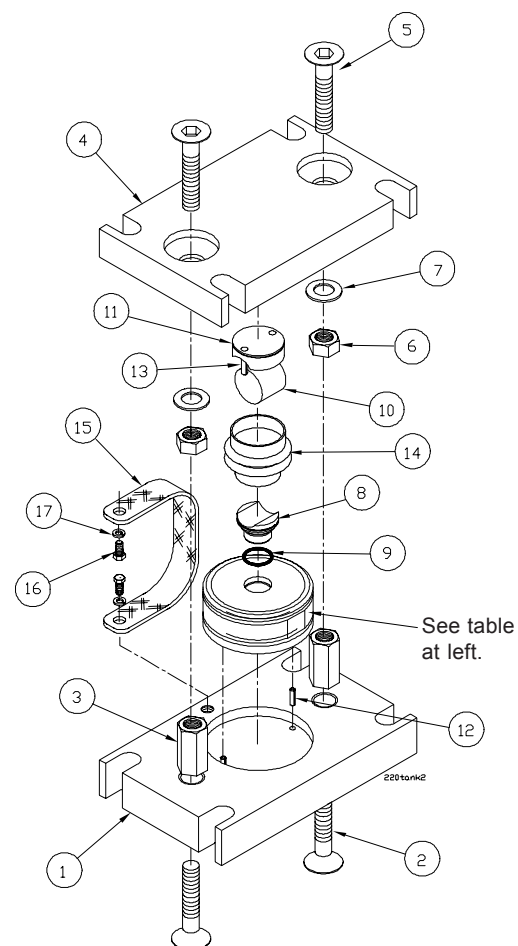
Specifications apply to load cell only.

General	Data/Specification	Units
Model No. or name:	220	
Serial No:	On Load Cell	
Mechanical Data		
Rated Capacity (R.C.):	11,000 - 66,000	lbs
Minimum dead load:	0.0	lbs
Safe load limit:	1.5 x R.C.	lbs
Ultimate load limit:	3 x R.C.	lbs
Direction of loading:	Compression	
Maximum platform size:	N/A	
Off center load error:	N/AN/A	
Safe side load:	0.5 x R.C.	lbs
Deflection at R.C.:	<0.5	mm
Spring element material:	Stainless steel	
Spring element finish:	N/A	
Mounting	Machined base	
Net Weight of load cell:	Varies by capacity	
Certificate Data		
Certificate No.:	#00-067	
Issuing body:	NTEP	
Accuracy class:	IIIL	
Maximum No. of load cell intervals (Nmax):	10,000	
Single/Multiple:	M	
Humidity symbol:	N/A	
Minimum load cell verification interval (Vmin):	per capacity	lbs
Metrological Data -non-legal for trade		
Non-linearity:	0.020	% of R.O.
Hysteresis:	0.015	% of R.O.
Non-repeatability:	0.010	% of Applied Load
Electrical Data		
Rated Output: (< 500 lb cap.)	2.0	mV/V @ R.C.
Rated Output: (>500 lb cap.)	2.0	mV/V @ R.C.
Excitation voltage: Recommended:	10	Volt AC or DC
Maximum:	15	Volt AC or DC
Cable length:	5T=16.4, 10-20T=32.8, 30T=65	ft
Color code: +/- Excitation	GRN/BLK	
+/- Signal	WHT/RED	
+/- Sense	GRY/BRN	
Shield	BARE	
Terminal resistance: Excitation: (< 10K lb cap)	1065	ohms
Excitation: (> 10K lb cap)	1065	ohms
Signal:	1000	ohms
Zero load output:	±2.0	% of R.O.
Insulation resistance (at 50 volts):	>2000	megaohms
Environmental Data		
Temperature compensation range:	+14 to +104	°F
Operating temperature range:	-22 to +158	°F
Safe storage temperature range:	-40 TO 180	°F
Warm-up time:	300	sec.
Barometric pressure effect on zero load output:	N/A	

220 Parts

Model 220 Parts (2.0 mV/V systems)

Cap.	Loadcell P/N	Ass'y minus Loadcell
5 ton	53625-0012	53626-0011
10 ton	53625-0020	53626-0029
20 ton	53625-0038	53626-0037
30 ton	53625-0046	53626-0045



Item	Description	Qty.	5 ton	10 ton	20 & 30 ton
1	Baseplate	1	52643-0012	52643-0020	52643-0038
2	Socket screw (sst)	2	52643-0293	52643-0293	52643-0301
3	Coupling nut	2	52643-0269	52643-0269	52643-0277
4	Cap plate	1	52643-0046	52643-0046	52643-0053
5	Socket screw (sst)	2	52643-0319	52643-0319	52643-0327
6	Nut (sst)	2	52643-0335	52643-0335	52643-0343
7	Flat washer (sst)	2	52643-0376	52643-0376	52643-0368
8	Load adapter	1	52643-0087	52643-0095	52643-0103
9	O-ring	1	52643-0210	52643-0228	P/N NA
10	Roller	1	52643-0111	52643-0111	52643-0129
11	Saddle	1	52643-0137	52643-0137	52643-0145
12	Roll pin	2	52643-0236	52643-0236	52643-0236
13	Roll pin	2	52643-0251	52643-0251	52643-0244
14	Boot	1	52643-0061	52643-0061	52643-0079
15	Ground strap	1	52643-0152	52643-0152	52643-0160
16	Hex bolt (sst)	2	52643-0384	52643-0384	52643-0392
17	Lock washer (sst)	2	52643-0350	52643-0350	52643-0285

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WEIGH-TRONIX

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