

# BenchMark<sup>®</sup> SL, SL/HE, CW-80B

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*Light-Capacity Spring Loaded Bench Scales*

## Technical Manual



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# 1.0 Introduction

The manual provides an overview of the technical information for the BenchMark SL, SL/HE and CW-80B Light-Capacity Spring Loaded Bench Scales.



Manuals and additional resources are available from the Rice Lake Weighing Systems website at [www.ricelake.com](http://www.ricelake.com)

Warranty information can be found on the website at [www.ricelake.com/warranties](http://www.ricelake.com/warranties)

## 1.1 Safety

### Safety Signal Definitions:



*Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. Includes hazards that are exposed when guards are removed.*



*Indicates a potentially hazardous situation that, if not avoided, could result in serious injury or death. Includes hazards that are exposed when guards are removed.*



*Indicates a potentially hazardous situation that, if not avoided, could result in minor or moderate injury.*



*Indicates information about procedures that, if not observed, could result in damage to equipment or corruption to and loss of data.*

### General Safety



*Do not operate or work on this equipment unless this manual has been read and all instructions are understood. Failure to follow the instructions or heed the warnings could result in injury or death. Contact any Rice Lake Weighing Systems dealer for replacement manuals.*



*Failure to heed could result in serious injury or death.*

*Do not allow minors (children) or inexperienced persons to operate this unit.*

*Do not operate without all shields and guards in place.*

*Do not jump on the scale.*

*Do not use for purposes other than weight taking.*

*Do not place fingers into slots or possible pinch points.*

*Do not use any load bearing component that is worn beyond 5% of the original dimension.*

*Do not use this product if any of the components are cracked.*

*Do not exceed the rated load limit of the unit.*

*Do not make alterations or modifications to the unit.*

*Do not remove or obscure warning labels.*

*Before opening the unit, ensure the power cord is disconnected from the outlet.*

*Keep hands, feet and loose clothing away from moving parts.*

## 1.2 10" x 10" and 12" x 12" BenchMark SL, SL/HE and CW-80B Scales

All of the 10" x 10" and 12" x 12" models have stainless steel covers and frame systems. All models use a single point load cell with 10' of cable.

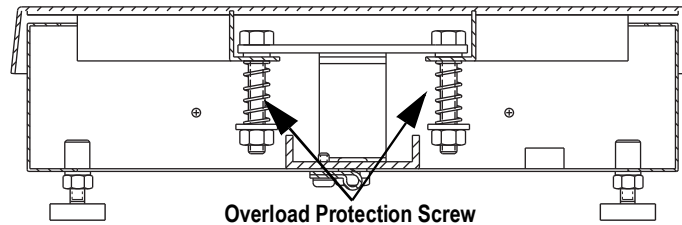


Figure 1-1. Overload Springs

The BenchMark SL, SL/HE and CW-80B scales use a sensitive 4-point, spring-plate suspension to minimize shock and overload damage susceptible of light-capacity scales. The system uses a bolt and an overload protection spring at each of four loading points beneath the top cover (Figure 1-1). Each spring is set for a specific tension so that it will compress to prevent overload damage. If a potentially damaging load is placed on a corner of the scale, the spring at that corner compresses. When the spring compresses, the load is taken off the load cell. This eliminates the possibility of overloading the load cell. If a load more than 150% of total capacity is placed anywhere on the deck, the springs will compress and remove the load from the load cell.

In addition to the overload protection spring, the SL, SL/HE and CW-80B scales incorporate a load cell overload protection screw beneath the load cell to help prevent overload damage.

To protect the load cell from being accidentally forced upward and damaged by improperly lifting the scale by the spider, a lift up protection screw is incorporated into the design (Figure 1-2).

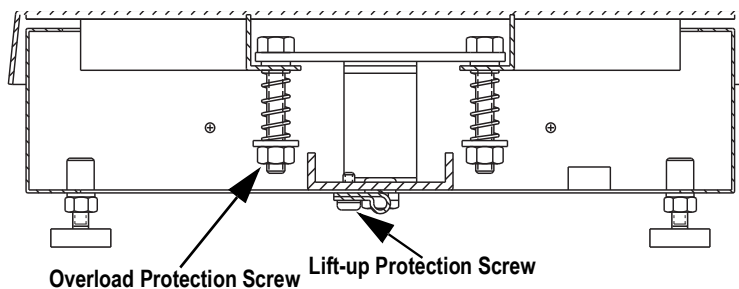


Figure 1-2. Lift up Protection Screw

## 2.0 Installation

This section provides an overview of how to install the BenchMark SL, SL/HE and CW-80B.

### 2.1 Unpacking

Immediately after unpacking, visually inspect the scale to ensure that the unit is undamaged. The shipping carton should contain the bench scale and this manual. If the bench scale was damaged in shipment, notify Rice Lake Weighing Systems and the shipper immediately.

### 2.2 Leveling the Scale

1. Place the scale in the desired location that is reasonably level and free of unnecessary vibrations and air currents.
2. Lift off the scale top cover and locate the level bubble.
3. Adjust the four corner feet on the scale base until the level bubble and all feet contact the support surface so the scale does not rock.
4. Lock the jam nuts on the feet when the final level is correct.

### 2.3 Connecting the Load Cell Cable

All models come with 10' of color-coded load cell cable.

**IMPORTANT** Do not cut this cable. Cutting this cable voids the warranty.



See the indicator manual to determine the proper load cell cable input connectors. Use the following color codes to wire the load cell cable to the indicator.

Color Code	Function
Green	+ Excitation
Black	- Excitation
White	- Signal
Red	+Signal
Blue	+ Sense
Yellow	- Sense

Table 2-1. SL Load Cell Wiring

Color Code	Function
Green	+ Sense
Black	- Excitation
White	+ Signal
Red	- Signal
Blue	+ Excitation
Grey	- Sense

Table 2-2. SL/HE Load Cell Wiring

Color Code	Function
Green	+ Excitation
Black	- Excitation
White	+ Signal
Red	- Signal
Yellow	Shield

Table 2-3. CW-80B Load Cell Wiring



Connect Sense and Excitation wires together if using system without sense leads.

## 2.4 Grounding the Scale Base

Bench scales can build up a static electricity charge during weighing operations. If powerful enough, this charge can travel through the load cell cable to the indicator. To prevent this, all bench scales should be adequately grounded so that static charges and transient electrical surges can drain directly to ground. Recommended practice is to connect the scale base to an AC ground circuit using at least #12 wire. All BenchMark scales have either a grounding screw or a hole for such a grounding screw located on the bottom of the lower frame for this purpose.

## 2.5 Calibration

It is recommended that the scale be exercised by loading it to near capacity two or three times before calibration to ensure everything is seated. See the specific indicator manual for the proper calibration procedure.

To calibrate, see the following procedure:

1. With no load on scale, place the indicator in its calibration mode and perform a zero calibration.
2. Place certified calibration weights on platform equal to 70%–100% of scale's capacity. If several weights are used, distribute them evenly around the platform.
3. Perform a calibration.
4. Remove certified calibration weights and check the zero reading. If necessary, repeat the calibration process.



**Note**

See the indicator manual for the specific indicator calibration procedure.

## 2.6 Replacement Parts

See the following information for replacement parts details:

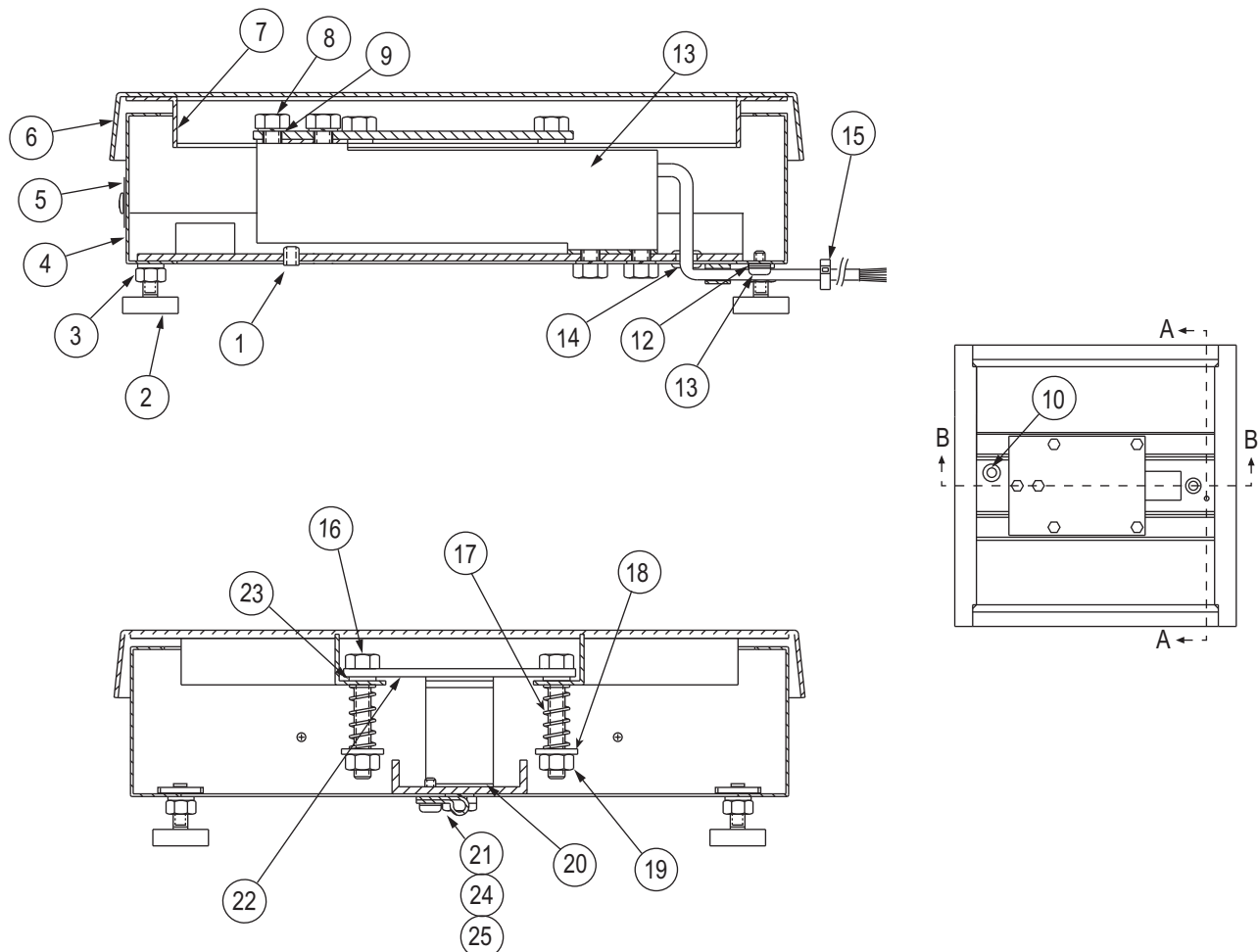


Figure 2-1. SL, SL/HE and CW-80B Parts Illustration



## 2.6.1 SL 10" x 10" and 12" x 12" Model Replacement Parts

Item No.	Part No.	Description	Qty.
1	14920	Screw, Overload Protection, 8-32UNC x 1/4, SST	1
2	35128	Foot, 1/4 - 20 NC x 1 3/16 SST	4
3	14645	Jam Nut, Foot 1/4 - 20, SST	4
4	19086	Bottom Subassembly, (5 lb – 30 lb Scales)	1
6	19091	Cover, Top, 10 x 10	1
7	19088	Spider, Top, 10 x 10	1
8	15148	Lockwasher 1/4 SST	4
9	21948	Screw, Load Cell, 1/4 - 20 x 5/8 SST	4
10	15410	Bubble Level, Plastic, 15 mm	1
11	40956	Load Cell, SPT RL104, 2 lb SL Scale	1
	188673	Load Cell, SPT RL42018A, 5 lb SL Scale	
	188675	Load Cell, SPT RL42018A, 10 lb SL Scale	
	188677	Load Cell, SPT RL42018A, 20 lb SL Scale	
	188678	Load Cell, SPT RL42018A, 30 lb SL Scale	
12	15132	Lockwasher, #8, SST	1
13	14857	Pan Head Screw, 8 - 32 x 1/4 SST	1
14	15408	Rubber Grommet, 3/16 ID x 1/2 OD	1
15	16141	Cable Tie, 8"	1
16	14984	Cap Screw (2 lb – 20 lb Scales)	4
	21947	Cap Screw (30 lb Scale)	
17	15412	Spring, Overload (2 lb Scale)	4
	21945	Spring, Overload (5 lb Scale)	
	15416	Spring, Overload (10 lb Scale)	
	21946	Spring, Overload (20 lb Scale)	
	21944	Spring, Overload (30 lb Scale)	
18	15149	Flat Washer, 1/4 type A, SST	4
19	14634	Nut, Nylon Insert, 1/4-20, SST	4
20	19089	Load Cell Shim, SST	1
21	15409	Plastic Wire Clamp	1
22	19090	Load Plate, (2 lb – 30 lb Scales)	1
23	15150	Washer, Rubber	4
24	15138	Washer, #8, SST	1
25	14862	Screw, 8-32 x 3/8 SST	1
-	15071	Cap Screw 1/2 - 20 NF x 1.939	4

Table 2-4. SL 10" x 10" Parts List

Item No.	Part No.	Description	Qty.
1	14920	Screw, Overload Protection, 8-32UNC x 1/4, SST	1
2	35128	Foot, 1/4 - 20 NC x 1 3/16 SST	4
3	14645	Jam Nut, Foot 1/4 - 20, SST	4
4	35066	Bottom Subassembly, (30 lb – 100 lb Scales)	1
6	35069	Cover, Top, 12 x 12	1
7	35068	Spider, Top, 12 x 12	1
8	15148	Lockwasher 1/4 SST	4
9	21948	Screw, Load Cell, 1/4 - 20 x 5/8 SST	4
10	15410	Bubble Level, Plastic, 15 mm	1
11	188678	Load Cell, SPT RL42018A, 30 lb SL Scale	1
	188679	Load Cell, SPT RL42018A, 50 lb SL Scale	
	188681	Load Cell, SPT RL42018A, 100 lb SL Scale	
12	15132	Lockwasher, #8, SST	1
13	14857	Pan Head Screw, 8 - 32 x 1/4 SST	1
14	15408	Rubber Grommet, 3/16 ID x 1/2 OD	1
15	16141	Cable Tie, 8"	1
16	21947	Cap Screw (30 lb Scale)	4
	35199	Cap Screw (50 lb – 100 lb Scales)	
17	21944	Spring, Overload (30 lb Scale)	4
	35086	Spring, Overload (50 lb Scale)	
	35200	Spring, Overload (100 lb Scale)	
18	15149	Flat Washer, 1/4 type A, SST	4
19	14634	Nut, Nylon Insert, 1/4-20, SST	4
20	19089	Load Cell Shim, SST	1
21	15409	Plastic Wire Clamp	1
22	35067	Load Plate, (30 lb – 100 lb Scales)	1
23	15150	Washer, Rubber	4
24	15138	Washer, #8, SST	1
25	14862	Screw, 8 - 32 x 3/8 SST	1
-	15071	Cap Screw 1/2 - 20 NF x 1.939	4

Table 2-5. SL 12" x 12" Parts List

## 2.6.2 SL/HE 10" x 10" and 12" x 12" Model

Item No.	Part No.	Description	Qty.
1	14920	Screw, Overload Protection, 8-32UNC x 1/4, SST	1
2	35128	Foot, 1/4 - 20 NC x 1 3/16 SST	4
3	14645	Jam Nut, Foot 1/4 - 20, SST	4
4	19086	Bottom Subassembly, (5 lb – 30 lb Scales)	1
6	19091	Cover, Top, 10 x 10	1
7	19088	Spider, Top, 10 x 10	1
8	15148	Lockwasher 1/4 SST	4
9	21948	Screw, Load Cell, 1/4 - 20 x 5/8 SST	4
10	15410	Bubble Level, Plastic, 15 mm	1
11	108685	Load Cell, SPT RLPWM15HE, 5 lb and 10 lb SL/HE Scales	1
	108686	Load Cell, SPT RLPWM15HE, 20 lb and 30 lb SL/HE Scales	
12	15132	Lockwasher, #8, SST	1
13	14857	Pan Head Screw, 8 - 32 x 1/4 SST	1
14	15408	Rubber Grommet, 3/16 ID x 1/2 OD	1
15	16141	Cable Tie, 8"	1
16	14984	Cap Screw (5 lb – 20 lb Scales)	4
	21947	Cap Screw (30 lb Scale)	
17	21945	Spring, Overload (5 lb Scale)	4
	15416	Spring, Overload (10 lb Scale)	
	21946	Spring, Overload (20 lb Scale)	
	21944	Spring, Overload (30 lb Scale)	
18	15149	Flat Washer, 1/4 type A, SST	4
19	14634	Nut, Nylon Insert, 1/4-20, SST	4
20	19089	Load Cell Shim, SST	1
21	15409	Plastic Wire Clamp	1
22	19090	Load Plate, (5 lb – 30 lb Scales)	1
23	15150	Washer, Rubber	4
24	15138	Washer, #8, SST	1
25	14862	Screw, 8 - 32 x 3/8 SST	1
-	15071	Cap Screw 1/2 - 20 NF x 1.939	4

Table 2-6. SL/HE 10" x 10" Model

Item No.	Part No.	Description	Qty.
1	14920	Screw, Overload Protection, 8-32UNC x 1/4, SST	1
2	35128	Foot, 1/4 - 20 NC x 1 3/16 SST	4
3	14645	Jam Nut, Foot 1/4 - 20, SST	4
4	35066	Bottom Subassembly, (30 lb – 100 lb Scales)	1
6	35069	Cover, Top, 12 x 12	1
7	35068	Spider, Top, 12 x 12	1
8	15148	Lockwasher 1/4 SST	4
9	21948	Screw, Load Cell, 1/4 - 20 x 5/8 SST	4
10	15410	Bubble Level, Plastic, 15 mm	1
11	108686	Load Cell, SPT RLPWM15HE, 30 lb SL/HE Scale	1
	108687	Load Cell, SPT RLPWM15HE, 50 lb SL/HE Scale	
	108688	Load Cell, SPT RLPWM15HE, 100 lb SL/HE Scale	
12	15132	Lockwasher, #8, SST	1
13	14857	Pan Head Screw, 8 - 32 x 1/4 SST	1
14	15408	Rubber Grommet, 3/16 ID x 1/2 OD	1
15	16141	Cable Tie, 8"	1
16	21947	Cap Screw (30 lb Scale)	4
	35199	Cap Screw (50 lb – 100 lb Scales)	
17	21944	Spring, Overload (30 lb Scale)	4
	35086	Spring, Overload (50 lb Scale)	
	35200	Spring, Overload (100 lb Scale)	
18	15149	Flat Washer, 1/4 type A, SST	4
19	14634	Nut, Nylon Insert, 1/4-20, SST	4
20	19089	Load Cell Shim, SST	1
21	15409	Plastic Wire Clamp	1
22	35067	Load Plate, (30 lb – 100 lb Scales)	1
23	15150	Washer, Rubber	4
24	15138	Washer, #8, SST	1
25	14862	Screw, 8 - 32 x 3/8 SST	1
-	15071	Cap Screw 1/2 - 20 NF x 1.939	4

Table 2-7. SL/HE 12" x 12" Model

### 2.6.3 CW-80B 10" x 10" and 12" x 12" Model

Item No.	Part No.	Description	Qty.
1	14920	Screw, Overload Protection, 8-32UNC x 1/4, SST	1
2	35128	Foot, 1/4 - 20 NC x 1 3/16 SST	4
3	14645	Jam Nut, Foot 1/4 - 20, SST	4
4	19086	Bottom Subassembly, (6 lb – 30 lb Scales)	1
6	19091	Cover, Top, 10 x 10	1
7	19088	Spider, Top, 10 x 10	1
8	15148	Lockwasher 1/4 SST	4
9	21948	Screw, Load Cell, 1/4 - 20 x 5/8 SST	4
10	15410	Bubble Level, Plastic, 15 mm	1
11	30783	Load Cell, SPT RL1380, 6 lb CW-80B Scale	1
	30782	Load Cell, SPT RL1380, 10 lb CW-80B Scale	
	30781	Load Cell, SPT RL1380, 15 lb CW-80B Scale	
	30780	Load Cell, SPT RL1380, 30 lb CW-80B Scale	
12	15132	Lockwasher, #8, SST	1
13	14857	Pan Head Screw, 8 - 32 x 1/4 SST	1
14	15408	Rubber Grommet, 3/16 ID x 1/2 OD	1
15	16141	Cable Tie, 8"	1
16	14984	Cap Screw (6 lb – 15 lb Scales)	4
	21947	Cap Screw (30 lb – 60 lb Scales)	
17	21945	Spring, Overload (5 lb and 6 lb Scales)	4
	15416	Spring, Overload (10 lb Scale)	
	21946	Spring, Overload (15 lb and 20 lb Scales)	
	21944	Spring, Overload (30 lb Scale)	
18	15149	Flat Washer, 1/4 type A, SST	4
19	14634	Nut, Nylon Insert, 1/4-20, SST	4
20	19089	Load Cell Shim, SST	1
21	15409	Plastic Wire Clamp	1
22	19090	Load Plate, (6 lb – 30 lb Scales)	1
23	15150	Washer, Rubber	4
24	15138	Washer, #8, SST	1
25	14862	Screw, 8 - 32 x 3/8 SST	1
-	15071	Cap Screw 1/2 - 20 NF x 1.939	4

Table 2-8. CW-80B 10" x 10" Model

Item No.	Part No.	Description	Qty.
1	14920	Screw, Overload Protection, 8-32UNC x 1/4, SST	1
2	35128	Foot, 1/4 - 20 NC x 1 3/16 SST	4
3	14645	Jam Nut, Foot 1/4 - 20, SST	4
4	35066	Bottom Subassembly, (30 lb – 60 lb Scales)	1
6	35069	Cover, Top, 12 x 12	1
7	35068	Spider, Top, 12 x 12	1
8	15148	Lockwasher 1/4 SST	4
9	21948	Screw, Load Cell, 1/4 - 20 x 5/8 SST	4
10	15410	Bubble Level, Plastic, 15 mm	1
11	30780	Load Cell, SPT RL1380, 30 lb CW-80B Scale	1
	30779	Load Cell, SPT RL1380, 60 lb CW-80B Scale	
	12	15132	
13	14857	Pan Head Screw, 8 - 32 x 1/4 SST	1
14	15408	Rubber Grommet, 3/16 ID x 1/2 OD	1
15	16141	Cable Tie, 8"	1
16	21947	Cap Screw (30 lb Scale)	4
	35199	Cap Screw (60 lb Scale)	
17	21944	Spring, Overload (30 lb Scale)	4
	35086	Spring, Overload (60 lb Scale)	
18	15149	Flat Washer, 1/4 type A, SST	4
19	14634	Nut, Nylon Insert, 1/4-20, SST	4
20	19089	Load Cell Shim, SST	1
21	15409	Plastic Wire Clamp	1
22	35067	Load Plate, (30 lb – 60 lb Scales)	1
23	15150	Washer, Rubber	4
24	15138	Washer, #8, SST	1
25	14862	Screw, 8 - 32 x 3/8 SST	1
-	15071	Cap Screw 1/2 - 20 NF x 1.939	4

Table 2-9. CW-80B 12" x 12" Model

## 3.0 Appendix

This section provides additional information about the BenchMark SL, SL/HE and CW-80B scales.

### 3.1 Options

Optional ball transfer, roller conveyor tops and custom height columns for attaching indicators to the scale are available. Consult the factory for available options.

### 3.2 Troubleshooting

For troubleshooting details, see the following information:

Issue	Cause	Solution
No display on indicator	Power disconnected	Connect power
	Cable cut or disconnected	Repair cable
	Signal leads incorrectly wired at indicator	Connect according to the manual
Indicator display remains at zero	Incorrect load cell cable connections	
	Faulty indicator	Service indicator
Erratic weight displays on indicator	Vibration near the scale	Remove the source of the vibration or adjust digital filtering of indicator to minimize erratic display
	Scale not level	Level the scale
	Water damage to the load cell or cable	Replace the load cell
	Faulty indicator	Service the indicator
	Loose load cell screws	Tighten to correct torque
	Faulty load cell	Test and replace if necessary
Consistently low weight	Indicator not properly adjusted to zero	Zero indicator correctly
	Scale cover binding	Obtain adequate clearance
	Overload stops set too high	Reset the stops correctly
	Indicator not calibrated for scale	Calibrate the scale
	Faulty load cell	Test and replace if necessary

Table 3-1. Troubleshooting

### 3.3 Dimensions

For SL, SL/HE and CW-80B bench scale dimensions see the following information:

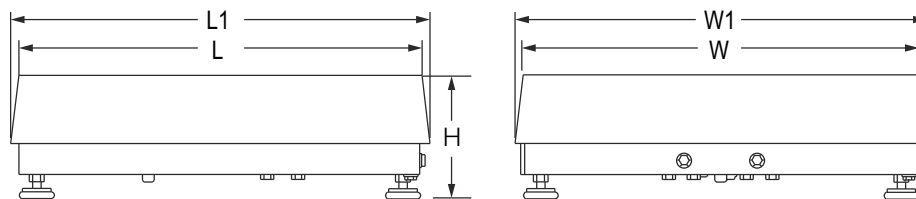


Figure 3-1. BenchMark Dimensions

#### 3.3.1 BenchMark SL, BenchMark SL/HE and CW-80B Bench Scale

See [Figure 3-1](#) for [Table 3-2](#) dimension references.

Capacity	Product Dimensions (L x W x H)	L1 x W1
2 lb (1 kg)	10" x 10" x 3.15" (254 mm x 254 mm x 80 mm)	10.25" x 10.25" (260 mm x 260 mm)
5 lb (2.5 kg)		
10 lb (5 kg)		
15 lb (7 kg)		
20 lb (10 kg)		
30 lb (15 kg)		
30 lb (15 kg)	12" x 12" x 3.25" (305 mm x 305 mm x 83 mm)	12.25" x 12.25" (311 mm x 311 mm)
50 lb (25 kg)		
100 lb (50 kg)		

Table 3-2. SL and SL/HE Model Sizes

#### 3.3.2 CW-80B Bench Scale

See [Figure 3-1](#) for [Table 3-3](#) dimension references.

Part No.	Capacity	Product Dimensions (L x W x H)	L1 x W1
35075	6 lb (3 kg)	10" x 10" x 3.15" (254 mm x 254 mm x 80 mm)	10.25" x 10.25" (260 mm x 260 mm)
35076	10 lb (5 kg)		
35077	15 lb (7 kg)	10" x 10" x 3.15" (254 mm x 254 mm x 80 mm)	10.25" x 10.25" (260 mm x 260 mm)
35078	30 lb (15 kg)		
35079	30 lb (15 kg)	12" x 12" x 3.25" (305 mm x 305 mm x 83 mm)	12.25" x 12.25" (311 mm x 311 mm)
35080	60 lb (30 kg)		

Table 3-3. CW-80B Model Sizes

### 3.4 Load Cell Replacement

Use the following steps to replace load cells:

1. Unplug AC power from indicator and disconnect load cell cable from indicator.
2. Remove scale top cover.
3. Locate and uninstall the two upper load cell screws.

**IMPORTANT**

**Do not remove four spring-loaded screws that attach load plate to spider assembly.**

4. Remove load plate/spider assembly as a unit.
5. Remove spacer between load plate and load cell and set it aside.

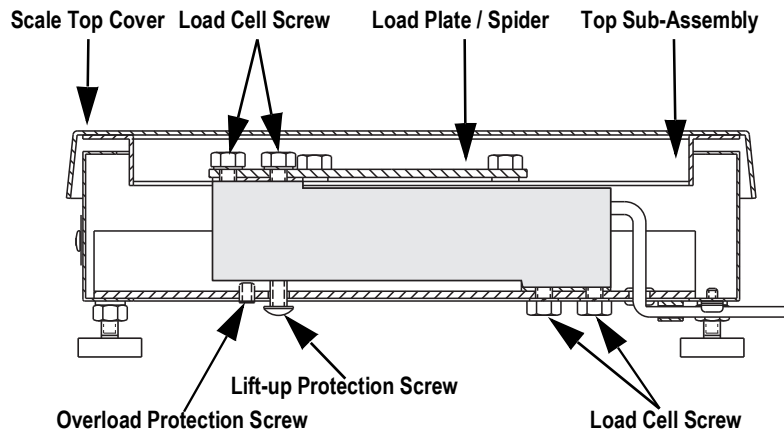


Figure 3-2. Load Cell Mount Diagram

6. Turn scale over and back off overload protection screw one complete turn. Completely unscrew and remove lift up protection screw.
7. Unscrew and remove two lower load cell screws. The load cell and cable can now be removed from scale. Do not lose shim beneath load cell.
8. Thread cable of replacement load cell through rubber grommet. Position load cell on shim and screw in two lower load cell screws. Torque to 80 in-lb.
9. Replace lift up protection screw by screwing it in until it lightly bottoms, then back it off 1/4 turn.
10. Turn scale right side up. Position spacer on load cell, then place load plate/spider assembly into position. Screw in two upper load cell screws. Torque to 80 in-lb.
11. Using an accurate caliper, check compressed spring length on four overload springs (Figure 3-3 on page 11). If necessary, adjust spring length to specifications shown in Table 3-4 on page 11. Replace top cover and re-level scale if necessary.
12. Connect load cell cable to indicator.
13. Recalibrate scale as described in Section 2.5 on page 4.

14. Adjust overload protection screw on bottom of scale by loading scale to 125% capacity. Place this weight on top cover, centered on platform. Use a hex wrench to screw in overload protection screw until it touches load cell, then back off 1/6 turn. Recheck calibration.

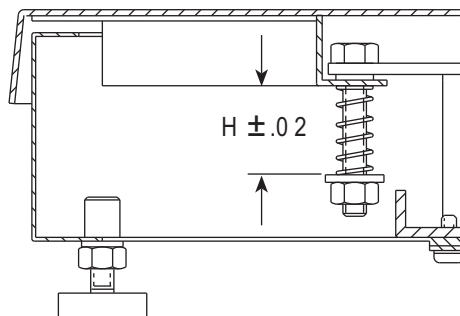


Figure 3-3. Spring Height

Scale Model	Spring Length "H"
10 x 10 - 2 lb	1.25
10 x 10 - 5 lb	1.06
10 x 10 - 6 lb	1.25
10 x 10 - 10 lb	0.94
10 x 10 - 15 lb	1.25
10 x 10 - 20 lb	0.97
10 x 10 - 30 lb	1.43
12 x 12 - 30 lb	1.43
12 x 12 - 50 lb	1.12
12 x 12 - 60 lb	1.25
12 x 12 - 100 lb	1.16

Table 3-4. Overload Spring Length

### 3.5 Limited Warranty

Rice Lake Weighing Systems (RLWS) warrants that all RLWS equipment and systems properly installed by a Distributor or Original Equipment Manufacturer (OEM) will operate per written specifications as confirmed by the Distributor/OEM and accepted by RLWS. All systems and components are warranted against defects in materials and workmanship for two years for the BenchMark SL and CW-80B Bench Scale, and three years for the BenchMark SL/HE.

RLWS warrants that the equipment sold hereunder will conform to the current written specifications authorized by RLWS. RLWS warrants the equipment against faulty workmanship and defective materials. If any equipment fails to conform to these warranties, RLWS will, at its option, repair or replace such goods returned within the warranty period subject to the following conditions:

- Upon discovery by Buyer of such nonconformity, RLWS will be given prompt written notice with a detailed explanation of the alleged deficiencies.
- Individual electronic components returned to RLWS for warranty purposes must be packaged to prevent electrostatic discharge (ESD) damage in shipment. Packaging requirements are listed in a publication, "Protecting Your Components From Static Damage in Shipment," available from RLWS Equipment Return Department.
- Examination of such equipment by RLWS confirms that the nonconformity actually exists, and was not caused by accident, misuse, neglect, alteration, improper installation, improper repair or improper testing; RLWS shall be the sole judge of all alleged nonconformities.
- Such equipment has not been modified, altered, or changed by any person other than RLWS or its duly authorized repair agents.
- RLWS will have a reasonable time to repair or replace the defective equipment. Buyer is responsible for shipping charges both ways.
- In no event will RLWS be responsible for travel time or on-location repairs, including assembly or disassembly of equipment, nor will RLWS be liable for the cost of any repairs made by others.

These warranties exclude all other warranties, expressed or implied, including without limitation warranties of merchantability or fitness for a particular purpose. Neither RLWS nor distributor will, in any event, be liable for incidental or consequential damages.

RLWS and buyer agree that RLWS's sole and exclusive liability hereunder is limited to repair or replacement of such goods.

In accepting this warranty, the buyer waives any and all other claims to warranty.

Should the seller be other than RLWS, the buyer agrees to look only to the seller for warranty claims.

No terms, conditions, understanding, or agreements purporting to modify the terms of this warranty shall have any legal effect unless made in writing and signed by a corporate officer of RLWS and the Buyer.



## 4.0 Specifications

### Load Cell

SL	IP66 aluminum and environmentally sealed
SL/HE	IP69K stainless steel, hermetically sealed
CW-80B	IP67 stainless steel and environmentally sealed

### Available Sizes

10" x 10", 12" x 12"

### Rated Output

0.91 mV/V

### Maximum Overload

SL	200%
SL/HE	200%, except 150% for 30 lb
CW-80B	200%

### Overload Protection

Shock-absorbing spider

### Cable Length

10' (3 m) – 6 wire shielded

### Output Impedance

350  $\Omega$

### Compensated Temperature Range

14° F – 122° F (-10° C – 50° C)

### Safe Temperature Range

-22° F – 158° F (-30° C – 70° C)

### Certifications and Approvals

#### SL



NTEP  
CoC 95-072  
Accuracy Class III; 5000 d

**Measurement  
Canada  
Approved**

Measurement Canada  
AM-5082, Class III 5000 d



Load cell is cFMus approved

#### SL/HE



NTEP  
CoC 95-072  
Accuracy Class III; 5000 d

**Measurement  
Canada  
Approved**

Measurement Canada  
AM-5082, Class III 5000 d



Load cell is FM approved

#### CW-80B



NTEP  
CoC 96-107  
Accuracy Class III; 3000 d

**Measurement  
Canada  
Approved**

Measurement Canada  
AM-5156, Class III 3000 d



Load cell is FM approved







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