

# Rice Lake Mechanical Physician Scale

*Model RL-MPS, RL-MPS-10, RS-MPS-20*

## Operation Instructions



**RICE LAKE**<sup>®</sup>  
WEIGHING SYSTEMS  
To be the best by every measure<sup>®</sup>



# Contents

---

- 1.0 Introduction..... 1**
- 2.0 Installation Instructions..... 2**
  - 2.1 Pillar Installation . . . . . 2
  - 2.2 Steelyard Rod Connection . . . . . 3
  - 2.3 Height Rod Installation (for those models equipped with height rod) . . . . . 5
  - 2.4 Wheel Installation (for those models equipped with wheels) . . . . . 6
- 3.0 Zero Adjustment..... 7**
- 4.0 Troubleshooting ..... 8**
- 5.0 Specifications ..... 8**

 *Technical training seminars are available through Rice Lake Weighing Systems. Course descriptions and dates can be viewed at [www.ricelake.com](http://www.ricelake.com) or obtained by calling 715-234-9171 and asking for the training department*



*Rice Lake continually offers web-based video training on a growing selection of product-related topics at no cost. Visit [www.ricelake.com/webinars](http://www.ricelake.com/webinars).*

# 1.0 Introduction

The Rice Lake Mechanical Physician Scale is ideal for use in health clinics and doctors' practices for height and weight measurement. The scale comes in a variety of configurations. Those configurations include:

- RL-MPS: Lb/kg model with height rod and rear wheels
- RL-MPS-10: Lb only model with height rod and rear wheels
- RL-MPS-20: Lb/kg model

The scale is durable, having a sturdy enameled steel body, removable slip resistant plastic cover and some models come with a retractable aluminum height rod and rear wheels. These installation and operating instructions will guide the user through basic instructions on pillar assembly, wheel installation, pillar height rod installation, and the zero adjustment of the scale.

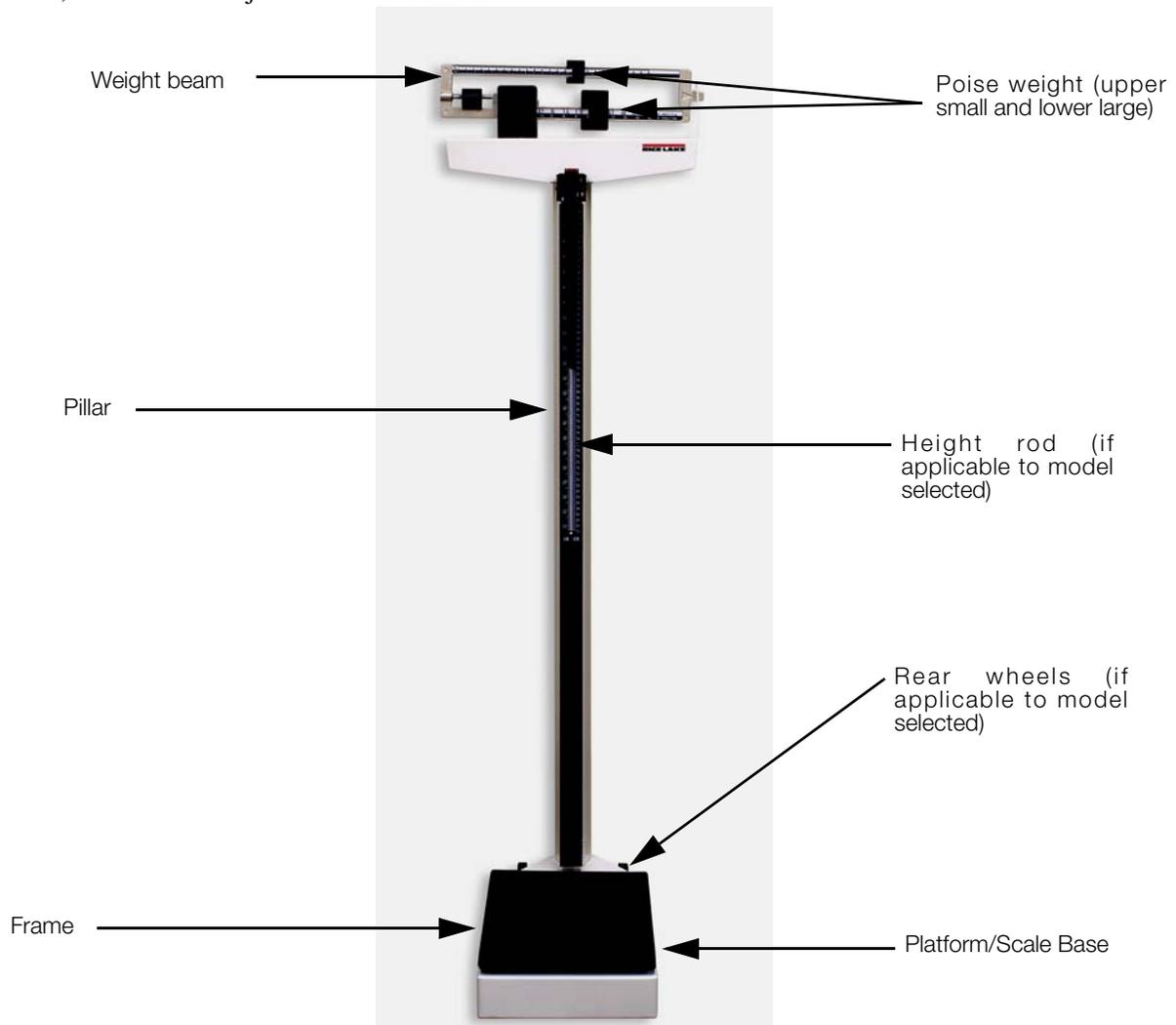


Figure 1-1. Mechanical Physician Scale Parts Breakdown (lb/kg version with height rod and rear wheels shown)



**Internet**

This manual can be viewed and downloaded from the Rice Lake Weighing Systems web site at [www.ricelake.com/health](http://www.ricelake.com/health). Rice Lake Weighing Systems is an ISO 9001 registered company.

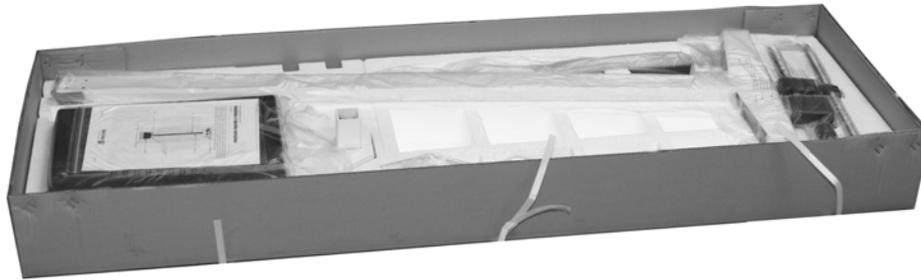
## 2.0 Installation Instructions

---

You will receive your Mechanical Physician Scale partially assembled. Those items that need additional assembly are:

- Pillar assembly
- Steelyard rod connection
- Height rod installation (for models having a height rod)
- Wheel installation (for models having wheels)

Remove all components from the shipping box (shown in Figure 2-1) and lay out in a convenient place.



*Figure 2-1. Box Contents*

### 2.1 Pillar Installation

Prior to assembly, you'll need the following tools to finish assembling the Mechanical Physician Scale.

- Phillips head screwdriver
- Wrench (included)

The pillar comes separate from the scale base and must be attached prior to use. Use the following steps to attach the pillar to the scale base.

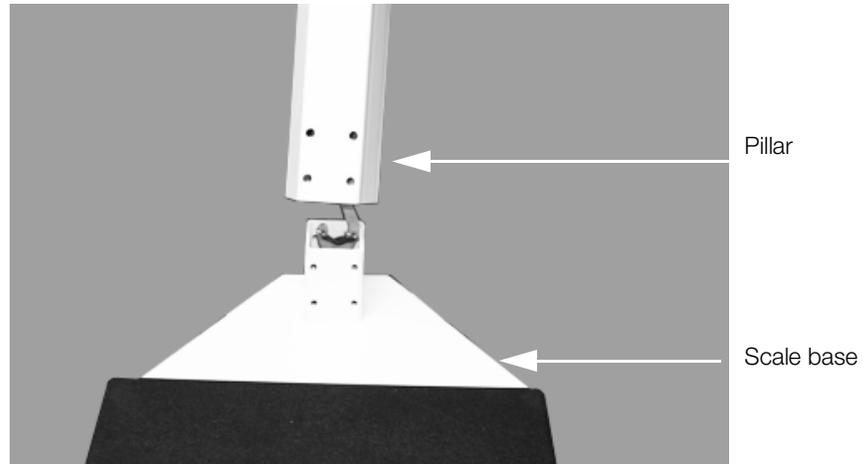
1. Set the scale base on a table or other convenient place.
2. Remove the twisty tie that holds the steelyard rod from shifting during transit (shown in Figure 2-2).



*Figure 2-2. Remove Cable Tie From Lever*

3. Insert the pillar into the scale base assembly ensuring that the RLWS logo located on the weight beam

faces the scale base.



*Figure 2-3. Attach the Pillar to the Scale Base*

4. Using a phillips head screwdriver, screw in the eight bolts and washers to secure the pillar to scale base.



*Figure 2-4. Attach Eight Bolts and Washers to Secure the Pillar to the Scale Base*

## 2.2 Steelyard Rod Connection

The steelyard rod is located inside the scale pillar. Once the pillar is attached to the scale base, the steelyard rod must be attached to the bottom of the scale.

1. Lay the scale on a table as shown in Figure 2-5.

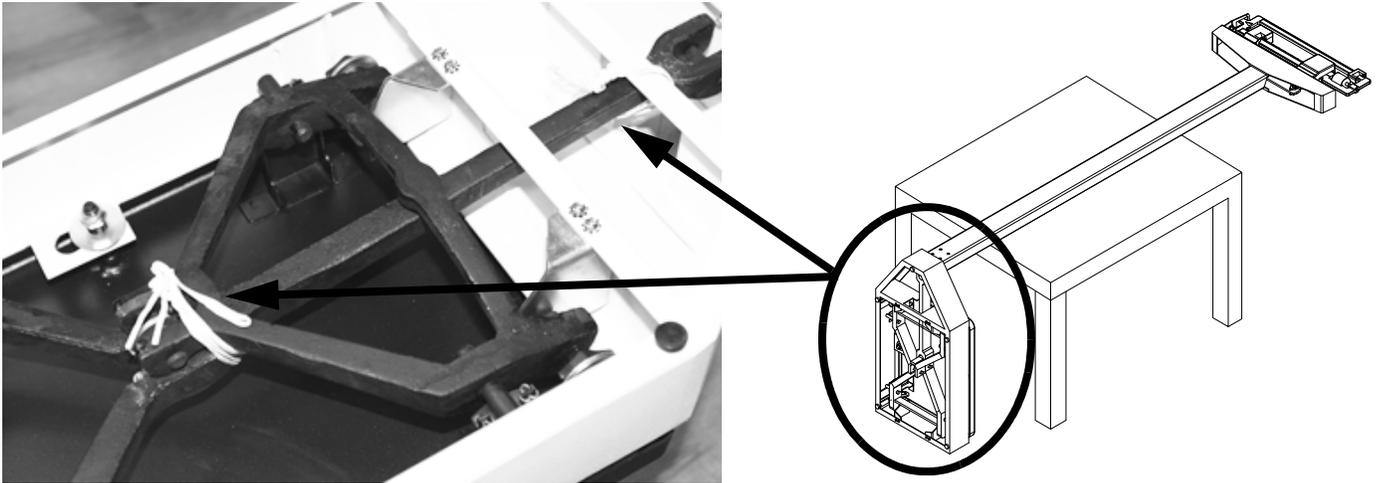


Figure 2-5. Lay Scale on Table to Access Bottom of Scale

2. There are tie wrap wires that prevent the underside of the scale carriage from shifting during shipping. Remove and discard the wires on the levers as shown in Figure 3.
3. Insert the wrench (included) to the small hole in front of the steelyard rod, and pull the hook of the steelyard rod with the hook of the wrench to connect it to the scale base as shown in Figure 2-6.

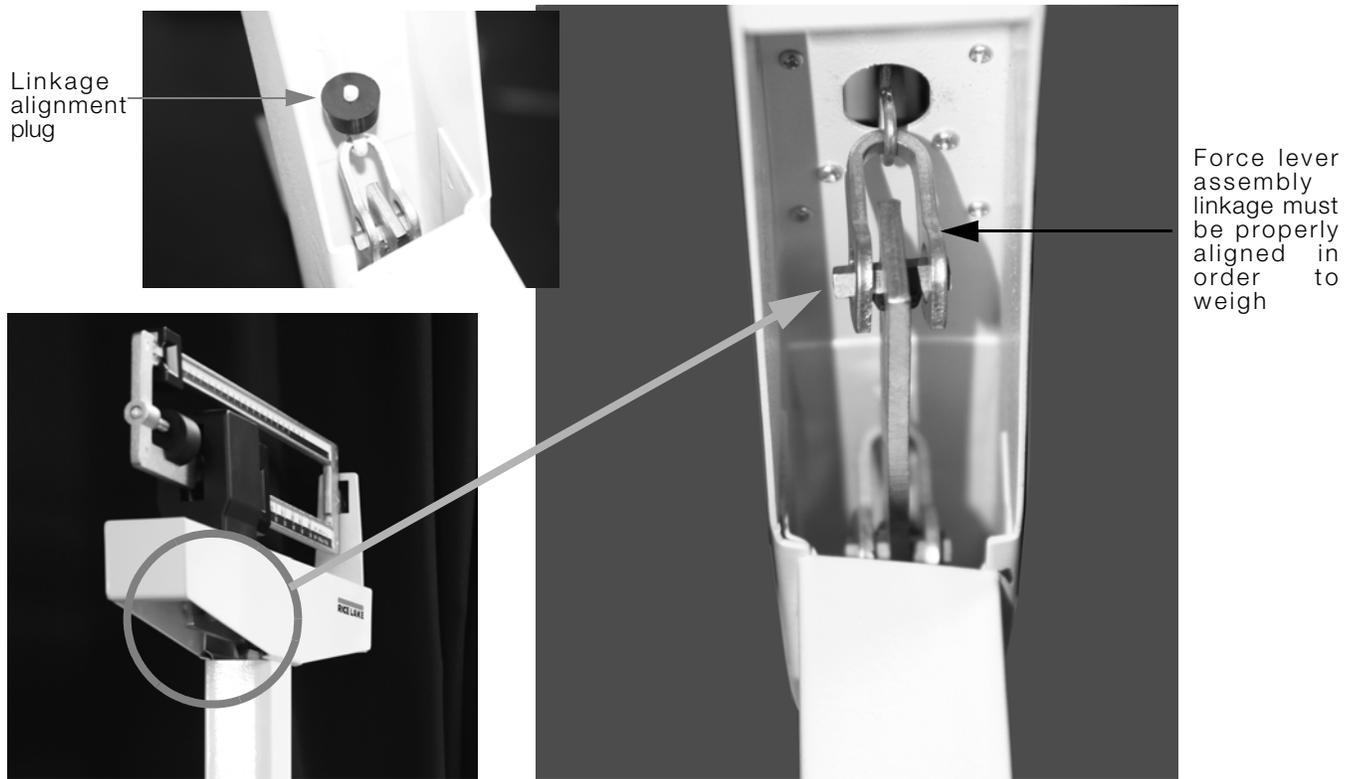


Figure 2-6. Connecting the Steelyard Rod to the Scale Base

4. Push the long lever frontward, then hook the bearing of the steelyard rod on the pivot of the long lever.

**NOTE:** Visually ensure that the force lever assembly linkage is centered and properly aligned. Occasionally during shipping, the alignment will become skewed however a plug is installed to ensure that the linkage stays aligned. The linkage must be free floating in order for the scale to weigh properly. The linkage can be seen by looking up underneath

*the top weigh beam if the scale is slightly tipped to one side.*



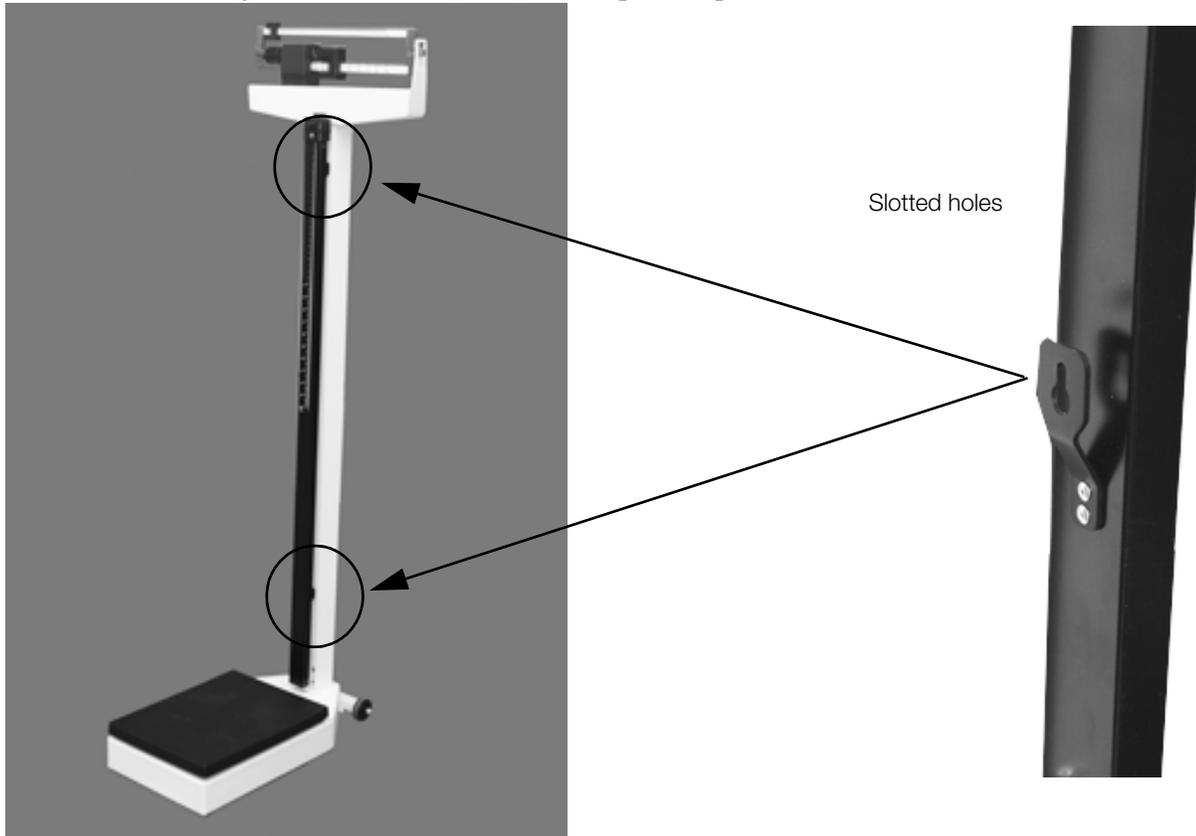
*Figure 2-7. View Looking up at Linkage up Underneath the Top Weigh Beam*

5. Place the scale gently back on the floor.

## 2.3 Height Rod Installation (for those models equipped with height rods)

Some models of the Mechanical Physician Scale comes with height rods. Use the following steps to install the height rod.

1. Insert the back side slotted holes of the height rod into the two bolts on the front side of the pillar as shown in Figure 2-8. One is located at the top of the pillar and the other towards the bottom of the pillar.



*Figure 2-8. Attach the Slotted Screw Location onto the Pillar Bolt Location*

2. Use the enclosed wrench to tighten the two hex-head screws, but ensure not to over tighten.
3. To raise or lower the height rod, press the red button at the top of the height rod and raise up or down.

## 2.4 Wheel Installation (for those models equipped with wheels)

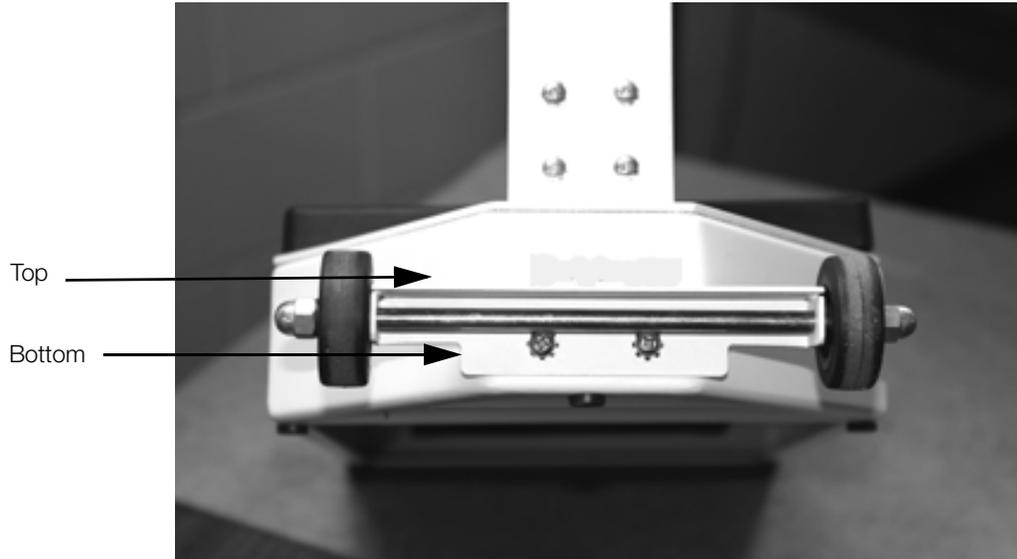
Some models of the Mechanical Physician Scale comes with sturdy wheels for easy portability. To install the wheels onto the scale, use the following instructions.



### Note

*Mounting the wheels upside down can create scale errors.*

1. Align the angle iron of the wheel base to the scale platform as shown in Figure 2-9.



*Figure 2-9. Attach the Scale Wheels onto the Scale Base*

2. Use the screws and washers that are included with the scale to fix the wheel to the platform, adjusting the angle iron at a level position, then tighten screws.
3. When moving the scale, hold the two side faces of the pillar to keep the front side of the platform away from the ground.



*Figure 2-10. Wheels Offer Easy Portability*

## 3.0 Zero Adjustment

To ensure accurate weighments, a zero adjustment should be done to the scale upon arrival and setup. To perform a zero adjustment, perform the following steps.

1. Ensure the scale is sitting on a level surface.
2. Check the eye loop area of the scale to ensure that the scale pointer is equally balanced between the eye loop area. This can be accomplished by gently holding the scale pointer with your finger until it touches the bottom of the eye loop area. Release the scale pointer and let it rise freely up and down between the eye loop area until the scale pointer settles in the middle of the eye loop area.



Figure 3-1. Eye Loop Area and Zero Adjusting Screw Location (Lb and kg version without height rod shown)

3. If the scale is not balancing properly, then the small zero balance weight must be adjusted. Turn the zero adjusting screw (shown in Figure 3-1) using a flat head screwdriver. By adjusting the screw, the zero balance weight will move accordingly.

## 4.0 Troubleshooting

The accuracy of the Mechanical Physician Scale, when calibrated at the factory, falls within plus or minus 1/4 pound accuracy. For the most accurate weight, always use the scale on a hard, level surface and stand in the center of the scale platform with the weight distributed as evenly as possible. If an error occurs or seems excessive, check the following:

Problem	Possible Fix
Zero balance of beam	The weigh beam must be balanced so the pointer comes to a rest in the center of the eye loop (shown in Figure 3-1) when both poise weights are set at zero (see Figure 1-1 for poise weight location). Adjust the balance by turning the zero adjusting screw at the left end of the weigh beam (see Figure 3-1).
Beam does not move freely	Check if the beam pointer is touching the side of the eye loop in its range of travel. Visually ensure that the linkage is centered and properly aligned. Occasionally during shipping, the alignment will become skewed. The linkage must be free floating in order for the scale to weigh properly. The linkage can be seen by looking up underneath the top weigh beam if the scale is slightly tipped to one side.
Platform rocks excessively	When you push down on any corner of the platform, you should not feel any significant rocking. Ensure scale is setting on a level surface.
Beam does not move at all during a weighment	This can be caused by the poise weights being set to a higher weight than the person's actual weight. Reset the weights to a lower weight. Also check to see that the steelyard rod is properly connected and aligned (see Figure 2-7).
Scale is out of calibration	Recalibrate the scale by placing a known weight on the scale and moving the zero adjusting screw to bring the scale back to zero.

Table 4-1. Troubleshooting Guide

## 5.0 Specifications

	RL-MPS	RL-MPS-10	RL-MPS-20
Maximum Capacity	440 lb (200 kg)	450 lb (204 kg)	440 lb (200 kg)
Graduation	0.25 lb (0.1 kg)		
Height Rod Range	24-84" (60-212 cm)		N/A
Min. Value of Height per Division	0.125" (0.1 cm)		N/A
Platform Size	14.75" x 10.75" (374.65 x 273.05 mm)		

Table 5-1. Model Specifications

# For More Information

---

## Literature

- *Medical Scales - Mechanical Physician Scale*, PN 106425

## Web Site

- <http://www.ricelake.com/health>

## Contact Information

### Hours of Operation

Knowledgeable customer service representatives are available 6:30 a.m. - 6:30 p.m. Monday through Friday and 8 a.m. to 12 noon on Saturday. (CST)

### Telephone

- Sales/Technical Support 800-472-6703
- Canadian and Mexican Customers 800-321-6703
- International 715-234-9171

### Immediate/Emergency Service

For immediate assistance call toll-free 1-800-472-6703 (Canadian and Mexican customers please call 1-800-321-6703). If you are calling after standard business hours and have an urgent scale outage or emergency, press 1 to reach on-call personnel.

### Fax

Fax Number 715-234-6967

### Email

- US sales and product information at [prodinfo@ricelake.com](mailto:prodinfo@ricelake.com)
- International (non-US) sales and product information at [intlsales@ricelake.com](mailto:intlsales@ricelake.com)

### Mailing Address

Rice Lake Weighing Systems  
230 West Coleman Street  
Rice Lake, WI 54868 USA

# Mechanical Physician Scale Limited Warranty

---

Rice Lake Weighing Systems 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.

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.
- Examination of such equipment by RLWS confirms that the nonconformity actually exists, and was not RLWS shall be the sole judge of all alleged non-conformities.
- 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.**

© 2011 Rice Lake Weighing Systems, Inc. Rice Lake, WI USA. All Rights Reserved.

RICE LAKE WEIGHING SYSTEMS • 230 WEST COLEMAN STREET • RICE LAKE, WISCONSIN 54868 • USA







230 W. Coleman St. • Rice Lake, WI 54868 • USA  
U.S. 800-472-6703 • Canada/Mexico 800-321-6703  
International 715-234-9171

**[www.ricelake.com](http://www.ricelake.com)**  
**[mobile: m.ricelake.com](http://m.ricelake.com)**

© 2010 Rice Lake Weighing Systems

PN 102696 08/11