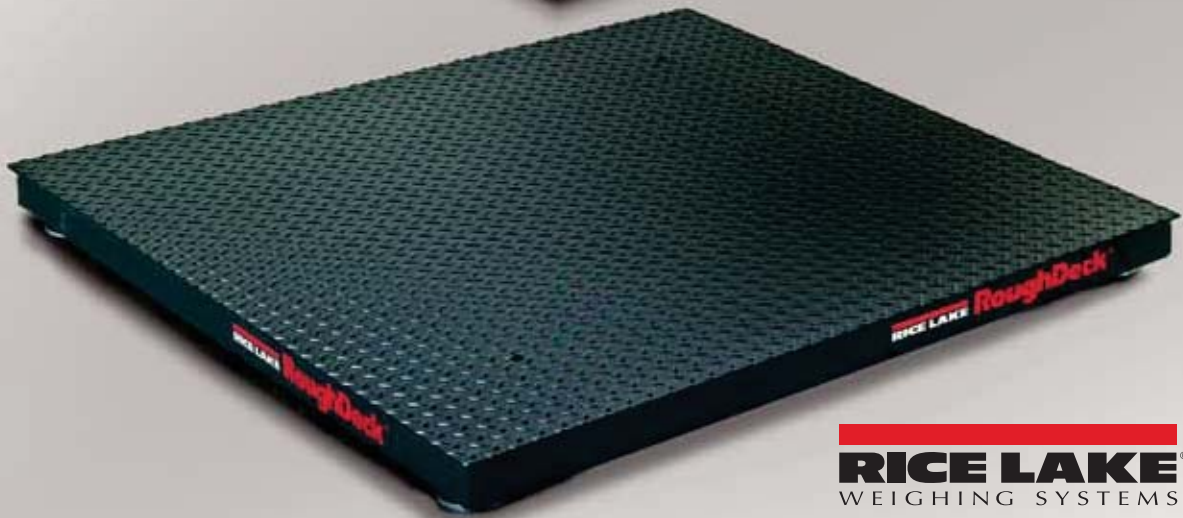


**RoughDeck**<sup>®</sup>

HP·HP-H·SS·HE  
SERIES

FLOOR SCALES



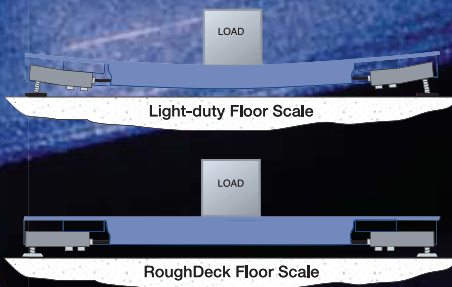
**RICE LAKE**<sup>®</sup>  
WEIGHING SYSTEMS

To be the best by every measure<sup>®</sup>

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# Why RoughDeck® is Simply the TOUGHEST, Most Accurate Floor Scale Available...

Before introducing our RoughDeck series, design engineers conducted a comprehensive floor scale testing program. They determined that two design factors—minimizing deck deflection and isolating load cells from extraneous forces—were key to low-profile scale accuracy and long life. As a result, the RoughDeck design concept provides outstanding strength and component protection.



The exaggerated figure illustrates the problems of deck and load cell deflection. The RoughDeck design minimizes deflection of the deck and feet.

The RoughDeck series has low-profile stationary and portable versions available and offers component interchangeability and alternative construction materials to meet specific industrial requirements, from basic shipping and receiving to highly corrosive or washdown environments.

# RoughDeck® ... IT DOES

## ■ Superior Structural Design

Unlike most other scales, the RoughDeck utilizes a full 6" structural channel frame welded to a durable steel deck, providing exceptional rigidity under severe loading conditions (typical of fork lifts and pallet jacks). This design has proven so superior that the RoughDeck carries a full 5-year warranty on the deck structure.

The cross sections shown compare the deck structure of the RoughDeck with other low-profile floor scales. The placement of underdeck supports on the RoughDeck minimizes deflection in all directions. Intermediate supports are added to prevent the top plate from "dishing" under heavy point loads.



Underside comparison



Light-duty

Light-duty

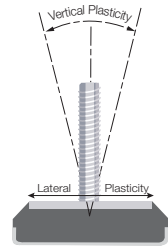
RoughDeck

## ■ Accuracy Requires a Specialized Foot

Many scales retain side loads and suffer from poor return to zero when bumped laterally. The slight plasticity flow of the SUREFOOT™ design eliminates such residual side loads and provides excellent return to zero.



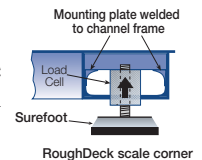
The RoughDeck was engineered to use a steel and neoprene sandwich design called SUREFOOT. A steel cup sits on the floor and is bonded by a pliable neoprene cushion to a steel top plate with attached threaded stem. This pliable sandwich allows the stem and top plate some plasticity to move laterally and tilt independently of the bottom steel cup. This allows the foot to accommodate small deflections and uneven floors.



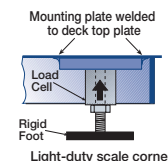
## ■ Load Cell Mounting Plate and SUREFOOT

To minimize localized deflection of the load cell, the mounting plate is welded to the channel frame rather than the deck plate.

Adjustable SUREFOOT support feet incorporate stainless steel and neoprene. This unique combination decreases extraneous forces on the load cell, resulting in superior accuracy and repeatability.



RoughDeck scale corner



Light-duty scale corner

## ■ Load Cell and Cable Protection

The unique channel structure of the RoughDeck provides enclosed protection for underdeck components so they can't be ripped out through rough handling use.

Load cells are recessed within the 6" channels, and conduit lies within the channels to ease pushing load cell cables through and deter rodent damage to the cables. A 20' length of hostile environment indicator cable is included to complete the installation.

## ■ TuffSeal Junction Box Protects Circuitry



The rugged TuffSeal™ junction boxes are specifically designed to protect sensitive circuitry from damage caused by moisture. A stainless steel junction box is included with all models. Its unique closure design inhibits moisture ingress and a Gore™ breather vent helps equalize the pressure inside the enclosure which can be caused by sudden temperature or environmental changes.

# ESN'T GET ANY TOUGHER THAN THIS.

## RoughDeck **HP** & **HP-H** High Accuracy, Heavy Capacity

► Non washdown environments

The RoughDeck HP's best-in-class features are enhanced to deliver more reliability and higher performance than ever before.

The RoughDeck HP's NEMA 4 aluminum TuffSeal junction box is protected from forks and industrial abuse by a 6" structural steel channel frame and diamond treadplate safety deck. The junction box is also mounted as a handy slide-out tray that eases setup and service access. Cables include sturdy cord grips or a quick disconnect for added convenience. In addition, all load cell cables are enclosed in conduit, alleviating danger of rough handling. All load cells are recessed within the channel for protection on all sides, while maintaining easy access for leveling. What's more, the RoughDeck HP is backed by an all-inclusive 5-year limited warranty!

Available in 1000 to 30,000 lb capacities, the RoughDeck HP is the industry leader for precision weighing in Legal-for-Trade applications.

### Heavy-Capacity Model

The HP-H model offers the exact superior structural design of the HP model, but with added capacity for the most demanding applications.



Both HP and HP-H have a slide-out junction box for quick access and superior protection from moisture and dirt.



Measurement  
Canada Approved  
(HP model only)



The RoughDeck design has proven so superior that it carries a 5-year limited warranty.



## RoughDeck **SS** Stainless Steel, Corrosion Resistant

► Corrosive dry chemical environments



Measurement  
Canada Approved

The RoughDeck SS floor scale is designed specifically for Legal-for-Trade applications requiring the added corrosion protection of stainless steel. Applications include dry chemical operations, fertilizer plants and other industries which require non-washdown corrosion resistance.

A rigid 6", 304 stainless steel channel frame and smooth top plate provide a durable scale deck. For added corrosion resistance, four NTEP-certified stainless steel load cells and surefeet, a stainless steel TuffSeal summing junction box and EL147HE hostile environment load cell cable complete the RoughDeck SS package.

The channel frame provides added protection by enclosing the load cells, cable and junction box inside, away from chemicals and other industrial elements.



The SS features an internal junction box slide-out assembly.

## RoughDeck **HE** Stainless Steel, Washdown Design

► Harsh chemical or washdown environments



The RoughDeck HE is a hostile environment, stainless steel floor scale designed specifically for corrosion resistance and long life in demanding washdown applications. Design features include a 6", 304 stainless steel channel frame and smooth top plate. The RoughDeck HE comes standard with four stainless steel, IP67 welded seal, shear beam load cells, four stainless steel surefeet, a stainless steel NEMA 4X TuffSeal summing junction box and EL147HE hostile environment load cell cable.

The stainless steel channel frame provides added protection by enclosing load cell cable and load cells, yet provides easy access for installation and service. The NEMA 4X summing TuffSeal junction box can be remotely mounted up to 10' from the scale, keeping sensitive electronic connections away from moisture and chemicals.



The HE features a remote junction box with cable.

# HP•HP-H•SS•HE SERIES FLOOR SCALES

## Installation Options Add Versatility...

- Indicator floor stand
- Digital weight indicators
- Anchor plates
- Pit frame
- Access ramps
- Bumper guards
- Forklift bumper guards

All installation options are available in mild or stainless steel.



### RoughDeck **HP**

#### Specifications

**End Load Capacity:**  
 1,000 lbs: 200% full scale  
 2,000 lbs: 100% full scale  
 10,000 lbs: 80% full scale

**Approvals:**  
 NTEP-certified, CC# 92-001A9 Class III, 5000d, Measurement Canada Approved, AM-4827, HC Series

#### Dimension/Capacities

Size (W x L x H)	Capacity	Est. Ship WT
3' x 3' x 3.5"	1000 lb/500 kg	232 lb
4' x 4' x 3.5"	1000 lb/500 kg	375 lb
2.5' x 2.5' x 3.5"	2000 lb/1000 kg	173 lb
3' x 3' x 3.5"	2000 lb/1000 kg	232 lb
3' x 3' x 3.5"	5000 lb/2500 kg	232 lb
4' x 4' x 3.5"	2000 lb/1000 kg	375 lb
4' x 4' x 3.5"	5000 lb/2500 kg	375 lb
4' x 4' x 3.5"	10,000 lb/5000 kg	375 lb
4' x 5' x 3.5"	5000 lb/2500 kg	437 lb
4' x 5' x 3.5"	10,000 lb/5000 kg	567 lb
4' x 6' x 3.5"	5000 lb/2500 kg	510 lb
4' x 6' x 3.5"	10,000 lb/5000 kg	656 lb
5' x 5' x 3.5"	5000 lb/2500 kg	541 lb
5' x 5' x 3.5"	10,000 lb/5000 kg	696 lb
5' x 6' x 3.5"	5000 lb/2500 kg	646 lb
5' x 6' x 3.5"	10,000 lb/5000 kg	821 lb
5' x 7' x 3.5"	5000 lb/2500 kg	734 lb
5' x 7' x 3.5"	10,000 lb/5000 kg	929 lb

### RoughDeck **SS**

#### Specifications

**End Load Capacity:**  
 1,000 lbs: 200% full scale  
 2,000 lbs: 100% full scale  
 10,000 lbs: 80% full scale

**Approvals:**  
 NTEP - certified, CC #92-001A9 Class III 5000d Measurement Canada Approved, AM-4827, HCSS Series

#### Dimension/Capacities

Size (W x L x H)	Capacity	Est. Ship WT
2.5' x 2.5' x 3.5"	2000 lb/1000 kg	173 lb
3' x 3' x 3.5"	1000 lb/500 kg	232 lb
3' x 3' x 3.5"	2000 lb/1000 kg	232 lb
4' x 4' x 3.5"	1000 lb/500 kg	375 lb
4' x 4' x 3.5"	5000 lb/2500 kg	375 lb
4' x 4' x 3.5"	10,000 lb/5000 kg	490 lb
4' x 5' x 3.5"	5000 lb/2500 kg	437 lb
4' x 5' x 3.5"	10,000 lb/5000 kg	567 lb
5' x 5' x 3.5"	5000 lb/2500 kg	541 lb
5' x 5' x 3.5"	10,000 lb/5000 kg	696 lb
5' x 7' x 3.5"	10,000 lb/5000 kg	929 lb

Your Rice Lake Weighing Systems distributor is:

### RoughDeck® Standard Features/Options

#### Approvals:

NTEP-certified, Class III 5000 divisions  
 Measurement Canada Approved

#### Load Cells:

Factory Mutual-approved  
 Alloy steel, nickel-plated  
 Stainless steel  
 Stainless steel, welded seal  
 Stainless steel hermetically sealed

#### Construction:

Mild steel  
 304 stainless steel

#### Deck:

Mild steel diamond treadplate  
 Smooth stainless steel  
 Stainless steel diamond treadplate

#### Junction Box:

Integral, side-entry NEMA 4X stainless steel TuffSeal  
 Remote NEMA 4X stainless steel TuffSeal  
 Top access

#### Miscellaneous:

4 adjustable stainless steel SUREFOOT™ support feet  
 mV/V output: 1.50-1.87 mV/V nominal  
 20' EL147HE Hostile Environment Load Cell Cable  
 Threaded eyebolt holes  
 Custom sizes  
 Top access foot adjustment holes  
 Epoxy paint

	HP	HP-H	SS	HE
<b>Approvals:</b>	•	•	•	•
<b>Load Cells:</b>	•	•	•	•
Factory Mutual-approved	•	•	•	•
Alloy steel, nickel-plated	•	•	•	•
Stainless steel	Opt	Opt	•	•
Stainless steel, welded seal	Opt	Opt	Opt	•
Stainless steel hermetically sealed	Opt	Opt	Opt	Opt
<b>Construction:</b>	•	•	•	•
Mild steel	•	•	•	•
304 stainless steel			•	•
<b>Deck:</b>	•	•	•	•
Mild steel diamond treadplate	•	•	•	•
Smooth stainless steel			•	•
Stainless steel diamond treadplate			Consult Factory	
<b>Junction Box:</b>	•	•	•	•
Integral, side-entry NEMA 4X stainless steel TuffSeal	Opt	Opt	Opt	•
Remote NEMA 4X stainless steel TuffSeal	Opt	Opt	Opt	Opt
Top access	•	•	•	•
<b>Miscellaneous:</b>	•	•	•	•
4 adjustable stainless steel SUREFOOT™ support feet	•	•	•	•
mV/V output: 1.50-1.87 mV/V nominal	•	•	•	•
20' EL147HE Hostile Environment Load Cell Cable	Std with or without Quick-Connect		•	•
Threaded eyebolt holes	•	•	•	•
Custom sizes	Opt	Opt	Opt	Opt
Top access foot adjustment holes	Opt	Opt	Opt	Opt
Epoxy paint	Opt	Opt		

### RoughDeck **HP-H**

#### Specifications

**End Load Capacity:**  
 1,000 lbs: 200% full scale  
 2,000 & 5,000 lbs:  
 100% full scale  
 10,000 lbs: 80% full scale

**Approvals:**  
 NTEP-certified, CC# 92-001A9 Class III, 5000d, Measurement Canada Approved, AM-4827, HC Series

#### Dimension/Capacities

Size (W x L x H)	Capacity	Est. Ship WT
4' x 4' x 4"	20,000 lb/10,000 kg	601 lb
4' x 5' x 4"	20,000 lb/10,000 kg	775 lb
4' x 6' x 4"	20,000 lb/10,000 kg	926 lb
4' x 7' x 4"	20,000 lb/10,000 kg	1135 lb
5' x 5' x 4"	20,000 lb/10,000 kg	926 lb
5' x 6' x 4"	20,000 lb/10,000 kg	1104 lb
5' x 7' x 4"	20,000 lb/10,000 kg	1377 lb
6' x 6' x 4"	20,000 lb/10,000 kg	1319 lb
6' x 8' x 4"	20,000 lb/10,000 kg	1861 lb
7' x 9' x 4"	20,000 lb/10,000 kg	2408 lb
7' x 10' x 4"	20,000 lb/10,000 kg	2959 lb
8' x 10' x 4"	20,000 lb/10,000 kg	3108 lb
4' x 4' x 5"	30,000 lb/15,000 kg	675 lb
4' x 5' x 5"	30,000 lb/15,000 kg	839 lb
4' x 6' x 5"	30,000 lb/15,000 kg	1071 lb
4' x 7' x 5"	30,000 lb/15,000 kg	1200 lb
5' x 5' x 5"	30,000 lb/15,000 kg	1021 lb
5' x 7' x 5"	30,000 lb/15,000 kg	1448 lb
6' x 6' x 5"	30,000 lb/15,000 kg	1438 lb
7' x 10' x 5"	30,000 lb/15,000 kg	3372 lb
8' x 10' x 5"	30,000 lb/15,000 kg	3699 lb

### RoughDeck **HE**

#### Specifications

**End Load Capacity:**  
 2,000 lbs and 5,000 lbs:  
 100% full scale  
 10,000 lbs: 80% full scale

**Approvals:**  
 NTEP-certified, CC# 92-001A9 Designed to meet or exceed H44, 5000, 10,000 - Class III 5000d 2000 - Class III 4000d

#### Dimension/Capacities

Size (W x L x H)	Capacity	Est. Ship WT
2.5' x 2.5' x 3.5"	2000 lb/1000 kg	173 lb
3' x 3' x 3.5"	2000 lb/1000 kg	232 lb
4' x 4' x 3.5"	5000 lb/2500 kg	375 lb
4' x 4' x 3.5"	10,000 lb/5000 kg	490 lb
4' x 5' x 3.5"	5000 lb/2500 kg	437 lb
4' x 5' x 3.5"	10,000 lb/5000 kg	567 lb
5' x 5' x 3.5"	5000 lb/2500 kg	541 lb
5' x 5' x 3.5"	10,000 lb/5000 kg	696 lb
5' x 7' x 3.5"	10,000 lb/5000 kg	929 lb



To be the best by every measure®

230 W. Coleman St. • Rice Lake, WI 54868 • USA  
 TEL: 715-234-9171 • FAX: 715-234-6967 • [www.ricelake.com](http://www.ricelake.com)

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 Specifications subject to change without notice

# IQ 390-DC

P L U S

BATTERY-POWERED  
DIGITAL WEIGHT  
INDICATOR



**RICE LAKE**  
WEIGHING SYSTEMS

To be the best by every measure®

800-472-6703  
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**IQ**  
P L U S**390-DC****BATTERY-POWERED  
DIGITAL WEIGHT INDICATOR**

## Powerful... Portable... Affordable!

The IQ plus® 390-DC digital weight indicator takes portability to a new level. Running on C-cell alkaline batteries\*, this handy indicator allows operation in practically any location imaginable! Topping rivals in ease of use and performance, it features battery life up to 300 hours and a configurable standby mode that conserves battery power when not in use.

Operators can't miss the IQ plus 390-DC's prominent LCD display. Showing up to six digits in unmatched clarity, its huge, on-target design makes viewing easy to reduce costly operator errors. In addition, the IQ plus 390-

DC's six-button panel eliminates the hassles of setup and operation—allowing even the most inexperienced operator to be immediately productive.

Housed in a stainless steel, NEMA 4X/IP66 enclosure, the IQ plus 390-DC is designed to outlast any digital indicator on the market. From outdoor weighing systems and portable warehouse scales, to material handling and food processing applications, its rugged construction stands up to repetitive use and environmental abuse. Additional features include a piece count mode that enables the IQ plus 390-DC to serve as part of a portable counting scale, an AC adapter for applications not requiring battery power, and RATTLETRAP® three-stage digital filtering for accurate weight data in environments where vibration is a concern. To ensure stability when weighing animals, choose the optional animal weighing program.

Add it all up and it's easy to see why the IQ plus 390-DC sets the standard for portable indicators. It's simply the first portable solution to deliver heavy-duty performance without a heavy-duty price.



When paired with a BenchMark® bench scale, the IQ plus 390-DC becomes part of a portable counting and weighing system.

Your Rice Lake Weighing Systems distributor is:

### Standard Features

- Large 1 inch six-digit LCD display
- Powered by six C-cell batteries for portability\* or AC adapter
- Revolution® scale software support
- Power for (4) 350 Ω load cells or (8) 700 Ω load cells
- EDP port for full duplex, RS-232 communications
- Count mode with selectable sample size
- Three 300-character print ticket formats

### Specifications

#### POWER

**Power:** 9 VDC, provided by 6 C-cell alkaline batteries\* or AC adapter  
**Power Consumption:** 25 mA typical

#### ANALOG SPECIFICATIONS

**Full Scale Input Signal:** Up to 17mV  
**Excitation Voltage:** 5 ± 0.25 VDC, 4 x 350 Ω or 8 x 700 Ω load cells  
**Sense Amplifier:** Differential amplifier with 4- and 6-wire sensing  
**Analog Signal Sensitivity:** 0.3 μV/graduation minimum  
1.5 μV/grad recommended

**Internal Resolution:** 1,000,000 counts  
**Display Resolution:** 100,000 d  
**Measurement Rate:** 30, 15, 7.5, 3/sec, selectable  
**System Linearity:** Within 0.01% of full scale  
**Calibration Method:** Software, constants stored in EEPROM  
**Input Overload:** ±12 V continuous, static discharge protected  
**Circuit Protection:** RFI, EMI, ESD protection

#### DIGITAL SPECIFICATIONS

**Digital Filter:** RATTLETRAP® filtering technology

#### SERIAL COMMUNICATIONS

**EDP/Printer Port:** Full duplex RS-232

#### OPERATOR INTERFACE

**Display:** 1 in (25 mm) 6-digit LCD display  
**Annunciators:** Lb, kg, PC (piece count mode), gross, net, standstill, center of zero, tare, low battery  
**Keyboard:** 6-key flat membrane panel

#### ENVIRONMENTAL

**Operating Temperature:** -10° to 40° C/14° to 104° F (legal)  
-10° to 50° C/14° to 122° F (industrial)

#### ENCLOSURE

**Dimensions:** 9.0 in x 5.5 in x 4.1 in  
(229 mm x 140 mm x 104 mm)  
(includes battery compartment cover)  
**Weight:** 3.2 lb (1.4 kg)  
**Finish:** NEMA 4X/IP66, stainless steel



### Approvals

\*Batteries not included



CC #98-203A1  
 $n_{max} = 10,000/d$   
Class III/III L

Measurement  
Canada Approved  
AM 5300  
 $n_{max} = 20,000/d$   
Class III/III HD



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