iDimension 200

Workstation

Operation Manual

RICE LAKE®
WEIGHING SYSTEMS
To be the best by every measure®

PN 167738 Rev A

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

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Rice Lake continually offers web-based video training on a growing selection of product-related topics at no cost. Visit www.ricelake.com/webinars.

1.0 Introduction

Thank you for purchasing the *iDimension 200*. This document describes how to operate the *iDimension 200*. Prior to using this unit, read this manual to ensure correct use.

Manuals can be viewed or downloaded on the Rice Lake Weighing Systems distributor site at **www.ricelake.com**.

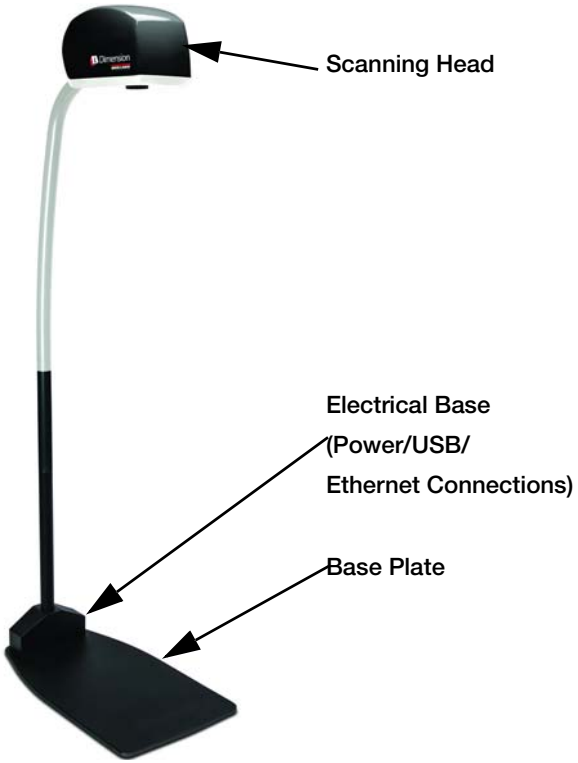


Figure 1-1. iDimension 200

1.1 Safety

Safety Symbol Definitions

DANGER *Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.*

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

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

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

Safety Precautions

Do not operate or work on this equipment unless you have read and understand the instructions and warnings in this manual. Contact any Rice Lake Weighing Systems dealer for replacement manuals. Proper care is your responsibility.

General Safety

DANGER

Failure to heed may result in serious injury or death.

Electric shock hazard!

- *For pluggable equipment, the socket outlet must be installed near the equipment and must be easily accessible.*
- *Always disconnect from main power before performing any work on the device.*
- *Check the power cable for damage regularly and replace it immediately if it is damaged.*
- *On the side of the device, maintain a clearance of at least 1.5'' in order to prevent damage to the cable.*

DO NOT allow minors (children) or inexperienced persons to operate this unit.

DO NOT operate without all shields and guards in place.

DO NOT place fingers into slots or possible pinch points.

DO NOT use this product if any of the components are cracked.

DO NOT make alterations or modifications to the unit.

DO NOT remove or obscure warning labels.

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

Do not use in hazardous areas!

Do not open the scanning head! The warranty and certification is void if this stipulation is ignored. The device may only be opened by authorized persons.

1.2 Overview

Figure 1-2. Electrical Base

- Ethernet port
- Power indicator light
- Power (DC OUT) — 24V 1A
- Power (DC IN) — 24V 2.5A
- Three standard USB ports (Type A)
- One USB port (Type B)
- Host indicator light
- USB indicator light

iDimension 200 is functioning correctly when all three lights are on and green.

1.3 Accessories

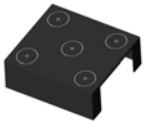
Part	Description
	Calibration Object
	Ethernet Cable
	Tools for assembling *iDimension 200*
	Power Cord – US Note Power is 110V/240 V but it may be necessary to supply a different cord for a specific country's plug requirements.

Table 1-1. Accessories

1.4 Cables

If using a USB cable to connect to a PC, or if using a separate cable for DC OUT, cables must be less than three meters long.

2.0 Operation

The *iDimension 200* administrator will have configured the unit for the environment it will be used in. As an operator, it is important to be aware of the following concepts.

2.1 Modes of Operation

2.1.1 Automatic Versus Manual Operation

iDimension 200 is configured to run in Automatic or Manual mode. The unit's configuration will depend upon the requirements and implementation of a company's application.

Note ***Do not hold the package in position, or place hands in the scanning area. The iDimension 200 may include the hand/arm as part of the dimensions.***

Automatic Operation

When *iDimension 200* is configured in Automatic mode, a scan of the item will start after the system has detected that all motion has stopped under the scanning head. When an item is placed on the scale or the base plate it can be re-positioned, but it will not scan until all motion has stopped.

Manual Operation

When configured in manual mode, motion detection has been turned off. There may be a button on the screen to select, which will start the scan, or a bar code scan may initiate the scan.

2.1.2 Operating with a Scale

When operating with a scale interfaced directly to the *iDimension 200*, follow the scale manufacturer's instructions for proper operation of the scale.

- Set the scale unit to metric or imperial.
- Before placing an item, ensure the scale is zeroed and settled.
- After placing an item on the scale, the weight reading must settle.

2.1.3 Operating iDimension 200 without a Scale

- Flats are not supported

2.1.4 Operating iDimension 200 with a Manual Roller Conveyor

The unit is able to scan items while mounted over a roller conveyor per the following:

- The item must stop under the scanning head while *iDimension 200* captures dimensions, bar codes and images.
- Items should be positioned under the scanning head one at a time; be sure the items are not too close together, or both items may be scanned incorrectly together.
- It is recommended that items are spaced about 1.5-4" apart; there should not be more than one item in the zone of interest.

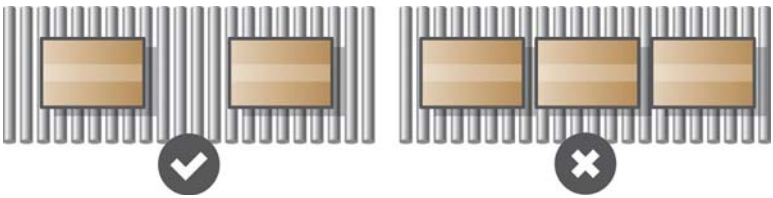


Figure 2-1. Items on Roller Conveyor

2.2 Measurement

When reporting dimensions of an item, it defines length, width and height as follows:

- Length – the longer of the two horizontal measurements
- Width – the shorter of the two horizontal measurements
- Height – the vertical measurement

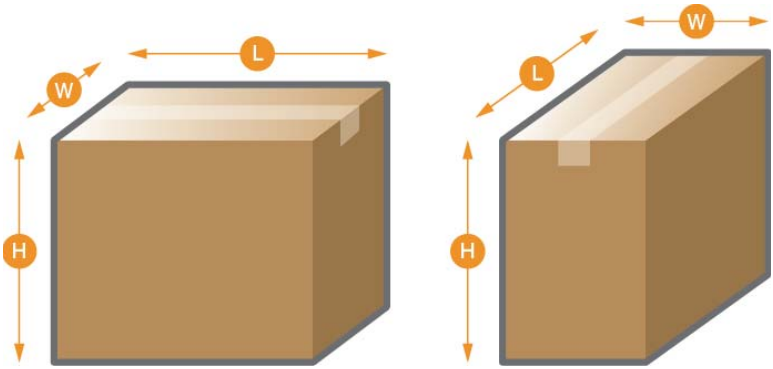
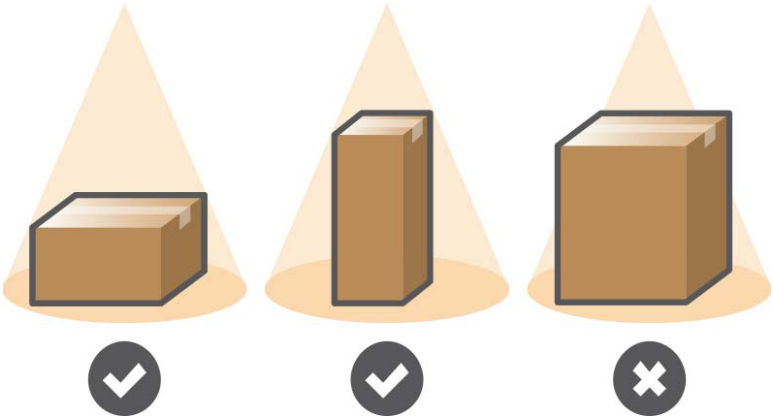


Figure 2-2. Object Measurements

2.3 Item Placement

When placing an item under the scanning head, do not worry about exact placement. In general, place an item anywhere under the scanning head, straight or at an angle. Best results will be obtained if the item is placed as centrally located as possible under the scanning head.



The maximum size of an item to be dimensioned varies due to the camera's field of view.

Note ***The zone of interest is typically the size of the scale. Any item that is not a least partially within the zone of interest will not be scanned.***

2.4 Zone of Interest

The zone of interest represents the detection area to be used for item dimensioning. Items must be placed at least partially within the zone of interest.

Note ***The zone of interest is typically the size of the scale. Any item that is not at least partially within the zone of interest will not be captured.***

2.5 Work Area

The work area represents the area around the base used for detecting motion. The system will wait until there is no motion detected before attempting to scan an item.

The work area also provides a maximum area for the detection of flats (items <2 inches in height); however, how flats are positioned within the work area is slightly different than parcel positioning.

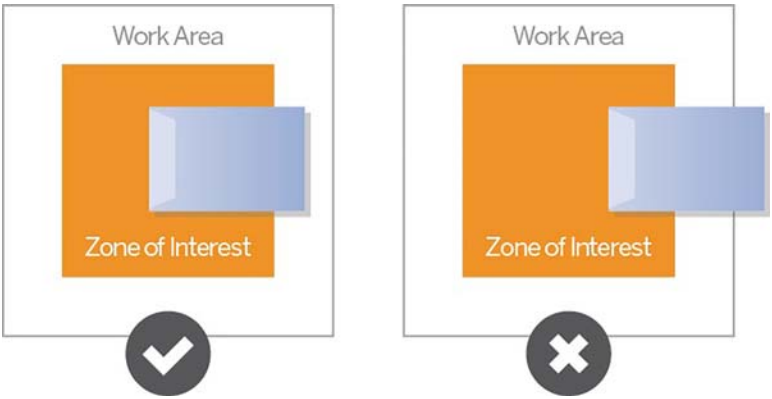


Figure 2-3. Flat Work Area

Important ***Figure 2-3 is for Flats only. Parcels will be dimensioned even if part of the item is outside of the work area.***

2.6 Environmental Conditions

2.6.1 Lighting

iDimension 200 is designed to work in most locations without having to use additional lighting. For best results in bar code scanning and imaging, the LUX value at the center of the scanning area should be 300 or higher. If only capturing dimensions, low lighting is not a factor.

In some cases, the image may appear under or over exposed. Use the “Image Quality” configuration tools in QubeVu Manager to adjust exposure settings. Alternatively, see the Administrator or call RLWS Customer Support for more information.

2.6.2 Table Color/Scale Platen

For best results capturing dimensions, it is recommended that the unit is positioned over a dark-colored table/scale platen. If the table/scale platen is not a dark color, it is recommended that a non-glossy, black mat is used to cover the scanning area.

When using a scale, the platen should be black for best results.

If scanning over a roller conveyor, color is not an issue.

2.6.3 Scale Placement

If using a scale, it should be placed on the base plate, centered on the marks. See Figure 2-4. During operations, the scale could move, so it is recommended that operators check the position of the scale before starting work each day.

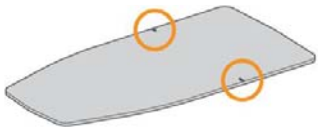


Figure 2-4. Base Plate Marks

2.7 Irregular Shapes

The Administrator has enabled the system to recognize both rectangular shapes and irregular shapes for dimensioning.

Table 2-1 shows some examples of how *iDimension 200* will measure shapes:

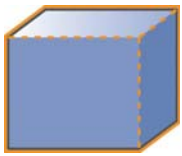
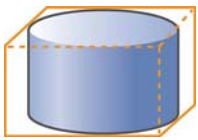
	Standard cube
	Cylinder

Table 2-1. Packaging Shapes

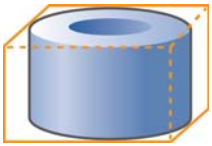
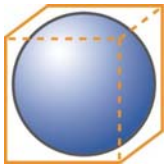
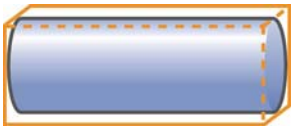
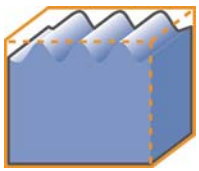
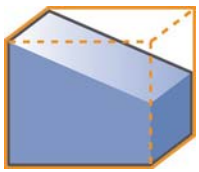
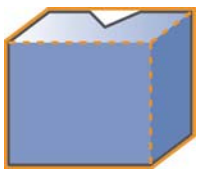
	Donut
	Sphere
	Polybag
	Tube
	Triangular tube
	Cube with an uneven top
	Cube with a sloped side
	Cube with 1 irregular side

Table 2-1. Packaging Shapes

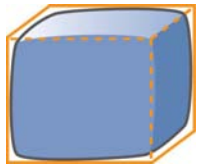
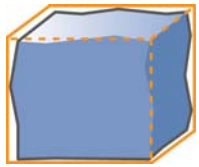
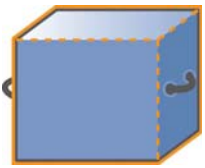
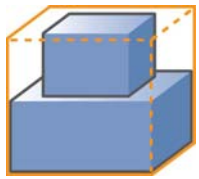
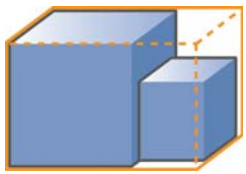
	Overstuffed cube
	Crumpled cube
	Cube with handles
	Cube on a cube
	Cube next to a cube

Table 2-1. Packaging Shapes

3.0 Appendix

3.1 Troubleshooting

3.1.1 iDimension 200 Is Not Responding

If not responding at all**:**

- Check that the power cable is connected to the rear panel and is properly plugged into a power outlet.
- Make sure that all three lights are lit on the rear panel.

If power is connected and all lights are on, restart your application.

If restarting the application does not resolve the problem, power cycle the *iDimension 200*.

- Locate the power switch on the rear of the base.
- Move the switch to the ***OFF*** (0) position for three seconds.
- Move back to the ***ON*** position.
- Wait until the three green lights are lit.
- Restart the application.

If neither of these actions is successful, contact RLWS Customer Support for additional help.

3.1.2 The Image Is Black

If the image is black, remove the cap from the scanning head.

3.1.3 Images Captured Arms

Be sure to move hands away from the scanning area after placing an item. If still having problems, ask the Administrator to review the configuration settings for ***Lock Motion*** and ***Motion Down***. Refer to the Administrator Reference Guide in Section 6 of the *iDimension 200* Installation Manual for more information.

3.1.4 Some Items Do Not Trigger Automatic Capture

If operating with a scale:

- Make sure the scale is registering a stable weight for the item.

If operating without a scale:

- Items less than 2 in high cannot be dimensioned.

3.1.5 Bar Codes Are Not Being Read

- Make sure that the item was placed under the scanning head with the bar code visible on top and within the imaging area.
- Confirm that the type of bar code being scanned is supported by the system. A list of supported bar codes is included in Section 3.2 on page 12.
- Confirm that the Administrator has defined the ***Capture Profile*** for the application, including the type of bar code being scanned.

3.2 Specifications

Physical Specifications

Height (with Standard Frame)	67 – 79 inches/170 cm – 200 cm
Base Dimensions	Length: 25.5 in/65 cm Width: 14in/36 cm
Weight (without Frame)	28 lb/13 kg

Operating Conditions

Indoor operating temperature	41° - 104° F (5° - 40°C)
Humidity	Non-condensing
Mechanical environment class	M1
Electromagnetic class	E1
Power	110V - 240V

Performance Specifications

Shape	LFT: Cuboid
	Non-LFT: Cuboid, irregular shapes
Accuracy	± 0.2 in (± 5 mm)
Maximum object size (LxWxH)	47.25 in x 31.5 in x 31.5 in object
	(120 cm x 80 cm x 80 cm object)
	31.5 in x 23.6in x 27.6 in object
	(80 cm x 60 cm x 70 cm object)
Minimum object size (LxWxH)	LFT: 4.7 in x 3.4 in x 2 in
	(12 cm x 10 cm x 5 cm)
	Non-LFT: 4.7 in x 3.4 in x single sheet of paper
	(12 cm x 10 cm x single sheet of paper)
Item position	Dimensions only: Any position
	OCR required: Any position with text and bar codes facing upwards
Object colors	All opaque packaging; some variances may occur with glossy surfaces or shrink wrap
Measurement surface	Level table, scale, roller or conveyor
	Background should have contrasting color from items to be dimensioned; also avoid overly polished or glossy surfaces

Interoperability

Scales	The following are supported:
	Mettler Toledo® Standard Protocol
	METTLER TOLEDO Standard Interface Command Set (MT-SICS)
	NCI Standard Protocol

	PENNSYLVANIA SCALE COMPANY® 7300 Scale USB HID Protocol
	External scale support via ScaleService web service interface

Other scales and interfaces can be supported; please contact RLWS Customer Support for custom quotes.

Communications

Communications interface	HTTP/HTTPS
	Tools are provided for setup, calibration and service.
Connectivity	3 USB A 1 USB B (unused) 1 – 10/100/1000BASE-T Ethernet

Technical Specifications

System requirements	Client computer with Ethernet connection.
	Customer applications can be integrated with *iDimension 200* using a web service interface.
	Configuration tool requires a JavaScript-enabled browser.
Bar codes	EAN 13, UPC-A and 2/5 digit extensions
	Code 128 and UCC/EAN-128 encoding
	Code 39
	Code 93
	EAN 8
	UPC–E
	UPC 2/5 digit extensions
	Interleaved 2 of 5
	Codabar
	Patch Codes
	PDF 417
	Datamatrix
	QR Code
Applications Interface	Web Services
	API documentation available

Regulatory Information

FCC

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Changes or modifications not expressly approved could void the user's FCC granted authority to operate the equipment.

iDimension 200 Limited Warranty

Rice Lake Weighing Systems (RLWS) warrants that all RLWS equipment and systems manufactured and sold by RLWS and properly installed by an authorized RLWS 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 one year.

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 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' 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.

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