

**HARDY LIFT DECK
FLOOR SCALES**

**INSTALLATION & OPERATIONS
MANUAL**

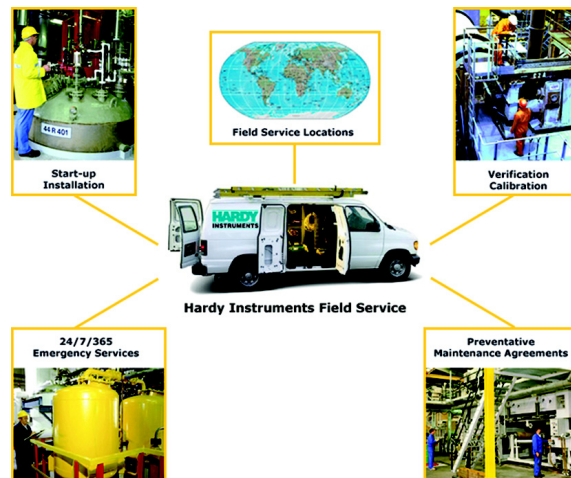


Corporate Headquarters

9440 Carroll Park Drive
San Diego, CA 92121
Phone: (858) 278-2900
FAX: (858) 278-6700
Email: hardyinfo@hardysolutions.com
Web-Site: <http://www.hardysolutions.com>

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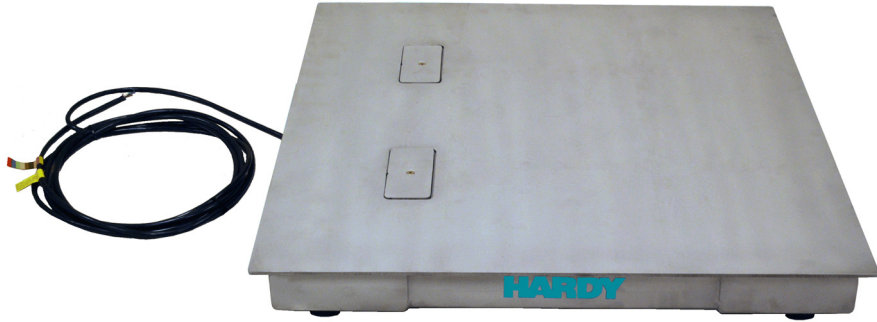
Hardy Service Center
Hardy Process Solutions
9440 Carroll Park Drive
San Diego, California 92121

Phone: (800) 821-5831
(858) 278-2900
FAX:(858) 278-6700

E-mail: hardysupport@hardysolutions.com
Web Address: www.hardysolutions.com

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Hardy Lift Deck Floor Scale with C2 and INTEGRATED TECHNICIAN

Table of Contents

Table of Illustrations - - - - - |

INTRODUCTION - - - - - 1

SPECIFICATIONS - - - - - 1

 Platform Material - - - - - 1

 Platform Height - - - - - 1

 Rated Output - - - - - 1

 Capacities - - - - - 1

 Excitation - - - - - 2

 Load Points - - - - - 2

 Total Error - - - - - 2

 Maximum Overload - - - - - 2

 End Loading - - - - - 2

 HI 6011 Summing Box Power Rating - - - - - 2

 Certifications - - - - - 2

 Temperature Range - - - - - 3

 Temperature Effect - - - - - 3

 Cable Length - - - - - 3

 Summing Card - - - - - 3

 Materials of Construction - - - - - 3

 Platform & Frame - - - - - 3

 Foot Elastomer - - - - - 3

 Grade Level - - - - - 3

 Accessories - - - - - 3

 NEMA Rating - - - - - 3

UNPACKING - - - - - 4

COMPONENT DESCRIPTIONS - - - - - 6

SITE PREPARATION - - - - - 7

 Precautions - - - - - 8

FLOOR SCALE INSTALLATION - - - - - 9

CALIBRATION - - - - - 12

 Pre-Calibration Procedures - - - - - 12

 C2® Electronic Calibration - - - - - 13

 Test Weight Calibration (Hard Cal) - - - - - 13

 Requirements: - - - - - 13

Table of Illustrations

Table of Illustrations

60 X 60 INCH LIFTS FROM CORNER - - - - -	4
36 X 36 INCH AND 48 X 48 INCH LIFTS FROM FRONT TO BACK. - - - - -	4
ACCESS THE LIFT DECK HANDLES, UNSCREW THE COVERS. - - - - -	5
SUMMING JUNCTION CARD - - - - -	6
DRIVING HEAVY EQUIPMENT ON AND OFF THE SCALE - - - - -	8
MAXIMUM HEIGHT - - - - -	8
SPIRIT LEVEL - - - - -	9
CHECKING PLATFORM LEVEL/SIDE TO SIDE - - - - -	9
CHECKING PLATFORM LEVEL/CORNER TO CORNER - - - - -	10
CHECKING PLATFORM LEVEL/DIAGONALLY - - - - -	10
ADJUSTING THE FEET FOR LEVEL - - - - -	11
WIRING THE SCALE TO THE WEIGHING INSTRUMENT- - - - -	12
SCALE VERIFICATION/POSITION #3 - - - - -	13
REMOVING THE SUMMING BOX COVER- - - - -	15
INSERTING THE LEVELING FOOT INTO THE LOAD SENSOR - - - - -	16
LEVELING FEET INSIDE VIEW- - - - -	17
LEVELING FEET OUTSIDE VIEW- - - - -	17
ALL FOUR FEET INSTALLED- - - - -	18
SUMMING CARD - - - - -	18
CABLE GLAND - - - - -	20
REMOVING LOAD SENSOR BOLTS AND FEET - - - - -	21
FOUNDATION FOR A PIT FRAME- - - - -	23
PIT FRAME DIMENSIONS- - - - -	24
DRAIN INSTALLATION DIMENSIONS - - - - -	25
EXCAVATED PIT AND SUPPORT FOR THE PIT FRAME - - - - -	25
RAMP WITH RETAINER PLATES - - - - -	27
INSTALLING ANCHORS FOR RAMP- - - - -	28

Hardy Lift Deck Floor Scales

Hardy Lift Deck Floor Scales

INTRODUCTION

Hardy Lift Deck Floor Scales are designed for applications that require a low profile weighing surface with high commercial accuracy and reliability coupled with the convenience of an easy to open and clean deck. They are certified for use in hazardous areas and are sealed for heavy washdown applications. Hardy Lift Deck Floor Scales can be configured with a complete range of accessories. Rugged Hardy Lift Deck Floor Scales are rated for 250,000+ load cycles under normal loading conditions.* They can be sized or configured to fit any floor scale application.

*Contact Hardy for more information

The typical platform height is 4.0 inches (10.2 cm). Each corner can be adjusted an additional 0.2" (5mm) to compensate for a non-level floor or pit mounting surface.

Hardy Lift Deck Floor Scales do not have bearings, levels or moving parts that can be damaged or wear out. The active elements of the floor scales are four precision Hardy load sensors, mounted in all four corners of the scale platform. This ensures that the load forces are always applied to the load sensor at precisely the same point regardless of where the load is placed on the scale. This ensures you will get accurate and repeatable weighments. The Summing Box is sealed for use in hazardous areas.

Each platform load sensor is initially certified for use in a C2[®] Electronic Calibration system.

SPECIFICATIONS

Platform Material	Brushed 304 stainless steel.
Platform Height	4.19 inches (10.2 cm) deck height adjustable 0.2 inches (5 mm)
Rated Output	2.0mV/V \pm 0.2%
Capacities	Comes in three sizes from 36 x 36, 48 x 48 and by 60 x 60 inches in 1, 2 and 5 thousand pound capacities

Hardy Lift Deck Floor Scales

Excitation 5 Volts DC

WARNING

FOR SCALES FITTED WITH AN INTEGRATED TECHNICIAN SUMMING CARD, DO NOT EXCEED 5 VDC EXCITATION. DOING SO MAY CAUSE PROPERTY DAMAGE. DO NOT USE WITH ANY INSTRUMENT WITH AN EXCITATION VOLTAGE ABOVE 5 VDC

Load Points

HARDY ADVANTAGE® Load Sensors

- IP69K rating for wash down applications
- C2® or manual calibration
- stainless steel and hermetically sealed
- blind hole loading

Total Error

Combined Error: 0.02%
Repeatability: 0.01%

Maximum Overload

100% of the Rated Scale Capacity

End Loading

100% of the Rated Scale Capacity

HI 6011 Summing Box Power Rating

5 VDC, Class 2 source, max. 50 mA

For Class I and II, Division 1 Hazardous (Classified) Locations, and Class 1, Zone 0 and 2 Groups IIC, Zone 20 and 22 Groups IIIC, power must be supplied to the summing box through approved intrinsically safe barriers per control drawing 0594-0010. (Available for download on the Hardy Floor Scales web page under Docs & Programs).

Certifications

- UL, CUL, CE
- RoHS and REACH Compliant
- **Hazardous Areas:** Class I, Division 1, Groups A, B, C, D, T4; Zone 0, Group IIC, T4; Division 2, Groups A, B, C, D, T5
- Class II, Division 1, Groups E, F, G, T4; Zone 20, Group IIIC; Division 2, Groups F, G, T5
- Class III, Division 1, T4; Division 2, T5

Hardy Lift Deck Floor Scales

Temperature Range	<ul style="list-style-type: none">• Compensated -10° to +40° Degrees C (14° to +104° F)• Allowable Operating Range -40 to +80 Degrees C (-40° to 176° Degrees F)
Temperature Effect	<ul style="list-style-type: none">• On Output - 0.0011% of load/Deg. C• On Zero - 0.0011% of FSO/Deg C
Cable Length	20 feet C2 Cable (6.096 meters)
NOTE:	<i>To purchase additional C2 Cable, contact our local Hardy Process Solutions Representative or Hardy Service Center.</i>
Summing Card	Summing Card Chassis <ul style="list-style-type: none">• NEMA 4x stainless steel enclosure Hardy 6011 Summing Card <ul style="list-style-type: none">• Individual load sensor terminal blocks• INTEGRATED TECHNICIAN® circuitry
Materials of Construction	
Platform & Frame	Stainless Steel: Type 304 plate steel (slip resistance - tread or brushed surface)
Foot Elastomer	Natural Rubber (Standard): Height adjustable for leveling
Grade Level	In operation, the scale must be firmly and adequately supported at all four corners to accommodate the maximum load in your application. The scale must be installed to within 3° of level.
Accessories	Access Ramps, Pit Frames, and Indicator Columns
NEMA Rating	Summing Junction Box Enclosure - NEMA 4x Stainless Steel

Hardy Lift Deck Floor Scales

UNPACKING

Hardy Lift Deck Floor Scales are shipped fully assembled and wired. Inspect the container for any signs of damage that might occur during shipment. Since almost all of the Floor Scales are shipped Ex Works, such damage is normally the responsibility of the carrier and should be reported to them.

- Step 1. Remove the banding straps and any shipping restraints.
- Step 2. Use a forklift or crane with rated lifting capacity that is equal to or greater than the total weight of the platform scale to lift the scale high enough to remove from the shipping pallet. See Tables 2 & 3 for shipping weights.
- Step 3. Be sure to use all safety precautions when lifting the platform so that it does not fall on equipment or personnel. It is highly recommended that blocks be placed under the platform before working near the platform scale.
- Step 4. The Hardy Lift Deck Floor Scale easily lifts from the front corners of the 36 x 36 and 48 x 48 inch. However, they are meant to be lifted from the corners and not the center. The 60 x 60 inch model features a two sided top and easily lifts from the center towards the outsides.

Hardy Lift Deck Floor Scales

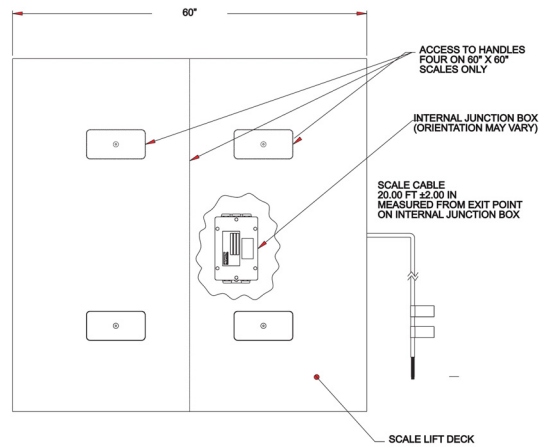


FIG. 1 - 60 X 60 INCH LIFTS UP FROM CENTER TOWARDS SIDES

LIFT DECK HINGE
36" X 36" AND
48" X 48"
SCALES ONLY



FIG. 2 - 36 X 36 AND 48 X 48 INCH DECK LIFTS FROM FRONT TO THE BACK.

- Step 5. If the scale will be installed in a pit frame where the corners are not accessible, use the provided handles to lift the deck. Unscrew the access plates to reach the handles. There are two access plates for the smaller scales and four in the 60 x 60 inch model.

Hardy Lift Deck Floor Scales



FIG. 3 - TO ACCESS THE LIFT DECK HANDLES, UNSCREW THE COVERS.

COMPONENT DESCRIPTIONS

1. **Steel Plate Platform** - The platform material is 304 stainless steel. The 304 stainless steel platform is made from a single piece of 1/4" brushed stainless steel or diamond tread (Conforms to ASTM A793-85) floor plate (skid resistant) for 36" x 36" or 48" x 48" models and two pieces for 60 x 60 inch models.
2. **Junction Box Chassis** - The HI 6011 Summing Card box comes pre-configured with the load cells installed and the box sealed. It is not normally required to open the Junction Box Chassis for any reason. If for some reason you need to access the inside of the box, unfasten the face plate on the center side of the platform. (See Fig.4) The summing junction card routes the excitation voltage to each of the four load sensors and sums the weight signal back from them. Hardy C2[®] electronic calibration is included with your scale.

For Class I and II, Division 1 Hazardous (Classified) Locations, and Class 1, Zone 0 and 2

Hardy Lift Deck Floor Scales

Groups IIC, Zone 20 and 22 Groups IIIC, power must be supplied to the Summing Box through approved intrinsically safe barriers per control drawing 0594-0010. (Available for download on the Hardy Lift Deck Floor Scales webpage under Docs & Programs).

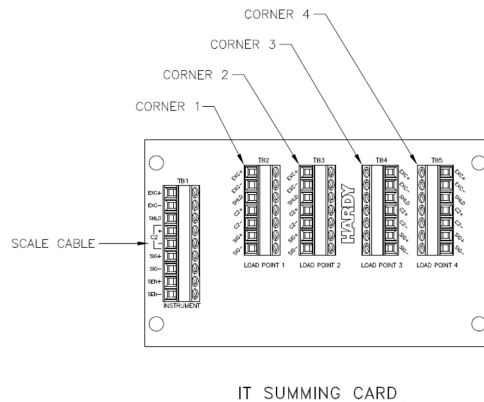


FIG. 4 SUMMING CARD

- Load Sensors** - The Hardy series scales use four (4) stainless steel Advantage[®] load sensors with hermetic seals. The output of each sensor is 2mV/V with 5 Volts DC excitation. They are connected via the HI 6011 summing card to provide one weight reading distributed across the entire deck. For more specifications see the electrical specification section of this manual.
- INTEGRATED TECHNICIAN™** - Built-in system diagnostics utility, continuously monitors the weighing system for possible malfunctions. This capability also allows the operator to rapidly troubleshoot the weighing system from a Hardy controller or indicator.
- Leveling Feet** - Each Hardy series scale comes with four (4) rubberized adjustable leveling feet. The leveling feet are adjustable to a maximum of 5 mm (.2"). The leveling feet are attached to each of the load sensors.

Hardy Lift Deck Floor Scales

SITE PREPARATION

- All mounting surfaces for the floor scale should be level to within 3°, corner to corner, end to end. Keep in mind that the adjustable leveling feet have a maximum adjustment of 5mm (.2").
- For Class I and II, Division 1 Hazardous (Classified) Locations, and Class 1, Zone 0 and 2 Groups IIC, Zone 20 and 22 Groups IIIC, power must be supplied to the Summing Box through approved intrinsically safe barriers per control drawing 0594-0010. (Available for download on the Hardy Lift Deck Floor Scales web page under Docs & Programs).
- Before welding anything onto the Lift Deck Floor Scale, contact Hardy Service Center for instructions and precautions.
- Proper drainage must be provided to prevent the load sensors from standing in water.

Precautions

- Do not do any electric welding on or near the platform scale.
- Do not drop items to be weighed on the scale. Set them carefully on the platform scale.
- Do not set items on the platform scale that weigh more than the capacity of the scale.
- Do not store or operate the scale in environments out of the specified temperature range.
- Do not store other equipment on the scale even temporarily when it is not used or in storage.
- Do not allow debris to accumulate on, around or under the scale.
- Do not set the scale in water or allow water to accumulate around the scale. Always provide proper drainage.
- Do not let moisture get on or into any of the electrical interconnections.
- Do not allow static or other electrical discharges go through the scale.
- Do not leave the screws for the summing junction box chassis cover loose so that the

Hardy Lift Deck Floor Scales

junction chassis is not sealed. Use a 5.5 mm hex wrench or a 5.5 mm hex socket to tighten them to 10 in-lbs.

- Do not drop the scale when moving or installing.
- When driving heavy equipment on and off the scale for weighing purposes, make sure that you drive onto and off of the platform in the direction indicated in Figure 5. Also See Access Ramp Installation Section.

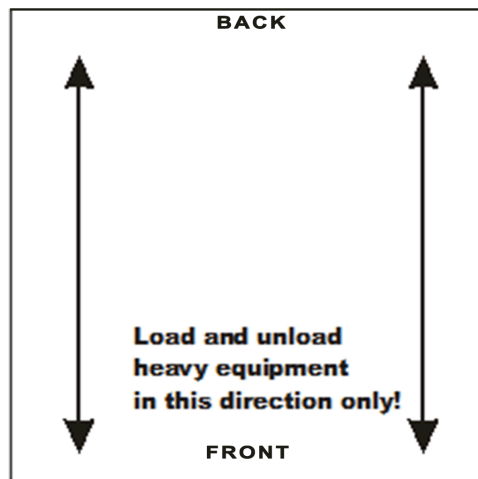


FIG. 5 - DIRECTION WHEN DRIVING HEAVY EQUIPMENT ON AND OFF THE SCALE

FLOOR SCALE INSTALLATION

- Step 1. Place the platform scale on the operating location. Make sure that the platform height is within 4.19 to 4.44" (10.6 to 11.2 cm) as measured from the top of the cover plate to the top of the floor surface.

NOTE:

With the scale in place, the clearance around the edge of the platform and pit coping should be 1/4" to 3/8".

Hardy Lift Deck Floor Scales

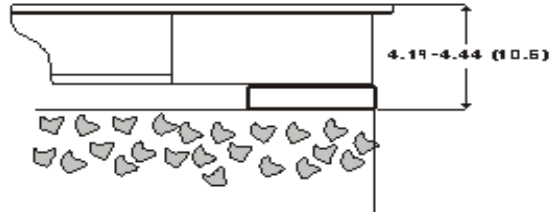


FIG. 6 MAXIMUM HEIGHT

- Step 2. Make sure that the platform mounting surface is level to 1/8".
- Step 3. Use a level (Spirit level, Bullseye level or similar) to check if the platform is level, side to side, corner to corner and diagonally. (See Figs. 7, 8, 9, 10)

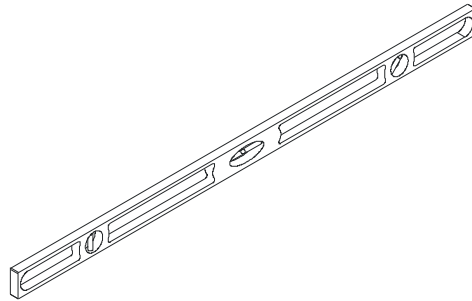
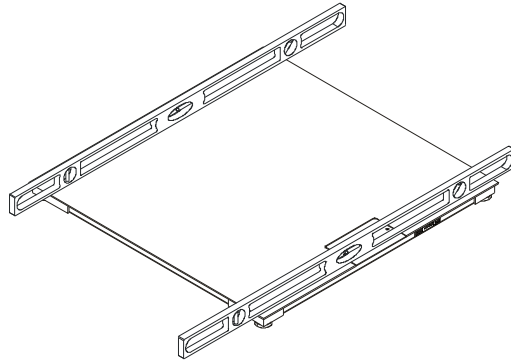
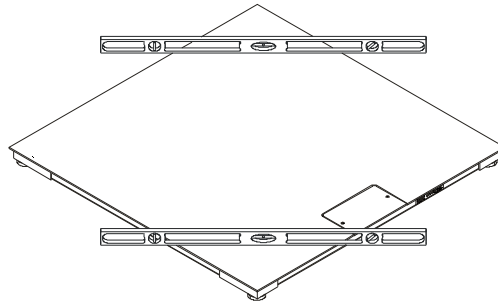


FIG. 7 SPIRIT LEVEL

Hardy Lift Deck Floor Scales

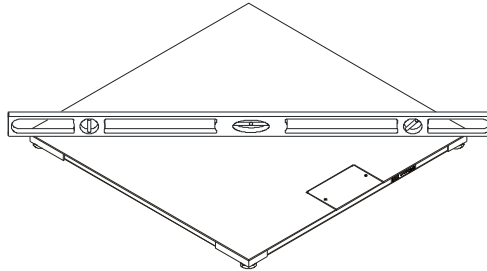


**FIG. 8 CHECKING PLATFORM LEVEL/SIDE
TO SIDE**



**FIG. 9 CHECKING PLATFORM LEVEL/COR-
NER TO CORNER**

Hardy Lift Deck Floor Scales



**FIG. 10 CHECKING PLATFORM LEVEL/
DIAGONALLY**

Step 4. Adjust each of the leveling feet in the direction (either up or down), indicated by the level readings. (See Fig. 11)

- To increase the height rotate the foot counter clockwise.
- To decrease the height rotate the foot clockwise.

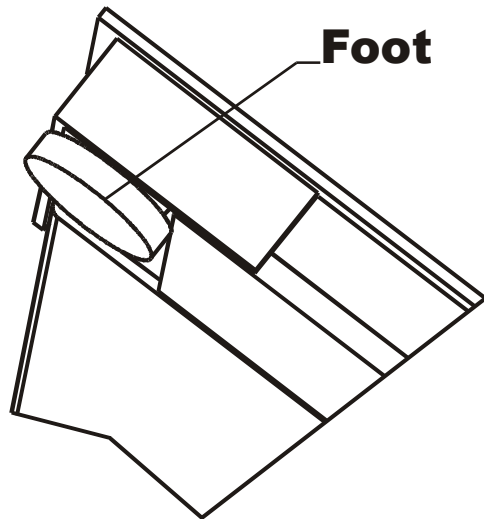


FIG. 11 ADJUSTING THE FEET FOR LEVEL

Hardy Lift Deck Floor Scales

- Step 5. Place the spirit level on the platform surface again to check the adjustment for level. Keep adjusting the legs until the platform is level and all four leveling feet are firmly on the floor surface.
- Step 6. Check the distance from the top of the platform to the floor surface at each corner. All the measurements should be within 3° of each other and the platform should be level.

CALIBRATION

Pre-Calibration Procedures

- Step 1. Connect the C2 Certified Summing Card Interface Cable to the weight instrument. Color code wires as follows:
- Step 2. Use the weight instrument/indicator manual for calibration instructions.

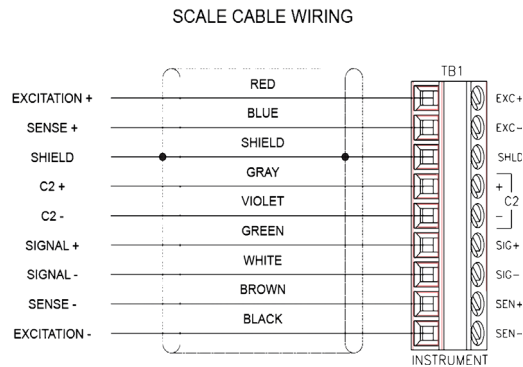


FIG. 12 - WIRING THE LIFT DECK FLOOR SCALE TO THE WEIGHING INSTRUMENT

NOTE:

To purchase C2[®] certified cable, contact your local Hardy Representative or the Hardy Process Solutions Service Center.

C2[®] Electronic Calibration

Definition - C2[®] electronically calibrates a scale system without the need for test weights. This feature is built into all Hardy weight or rate controllers, and in the Hardy weight modules for Rockwell PLCs.

Hardy Lift Deck Floor Scales

The set of four matched Advantage[®] Load Cells built into the Hardy Lift Deck Floor Scale include C2[®]. Refer to the Hardy weight or rate controller or the Rockwell PLC module manual for complete calibration instructions.

Test Weight Calibration (Hard Cal)

Requirements:

- Test weight calibration requires the use of certified class 'F' test weights equal to a minimum of 80% of the rated scale capacity.
- Three weights between 10% and 100% of the scale capacity should be used to check the mid range.
- Several low capacity weights equivalent to one or two instrument divisions are required to check the systems' sensitivity.

Material Substitution:

- When certified test weights are not available you can use an accurately weighed material instead.
- The material must be weighed on a secondary, calibrated scale and delivered to the site of the primary floor scale for calibration.
- The secondary calibrated scale should be of the same accuracy or greater and have a capacity approximately equal to the primary floor scale.

SCALE VERIFICATION

- Step 1. Get a test weight that is equal to 10% of the full scale capacity.
- Step 2. Place the test weight at Position #1 on the platform. (See Fig. 13)

Hardy Lift Deck Floor Scales

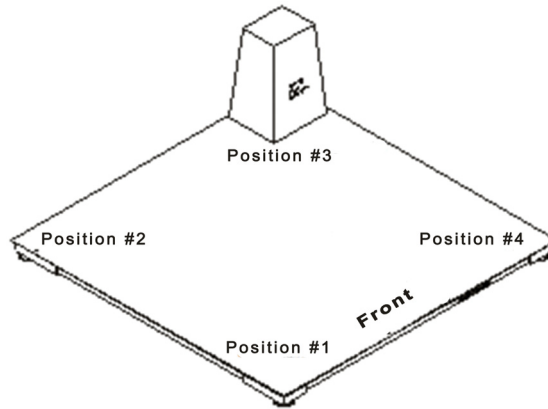


FIG. 13 SCALE VERIFICATION/POSITION #3

- Step 3. Write down the weight for position #1.
- Step 4. Place the weight at position #2.
- Step 5. Write down the weight for position #2.
- Step 6. Place the weight at position #3.
- Step 7. Write down the weight for position #3.
- Step 8. Place the weight at position #4.
- Step 9. Write down the weight for position #4.
- Step 10. Check all the readings. If all the readings are within an acceptable tolerance, no re-calibration is required.
- Step 11. If all the readings are not within an acceptable tolerance contact the Hardy Process Solutions Service Center.

MODEL PART NUMBERS

Stainless Steel Deck (304 SS)

Tread Plate Stainless Steel Deck	Smooth Stainless Steel Deck	CAPACITY		Overall Size		Ship Wght
		LBS	KGS	Feet	CM	LBS (KGS)
HIFSLD-3636-01-SS-T	HIFSLD-3636-01-SS-S	1000	454	3' x 3'	91 x 91	290 (131.5)

Table 1: Hardy Lift Deck Floor Scale Models

Hardy Lift Deck Floor Scales

Tread Plate Stainless Steel Deck	Smooth Stainless Steel Deck	CAPACITY		Overall Size		Ship Wght
MODEL	MODEL	LBS	KGS	Feet	CM	LBS (KGS)
HIFSLD-3636-02-SS-T	HIFSLD-3636-02-SS-S	2000	907	3' x 3'	91 x 91	290 (131.5)
HIFSLD-3636-05-SS-T	HIFSLD-3636-05-SS-S	5000	2268	3' x 3'	91 x 91	290 (131.5)
HIFSLD-4848-01-SS-T	HIFSLD-4848-01-SS-S	1000	454	4' x 4'	122 x 122	440 (199.6)
HIFSLD-4848-02-SS-T	HIFSLD-4848-02-SS-S	2000	907	4' x 4'	122 x 122	440 (199.6)
HIFS-4848-05-SS-T	HIFS-4848-05-SS-S	5000	2268	4' x 4'	122 x 122	440 (199.6)
HIFS-6060-01-SS-T	HIFS-6060-01-SS-S	1000	454	5' x 5'	152 x 152	695 (315.2)
HIFS-6060-02-SS-T	HIFS-6060-02-SS-S	2000	907	5' x 5'	152 x 152	695 (315.2)
HIFS-6060-05-SS-T	HIFS-6060-05-SS-S	5000	2268	5' x 5'	152 x 152	695 (315.2)

Table 1: Hardy Lift Deck Floor Scale Models

Hardy Lift Deck Floor Scales

REMOVING SUMMING BOX COVER

NOTE:

The HI 6011 Summing box is pre-wired and sealed. You should only remove the cover if you need access to the load cell cabling and only then if you are replacing a load cell.

- Step 1. Use a 5.5 mm hex wrench or a 5.5 mm hex socket to loosen the 8 hex bolts that fasten the summing box cover to the chassis (See Fig. 14).

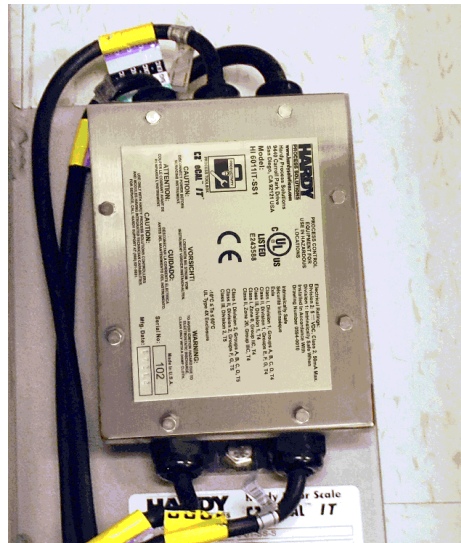


FIG. 14 REMOVING THE SUMMING BOX COVER

- Step 2. Gently pull the frame cover off of the enclosure. You now have access to the summing junction card and C2 Certified Cable as shipped.
- Step 3. To close, be sure to carefully re-fasten all eight bolts to preserve the NEMA 4X rating and water tightness of the summing box. A proper seal is also required to retain

Hardy Lift Deck Floor Scales

the Hazardous Area Certification. Use a 5.5 mm hex wrench or a 5.5 mm hex socket to tighten them to 10 in-lbs.

Installing the Leveling Feet

- Step 1. Remove the lock bolt and nut from the leveling foot.
- Step 2. With the scale raised and securely blocked, insert the leveling foot into the load sensor. Make sure the through hole in the foot is aligned with the bottom through hole on the load sensor. (See Fig. 15)

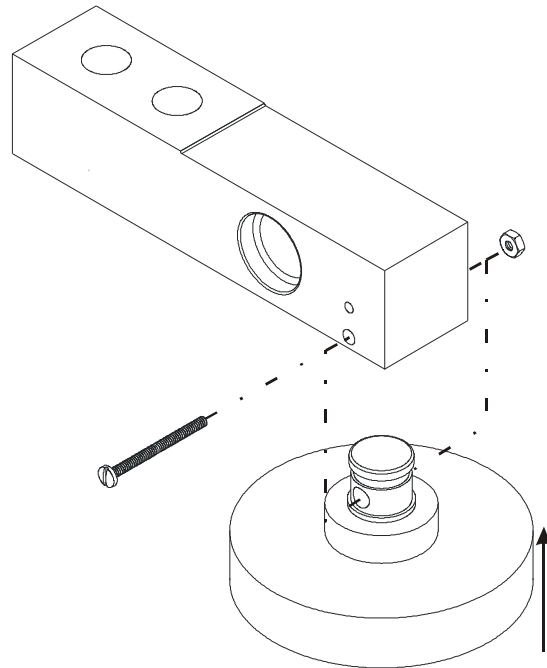


FIG. 15 INSERTING THE LEVELING FOOT INTO THE LOAD SENSOR

NOTE:

You may need to push with a little force due to some interference caused by the O-ring that is attached to the foot. DO NOT USE A HAMMER OR TRY TO DRIVE THE FOOT INTO THE HOUSING.

Hardy Lift Deck Floor Scales

- Step 3. With the through holes aligned, insert the lock bolt going from the center of the scale outward. This eliminates having to remove the load sensors when installing the lock bolt.
- Step 4. Screw the nut onto the lock bolt until it is tight. The feet should look like the following: (See Figs. 16 & 17)

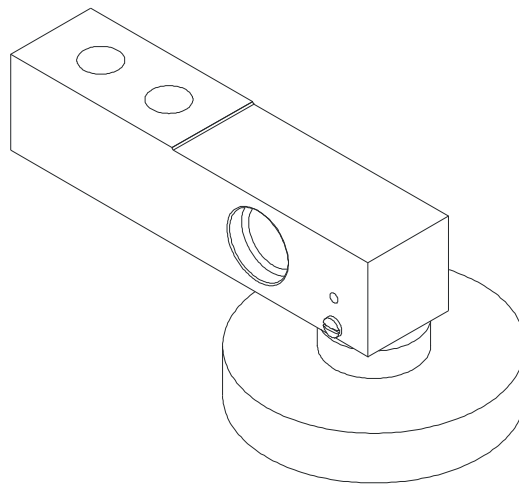


FIG. 16 INSIDE VIEW

Hardy Lift Deck Floor Scales

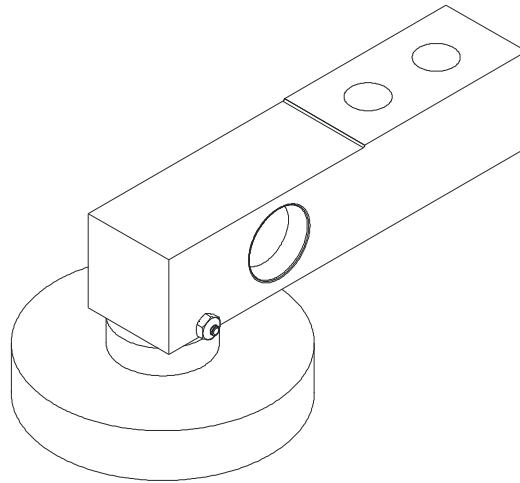


FIG. 17 OUTSIDE VIEW

Step 5. Install all four (4) feet. (See Fig. 18)

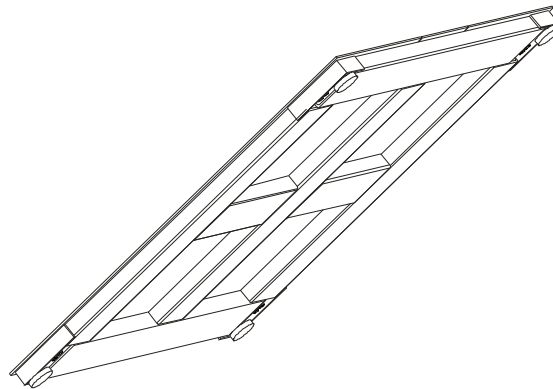


FIG. 18 ALL FOUR FEET INSTALLED

REPLACING A LOAD SENSOR

- Step 1. Shut all power off to the floor scale.
- Step 2. To gain access to the Summing Card follow the instructions above. You do not have to remove the summing card or the

Hardy Lift Deck Floor Scales

bottom of the Junction box to install a new load sensor. (See Fig. 19)

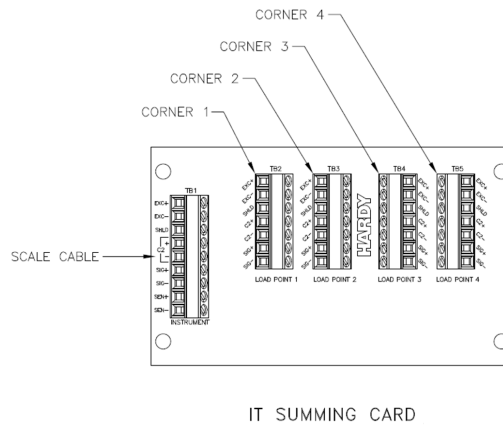


FIG. 19 SUMMING CARD

Load Sensor #	Connector
Load Sensor #1	TB2
Load Sensor #2	TB3
Load Sensor #3	TB4
Load Sensor #4	TB5
Scale Cable to Instrument	TB1

Table 2: Summing Card Load Sensor Connectors

Step 3. Use a small slotted head screw driver to disconnect the Load Sensor cable. It is a good idea to mark the wires if the wire markers have been removed. Color code wires are shown in Fig. 20.

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We recommend the use of C2 cable from the weighing instrument to the junction box. Note the color codes for C2 load points (left to right facing the rear panel). Match the load sensor's color coding to ease trouble shooting.

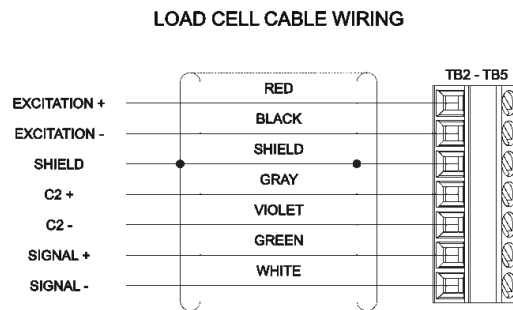


FIG. 20 C2 WIRING COLORS

- Step 4. Loosen the cable gland nut for the load sensor cable you want to remove. (See Fig. 21)

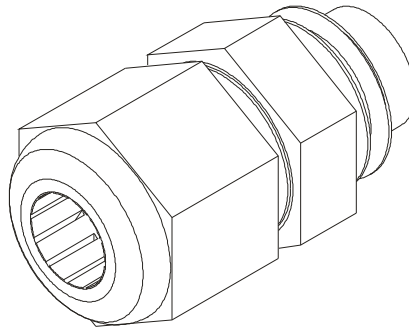


FIG. 21 CABLE GLAND

- Step 5. From the load sensor pull the cable out of the junction box and through the channel until all the cable has been removed.
- Step 6. Use the closed eye bolts and chain, cable or nylon strapping to lift the floor scale

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high enough to remove the load sensor or turn the scale completely over and let the top plate rest on blocks for easier access to the feet.

- Step 7. Block the floor scale adequately so that the platform will not drop on any machinery or personnel.
- Step 8. Remove the lock bolt on the load sensor foot you are removing. Store in a safe place so that you don't forget to install it.
- Step 9. Pull the load sensor leveling foot out of the load sensor.
- Step 10. Use a socket wrench and remove the two bolts that fasten the load sensor to the mount.
- Step 11. Lift the load sensor out of the housing.

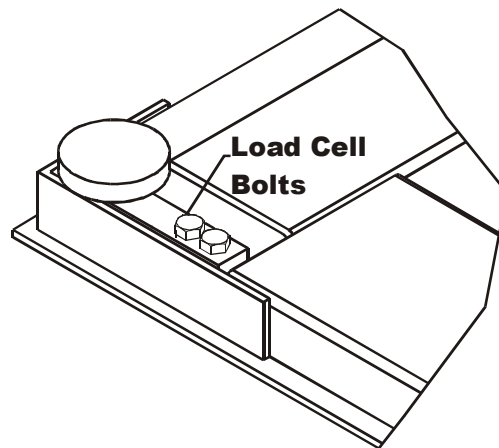


FIG. 22 REMOVING LOAD SENSOR BOLTS AND FEET

- Step 12. Place the new load sensor so that the through bolt holes are aligned with the threaded mounting holes and in the same direction as the old load sensor. DO NOT CUT OR REUSE THE OLD CABLE ON THE NEW LOAD SENSOR.

Hardy Lift Deck Floor Scales

- Step 13. Screw in the two (2) load sensor bolts that fasten the load sensor to the mount. Tighten the bolts finger tight.
- Step 14. Use a Torque Wrench and tighten the bolts to the torque rating in Table 3. It is a good idea to switch back and forth between each bolt until the torque value has been reached.

BOLT	Grade	Torque
.500 - 20 UNC (2.25 inches long)	5	65 Ft/Lbs (90 Nm)

Table 3: Torque Specifications for Load Sensor Bolts

- Step 15. Run the load sensor cable through the channel to the summing box. Bundle up any excess cable and store it in the channel. **DO NOT CUT THE CABLE TO MAKE IT FIT BETTER.** If you cut the cable, you will not get correct readings from the load sensors.
- Step 16. Reconnect the cable wires according to the color code in Step 3 to the correct load sensor connector.
- Step 17. Replace the Summing Box Chassis cover using the 8 hex screws and a 5.5 mm hex wrench or a 5.5 mm hex socket. Tighten the hex screws to 10 in-lbs.

WARNING

LOAD CELL CABLE LENGTH HAS BEEN CALCULATED INTO C2 CALIBRATION DATA. HARDY RECOMMENDS THAT YOU DO NOT CUT YOUR ADVANTAGE LOAD SENSOR CABLE, AS YOUR C2 ACCURACY WILL BE AFFECTED AND THE WARRANTY WILL BE VOIDED.

Hardy Lift Deck Floor Scales

OPTIONAL PIT FRAMES

About Pit Frames

The pit frame optional accessory is a one-piece welded unit with no additional welding required. This accessory is designed for in-floor or 'flush' applications. In general, a hole is cut in the concrete, the pit-frame accessory is installed in the hole, then concrete is poured around and under the frame. Once cured, the scale platform is set into the frame and installation can be completed.

Standard duty frames are available in stainless steel for all the Hardy Lift Deck Floor Scale sizes. The concrete work and frame setting is usually done by a contractor, with a scale technician completing the project by setting and installing the scale.

- A soil bearing pressure of at least 1,000 lbs per square foot is required. The corner pier should be designed to support at least two thirds of the total capacity of the scale.
- A 3/4" diameter conduit for the scale interface cable is recommended. The pit frame is arranged with a 1 1/8" diameter hole for a cable exit. Locate the conduit to match the hole location.

Step 1. Place the pit frame in the approximate position it will occupy on the floor. (See Fig. 24)

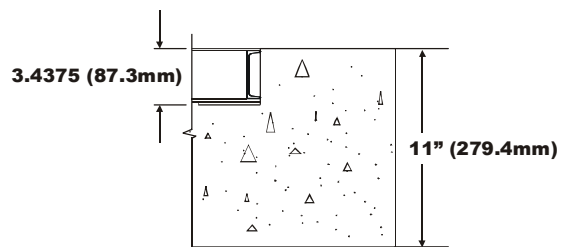


FIG. 23 FOUNDATION FOR A PIT FRAME

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Step 2. Mark out the position of the hole to be made. The hole MUST be a minimum of 12" larger than the pit frame on all sides. (See Fig. 24)

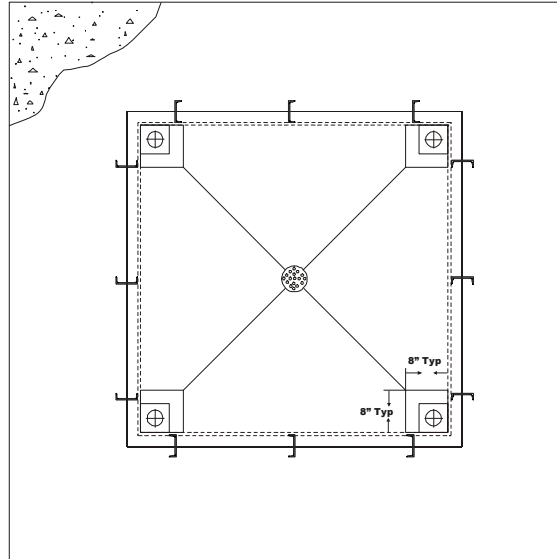


FIG. 24 PIT FRAME DIMENSIONS

Model Number	Platform Size	Platform Size CM	Material
HIFSLDPF-3636-SS	36in x 36in	91cm x 91cm	Stainless Steel
HIFSLDPF-4848-SS	48in x 48in	122cm x 122cm	Stainless Steel
HIFSLDPF-6060-SS	60in x 60in	152cm x 152cm	Stainless Steel

Table 4: Pit Frame Stainless Steel/Model Numbers and Dimensions

Step 3. Should pit drainage be required, slope the pit floor to an installed drain while maintaining a level area at each corner. (See Fig. 25)

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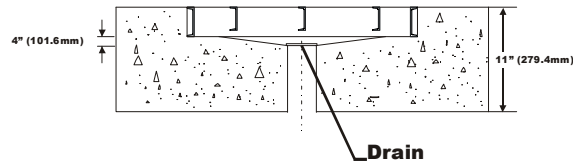


FIG. 25 - DRAIN INSTALLATION DIMENSIONS

- Step 4. The drain hole will have to be deep enough to accommodate the pit coping, plus the thickness of the pit floor. (See Fig. 25)

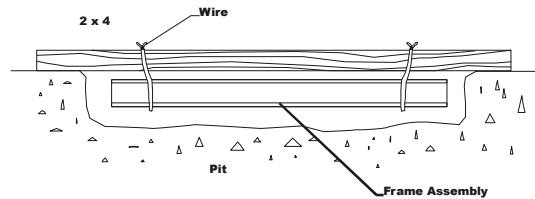


FIG. 26 - EXCAVATED PIT AND SUPPORT FOR THE PIT FRAME

- Step 5. Set the frame in the hole supported at about the correct height.
- Step 6. Set two 2 x 4's on edge (longer than the width of the hole) across the opening. (See Fig. 26)
- Step 7. Use soft wire and make 2 loops by twisting wire around each 2 x 4 and the frame
- Step 8. With the frame supported by the wire and 2 x 4's, use a spirit level to set the frame flush with the surrounding floor, level the frame to within 1/8", corner to corner, side to side and diagonally, and at the correct height by twisting or untwisting the wires. (See Fig. 26)
- Step 9. Use the correct concrete specifications:

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- At least 6” thickness of concrete is required for pit floor in Non-Hostile applications.
- At least an 11” concrete floor with a minimum of 3” bottom slope is required if drainage is required for hostile applications. A 4” drain is highly recommended.
- Make sure the conduit for the scale cable is in place and secured into the frame opening.
- Pour the concrete around and under the frame ensuring a smooth and level finish. It is recommended that f = 3500 psi and 3” to 4” slump concrete be used.
- If a drain is required, form the pit to place a slope in the pit floor to the drain. (See Fig. 23)
- Cure to a minimum of 2000 psi before pulling the interface cable through the conduit.

Step 10. Pull the interface cable through the conduit.

OPTIONAL ACCESS RAMPS

Optional access ramps are available in stainless steel, with smooth or diamond tread floor plate. All ramps are forty-eight inches (48") (122 centimeters) long in the direction of travel and provide a 5° degree incline. The first two digits of the model number after

Model Number	Platform Size	Platform Size CM	Material
HIFSLDR-3648-SS-S	36 x 48	91 x 122	Stainless Steel
HIFSLDR-4848-SS-S	48 x 48	122 x 122	Stainless Steel
HIFSLDR-6048-SS-S	60 x 48	152 x 122	Stainless Steel
HIFSLDR-3648-SS-T	36 x 48	91 x 122	Stainless Steel
HIFSLDR-4848-SS-T	48 x 48	122 x 122	Stainless Steel
HIFSLDR-6048-SS-T	60 x 48	152 x 122	Stainless Steel

Table 5: Access Ramp Model Numbers

HIFSLDR denotes the scale size compatible with Ramps or Bumper Guards. For example, HIFSLDR-

Hardy Lift Deck Floor Scales

3648-SS-S would be compatible with the 36" side of the scale. HIFSLDR-6048-SS-T would fit a 60" side of the scale.

Access Ramp Installation

- Step 1. Determine which side of the floor scale you want the access ramp to be placed. Consider the location of the pit frame, the hinges for the lift deck and the direction of the top when it is lifted. Each ramp accessory comes with two integral foot retainer plates and four anchors.
- Step 2. Place the ramp in position, then lift and set the platform feet into the foot retainer plate holes. (See Fig. 28)

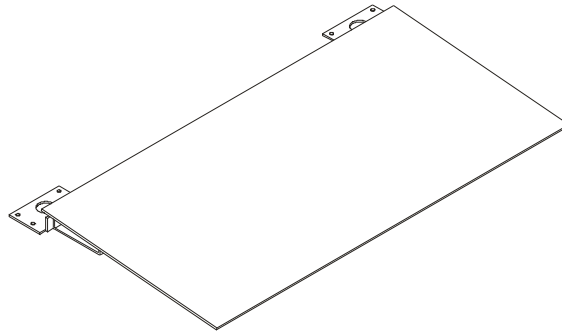


FIG. 27 RAMP WITH RETAINER PLATES

- Step 3. Drill the two (2) outer holes using a hammer drill. (See Specifications/Anchor Bolt Holds above for hole dimensions)
- Step 4. Insert the anchor bolts with the nut and washer already ON. (See Fig. 26)

Hardy Lift Deck Floor Scales

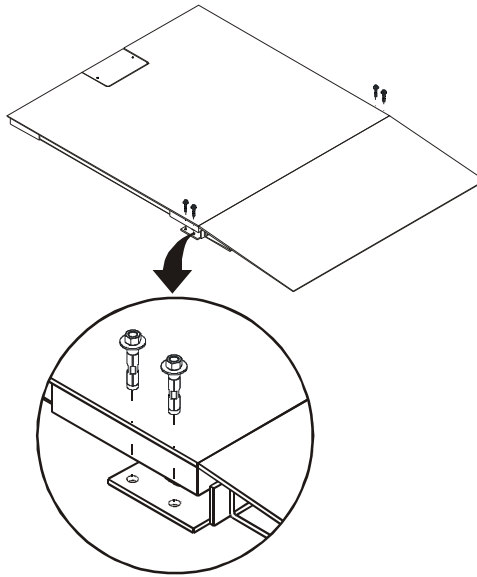


FIG. 28 INSTALLING ANCHORS FOR RAMP

- Step 5. Tap the anchor bolt into the hole then tighten the nuts securely.
- Step 6. Lift the Platform out and away from the foot retainer plate.
- Step 7. Drill the two (2) inner holes using a hammer drill. (See Specifications/Anchor Bolt Holds above for hole dimensions)
- Step 8. Insert the anchor bolts with the nut and washer already ON.
- Step 9. Tap the anchor bolts into the hole then tighten the nuts securely
- Step 10. Note the following:
- If two ramps are installed, NO other foot retainer plates are needed
 - If one ramp is installed then a set of two foot retainer plates are needed.
 - Only two ramps total may be installed on opposite sides of a scale platform.

Hardy Lift Deck Floor Scales

Optional Indicator Column

Many Floor Scale installations require the weight to be displayed DIRECTLY at the scale. An Indicator column allows the site to mount an instrument directly by the scale for ease of reading.

Hardy Floor Scales feature an optional 4 ft. Indicator column for mounting a Hardy controller or weight processor directly next to the floor scale. The indica-

Indicator Model Number	Height	Height in CM	Material
HIFSI-48-SS	48 inches	91 cm	Stainless Steel

tor column must be bolted to the floor in such a way that it does not interfere with the platform when it is lifted.

NOTE:

To purchase optional equipment for the Hardy Floor Scales, contact your local Hardy Representative or Hardy Process Solutions Service Center.

TROUBLESHOOTING

1. Check all cables to be sure that they have no cracks, cuts or crimps. Check for broken cables.
2. Check for loose fitting connections.
3. Look for the presence of moisture at all connections and under or near the summing junction box cover.
4. Look for structural changes in the platform scale and supporting structures.
5. Periodically check to see if the platform is level.

Problem: Scale does not respond when a weight is placed on the platform.

Cause #1: Packing material or debris wedged or built up underneath the platform

Cause #2: Platform scale is not wired correctly to the weighing instrument.

Cause #3: Weigh Process Controller Malfunction

Hardy Lift Deck Floor Scales

Remedies:	<ul style="list-style-type: none">• Carefully lift the platform high enough to safely remove the built up debris.• Check for loose connections or broken wires.• Check the wiring color code to be sure that the wires are routed correctly. If they are not wired correctly change the wiring until it is correct.• Check the Weighing Instrument Manual for trouble shooting instructions.
Problem:	Scale indication is not linear.
Cause #1:	Packing material or debris wedged or built up underneath the platform
Remedy #1:	<ul style="list-style-type: none">• Carefully lift the deck and safely remove the built up debris.• Check for loose connections or broken wires.
Cause #2:	Weighing instrument or floor scale is not calibrated.
Remedy #2:	<ul style="list-style-type: none">• Re-calibrate either the weight instrument or the floor scale or both.• Check for corrosion on the electrical connections.
Problem:	The scale reading drifts or is erratic.
Cause #1:	Corrosion or moisture in the electrical connections.
Remedy #1:	<ul style="list-style-type: none">• Check to see that the summing junction box is tightly fastened.• Check to see that the gaskets and seals are not cracked or damaged.• Remove the wires and clean any corrosion from the connectors and exposed wire.• For high humidity areas, place a desiccant packet in the summing junction card enclosure.
Cause#2:	High voltage wires close to the load sensor cable.
Remedy #2:	Move the high voltage wires away from the load sensor cable.

Hardy Lift Deck Floor Scales

Cause #3: Instrument or floor scale improperly grounded (i.e. one or both not connected to earth ground).

Remedy #3: Make sure that the weigh instrument and the floor scale platform cover are both connected to earth ground.

Cause #4: High static electricity present.

Remedy #4: Install a ground strap from the floor scale platform cover to earth ground.

WARNING

DO NOT CONNECT THE GROUND STRAP NEAR OR ON THE LOAD SENSORS. THEY ARE GROUNDED THROUGH THE SUMMING JUNCTION BOX. TO DO SO WILL DAMAGE THE LOAD SENSORS.

Hardy Lift Deck Floor Scales

Hardy Lift Deck Floor Scale Index

Numerics

304 stainless steel platform 1-5

A

About Pit Frames 1-22

acceptable tolerance 1-14

Access Ramp Installation 1-27

Accessories 1-3

Active elements 1-1

Allen Bradley module manual 1-12

B

Block the floor scale 1-20

Bundle 1-22

C

C2 Certified Summing Card Interface Cable 1-11

C2® Second Generation Calibration 1-12

C2® Second Generation Calibration system 1-1

Cable Length 1-2

Calibration 1-11

Certifications 1-2

Color code wires 1-19

Commercial accuracy 1-1

Component Descriptions 1-5

Conduit 1-23

Cord grip nut 1-19

Corner to corner 1-6

Cure 1-26

D

Diamond tread floor plate 1-26

E

End to end 1-6

Endloading 1-2

Excitation 1-1

Hardy Lift Deck Floor Scales

F

Floor Scale Installation 1-8

Foot Elastomer 1-3

Forklift 1-3

G

Grade Level 1-3

H

Hammer drill 1-27

Hardy Lift Deck Floor Scales 1-1

Hardy Instruments Service Center 1-7

Hardy weight or rate controller manuals 1-12

Hex Wrench 1-15

Hostile applications 1-26

I

Increase the height 1-10

Inner holes 1-28

Installing A Load Sensor 1-18

Installing the Leveling Feet 1-15

INTEGRATED TECHNICIAN™ 1-6

L

Level readings 1-10

Leveling Feet 1-6

Load forces 1-1

Load sensor bolts 1-21

Load Sensors 1-6

Loops 1-25

M

Material Substitution 1-13

Maximum Overload 1-2

Model Code Breakdown 1-14

Hardy Lift Deck Floor Scale Index

N

Natural Rubber 1-3
NEMA 4X 1-3
NEMA Rating 1-3
Non-Hostile applications 1-26
Non-level floor 1-1
Nylon strapping 1-20

O

Optional Bumper Guards 1-29
Optional Pit Frames 1-22

P

Pit coping 1-25
Pit drainage 1-25
Pit floor 1-25
Pit mounting surface 1-1
Platform Height 1-1
Platform Material 1-1
Position 1-13
Power Rating for Summing Box 1-2
Pre-Calibration Procedures 1-11
Precautions 1-7
Proper drainage 1-7

R

Rated lifting capacity 1-3
Repeatable weighments 1-1
Requirements 1-12

S

Safety precautions 1-3
Scale platform 1-22
SCALE VERIFICATION 1-13
SITE PREPARATION 1-6
Slotted head screw driver 1-19
Socket wrench 1-20

Hardy Lift Deck Floor Scales

Soft wire 1-25
Soil bearing pressure 1-22
Spirit level 1-9
Steel Plate Platform 1-5
Summing card 1-18
Summing Card Assembly 1-5

T

Temperature Effect 1-2
Temperature Range 1-2
Test weight calibration 1-12
Test Weight Calibration (Hard Cal) 1-12
Torque Wrench 1-21
Total Error 1-2
Troubleshooting 1-29

U

Unpacking 1-3

W

Welding 1-7