2888

DECKMATE® Floor Scale

Installation and Service Manual

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10/96

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STANDARD WARRANTY: Model 2888 Deckmate®

Mettler Toledo warrants that the equipment covered by this warranty will be free from defects in workmanship and materials for a period of two years from date of installation or twenty six (26) months from date of shipment to the buyer, whichever comes first.

Should any such defects be found and reported during the first thirty (30) days after installation (if installation occurs during the warranty period), Mettler Toledo (herein referred to as the "Company"), will, at its option, refund the purchase price or correct such defects furnishing replacements parts and service free of charge to the buyer. For the remainder of the first 12 months of the warranty term, the Company will furnish necessary replacement parts and on site technician's service free of charge, provided the Buyer agrees to pay reasonable technician's travel time, vehicle mileage, and associated travel expenses to and from the nearest authorized Company service location. For last 12 months or remaining balance of the warranty period, whichever comes first, the Company will furnish the necessary replacement parts to the Buyer free of charge provided that the Buyer agrees to pay reasonable technician's on site labor services, travel time, mileage and expenses to and from the nearest authorized Company service location. The following are NOT covered under any of these warranties:

1) Initial installation and ongoing scale calibration.

2) Damage to scale components by gross abuse, fire, flooding, explosion, water, voltage surges, or civil disturbance.

3) Normal maintenance or consumable items.

This warranty covers only the Model 2888 Deckmate ® floor scale understructure. Refer to Mettler Toledo Standard Product Warranty for coverage of other scale system components including scale instrument, printer, and/or other accessories.

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This warranty coverage is only applicable to the United States of America. Consult Mettler Toledo for Export Warranty Terms and Conditions.

APPLICATION GUIDES

The only warranty of Mettler Toledo is for the product it supplies under the Product Warranty Statement listed above. Weighing application guidelines pertain to Mettler Toledo products.

Declaration of conformity

Konformitätserklärung
Déclaration de conformité
Declaración de Conformidad
Verklaring de overeenstemming
Dichiarazione di conformitá

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1150 Dearborn Drive
Worthington, Ohio 43085
USA

declare under our sole responsibility that the product,
erklären, in alleiniger Verantwortung, daß dieses Produkt,
déclarons sous notre seule responsabilité que le produit,
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dichiariamo sotto nostra unica responsabilitá, che il prodotto,

Type: **Analog Load Cells**

Models: **744 and 745** **(when used within the technical requirements listed in Test certificate TC2154 and installed as a Load receptor as listed in Type approval certificate T2206, Table 4.)**

to which this declaration relates is in conformity with the following standard(s) or other normative document(s).
auf das sich diese Erklärung bezieht, mitder/den folgenden Norm(en) oder Richtlinie(n) übereinstimmt.
Auquel se réfère cette déclaration est conforme à la (aux) norme(s) ou au(x) document(s) normatif(s).
Al que se refiere esta declaración es conforme a la(s) norma(s) u otro(s) documento(s) normativo(s).
Waarnaar deze verklaring verwijst, aan de volende norm(en) of richtlijn(en) beantwoordt.
A cui si riferisce questa dichiarazione è conforme alla/e sequente/i norma/e o documento/i normativo/i.

CE Conformity / CE-Konformität / Conformité CE
90/384/EU Nonautomatic Balances and Scales / Nichteselbsttätige Waagen / Balances à Functionnement non automatique
Article 1.2.a.

Other Directives and Standards / Andere Richtlinien und Normen / Autres documents
corresponding to local requirements / entsprechend lokalen Anforderungen / correspondant aux exigences locales

R60	OIML International Recommendation , Metrological regulation for load cells
EEx ib IIC T4	el. Safety / el. Sicherheit / s , curit , el. (PTB Nr. Ex-95.D.2051)

Darrell Flocken, Manager - Weights & Measures
Office of Weights and Measures
Worthington, Ohio USA
September, 1996

according to EN45014

INTRODUCTION

This publication is provided as a guide for the trained technician for installing, calibrating, and servicing the 2888 Deckmate. Repair or adjustment by unauthorized persons voids the METTLER TOLEDO warranty.

For information regarding your METTLER TOLEDO distributor, Sales, and Service location, please contact:

METTLER TOLEDO
6600 Huntley Road
Columbus, Ohio 43229
(614) 841-7300

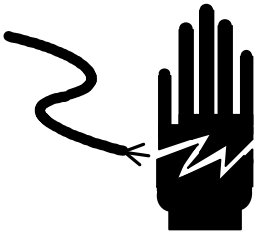
ORDERING INFORMATION

It is most important that the correct part number is used when ordering parts. Parts orders are machine processed, using only the part number and quantity as shown on the order. Orders are not edited to determine if the part number and description agree.

METTLER TOLEDO RESERVES THE RIGHT TO MAKE REFINEMENTS OR CHANGES WITHOUT NOTICE.

PRECAUTIONS

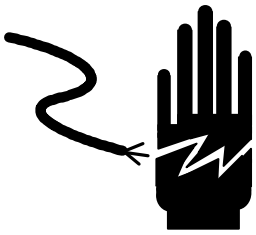
READ this manual BEFORE operating or servicing this equipment.



WARNING

ONLY PERMIT QUALIFIED PERSONNEL TO SERVICE THIS EQUIPMENT. EXERCISE CARE WHEN MAKING CHECKS, TESTS AND ADJUSTMENTS THAT MUST BE MADE WITH POWER ON. FAILING TO OBSERVE THESE PRECAUTIONS CAN RESULT IN BODILY HARM.

FOLLOW these instructions carefully.

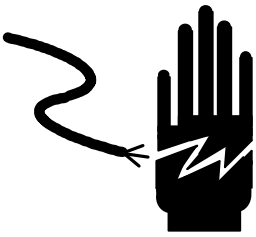


WARNING

FOR CONTINUED PROTECTION AGAINST SHOCK HAZARD CONNECT TO PROPERLY GROUNDED OUTLET ONLY.

DO NOT REMOVE THE GROUND PRONG.

SAVE this manual for future reference.



WARNING

DISCONNECT ALL POWER TO THIS UNIT BEFORE REMOVING THE FUSE OR SERVICING.

DO NOT allow untrained personnel to operate, clean, inspect, maintain, service, or tamper with this equipment.

CAUTION

BEFORE CONNECTING/DISCONNECTING ANY INTERNAL ELECTRONIC COMPONENTS OR INTERCONNECTING WIRING BETWEEN ELECTRONIC EQUIPMENT ALWAYS REMOVE POWER AND WAIT AT LEAST THIRTY (30) SECONDS BEFORE ANY CONNECTIONS OR DISCONNECTIONS ARE MADE. FAILURE TO OBSERVE THESE PRECAUTIONS COULD RESULT IN DAMAGE TO OR DESTRUCTION OF THE EQUIPMENT OR BODILY HARM.

ALWAYS DISCONNECT this equipment from the power source before cleaning or performing maintenance.

CAUTION

OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES.

CALL METTLER TOLEDO for parts, information, and service.

CONTENTS

Chapter 7: Troubleshooting

Chapter 8: Service Parts

Chapter 9: Reference Material

1 Specifications

General Description

The model 2888 Deckmate ® floor scale is a fully electronic low profile floor scale suited for top-of-floor drum weighing application. Specifications include:

- Platform Size— 30 in. x 30 in. x 1.31 in. (76.2 cm x 76.2 cm x 3.3 cm) deck with " live" side rails
- Gross Capacity—1,000 lb (500 kg)
- 4 Load Cells—500 lb each
- End Loading — 1,000 lb (500 kg)
- Standard Support Frame or Portable Assembly

Power Supply Requirements

Load cell power supply is provided by the Mettler Toledo Digital Indicator.

Accuracy

Model 2888 Deckmate floor scales meet or exceed the National Institute of Standards and Technology (NIST) Handbook 44 requirements for Class III 5000 divisions.

Model /Ram Numbers

Model	Standard Platform 30 In x 30 In (76.2 Cm X 76.2 Cm), 1,000 Capacity	Shipping Weight (lb)
2888002001	Mild Steel Tread Plate Deck.	125
2888012001	Mild Steel Smooth Plate Deck	125
2888022001	Stainless Steel Tread Plate Deck	125
2888032001	Stainless Steel Smooth Plate Deck	125

Model	Portable Assembly 30 in x 30 in (76.2 cm x 76.2 cm), 1,000 Capacity	Shipping Weight (lb)
2888 P02001	Mild Steel Tread Plate Deck.	325
2888 P12001	Mild Steel Smooth Plate Deck	325
2888 P22001	Stainless Steel Tread Plate Deck	325
2888 P32001	Stainless Steel Smooth Plate Deck	325

Load Cells

Four 500 lb Stainless Steel Hermetically Sealed Load Cells are provided in all 2888 Deckmate platforms, which allow for a 100 % end loading (loading across either end of the scale) of 1,000 lb / 500 kg. Each cell is complete with an integral 4-conductor, shielded, color coded cable and attached to a stainless steel junction box. The load cell suspension utilizes a stainless steel rocker pin between the cell and a fixed receiver in the frame (see Figure 1-a).

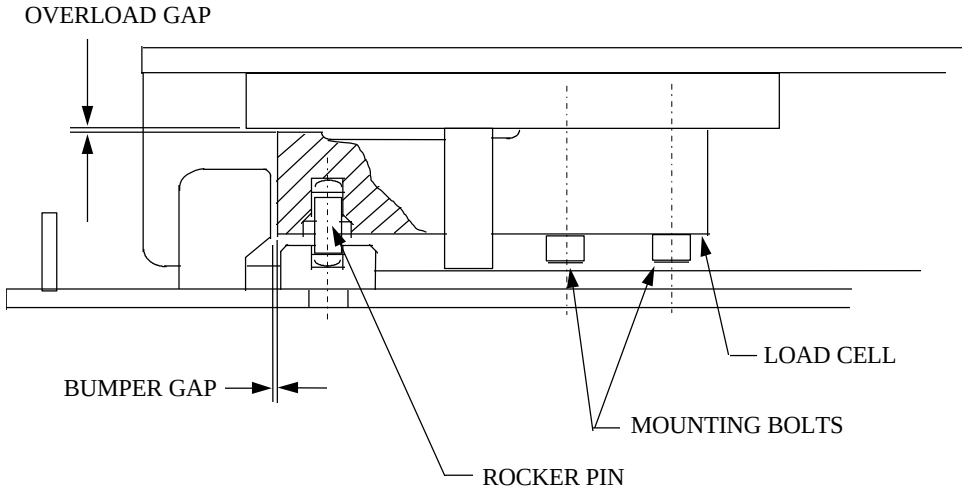


Figure 1-a: Load Cell Suspension Detail

Platform Assembly

Deckmate scales utilize a channel reinforced deck with “live” side rails design, which provides mounting for the four load cells, protection for the load cell cables, and mounting for the junction box. The platform is available in mild steel or stainless steel with either tread or smooth plate deck. The stainless steel platform with smooth plate deck has a glass bead blast finish (see Figure 1-b).

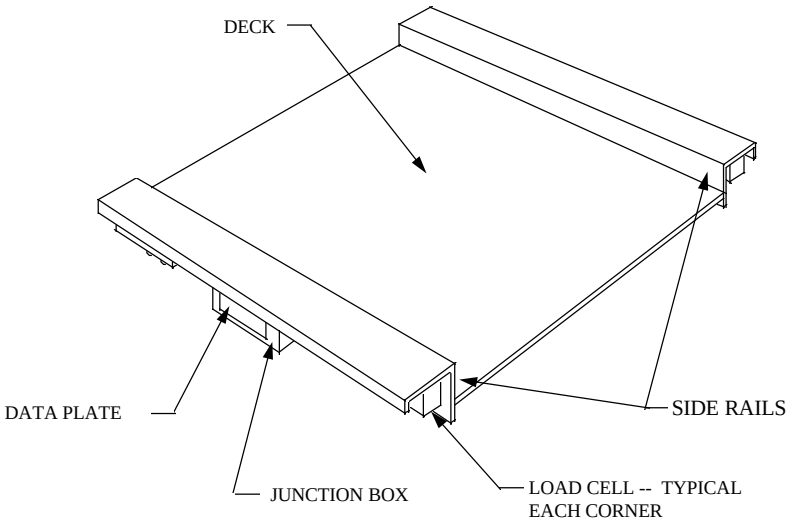


Figure 1-b: Platform Assembly

Support Frames

"Standard Platform"

Standard Deckmate platforms utilize a support frame under the platform for maintaining position of the platform. (see Figure 1-c). The model 2888 platforms are used for top-of-floor installations and can be used with optional ramps for access to one or both ends of the platform (see Figure 1-c).

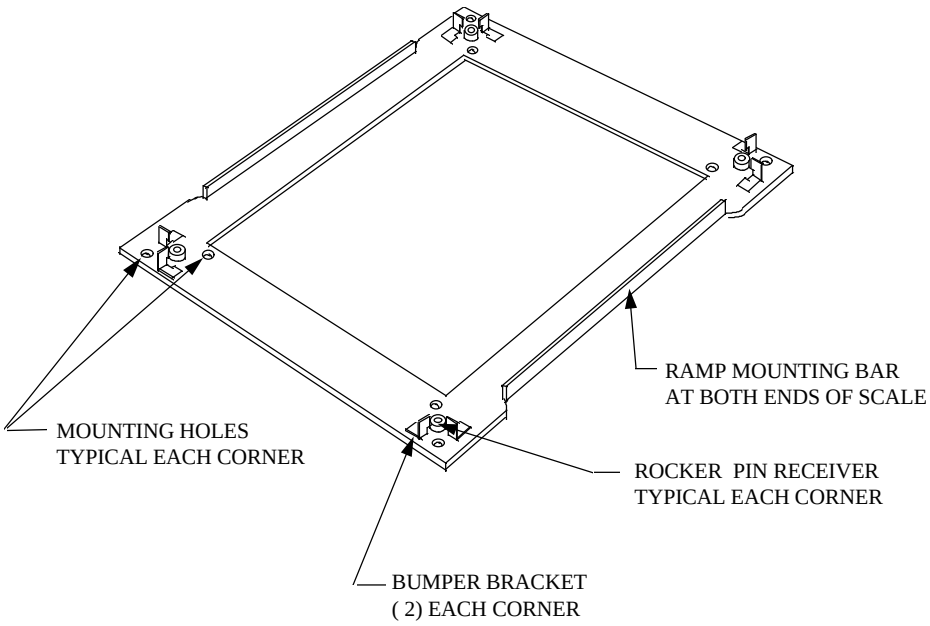


Figure 1-c: Support Frame

Portable Assembly

The support frame for the portable assembly provides support for the 2888 platform and the ability to easily move the platform from one weighing location to another. (see Figure 1-d).

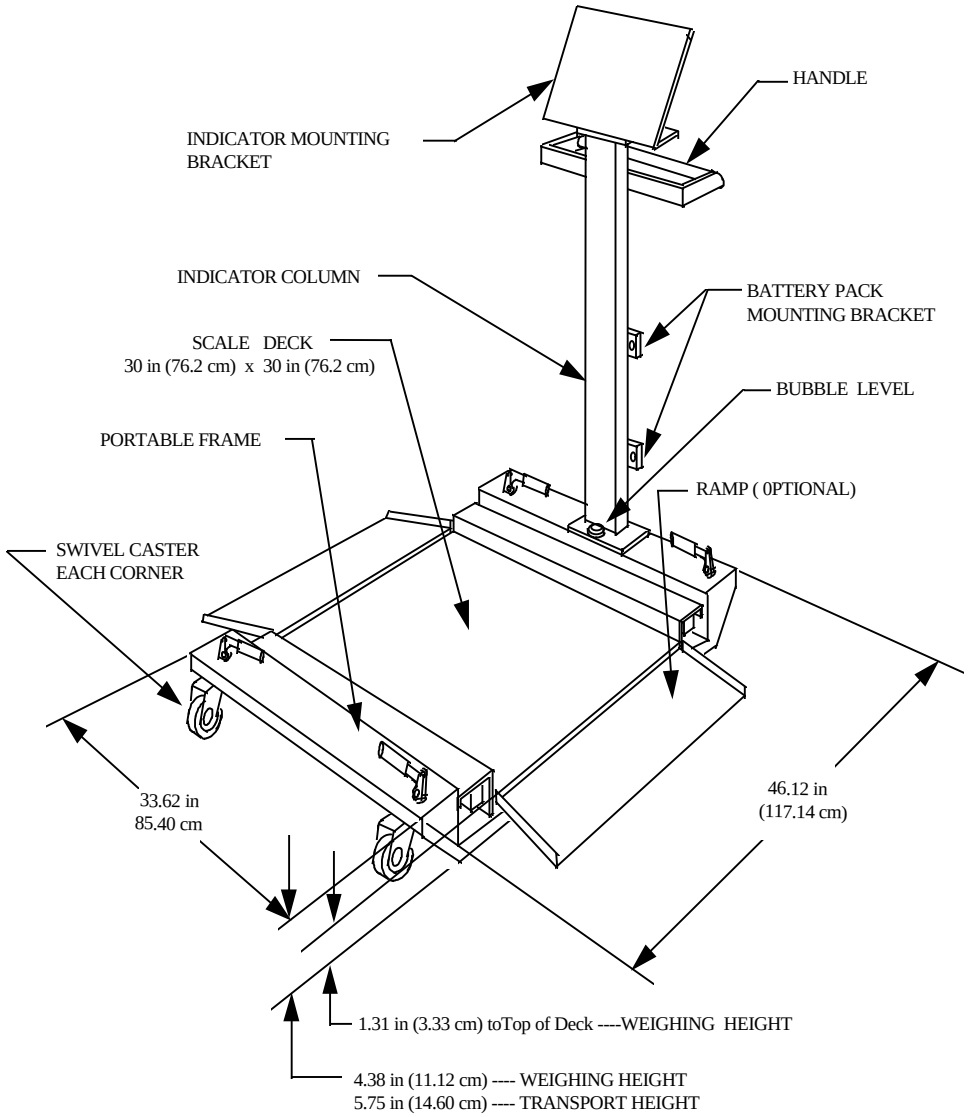


Figure 1-d: Portable Platform

Access Ramps

Mild Steel and Stainless Steel access ramps are available for the model 2888 floor scales. The access ramps will provide access to the scale deck from one or both ends of the platform. The ramps for the static scale platform are attached to a mounting bar located at the ends of the platform. The ramps for portable assembly are hinged to allow the ramps to fold up over the deck when moving the platform.

Model Number	Standard Platform Ramp 30 In (76.2 Cm) Ramp Width	Ramp Angle	Shipping Weight (Lb)
88-110001	6 in (152 mm) Lg. Mild Steel Tread Plate	11.6°	15
88-110002	6 in (152 mm) Lg. Mild Steel Smooth Plate	11.6°	15
88-110003	12 in (305 mm) Lg. Mild Steel Tread Plate	5.8°	25
88-110004	12 in (305 mm) Lg. Mild Steel Smooth Plate	5.8°	25
88-110101	6 in (152 mm) Lg. Stainless Steel Tread Plate	11.6°	15
88-110102	6 in (152 mm) Lg. Stainless Steel Smooth Plate	11.6°	15
88-110103	12 in (305 mm) Lg. Stainless Steel Tread Plate	5.8°	25
88-110104	12 in (305 mm) Lg. Stainless Steel Smooth Plate	5.8°	25

Model Number	Portable Assembly Ramp 30 In (76.2 Cm) Hinged Ramp Width	Ramp Angle	Shipping Weight (Lb)
88-130001	12 in (305 mm) Lg. Mild Steel Tread Plate	5.8°	25
88-130002	12 in (305 mm) Lg. Mild Steel Smooth Plate	5.8°	25
88-130003	18 in (457 mm) Lg. Mild Steel Tread Plate	3.8°	30
88-130004	18 in (457 mm) Lg. Mild Steel Smooth Plate	3.8°	30
88-130101	12 in (305 mm) Lg. Stainless Steel Tread Plate	5.8°	25
88-130102	12 in (305 mm) Lg. Stainless Steel Smooth Plate	5.8°	25
88-130103	18 in (457 mm) Lg. Stainless Steel Tread Plate	3.8°	30
88-130104	18 in (457 mm) Lg. Stainless Steel Smooth Plate	3.8°	30

2 Inspection and Site Selection

Inspection

Upon delivery of the 2888 DECKMATE, visually inspect the scale for any damage which may have occurred during shipment and handling. Inspect the following areas:

1. Platform assembly for any damage
2. Load cell and suspension assemblies
3. Load cell cables
4. Load cell summing junction box
5. Overall platform assembly

If any damage is noted, contact your freight carrier immediately.

Site Selection

Many problems associated with floor scale installations are caused by improper site conditions. Before installing the scale, check the proposed location for the following conditions:

- Is the floor or support at the location of the scale level?
- Is the floor/support at each corner of the scale area able to maintain support throughout the entire weighing capacity of the scale?
- Is there proper drainage away from the scale area?
- Are there any heavy vibrations or wind currents present at or near the scale?

3 Installation

Locate

Place the 2888 Deckmate in the desired location after inspecting the site per Chapter 2 of this manual.

Remove Platform

Remove scale platform from the frame by lifting the platform straight up from the frame.

Anchor Frame

Locate the anchor holes in all four corners of the frame. There are a total of 8 anchor holes (2 per corner). (see Figure 3-a).

Drill the anchor holes using the frame as a guide. Eight 1/2"-13 UNC x 1-1/2" long flat head socket cap screws are required to secure the frame to floor. The 1/2" anchors and 1/2-13 flat head screws are to be provided by others or can be purchased from Mettler Toledo. Drill anchor holes to a diameter and depth per the supplier's instructions.

All corners of the frame must be in contact with the floor and be level within plus or minus 1/16". If the scale is out-of-level or gaps exist between the frame and floor, shimming is required.

Corner shims (1/16" thick) can be purchased from Mettler Toledo or fabricated using Figure 3-b as a guide.

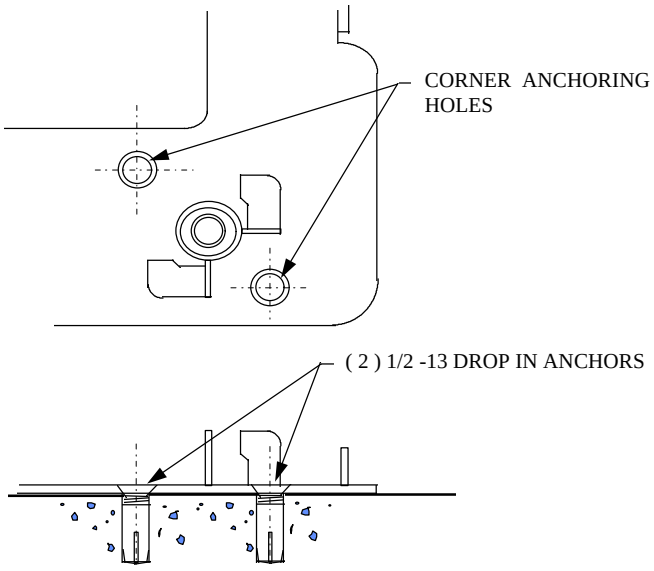


Figure 3-a: Frame Anchoring - Typical Each Corner

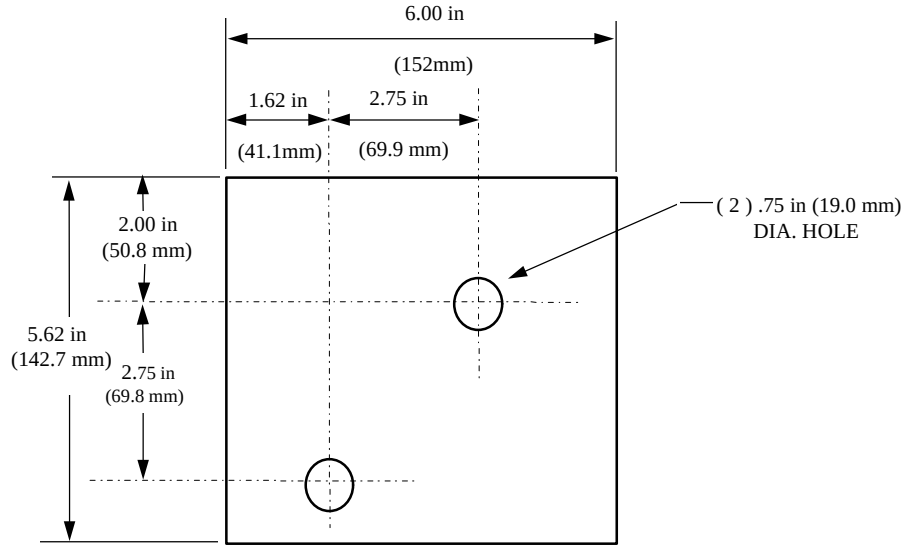


Figure 3-b: Leveling Shim Detail

Junction Box Wiring

Remove the junction box cover plate from the top of the side rail of the platform. Thread the instrument cable through the connector on the end of the junction box and terminate the cable to the terminals provided (see figure 3-c). After terminating cable check all connections and place desiccant bag inside junction box. Reinstall junction box cover. Make sure the rubber gasket is clean and correctly located. Tighten all screws and check that all cord grip caps are tight.

Note: Turn all potentiometers fully clockwise prior to calibration.

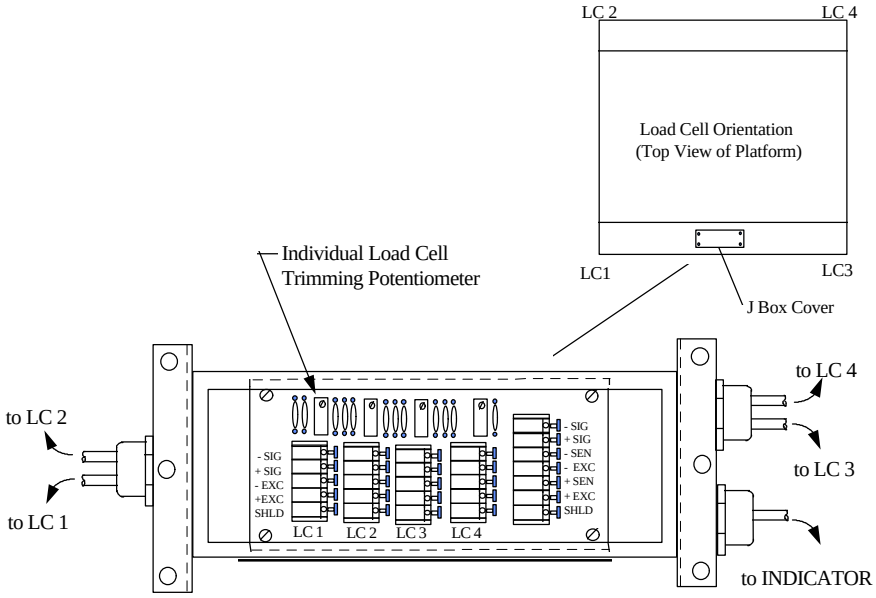


Figure 3-c: 2888 Analog Junction Box Details and Wiring Codes

Load Cell Wiring		Instrument Cable Wiring	
Function	**Color**	**Function**	**Color**
+ Excitation	Green	+ Excitation	White
		+ Sense	Yellow
+ Signal	White	+ Signal	Green
Shield	Yellow	Shield	Orange
– Signal	Red	– Signal	Black
		– Sense	Red
– Excitation	Black	– Excitation	Blue
		(Based on Mettler Toledo cable number 510624370)	

Reinstall Platform

Clear all debris from the scale area. Ensure that all four load pin receivers in the frame are clean and free of all foreign material.

Replace the platform into the frame. Make sure there is slack in the cable between the frame and platform and that no cable pinching occurs.

Oscillate the platform to ensure that the rocker load pins are seated in the receivers and no binding exists.

Calibrate the scale per the Mettler Toledo Indicator Manual.

Mode of Operation

The model 2888 uses an analog junction box for summing the load cell outputs. Only analog compatible indicators will work with the model 2888. The correct cable connection can be seen in Figure 3-c.

4 Optional Ramp Installation

Model 2888 Deckmate ramps provide access from one or both ends of the scale. Select which end(s) of the platform is to have a ramp attachment.

The static platform ramps are installed after anchoring the support frame to the floor. To install a ramp place the mating end of the ramp over the ramp mounting bar (see figure 1-c). Check to make sure that the ramp is stable. (Shim under the corners of the ramp if required)

The Portable Platform ramps are hinged to the support frame. This will allow the ramps to be folded on top of the deck when the platform is moved from one location to another. With the platform in the weighing position and the ramps down in place, check to make sure that the ramps are stable. (Shim under the corners of the ramp if required)

5 Calibration

Shift Adjust

Note: The scale has been roughly shift adjusted at the factory. Before proceeding, check the shift characteristics to determine if any shift trimming is required. In a new installation, shift adjustment to a properly shimmed scale should be minor.

This adjustment should be made only after all mechanical parts are checked, and the scale has proven repeatable. Repeatability is checked by repeatedly placing a test weight on the same position of the platform and checking for repeatable weight reading. Shift adjust is then done to make the weight reading for each corner of the platform the same for the same test weight.

The amount of test weight used for the shift test should equal 1/2 of the rated scale capacity. Test weights should be concentrated at the center of each quadrant of the scale platform.

Shift Adjustment for Model 2888

The shift adjustment is made by adjusting load cell trim potentiometers mounted on the junction box PCB.

1. Successively place the test weight at each of the four designated locations (center of each scale quadrant). Note and record the displayed indications.
2. Determine the location with the lowest indication. The corresponding load cell is NOT trimmed.
3. Place the test weight at the location with the lowest indication. Note and record the indication.
4. Proceeding clockwise, place the test weight at each designated location; if necessary, adjust the trimming potentiometer corresponding to that location to obtain the indication recorded in step 3.
5. Repeat this procedure until all indications at the designated locations are the same or within the specified National Institute of Standards and Technology (NIST) Handbook 44 scale accuracy requirements.
6. Reinstall junction box cover plate.

Note: Because of the trim pots interaction with each other, any adjustment will affect all corner indications.

Scale Calibration

It is recommended to calibrate the scale using a test weight equal to the scale capacity. With the proper test weight, continue with the calibration of the weighing system in accordance with the instructions provided in the manual of your digital indicator.

6 Routine Care and Maintenance

General

Once the scale is installed, it is recommended that the assembly be periodically inspected and calibrated by an authorized Mettler Toledo representative. If the scale is used for legal-for-trade purposes, consult the local Weights and Measures Authorities for minimum inspection requirements. Contact your local authorized Mettler Toledo Service representative for information on periodic inspection and calibration services.

Site Inspection

Ensure that the scale site remains in good condition. Check for alterations in the surrounding floor, excessive vibrations, and possible overloading conditions.

Platform Inspection

During periodic inspections of the scale assembly, check the following:

1. Is there any unusual wear points, paths, or marks on the weighing surface?
2. Is the scale frame bent or damaged?
3. Is the junction box lid properly sealed and all cable connectors tight against the enclosure?
4. Is there any moisture or foreign material present around or inside the junction box assembly?
5. Is the instrument cable free from damage or binding the scale?
6. Is there any debris or material build-up under or around the platform which could inhibit freedom of movement?
7. If a pit installation, is the floor drain clear and providing adequate drainage?
8. Visually inspect the load cells, rocker pins, and fixed bumpers for signs of unusual wear.
9. Check repeatability and shift of the scale.

7 Troubleshooting

General

If operational difficulties are encountered, obtain as much information about the problem as possible. Is the problem constant or intermittent? Malfunctions can be caused by mechanical or electrical influences so be patient and use sound logic when troubleshooting. When troubleshooting a 2888 Deckmate scale, examine the physical location of the scale, checking for the presence of the following: water, corrosive materials, unlevel floors, high vibrations, or air currents, physical damage to the scale platform or frame. Also check the instrument cable for damage and all connections for any loose/incorrect wiring.

CAUTION

BEFORE CONNECTING/DISCONNECTING ANY INTERNAL ELECTRONIC COMPONENTS OR INTERCONNECTING WIRING BETWEEN ELECTRONIC EQUIPMENT ALWAYS REMOVE POWER AND WAIT AT LEAST THIRTY (30) SECONDS BEFORE ANY CONNECTIONS OR DISCONNECTIONS ARE MADE. FAILURE TO OBSERVE THESE PRECAUTIONS COULD RESULT IN DAMAGE TO OR DESTRUCTION OF THE EQUIPMENT OR BODILY HARM.

Isolate the Problem

First, determine if the problem is in the scale platform or the digital indicator. After removing power from the system, disconnect the digital indicator from the 2888 Deckmate LP scale assembly and connect a load cell simulator to the indicator (analog simulator available from Mettler Toledo). Reapply power. If the problem is still present, consult the digital indicator manual for further troubleshooting assistance.

If the problem is NOT present with the load cell simulator attached to the indicator, remove power, disconnect the simulator and reconnect the 2888 platform. If the problem reoccurs, further scale platform troubleshooting is required.

Check Wiring

Remove power from the system. Remove the Junction box cover plate from the platform and check the interior of the junction for moisture or any foreign material.

Ensure that all wiring connections are tight and that no insulation material is touching the terminal contacts. Check all cable connections for correct wiring, the wiring color code are as follows:

Load Cells		Instrument Cable	
+Excitation	Green	+Excitation	White
		+Sense	Yellow
+Signal	White	+Signal	Green
Shield	Yellow	Shield	Orange
-Signal	Red	-Signal	Black
		-Sense	Red
-Excitation	Black	-Excitation	Blue

(Instrument cable color code based upon Mettler Toledo cable no. 510620370)

Check all cable connectors on the junction box. Tighten any connectors found to be loose.

Check Load Cells

Check each load cell for proper bridge resistances.

Measuring Points	Resistance
Any lead to shield or ground	Infinity
+Exc (Green) to -Exc (Black)	350 Ohm minimum
+Sig (White) to -Sig (Red)	348 to 352 Ohms

If bridge resistances are within specification, perform a “shorted signal” symmetry check. Short the signal leads together and place one multimeter lead on the shorted signals and one lead on the +excitation wire. Note the resistance value indicated. Next, remove the lead from the +excitation wire and place it on the -excitation wire. Both resistance values should be approximately within 1 Ohm.

If the cells pass the above test, reapply power to the scale platform. Confirm that proper excitation voltage is reaching the load cells by placing multimeter leads on the excitation positions of each load cell terminal (excitation voltage can vary from 5 VDC to 15 VDC depending upon the application and digital indicator used).

If proper excitation voltage is reaching the load cells, check the output signal from each cell. If one cell has a particularly high or low dead-load output it is suspect (the maximum output possible from any cell is 30 mV at 15 VDC excitation and loaded to gross capacity).

If any cell has an unusual signal, remove all load from that cell by raising the platform. With the power still on, measure the output from the suspect load cell. The "no load" zero output should be ± 1.5% of the full scale output. For example, if the excitation voltage is 15 VDC then the full scale output is 30 mV. Therefore, the no load zero output should be within ± 0.45 mV. If the load cell is out of specification, replace it.

Note: Remove signal leads from terminals to measure output.

If a load cell fails any of the above test, replace it.

Check Mechanical Components

Due to the simplicity of the 2888 Deckmate design, there are only a few mechanical components to troubleshoot. Ensure that the platform has freedom of movement and that the load cells are not resting against the fixed bumpers. If the load cells are contacting the fixed bumpers with no motion in the scale platform, check the following:

1. Is the platform level or rocking? Reshimming may be required.
2. Check the rocker pins for unusual wear. Replace any rocker pins that are unevenly worn or have flattened bearing surfaces.
3. Examine the rocker pin receivers in the frame. If the bearing surface is sunken, depressed, or unevenly worn, replace the frame.
4. If the fixed bumpers on the frame are excessively worn or damaged, the entire frame will need to be replaced.
5. Inspect the platform and frame for any apparent physical damage. Replace any platform or frame that is bent or contains broken welds.
6. Verify that the load cell overload gap is proper.

Load Cell Replacement Procedure

Remove power to the digital indicator and disconnect the instrument cable.

Remove the junction box cover plate from the top of the side rail of the deck to gain access to the junction box. Locate the defective load cell terminal.

Disconnect the defective load cell cable from its' terminal on the summing PCB.

Loosen the cable connector on the junction box and remove the cable from the enclosure.

Note: The instrument cable may need to be removed from the junction box to allow the platform to be removed.

Carefully remove the deck from the support frame. Position the deck upside down onto a stable support that allows access to the defective cell and cable as well as offering protection to the other cells during disassembly.

Affix a string to the end of the defective load cell's cable. The string should be of sufficient strength and length to pull the new load cell's cable through the platform structure.

Note: The load cells are fastened to the stainless steel platforms using (2) 1/2-13 UNC S.S. Hex. Hd. Screws.

The load cells are fastened to the platform using two 1/2"-13 UNC high strength socket head cap screws. Remove the two load cell mounting screws with a 3/8" hex allen socket, retaining the screws for reinstallation. Lift the load cell from the mounting surface .

Carefully pull the defective load cell's cable through the platform while feeding the string in at the junction box opening. Once the string is at the load cell location, unattach it from the load cell cable.

Remove the rocker pin with o-rings from the defective load cell and reinstall it in the new load cell.

Attach the new load cell's cable to the pulling string and carefully thread the new cable through the platform into the junction box opening. Coil and store any excess cable within the platform side channel.

Notes: Make sure load cell and platform mounting surfaces are free of grease and other foreign materials.

Secure the new load cell to the platform. Apply an anti-seize compound such as "Never-Seez" to the threads of the mounting screws and tighten with a calibrated torque wrench to 100 ft-lb (Mild Steel Scales) or 75 ft-lb (Stainless Steel Scale).

Verify that the load cell has proper overload gap: 0.009"- 0.014"

Thread the load cell cable through the connector on the junction box. When the cable length inside the box is sufficient, tighten the box connector.

Note: It may be necessary to apply a small amount of lubricant to the cable to allow it easily pass through the double hole cord grip.

Wire the new load cell cable to the proper terminal on the PCB per the wiring code shown.

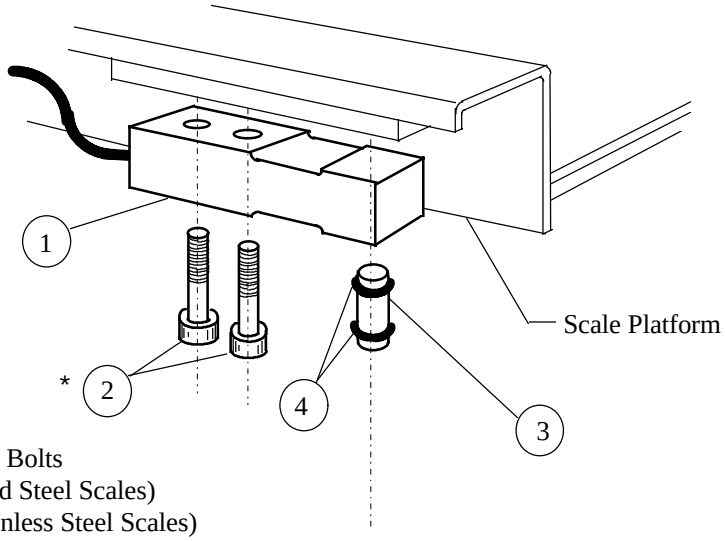
Reinstall the deck into the frame. Ensure that the rocker pins are properly seated and aligned with the receivers in the frame.

Reattach the instrument cable and power-up the indicator. Perform shift adjust and recalibrate the scale .

8 Service Parts

Load Cell and Suspension Parts

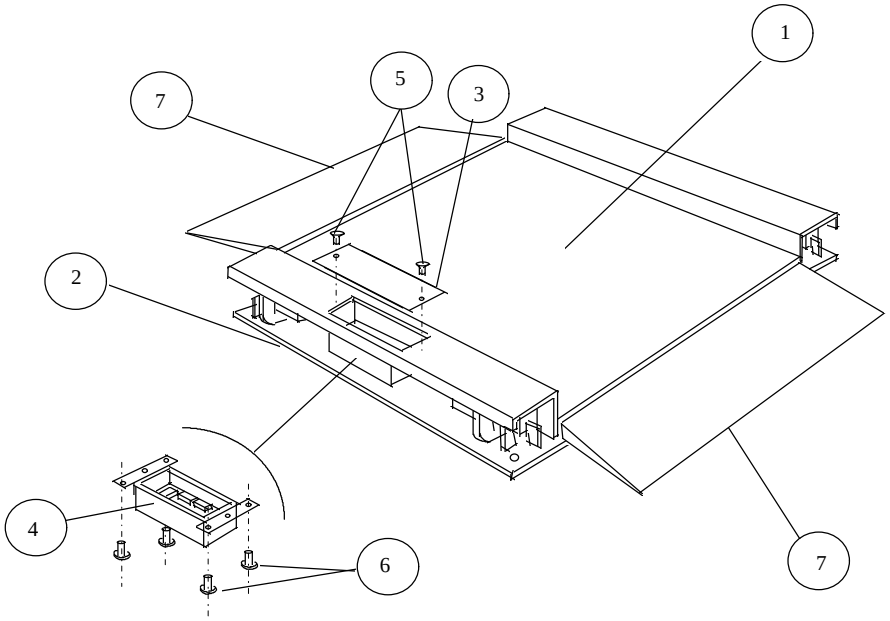
Notes:
Proper Overload Gap
0.009 in - 0.014 in
(.228 mm - .356 mm)



*Note:
Torque Load Cell Bolts
to: 100 ft-lb (Mild Steel Scales)
75 ft-lb (Stainless Steel Scales)

Ref. No.	Part Number	Description	Qty.
1	TB600529-1	500 lb load cell (5000d) with 4 ft. cable	4
2	MZ0901010333	1/2-13 Soc. Hd. Screw x 1 3/4” Lg. (Mild Steel Scale)	8
	MZ0901010384	1/2-13 Hex. Hd. Screw S.S. x 1 3/4" Lg. (Stainless Steel. Scale)	
3	TN200050	Rocker pin	4
4	MZ0909000005	O-ring, 70 Dura BUTA “N”	8

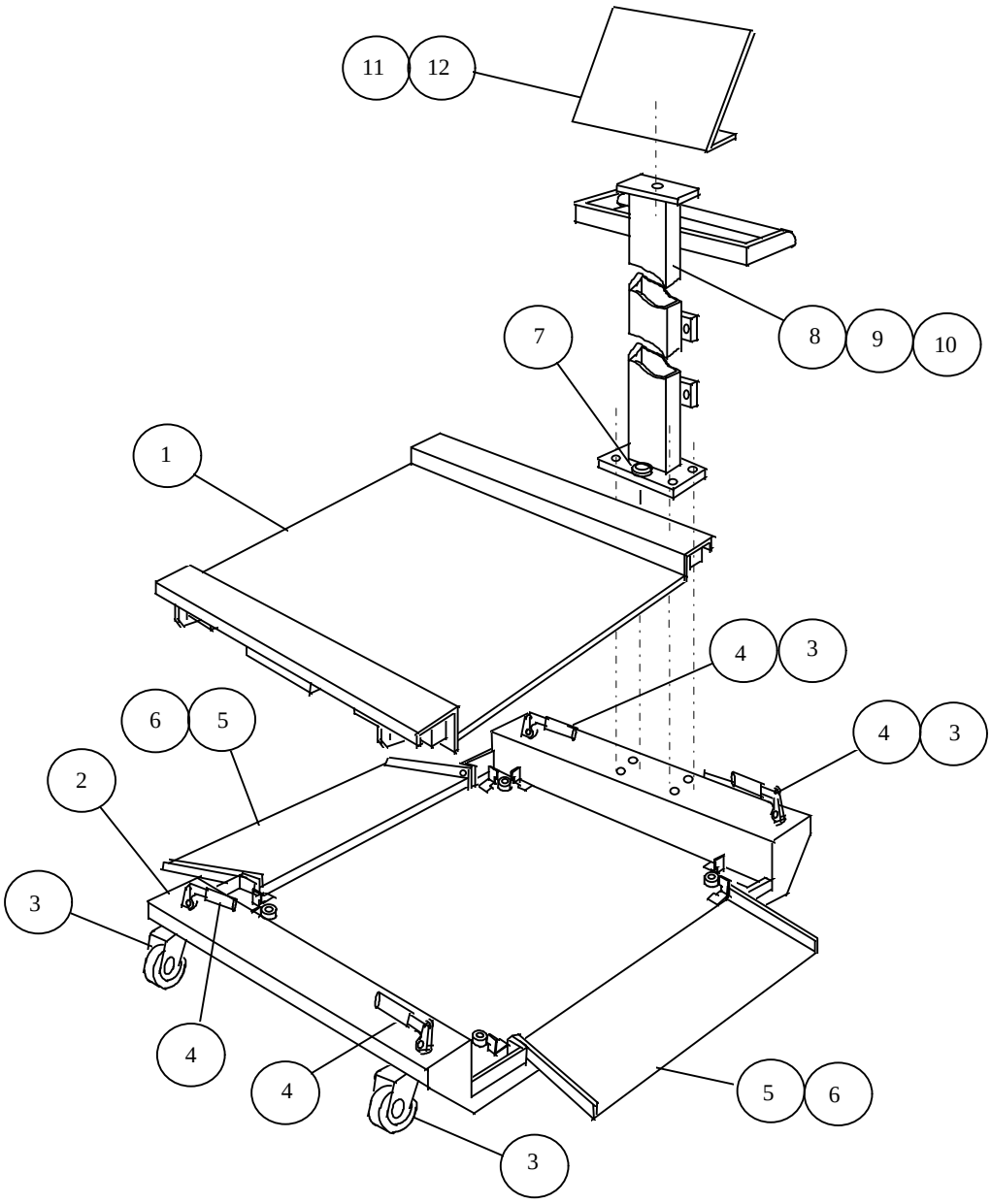
Static Platform Parts



Ref. No.	Part Number	Description	Qty.
1	TC202770-1 TC202770-2 TC202780-1 TC202780-2	Platform, Mild Steel Tread Plate Platform, Mild Steel Smooth Plate Platform, Stainless Steel Tread Plate Platform, Stainless Steel Smooth Plate	1
2	TB202771 TB202781	Frame, Mild Steel Frame, Stainless Steel	1
3	TN203054 TN203055	Junction Box Lid, Mild Steel Scale Junction Box Lid, Stainless Steel Scale	1
4	TB100520	Junction Box Assembly Consists of: *14378800A Analog PCB TA800218 Desiccant Pack	1
5	TN100524	10-32 Fl. Hd. Screw S.S. x 5/8" Lg.	2
6	MZ0901010407	10-32 Ph. Hd. Screw S.S. x 3/16" Lg.	4
7	TA202775-1 TA202775-2 TA202785-1 TA202785-2 TA202776-1 TA202776-2 TA202786-1 TA202786-2	Ramp x 6" Lg. (Optional) Mild Steel Tread Plate Ramp x 6” Lg. (Optional) Mild Steel Smooth Plate Ramp x 6" Lg. (Optional) Stainless Steel Tread Plate Ramp x 6" Lg. (Optional) Stainless Steel Smooth Plate Ramp x 12" Lg. (Optional) Mild Steel Tread Plate Ramp x 12" Lg. (Optional) Mild Steel Smooth Plate Ramp x 12" Lg. (Optional) Stainless Steel Tread Plate Ramp x 12" Lg. (Optional) Stainless Steel Smooth Plate	var.

*May have an alpha prefix.

Portable Scale Parts



Ref. No.	Part Number	Description	Qty.
1	----------	Same as Standard Platform	
2	*TC202772 *TC202782	Portable Frame, Mild Steel Portable Frame, Stainless Steel	1
3	TN202939	Swivel Caster	4
4	TN202579	Straight - Line Action Clamp	4
5	TA202778-1 TA202778-2 TA202788-1 TA202788-2 TA202779-1 TA202779-2 TA202789-1 TA202789-2	Ramp x 12" Lg. (Optional) Mild Steel Tread Plate Ramp x 12” Lg. (Optional) Mild Steel Smooth Plate Ramp x 12" Lg. (Optional) Stainless Steel Tread Plate Ramp x 12" Lg. (Optional) Stainless Steel Smooth Plate Ramp x 18" Lg. (Optional) Mild Steel Tread Plate Ramp x 18" Lg. (Optional) Mild Steel Smooth Plate Ramp x 18" Lg. (Optional) Stainless Steel Tread Plate Ramp x 18" Lg. (Optional) Stainless Steel Smooth Plate	Var.
6	TA202918-1	Ramp Mounting KIT (per Ramp)	1
7	TN201817	Bubble Level	1
8	TB202616 TB202618	Instrument Column, Mild Steel Instrument Column, Stainless Steel	1
9	---------- MZ0901010076 MZ0901030060 MZ0901030076 MZ0901020016	Column Mounting Hardware: 3/8-16 Hex. Hd. Screw S. S. x 1.25" Lg. 3/8 Flat Washer, S. S. 3/8 Lock Washer, S. S. 3/8 -16 Hex. Nut, S. S.	 4 8 4 4
10	---------- MZ0901010250 MZ0901030069	Battery Pack Mounting Hardware 1/4 - 20 Hex. Hd. Screw S. S. x .38" Lg. 1/4 Lock Washer, S. S.	 4 4
11	----------	Instrument Bracket	
12	TN202610	Black Thermoplastic Knob	1

*TN800569 Safety Label is required to be attached to Portable Frame

9 Reference Material

Reference Drawings

Scale	Static	Portable
1000 lb / 500 kg	TC202768	TC202769

Recommended Spare Parts

Part Number	Description
TB600529-1	500 lb Analog Load Cell
*14378800A	Analog Junction Box PCB
TN200050	Load Pin
MZ0909000005	O - Ring

* May have a letter prefix

Load Cell Data

Model number: 745

NTEP certificate of conformance number: 92-108

Rated Capacity 500 lb

Maximum excitation voltage: 15 VDC or VAC rms

Recommended excitation voltage: 15 VDC

Full scale output: 2 mV/V

Input terminal resistance: 350 Ohm minimum

Output terminal resistance: 350 $\pm$ 2 Ohms

Temperature range compensation: -10°C to +40°C (+14°F to +104°F)

Safe side load: 100% of full load cell rating

Safe overload: 150% of full load cell rating

METTLER TOLEDO
Scales & Systems
6600 Huntley Road
Columbus, Ohio 43229-1012

P/N: 14859700A

(10/96)

14859700A