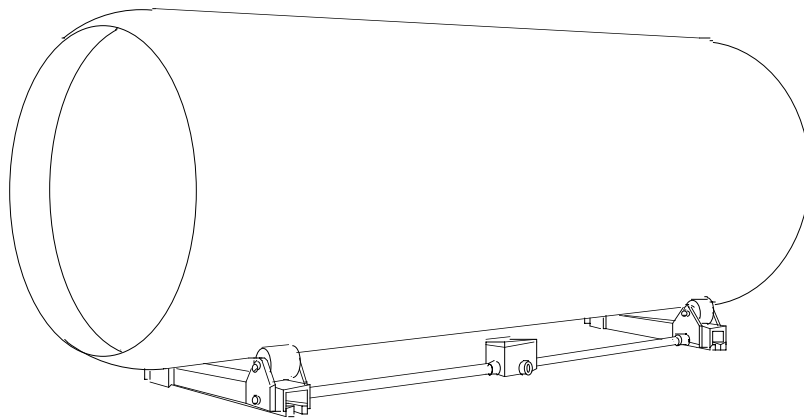


# WT-3600 TON CONTAINER WEIGH TRUNNION



**OPERATION INSTALLATION AND SERVICE MANUAL**



366 CIRCLE OF PROGRESS POTTSTOWN, PA 19464  
(610)323-2250 FAX: (610)323-0114

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## **SECTION 1.0 DESCRIPTION**

EAGLE MICROSYSTEMS WT3600 Weigh Trunnion was designed specifically for weighing standard ton containers for Chlorine and Sodium Dioxide. Rollers made of UHMW plastic on stainless steel axles allow easy ton rotation and require no greasing or other preventive maintenance. Two sealed stainless steel, electronic load cells provide an accurate weight reading. Each WT3600 weighs less than 50 pounds so it is shipped via parcel service and can be handled and installed by one person. Several WT3600's can be daisy chained to create a multiple container scale. This modularity allows easy reconfiguration to accommodate growth or downsizing without waste of resources.

## **SECTION 2.0 PREPARATION FOR USE**

### **2.1 RECEIVING INSPECTION**

1. Upon receiving the WT3600, carefully inspect the condition of the shipping container including the banding and any protective covering used for shipping. Report any damage to the shipper and to Eagle Microsystems.
2. Remove the WT3600 from the box and inspect for damage. Report any damage to the shipper and to Eagle Microsystems.

### **2.2 SHIPMENT**

Should re-shipment of your WT3600 become necessary.

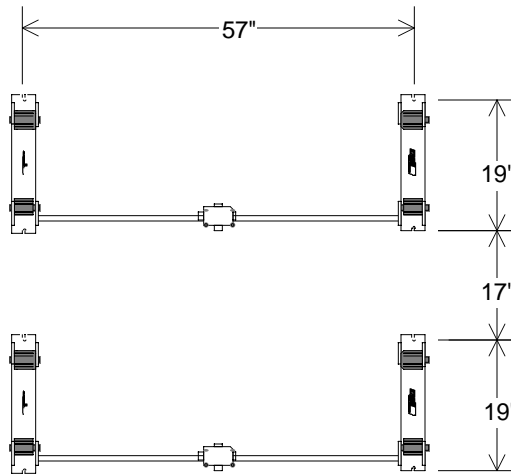
1. Use a strong, well-built shipping container. The shipping container must be larger than the outer dimensions of the WT3600 to protect it in shipping.
2. Make sure the hook-up cable is protected and secured in crate.
3. Use strong banding to secure WT3600 in shipment.

### **2.3 SITE SELECTION**

1. Line power devices causing large inductive currents should not run off the same circuit as the weigh system. Fluctuations in line voltage caused by such devices may result in display instability.
2. The hook-up cable to the read-out should not run close to other unshielded cables. Display instability may result.
3. For best accuracy, a flat, level, and rigid surface is recommended to support the WT3600.
4. The area should be accessible for periodic cleaning.

## 2.4 INSTALLATION

1. The WT3600 is "rolled up" prior to packaging and shipment. Prior to installation, the scale assembly must be "unrolled" so that the flexible conduit is straight on either side of the junction box. Rollers should face upward.

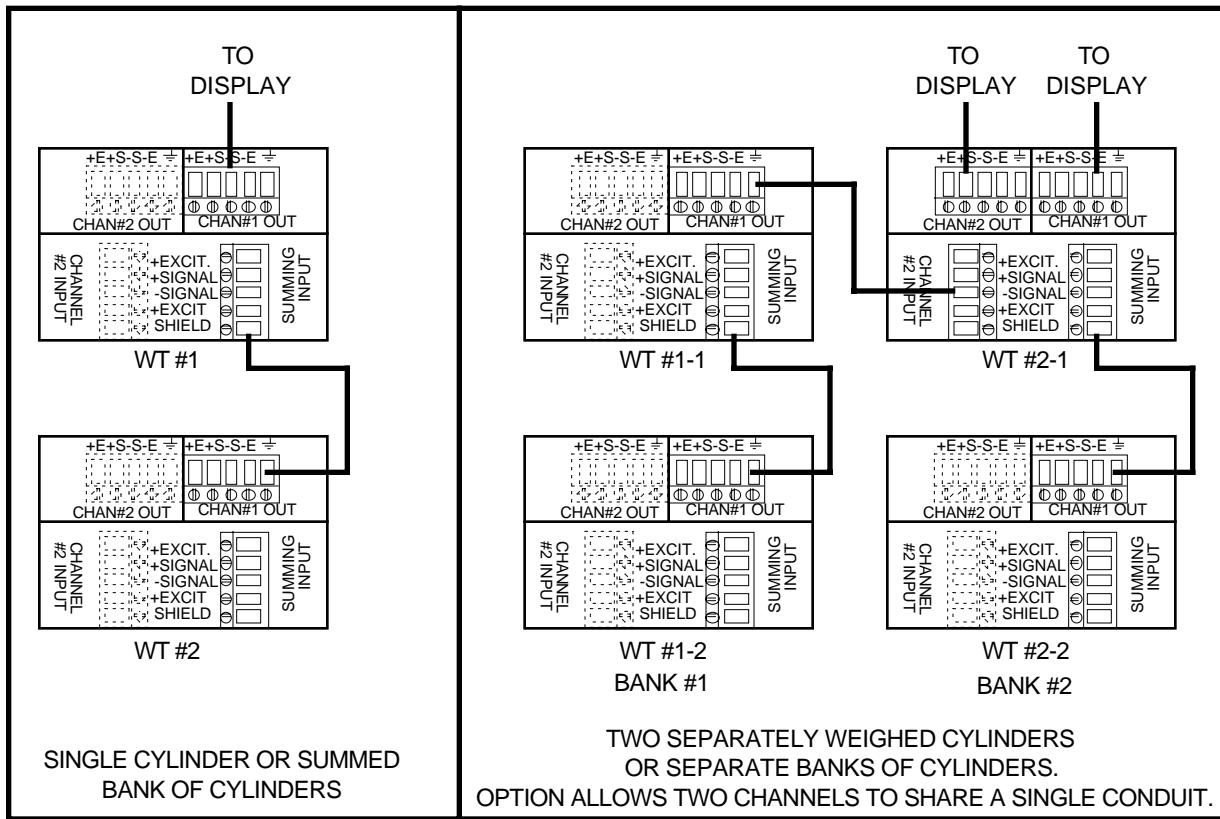


**FIGURE 1: Anchor Bolt Spacing**

2. Figure 1. shows the mounting pattern for four 7/16" diameter mounting studs (by others) as well as the minimum spacing between weigh trunnions for multiple trunnion applications.
3. Mounting tab on the base of each trunnion assembly is 3/4" high. 7/16" mounting studs should extend no more than 1 3/8" above the floor.
4. For good scale performance and easy roller operation, **care should be taken to ensure that the two ends of the WT3600 are parallel, concentric and level with each other.** If necessary, use grout to achieve this.

## 2.5 CONNECTION TO DISPLAY/TRANSMITTER

Refer to FIGURE 2 and 2a. Several configurations are possible. Note that the “Channel 2 Input” option allows the cables for two scales or “banks” of scales to share a single conduit back to a dual channel instrument. This option must be specified when ordering.



**FIGURE 2: System Wiring**

COLOR	FUNCTION
RED	+Excitation
GREEN	+Signal
WHITE	- Signal
BLACK	- Excitation
YELLOW	Shield

**FIGURE 2a : Wiring Color Code**

## SECTION 3.0 TROUBLE SHOOTING

The following is a list of potential problems and likely cures.

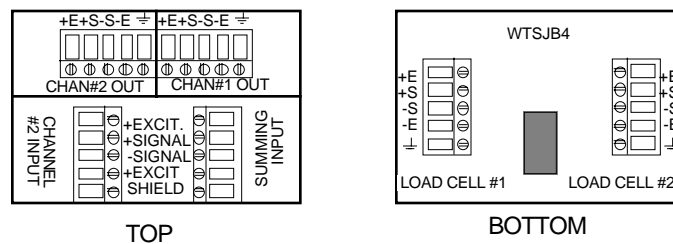
1. Inaccurate but repeatable weight readings:
  - a. Recalibrate the system (see instrument manual)
2. Inaccurate, non-repeatable weight readings.
3. Check the WT3600 trunnions for damage or interference (Sect. 4.2).
4. Check for bad load cell (Sect. 4.3).
5. Blank or drifting display:
  - a. Consult the instrument manual.
  - b. Look for loose connection in hook-up cable at the instrument or in the Summing Box(Sect. 4.1).
  - c. Look for moisture in the Summing Box (Sect. 4.1).
6. Check for bad load cell ( Sect. 4.3).

## SECTION 4.0 SERVICING

### 4.1 CHECKING THE SUMMING BOX CONNECTIONS.

1. Locate the Summing Junction Box between the two trunnions and remove the lid.
2. Gently lift the summing board out of the box. Check for any signs of moisture or corrosion.
3. Check all connections by lightly pulling on each lead. Tighten terminal connections as needed.
4. If problem persists, press lightly on the circuit board itself and check meter response. Replace board if required.

**Note:** Make sure, when replacing the cover, that the box is dry and the cover is tight.



**FIGURE 3: Summing Junction Board**

#### 4.2 CHECKING FOR TRUNNION DAMAGE / INTERFERENCE.

1. Remove the ton container.
2. The 2 trunnions that support the ton container are hinged at the end where the pipe enters. Lift the top casting at the opposite end to expose the load cell. The load cell has a small button that faces up. This contacts a shock pad that is installed in the top casting directly above the load cell. This pad consists of a metal plate attached to a rubber backing that is glued or taped in place. Check to be sure that neither the plate nor the entire pad has fallen out on both trunnions. The pad and plate can be glued back together and put in place with contact cement or double sided tape if they have come apart.
3. Check for any objects that may have gotten stuck between the top and bottom castings.
4. Lower the top casting. It should not rub against the sides of the bottom casting or anything else as it is lowered. If grouting was used when the scale was installed check that it is not under or against the top casting.

#### CHECKING THE LOAD CELLS.

1. Disconnect the scale cable at the display instrument.
2. Measure the resistance between the green and white wires. This should be approximately 1502 ohms.
3. Measure the resistance between the black and red wires. This should be approximately 600 ohms.

## **SECTION 5.0 SPECIFICATIONS**

CONSTRUCTION:	Load Cell: Stainless Steel Trunnion Castings: Aluminum Axles & Hardware: Stainless Steel Rollers: UHMW Plastic Shock Pads: Fabcel 300 ® Conduit & Fittings: PVC Junction Box: Cast Iron
FINISH:	Trunnion Castings: Acrylic Paint Junction Box: Clear Acrylic Paint
CAPACITY:	4000 Lb
SAFE OVERLOAD:	200% of Rated Capacity.
ULTIMATE OVERLOAD:	300% of Rated Capacity.
NOMINAL OUTPUT:	0.5 mV/V at full scale
EXCITATION VOLTAGE:	5 to 15 VDC
OPERATING ACCURACY:	0.5% of Capacity.
REPEATABILITY:	0.2% of Capacity.
LOAD CELL:	Stainless Steel strain gage, hermetically sealed, 1000 Ω.
TEMPERATURE:	0 to 150 Degr. F.
HOOK-UP CABLE:	15' of 4 conductor, color coded, shielded cable. PVC jacket.

## **SECTION 6.0 SPARE PARTS LIST**

<u>PART DESCRIPTION</u>	<u>MODEL/CAPACITY</u>
Load Cell	TH-CM / 4,000 lbs F.S.
Roller	M10246
Roller Retaining Ring	WST-75
Shock Plate	M10250
Shock Pad	M10249
Shock Disk	M10131
Load cell Summing Board	WTSJB