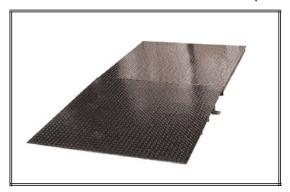


TECHNICAL BULLETIN

April 7, 2003

GUARDIAN LOW PROFILE FLOOR SCALE

Guardian Floor Scale with Ramp



The Guardian floor scale series is NTEP Certified Legal-For-Trade from 3' x 3' through 5' x 7' up to 20,000 pound capacities. The Guardian is specifically designed for use in a multitude of applications by utilizing twin 7" structural steel channel's. These channels create an 'X' design which has been proven to maintain superior structural integrity. The load cells are mounted at 45 degrees to the scale edge for maximum performance by reducing the negative effects of torsional errors.

The Guardian features a top access junction box that is housed in a separate compartment and protected from damage caused by forklifts and other elements. Top access to the leveling feet is provided along with four rigid butyl rubber load bearing foot pads. These features combined with quality components make the Guardian one of the most reliable, durable, and economical floor scales.



Top Access
Junction Box



Top Access to Leveling Foot

Why Are There So Many Floor Scale Bargains?

In recent years, driven by competitive forces, a number of low cost, low quality floor scales have come to market. These scales are mainly in the 4' x 4' -5000 lb size. Although many 4' x 4' 5k's look like any other floor scale on the surface and appear to be good bargains, this is not always true. Some of these scales lack necessary structural steel and may weigh as little as 200 pounds. Compare this to a GUARDIAN 4x4 5k weighing 330 pounds. Many of these scales are not NTEP certified and lack the standard features of the TRANSCELL Guardian. There is obviously a significant difference in structural design and material. Therefore, these "cheap" floor scales lack durability, quality, low cost of ownership and lasting value. The Guardian Floor scale series are unique in that they are offered at highly competitive prices while maintaining high levels of product quality and value.

Product Need vs Product Fit

TRANSCELL designed and priced the Guardian to suit a wide range of applications. The Guardian Series are at home weighing low density, evenly distributed loads like pallets and boxes. However, based on the superior structural design, the Guardians can also be utilized in heavy industrial applications where concentrated point loading occurs. and in many other rugged applications.

Accuracy by Design

Accuracy in floor scales requires an extremely rigid structure and a proper load corner design to minimize weigh deck deflection in order to reduce the errors caused by torsional forces on the load cells. Many of the lightweight floor scales will allow excessive deck flexion which then produces non-linearity, poor return to zero, corner imbalance and ultimately load cell failure. Overall accuracy deteriorates as the scale structure is weakened from normal industrial use for which the scale was not designed.



Top Access ABS NEMA 4 Junction Box

Some manufacturers of floor scales cheapen their product by not including top access to a J-Box with a summing board that allows individual load cell adjustment required for accurate corner calibration. All Guardian models are equipped with an ABS NEMA 4 summing box that contains a summing board with 4 individual potentiometers for each load cell to allow precision corner adjustment and calibration. The summing box is watertight and mounted underneath a top cover plate for easy and convenient access.



Maximum Protection

To protect the Guardian series from rust and oxidation, they are coated with a tough two-part polyurethane enamel paint. This extensive and intricate surface treatment provides superior surface hardness, durability and abrasion resistance. It also offers excellent protection against many corrosive chemicals and solvents. The Guardian series include a NEMA 4, ABS J-box and nickel plated load cells.

Deck Plate Gauge

Most of the lightweight floor scales use deck plates as thin as 1/8" to 3/16". As a result, these scales soon show a dished top plate between frame supports. This pattern is exasperated with wheeled vehicle use. The Guardian deck plate gauge is 1/4" on standard floor scales up to 10,000 pound capacities. With heavy duty seven inch channel forming and 'X' pattern under the deck, unsupported area is minimized resulting in an extremely strong and rigid structure. The load cells are mounted at a 45 degree angle to the scale edge which is the ideal mounting arrangement to minimize errors from side torque. As a result, the Guardian is certain to provide long term consistent accuracy despite repeated heavy duty industrial use.

Actual Deck Plate Size



Guardian 1/4"

3/16" Plate

Factory Calibration

TRANSCELL performs a complete calibration of scale and indicator combinations before shipping. This free of charge service assures proper performance of the scale and saves time and expense at final setup.