

# Treadmill Force Measurement Load Cell

## Industry: Test and Measurement

### Summary

#### Customer Challenge

A customer wants to measure the ground-reaction forces or GRF's during treadmill running. They want to measure and study the runner's foot-strike patterns at different speeds. They also want to be able to record and graph the runner's contact time, aerial time, and lower limb acceleration.

#### Interface Solution

Multiple of Interface's SSB Sealed Beam Load Cells can be installed under a metal platform, inside of the treadmill. The runner's foot-strike pattern data are picked up and displayed when the SSB's are connected to the JB104SS Junction Box. The total amount of force is displayed through the 480 Bidirectional Weigh Indicator.

#### Results

Interface's force solution system was able to help this customer measure the ground-force measurements of the runner on their treadmill test.

### Materials

- Four SSB Sealed Beam Load Cells
- JB104SS Junction Box
- 480 Bidirectional Weight Indicator

### How It Works

1. Four SSB Sealed Beam Load Cells are attached beneath a metal plate, which is then installed inside of the treadmill.
2. The runner runs on the treadmill at different speeds.
3. The runner's ground-force contact measurements are combined with the JBS104SS Junction box, and displayed through the 480 Bidirectional Weight Indicator.

