

Henning Mobile Weight Watcher System -- MUST READ INFORMATION

Consistent, reliable, and repeatable tool for weighing installed elevator equipment AND equalizing loads on all suspension means (ropes and belts). Correct use of the system ensures accuracy:

Important things to KNOW and DO and a few NOT to do:

1. Ensure all users of this equipment are instructed on how to use the system; how to attach and care for the sensors. They are electronic measuring devices and must be handled with appropriate care. We provide manuals, quick guides (like this), and video tutorial guidance.
2. Never force sensors onto rope or belt. It is also **absolutely critical** that the closing plate on LSM-XL sensors is closed completely on the set button BEFORE closing the main (middle) clamp. If not on that button, the torque force of the clamp will bend the steel side plates. If clamping is tight and you are risking bending or breakage, do NOT force. Adjust knob setting to more open. Goal is to have a firm clamp (rope/belt deflection). Setting tape affixed to new sensors is just a guide (and as a guide only when the main clamp is in the fully open position). Good practice to open the sensor enough to fit over the rope, turn knob to tighten so it gently holds, and then try closing the clamp. This method gets very close to the firm clamp needed - confirmed by correct green ring position (see Manual MSM12 or Quick Reference).
3. ALWAYS use correct sensor size (measuring range and type). Consider rope as well as suspension. Measuring a load outside of the sensor's range will invalidate your measured and total weight and may damage or distort your sensor. An LSM1 sensor attached to any rope with load as high as 2,000 lbs will likely need to be recalibrated. Typically, in North America, LSM1 and LSM-XL sensors cover the range of normally installed ropes. LSM1's measure loads between 0 and 1,100 lbs. Remember that 2:1 reduces actual loads to one-half, LSM1 sensors are good to use on relatively lighter systems and ropes 5/8" or smaller. Knowing an estimate of the total load you will measure (Car or CWT-- which we know is heavier), divide that weight by number of ropes to get expected average load on your ropes. Keep in mind that un-equalized ropes and worn and unequal sheave groove depths can put a rope load outside of measuring range. LSM-XL sensors have measuring range between 400 lbs and 4400 lbs. Top end is almost never a factor, but having a load under 400 lbs. happens. For belt systems, be aware there is a completely different sensor for currently existing Otis belts, Schindler belts, and now tkE belts.
4. Always attach one (and only one) sensor on each and every rope or belt. It does not work to try to weigh with less sensors than ropes and then extrapolate; as each sensor deflection affects balancing and total

measurement. Mixing sensor types in an installation measurement can work, as long as it is known that the measured load is within the range of the sensor used (i.e. an LSM1 sensor when others are LSM-XL) on the specific rope being measured.

5. Be sure sensors are not attached in or too near (within ~ 8 inches/150mm) to any curvature of rope or belt (i.e. too close to hitch-point). It is also **very important that sensors do not make contact with each other**. Any contact will distort measurement. In tight hitch-plate arrangements, it is acceptable to stagger height attachment and go around the side and backside of ropes - whatever needs to be done to avoid touching.
6. Be aware that comparison to other methods of weighing can be misleading. Experience has shown other methods can be wrong. See article and other presented examples. When sensors are in good working condition, in calibration, and usage procedures are followed, you will measure weights within +/- 2.5% of Full Scale of these devices.