

7. Meter recalibration for non-standard belts

Measuring the tension of special belts with extra thick backings, alternate materials, etc., may yield less than accurate results using unit weights for standard belts. In these cases, a simple calibration process may be used. The belting can be placed on a fixture with a known span length under various known tensions (hanging weights can be used). By taking frequency measurements at various tensions, span frequency vs. tension data can be collected. These data can then be used in a graphical format or in equation form to convert measured span vibration frequencies to accurate belt tensions. Data of this type is specific to each application and cannot be applied to drives with different span lengths. Because the resulting data may not be linear, it is best to measure the tension of non-standard belts in terms of frequency rather than deriving a new belt unit weight to measure in terms of absolute tension.

8. Summary of features

- › H 160 mm x D 26 mm x W 59 mm
- › Batteries: 2 x AAA
- › Suitable for multi-ribbed belts, V-belts and synchronous belts
- › Measurement range: 10 Hz to 5,000 Hz
- › Measured accuracy: $\pm 1\%$
- › LCD screen backlight
- › Double display possible (Newton and/or Hz)
- › Flexible sensor (Product No. 7420-00204)
- › Cord sensor and inductive sensor available on request
- › Stores weight, width and span constants for up to 40 different drive systems
- › Auto gain adjustment function cancels out background noise automatically
- › Shuts off automatically after five minutes of inactivity, making it an energy-saving device
- › CE approved
- › RoHS compatible: the device complies with the European Directive (2002/95/EC) on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

9. Optional accessories

- › Cord sensor - Product No. 7420-00206.
Cord sensor is recommended for measuring tensions a distance from the Sonic tension meter (+/- 1 meter cord length).
- › Inductive sensor (Magnets included) - Product No. 7420-00212. Comes as cord sensor type. Recommended for noisy or windy environments, for measuring steel reinforced belts and low frequency measurements (+/- 1 meter cord length).