Why choose novel?

Q: Why capacitive sensors?

A: The novel sensors utilize capacitive sensor technology to assess dynamic pressure distribution. The elasitisty and flexibility of capacitive sensors allow conformity between varied and complex surfaces such as the shoe and foot, foot and orthotics, hand and tool, the buttocks and chair, or intraarticularly. novel capacitive sensors offer the highest proven accuracy and reliability available in today's pressure distribution market. One important aspect of the novel technology is its calibration procedure. Each sensor element is calibrated throughout the range of measurement, therefore providing an absolute pressure value. Striving to provide continued excellence, novel is constantly working to develop and research new sensor designs to provide the highest accuracy and reliability in pressure sensor technology.

Q: What is the accuracy and reliability of the novel systems?

A: The accuracy and reliability of the novel systems has been discussed in much of the literature. The following articles can be used as reference and for descriptive information on the novel products:

- Putti, AB, et al. The Pedar in-shoe system: Repeatability and normal pressure values. Gait & Posture. 25 pp 401-405. 2007.
- Martinelli, L et al. Comparison of Capacitive versus Resistive Joint Contact Stress Sensors. Clinical Orthopaedics and Related Research. 447: pp 214-220. 2006.
- Hurkmans, HLP, et al. Validity of the Pedar Mobile system for vertical force measurement during a seven-hour period. Journal of Biomechanics 39: 110-118. 2006.
- McPoil, TG, et al. A Comparison of Two In-Shoe Plantar Pressure Measurement Systems. The Lower Extremity. 2:2. 1995.
- Hughes, J, et al. Reliability of pressure measurements: the emed-F system. Clinical Biomechanics. 6:14-8. 1991.
- Kalpen, A. and Seitz P. Comparison between the force values measured with the Pedar system and Kistler platform. Proceedings of the Fourth EMED User Meeting, Ulm. Gait & Posture 2:238–9. 1994.
- Hsiao, H., Guan, J., Weatherly, M., Accuracy and precision of two in-shoe pressure measurement systems. Ergonomics. 2:537-5. 2002.

For a complete listing of references relating to pressure, please click here.

Q: How are the novel systems calibrated?

A: The novel systems use the trublu calibration device to ensure the most accurate results possible. Each capacitive sensor (whether from an insole or from a seat mat) are calibrated with known pressures applied through an air bladder. Since each sensor element contains its own calibration curve the resulting accuracy of the system is extremely high. The user can check the accuracy at any time and perform calibration quickly and easily.
