

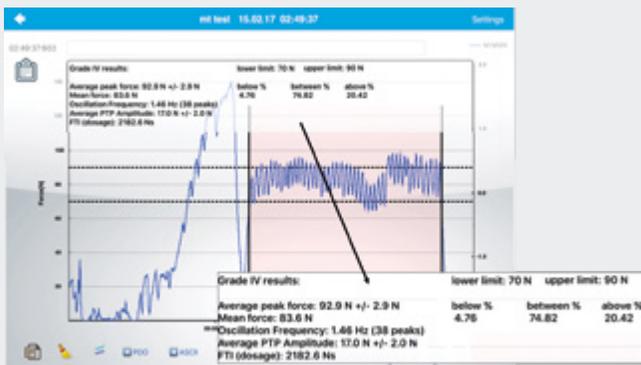
## load monitoring device



The loadpad® sensors are available in several standard sizes and with different sensitivity and maximum loads. In order to achieve an optimal adaptation to the intended measuring surface, the loadpad® sensor can be produced with different material coverings. The sensor can also be manufactured with a maximum of three sub-areas if it is necessary to distinguish different loads across the sensor surface. The loadpad® sensors can be configured accordingly to customer-specific requirements in terms of shape, size, sensitivity, and surface coatings. The loadpad® accurately measures a complete assessment of the total force in the normal direction to the sensor.



mt-loadpad® M, 110 x 50 x 1,6 mm for monitoring hand force production during manual manipulation and mobilization



Force applied to mt-loadpad® with the hand

## loadpad®



### Features of the loadpad® force sensor

- Provides force curve and time process
- Provides biofeedback for adjustable force levels
- Uses patented, capacitive, robust textile sensors
- Uses small, lightweight electronics
- Transmits the measurement in real time to smartdevices
- Works with iOS and Android devices
- Scans the measuring surface at up to 200 Hz
- Offers apps for a wide range of applications
- Detects the force on the entire sensor surface
- Enables connection to novel Windows software
- Provides ASCII output for scientific data analysis
- Operates with coin cell or rechargeable batteries

### Technical data of the loadpad® force sensors

sizes sensors	standard and custom sizes
size electronics	30 x 40 x 15 mm
measuring time	up to 12 hours
sampling rate (Hz)	10   50   100   200 selectable
accuracy	10% ZAS, dynamic load
transmission	Bluetooth® LE
operating device	iPhone, iPad, iPod touch, Android smartdevices
power supply	3V coin cells (or rechargeable batteries)

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All systems from novel operate with high quality, calibrated sensors and provide reliable and reproducible long term measurements. loadpad®, artinscience®, and the novel logo (colored foot) are the registered trademarks of novel gmbh © 1992-2019

# loadpad®

force sensors

EU



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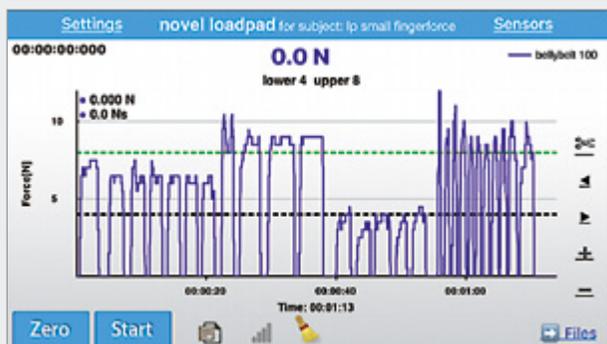


## loadpad® force sensors for measuring normal force in biomechanics and industry

The loadpad® force sensors were developed by novel for use in a wide range of applications including medicine, rehabilitation, sports, ergonomics, biomechanics, and industrial production quality control. The loadpad® measures the normal force placed on the sensor area and is therefore the ideal solution for measurements which do not require information about the distribution of force across a surface.



mk loadpad®, 30 x 20 x 3 mm for finger load analysis



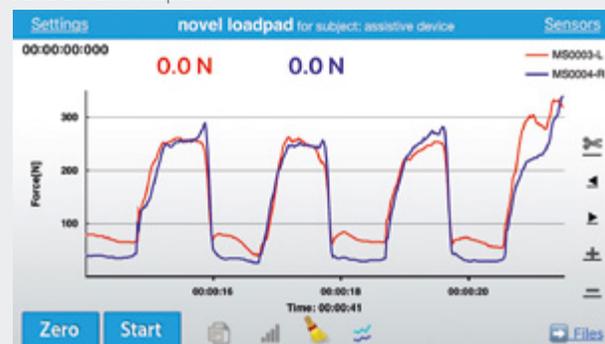
Display of forces produced by the finger



The loadpad® measures the normal total force using a thin, flexible sensor. Based on a new patent, it is the first sensor which can accurately assess the total force even if heterogeneously loaded across the sensor surface. The loadpad® sensor has matchbox-sized electronics and communicates wirelessly via Bluetooth with a smartphone. The force values are displayed on the smartphone in real time. The user can also receive immediate feedback regarding the applied force via an auditory, visual, or vibratory signal. The measured data can be stored on the smartphone and



ad loadpad®, 105 x 50 x 3 mm for hand load analysis on assistive devices in research and development



Forces on the handles of assistive devices (left and right)

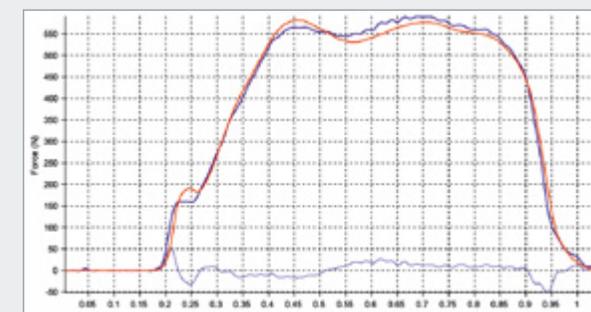


to the cloud and additionally transferred to a computer for a more detailed analysis. Long-term measurements allow the evaluation of different parameters such as impulse, load frequency or loading rate.

The loadpad® app can be modified for specific applications. It is easy to use, offers numerous display options and allows the analysis of various parameters. Data can also be exported to an ASCII file for additional assessment not included within the app. Additionally, the Windows loadpad® analysis software offers an extensive evaluation of the loadpad® data on the computer.



kab loadpad®, 35 x 25 x 3 mm for monitoring force during gait



Force platform (red) versus loadpad® (blue) at 100