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Metatarsophalangeal Joint Tester

Specification

The La Trobe University in Melbourne required a device to test the first metatarsophalangeal joint, commonly known as the big toe. They wanted to compare different patients' toe strength.

Mecmesin Force Gauges were already used for occupational health and safety applications as well as for measuring human efforts, and so were chosen for this application.

Solution

The tester comprised of a rugged aluminium frame platform where the big toe was placed in the middle.

The platform could be set with a 0° up to 70° angle tilt, set with the protractor on the side of the unit.

Underneath the tilting platform the loadcell was connected to measure directly the force applied by the big toe. The platform was also fitted with a sliding scale and ruler to make sure the patient always positioned their foot in exactly the same position.

Over a period of weeks the system was used to do a full investigation on a large number of patients where the findings were produced in a report.

System

- AFG 500N
- 500N Smart S-Beam Loadcell

Supplied to

La Trobe University, Melbourne, Australia



Protractor for setting tilt angle

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medical industry

