

The Prosim Knee Wear Simulator: Machine Specification

The **Prosim Knee Wear Simulator** is a multi-station machine designed for the reliable and repeatable wear testing of knee and patella implants.

The Prosim Knee Wear Simulator meets the following apparatus requirements:

- **ISO 14243-1 (2009)** – Implants for surgery – wear of total knee-joint prostheses – Part 1: loading and displacement parameters for wear-testing machines with load control and corresponding environmental conditions for test
- **ISO 14243-3 (2014)** – Implants for surgery – wear of total knee-joint prostheses – Part 3: loading and displacement parameters for wear-testing machines with displacement control and corresponding environmental conditions for test

The Prosim Knee Wear Simulator (Independent Stations) includes numerous features and benefits:

- Up to six knee implants can be tested simultaneously
- Five independent axes of articulation for each station
- Single load axis per station
- Each station is equipped with a six-axis loadcell
- Load soak incorporated into each station
- Simple user programmability of any articulation/load cycle
- Operating frequency of motions programmable up to 2.0 Hz
- Capable of running programmed sequences of walking, jogging, running and periods of rest
- Test fluid temperature is maintained at 37°C \pm 2°C
- Axial loading of up to 5kN per station
- Up to \pm 90 degrees of programmable motion on the flexion-extension axis
- Up to \pm 15mm of programmable anterior posterior translation
- Up to \pm 30 of programmable motion on the tibial rotation axis
- Up to \pm 10 of programmable motion on the adduction/abduction axis
- Up to \pm 10mm of medial/lateral translation
- Able to run both force and displacement control
- Can incorporate deep flexion bending
- Easy to use Windows operator screen
- Realtime logging of position and load allows instant verification of the test cycle
- Clinically and physiologically representative testing