



THELKIN
Know the Difference

FOOT-ANKLE TEST SYSTEM

- DESCRIPTION AND SPECIFICATIONS -

THELKIN Application Support

- June 2021 -

System Specifications

General

- Fully electric system
- Meets all requirements of ISO 22675
- Two independently controlled axis
- Large & easily accessible work space
- Profile frequency: 2.5 Hz (waveform dependent)
- Flexible adaptations for easy specimen mounting
- Low maintenance

System Specifications

Safety

- Safety brakes on all axes
- Three-level limit monitoring
- Emergency stop
- Setup mode with reduced actuator performance
- "Setup Hold" mode for secure specimen mounting

System Specifications

Dimensions

- System: 2'250 x 1'200 x 650 (h x w x d, in mm)
- Workspace : 1'200 x 800 x 300 (h x w x d, in mm)
- System weight: 650 kg

Others

- Features for floor mounting
- Wall fixation hooks (optional, earthquake safety)

System Specifications

Linear Motion

- Constant force: ± 5.0 kN
- Peak force: ± 7.5 kN
- Displacement: 150 mm (± 75 mm)
- Displacement resolution: 1.0 μm
- Load sensor range: ± 10 kN
- Load sensor resolution: < 1.0 N
- Actuator speed: up to 2'500 mm/s

Tilt Table Specifications

- Table size: 180 x 360 mm² (fits 32 cm foot size)
- Constant torque: ± 250 Nm
- Peak torque: ± 500 Nm
- Rotation: $\pm 90^\circ$
- Rotation resolution: 0.1°
- 6-DOF-sensor-ready

Controller Specifications

Control Loop

- 20k Hz update rate
- Closed-loop control, load or position
- Adjustable PID settings

Data Acquisition

- Sampling rate: max. 1'000 Hz
- Continuous, Blocks, Min/Max, FIFO-Buffer

Controller Specifications

Input Profiles

- Pre-configured (sine, ramp, constant)
- Custom (any profile, txt-format)

Inputs / Outputs

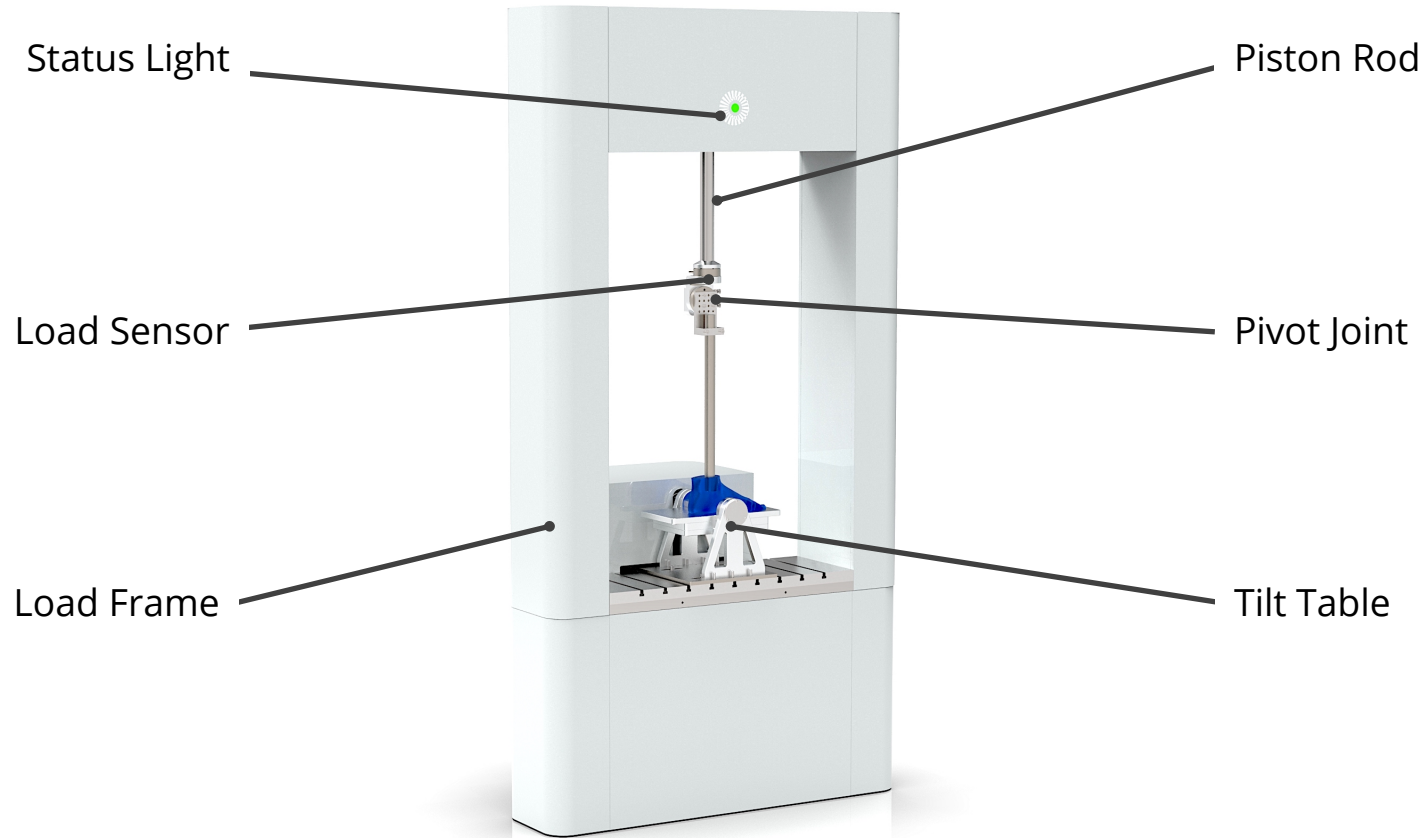
- Digital trigger (out)

Controller Specifications

Other Features

- Adaptive control (min/max, point-by-point)
- Acceleration compensation (load, torque)
- Three-level limits / safety settings
- Multiple input / output options (analog, digital)

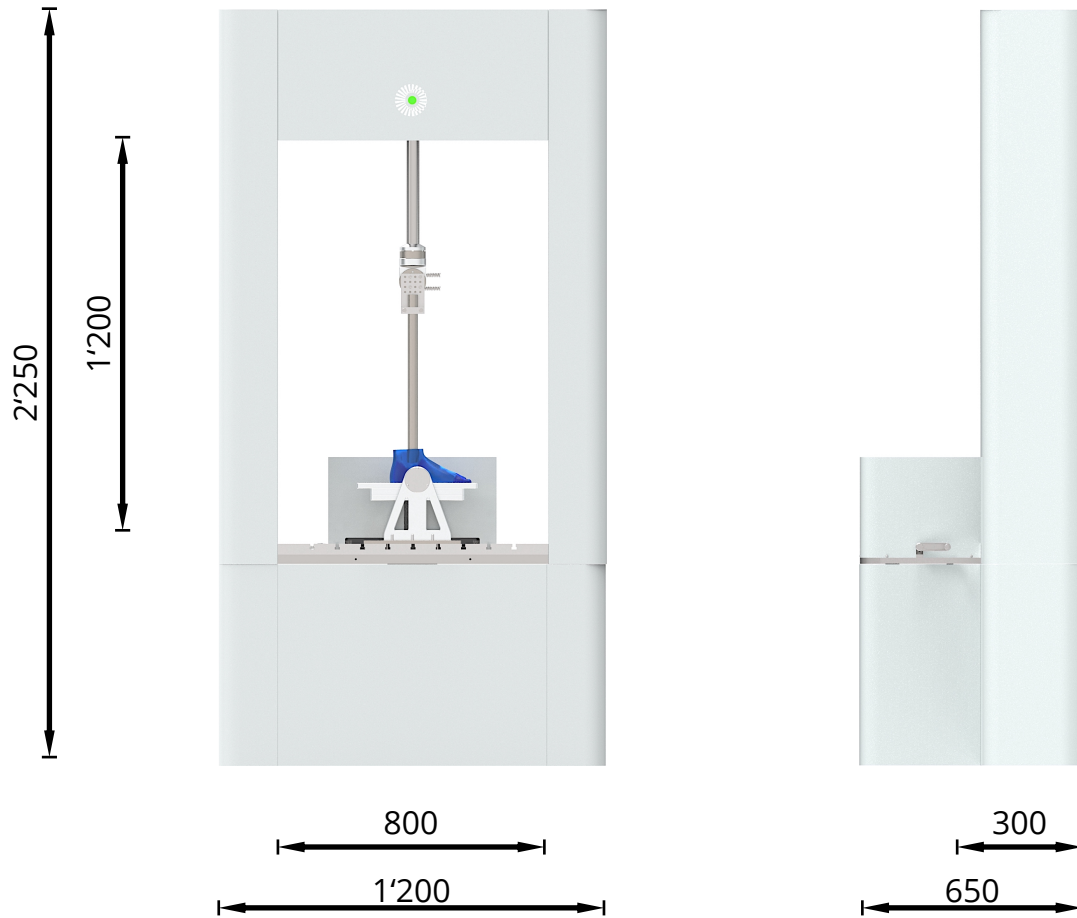
System Overview - front



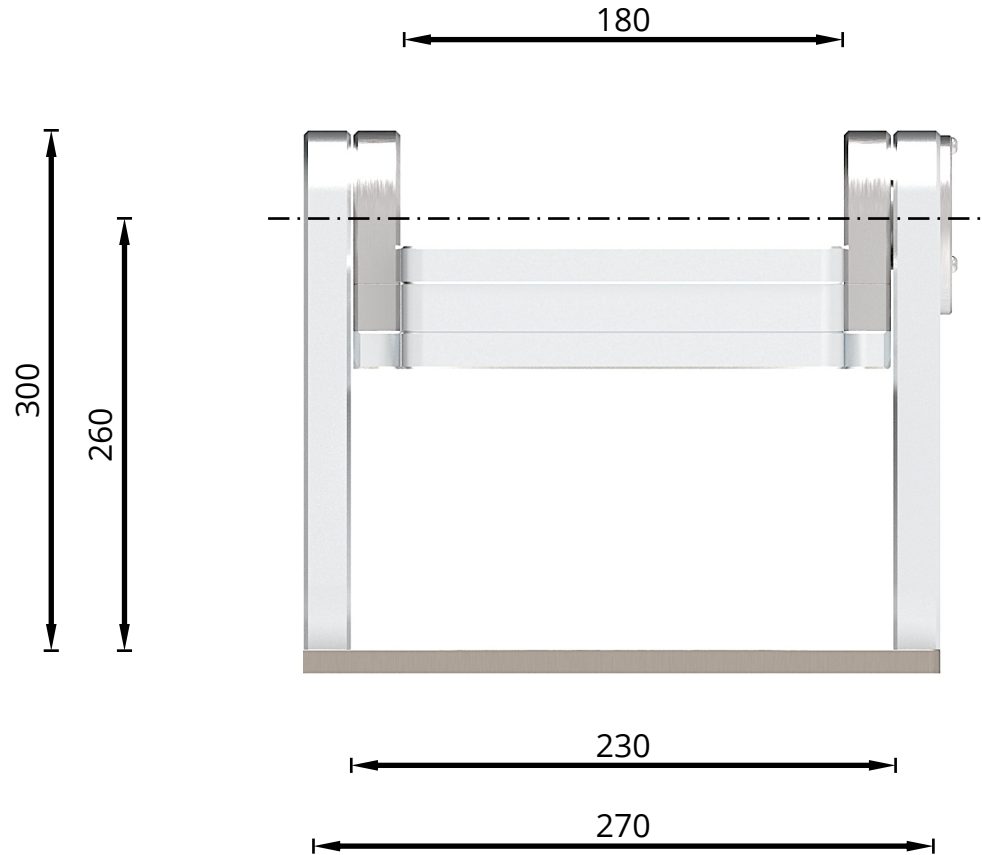
System Overview - back



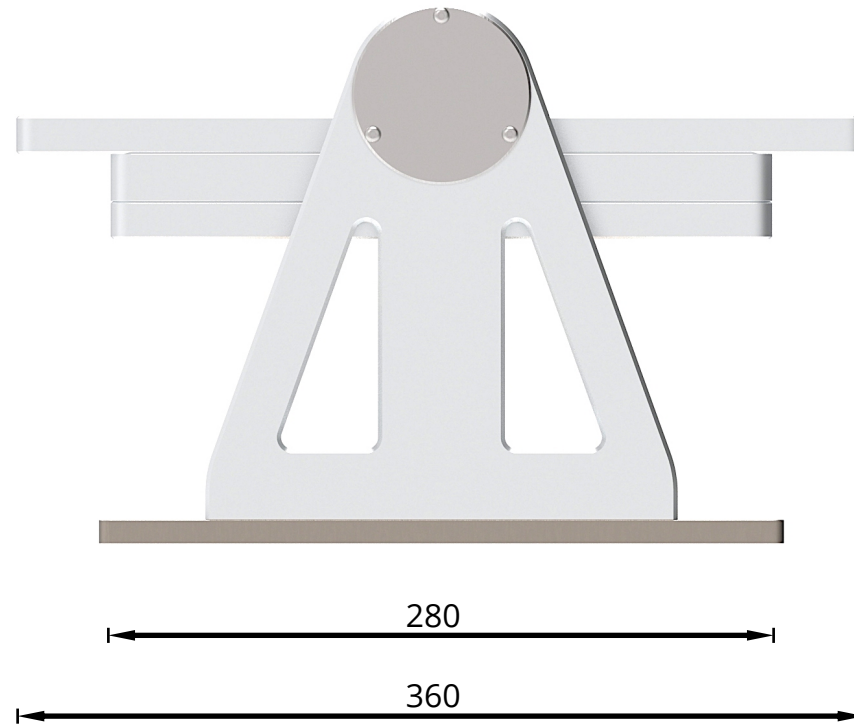
Frame Dimensions



Tilt Table - Dimensions 1



Tilt Table – Dimensions 2



Tilt Table Assy – explosion view

