



SMART Balance Master®



Physical Dimensions:

	(W x D x H)	
	in	cm
Assembled dimensions	53 x 61* x 94	135 x 155 x 239
Base	53 x 61 x 6	135 x 155 x 15
System cart	25 x 24 x 44-57**	64 x 61 x 112-145**
Dual forceplate	18 x 18	46 x 46
Step height	6	15
Visual surround	42 x 36 x 74	107 x 91 x 188
Maximum subject height	80	203
*Depth extends to 64 in / 163 cm with surround in resting position.		
**Minimum-maximum monitor extension height.		
Minimum footprint required	96 x 75	244 x 191
Minimum ceiling height	95	242
Total system weight	710 lbs.	325 kg.

Components:

- SMART Balance Master® system software
- Moveable dual forceplate (rotate)
- Moveable visual surround with illumination
- Overhead support bar with patient harness set
- IBM compatible computer
- Two flat panel LCD monitors
- Color printer
- Wireless mouse
- Mobile computer cart

Accessories Included:

- Rocker board
- Step-up blocks: 4 in (10 cm) and 6 in (15 cm)
- Leveling block: 2 in (5 cm)
- Heel/toe wedges: 6° and 12° A/P
- Inversion/eversion wedges: 3° and 6° M/L
- Foam pad: 18 x 18 x 5 in (46 x 46 x 13 cm)

Specifications subject to change without notice.

Electrical Characteristics:

- 100-240 volt / 50-60 Hz / 1200 Watt
- Conforms to UL STD 2601-1
- Certified to CAN/CSA STD C22.2 No. 601.1
- Compliant to CE standards



Performance Characteristics:

Rotation of the dual forceplate and visual surround is controlled by independent direct current servomotors.

- Forceplate rotation $\pm 10^\circ$, maximum velocity $50^\circ/\text{sec}$.
- Visual surround rotation $\pm 10^\circ$, maximum velocity $15^\circ/\text{sec}$.

Options:

- *inVision*™
- Head Shake-Sensory Organization Test (HS-SOT)
- EMG/Postural Evoked Response (PER)
- Pressure Test
- D.A.T.a™
- NeuroGames™
- 18" x 60" static forceplate
- Laptop configuration

See Individual Specification
Sheets for Details



SMART Balance Master®

Standardized Assessment Protocols:

Sensory Organization Test (SOT) The SOT is a six-condition assessment providing information about interactions among the three sensory systems contributing to postural control. The SOT isolates and quantifies impairments in the patient's use of somatosensory, visual, and vestibular inputs to balance, and impairments related to the patient's use of specific sensory input when it is incorrect. The SOT also quantifies secondary maladaptive impairments related to the patient's ability to select appropriate movement strategies and to accurately align their center of gravity (COG) relative to their base of support.

Adaptation Test (ADT) The ADT is an assessment of the automatic motor system that quantifies impairments in the patient's ability to adapt automatic responses to minimize sway when exposed to surface irregularities and unexpected changes in support surface inclination. The ADT quantifies the patient's ability to systematically reduce their sway energy during repeated exposure to the same surface tilt disturbance.

Limits of Stability (LOS) The LOS is an assessment of the voluntary motor system that quantifies impairments in ability to intentionally displace the COG to the patient's stability limits without losing balance. The patient performs the task while viewing a real-time display of their COG position in relation to targets placed at the center of the base of support and at the stability limits. For each of eight directions, the test measures movement reaction time, movement velocity, movement distance, and movement directional control.

Rhythmic Weight Shift (RWS) The RWS quantifies the patient's ability to perform rhythmic movements of their COG from left to right and forward to backward at three distinct paces. During performance of each task, the patient views a real time display of their COG position relative to a target moving at the desired pace and amplitude. For each direction and pace, the RWS measures movement velocity and directional control.

Weight Bearing Squat (WBS) The WBS quantifies the patient's ability to perform squats with the knees flexed at 0°, 30°, 60°, and 90°, while maintaining equal weight on the two legs.

Unilateral Stance (US) The US is a performance test quantifying the patient's ability to maintain postural stability while standing on one leg at a time with the eyes open and closed. The US enhances the observational testing of single leg stance performance by providing an objective measure of patient sway velocity for each of the four task conditions.