



## Bertec® CDP/IVR™

Bertec's Computerized Dynamic Posturography (CDP/IVR™) combines immersive virtual environments with dual-balance force plate technology. The advancements in Bertec's technology increase the clinical value of CDP in both assessment and targeted therapy interventions, especially for patients suffering from dizziness, balance problems and/or motion sensitivity. Training with immersive, virtual stimuli can increase patient motivation, adaptability and variability – all factors that positively affect patient outcomes.

- Next generation CDP
- Immersive virtual reality training
- Expanded assessment and treatment protocols
- Enhanced visual stimulus
- Low profile for easy access
- Touch screen display and remote control



**Standard Package**

Immersive virtual environment with real-time adjustable parameters

- Rock wall
- Checkerboard Room
- Optokinetic stripes (horizontal and vertical, adjustable width and speed)
- Grocery aisle (real-time adjustable parameters)
- Flight simulator
- Castle Corridor

Bertec Balance Advantage Software

Dedicated computer

Touchscreen monitor

Wireless keyboard and pointing device/mouse

Color printer

Dynamic base with dual-balance force plate

Visual surround immersive screen (74"W x 42"D x 105"H) with LCD projector

Integrated safety harness structure

Height adjustable clinician workstation

One-year parts and labor with ongoing support

Foam balance pad (18" x 20" x 4")

**Assessment Protocols**

Dynamic:

- Sensory Organization Test (SOT)
- Motor Control Test (MCT)
- Adaptation Test (ADT)

Static:

- Limits of Stability (LOS)
- Rhythmic Weight Shift (RWS)
- Unilateral Stance (US)
- Weight Bearing Squat (WBS)

**Featured Training**

- Quick Training
- Mobility
- Closed Chain
- Weight Shifting
- Vision

**Specifications**

Expanded assessment and treatment protocols

Low 4" step height onto dual-balance force plate

Low profile, easy access, open space, no hinge obstruction

High-sensitivity dual-balance force plate

Clinician touch screen display for user-friendly experience

Intuitive, comprehensive clinical software for patient tracking

Over 180 degree horizontal field of view, over 90 degree vertical field of view

18" x 20" balance plate level with 12" x 39" clinician standing area

Modular software design to fit your needs

Patented and HIPAA compliant patient database with merge and sync capabilities across all Bertec® Balance Advantage® products

**Options**

Bertec® Vision Advantage™ Head-Shake Sensory Organization Test (HS-SOT)

Functional dual-balance force plate (20" x 60")

Pediatric safety harness

Bariatric safety harness

Extended warranty

For more information, contact Bertec at 614-543-8099 or by email at [info@bertec.com](mailto:info@bertec.com)



## Bertec® Vision Advantage™

The Bertec® Vision Advantage™ (BVA) identifies dysfunction in the vestibular ocular reflex (VOR) per the Dynamic Visual Acuity Test. The BVA provides a more objective test than the standard clinical DVA test with using an eye chart. The BVA also includes a Gaze Stability Test that identifies when the VOR falls below normal limits and whether there is an asymmetry between the left and right side. These advanced capabilities allow the clinician to customize treatment to the patient, resulting in optimal patient outcomes.

- Wireless and light weight head tracker
- Next generation VOR assessments
- Patient-specific baseline comparison
- Automatic sensor calibration
- New technology allows for unrestricted patient movements and more flexibility for clinicians
- Optimal patient outcomes



**Standard Package**

Wireless, lightweight head-worn sensor

Bertec Vision Advantage Software

Touch screen display and remote control

Wireless-computerized VOR training exercises with selectable controls for velocity and direction of head movement

Computerized Gaze Stabilization (GST) and Dynamic Visual Acuity (DVA) tests

Headband: adjustable elastic band

Triaxial gyroscope, accelerometer and compass sensors

Dedicated product case for portability and storage of system

Online educational product videos for clinician

**Assessment Protocols**

Visual Processing Time (VPT) – this quick screen ensures the patient can process the optotype (letter “E”) stimuli quickly enough to use DVA and GST protocols accurately and reliably.

Baseline Visual Acuity (BVAT) measures a patient’s visual acuity with the head stationary. The results are then used for comparison to visual acuity while the head is moving during DVA and GST protocols.

Dynamic Visual Acuity (DVA) provides an assessment of the smallest character the patient can identify accurately while the head is moving at a specific and constant velocity. Data can be collected for any axis of rotation (yaw, pitch, or roll) and are analyzed and reported for each direction of rotation separately. Results indicating significant loss of visual acuity in one or both directions are considered an indication of VOR impairment.

Gaze Stabilization Test (GST) measures the head velocity, axis, and direction where visual accuracy breaks down. Results provide insight into a patient’s effective use of VOR as it relates to functional demands for activities of daily living, and clinicians can use the data to make training decisions and document progress.

Patient Training uses computerized VOR training to simulate gaze stabilization X1 exercises, with selectable controls for velocity and direction of head movement. Training exercises are customized to patient performance on DVA and GST and can be programmed to progress through varying levels of challenge depending on patient’s successful completion. Progress reports are automatically stored for printing.

**Specifications**

Head rotation can be measured in yaw, pitch and roll planes

Modular software design to fit your needs

Multiple Axis of Rotation

Wireless Inertial Measurement Unit (IMU)

Sampling Frequency: 175 Hz

Communication Range: Up to 20 feet +

Charging device: USB cable

Use per charge: Up to five hours

Battery: Rechargeable lithium-polymer

Patented and HIPAA compliant patient database with merge and sync capabilities across all Bertec® Balance Advantage® products

Recommend use with surgical bonnets (package of 100 supplied with purchase)

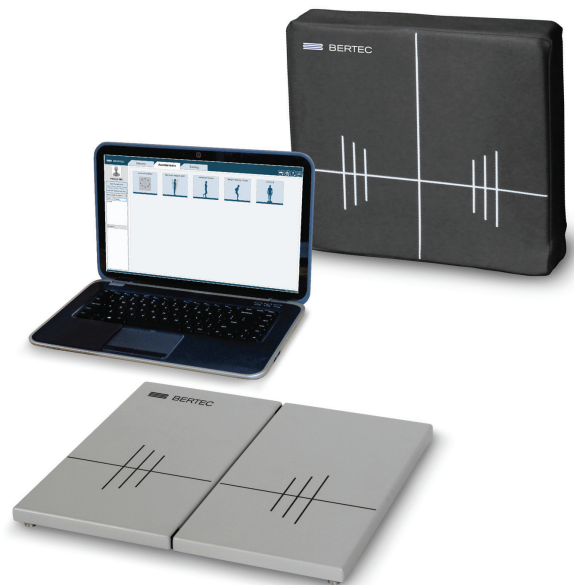
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## Bertec® Portable Essential

The Bertec® Portable Essential™ provides a variety of assessments, including standard static balance tests, weight shifting, and optional higher-level balance testing for athletes (COBALT™). Static balance and weight shifting activities can be easily integrated into a customized therapy program.

- High-sensitivity dual-balance force plate
- Objective assessment of balance with normative data for comparison
- Convenient for clinical rehabilitation, home health, bedside, and community health programs
- Portable to bring balance services beyond clinic walls
- Training menus for use with biofeedback rehabilitation
- Low profile and light weight





**Standard Package**

Bertec Balance Advantage Software	Foam balance pad (19" x 20" x 4")
Dual-balance force plate	Database merge and sync
Laptop computer with touchscreen display and remote control	One-year parts and labor with ongoing support
Power cable and USB cable	
Wireless pointing device/mouse	

**Assessment Protocols**

Modified Clinical Test of Sensory Interaction on Balance (mCTSIB)

Limits of Stability (LOS)

Rhythmic Weight Shift (RWS)

Unilateral Stance (US)

Weight Bearing Squat (WBS)

**Featured Training****Specifications****Options**

Quick Training	High-sensitivity dual-balance force plate	Bertec® Vision Advantage™
Mobility		COBALT™ (Concussion Balance Test) powered by Bertec®
Closed Chain	Standardized protocols with normative data	Carrying case (custom fit to all components)
Weight Shifting	Low 1.5" profile in an 18" x 20" configuration	Extended warranty
Seated Training	Modular software design to fit your needs	
	500 lb load capacity	
	Patented and HIPAA compliant patient database with merge and sync capabilities across all Bertec® Balance Advantage® products	
	Portable system powered by USB providing assessments for patients with balance and/or mobility problems	

For more information, contact Bertec at 614-543-8099 or by email at [info@bertec.com](mailto:info@bertec.com)

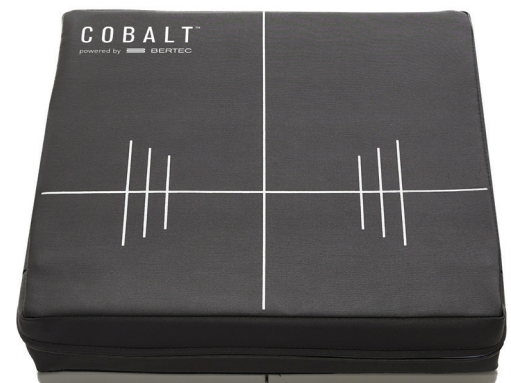
# COBALT

powered by  BERTEC

## Bertec® COBALT™ Option

COBALT™ is a balance test for athletes. COBALT™ can be used as part of a concussion screening and management program by providing an objective measure of balance control when relying on visual, somatosensory and vestibular demands. The patented COBALT™ protocol includes a unique set of testing conditions that places high demands on the visual and vestibular systems that traditional static balance testing does not provide. Research shows these more difficult conditions yield sensitivity in identifying individuals with suspected concussion.

- Brief screening test designed for athletes
- Challenging but achievable
- Provides objective data about balance performance using accurate measurements with a dual-balance force plate
- Objective postural sway data combined with simplified scoring system
- Standardized test conditions, including head turn and visual motion sensitivity
- Fully portable



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**Specifications**

Standardized four-condition assessment for high volume baseline screening

Standardized eight-condition assessment for clinical follow up

Automatic storage of balance performance data for comparison over time

Individual test results can be compared to age-related normative data

Kit of accessories to maintain consistent test administration in clinical or remote settings

**Options**

COBALT™ can be added to the Bertec® Balance Advantage® Essential™ or Functional systems.

The combination provides both a screening protocol and standard Balance Advantage® assessment and treatment capability to enhance your Bertec® system.

Optional case available to store and transport all system components

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**Standard Package**

COBALT Software Package –  
Protocol for eight test conditions

**Firm Surface**

Eyes Open

Eyes Closed

Head Shake\*

Visual Motion Sensitivity\*

**Foam Surface**

Eyes Open

Eyes Closed

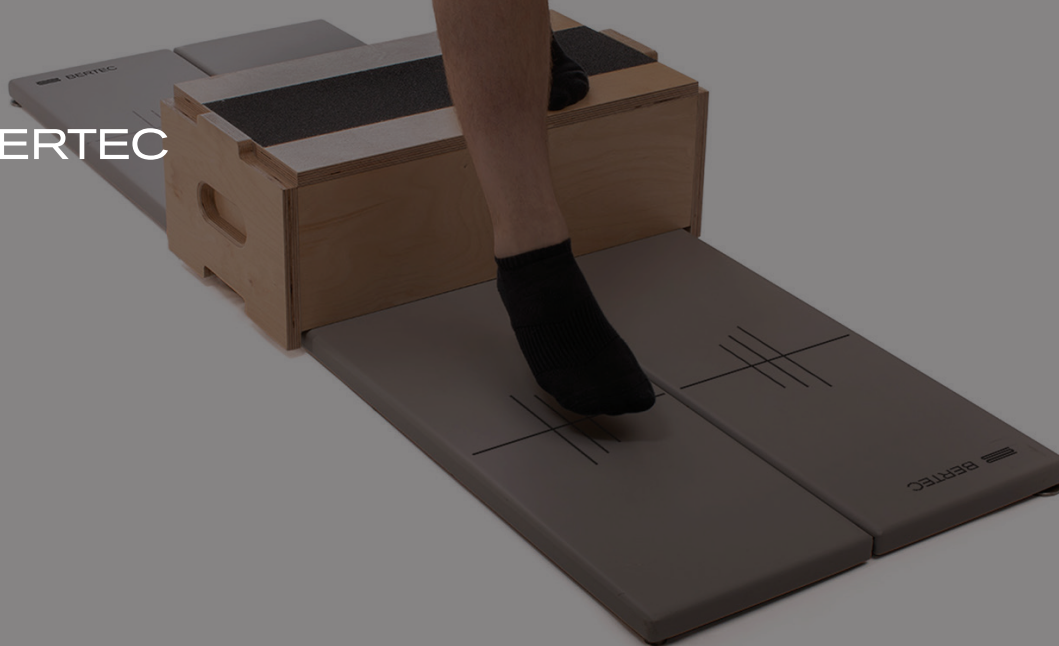
Head Shake\*

Visual Motion Sensitivity\*

\*four condition screening protocol  
for high volume test protocol

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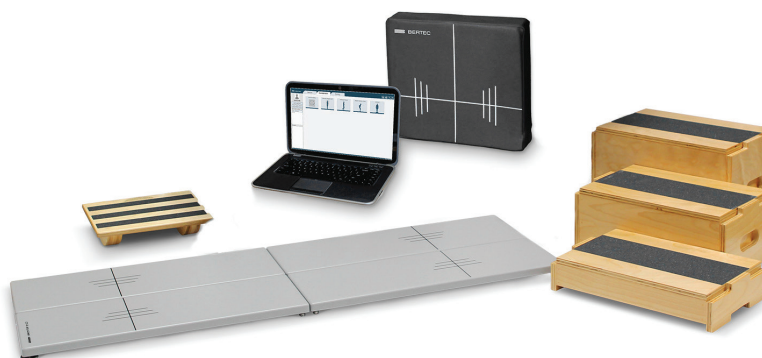




## Bertec® Portable Functional

The Bertec® Portable Functional is a longer yet portable and highly sensitive balance force plate designed as a walkway for mobility assessment and training. The longer force plate allows the clinician to assess and train the patient on tasks that mimic daily walking, stair-stepping, and sit-to-stand activities.

- Objective assessment of functional movements
- Integrated high sensitivity dual-balance force plates
- Expanded assessment and treatment protocols
- Normative data ensuring evidence-based practice
- Low profile and light weight
- Functional training with biofeedback



**Standard Package**

Bertec® Balance Advantage® software

Dual balance plate, 500 lb. load capacity

Standardized protocols with normative data

Unsurpassed classroom education

20" x 60" plate with low 1.5" profile

One-year parts and labor with ongoing support

**Assessment Protocols**

Modified Clinical Test of Sensory Interaction on Balance (mCTSIB)

Limits of Stability (LOS)

Rhythmic Weight Shift (RWS)

Unilateral Stance (US)

Weight Bearing Squat (WBS)

Sit to Stand

Step Up and Over

Step Quick Turn

Tandem Walk

Walk Across

Forward Lunge

**Featured Training**

Quick Training

Mobility

Closed Chain

Weight Shifting

Seated Training

**Included Accessories**

Foam balance pad (18" x 20" x 4")

Stackable, interlocking blocks, 4", 8", 12"

Wooden rocker board

**Specifications**

Low 1.5" profile

20" x 60" walkway-style configuration

500 lb load capacity

Modular software design to fit your needs

Low profile extended 60" balance plate system providing functional movement assessments for balance and mobility patients

Functional movement assessment and training

Visual biofeedback

Patented and HIPAA compliant patient database with merge and sync capabilities across all Bertec® Balance Advantage® products

Portable system powered by USB providing assessments for patients with balance and/or mobility problems. Great for treatment using biofeedback!

**Options**

Utilize with Bertec® Computerized Dynamic Posturography (CDP/IVR™) to expand both assessment and training capability

For more information, contact Bertec at 614-543-8099 or by email at [info@bertec.com](mailto:info@bertec.com)

## Bertec® Vision Trainer™

The Bertec® Vision Trainer™ (BVT) offers performance testing and training programs to quantify reaction times, eye-hand coordination and visual memory.

- Improve visual-motor performance
- Achieve peak performance in fast-paced competitive environment
- Provide a unique modality for training during injury recovery
- Increase user motivation and participation



**Standard Package**

Bertec® Vision Trainer™ software

Slim profile with large, interactive TV screen

Dedicated integrated computer

55" commercial grade touchscreen

Height adjustable Ergotron cart

Power cable, HDMI cable & power strip

**Featured Training**

Speed

Peripheral

Sequence

Reaction

Flash

Go/No-Go

Balance

**Specifications**

Customizable training

Touchscreen operation

Compact, all-in-one vision training system

Simple & intuitive user interface

Minimum ceiling height: 7 ft

System weight: ~100 lb

**Options**

Capacitive touchscreen monitor: 55"

Electrical requirements: 120 VAC  
6.0 amps

General footprint: ~4x2 ft

Computer: Intel Nuc (Windows 10, i7 processor)

Balance Plate

For more information, contact Bertec at 614-543-8099 or by email at [info@bertec.com](mailto:info@bertec.com)



## Bertec® Immersive Labs

Bertec Immersive Labs is an integrated research system for research grade kinetic and kinematic movement analysis with visual and audio feedback in real time. The product integrates an instrumented treadmill, 3D motion capture system, Motion Monitor software and an immersive environment with controlled visual and auditory feedback, making this one of the most advanced systems for locomotion and balance research.

- Research-grade data and real time control
- Build your own feedback system
- Flexibility in choosing motion capture systems and hardware for movement analysis
- Advanced system for locomotion and balance research
- Expand the type of studies you build
- Customized immersive scenarios





**Options**

Available in 5m, 4m, and 3m screens

Compatible with any major motion capture systems

Supports a wide variety of 3D motion capture systems, footswitches, EMGs, IMUs; allowing a wide range of measurement along with the basic joint kinematics and ground reaction forces

Research collaboration opportunities available

**Specifications**

Accurate ground reaction forces and center of pressure using Bertec's instrumented treadmill

The instrumented treadmill speed and acceleration can be controlled at a frequency of 1kHz at a fixed or self-paced mode

Customize immersive scenarios for visual and audio stimulus using the software tools provided

Customization with the immersive software and auxiliary hardware based on the current needs of research protocols

For more information, contact Bertec at 614-543-8099 or by email at [info@bertec.com](mailto:info@bertec.com)