Body composition through Air Displacement Plethysmography for Health, Wellness, and Performance

- Gold Standard accuracy using whole-body densitometric principles
- Excellent test-to-test repeatability
- Fat and Fat-Free Mass measurements
- Fast test time (2 minutes inside BOD POD and about 5 minutes total test time)
- Safe, non-invasive, and ideally suited for frequent testing
- Flexibility in testing special populations
The BOD POD is the world's only Air Displacement Plethysmography system using whole body densitometric principles to determine body composition (Fat and Fat-Free Mass) in adults and children.

In comparison to other body composition assessment methods, the BOD POD’s air displacement plethysmography has eliminated the radiation of Dual Energy X-Ray Absorptiometry (DXA) as well as the difficulties associated with underwater submersion in hydrostatic weighing. This is why the BOD POD is considered the practical Gold Standard for body composition assessment.

The BOD POD is ideal for assessing the body composition of special populations such as children, the elderly, the disabled, and subjects weighing up to 550 lb. It is also completely non-invasive, making it especially suitable for frequent, longitudinal tracking of body composition and metabolic changes over time.

**Proven Accuracy**

Each BOD POD Express is a complete turnkey system based on the same Gold Standard operating principle as hydrostatic (underwater) weighing.

The BOD POD uses the principles of whole-body densitometry to determine body composition. This technique relies on a mass measurement from a highly accurate scale (provided) and a volume measurement from the BOD POD chamber. Once body density is determined (Density = Mass/Volume), the BOD POD predicts Thoracic Gas Volume (TGV) and then uses known (or user-customized) densitometric equations to calculate percent Fat and Fat-Free Mass.

The accuracy of the BOD POD has been shown to be very high against reference techniques in a number of research publications.

The BOD POD also provides flexibility in testing special populations - something other techniques are unable to offer.

**Applications**

The BOD POD Express is used in a wide variety of segments:

- Health & Wellness
- Corporate Wellness Programs
- Weight Management
- Elite Athletic Training
- Military and Public Safety
- Nutrition Counseling
- Bariatric Clinics
- University Fitness

Used in a variety of applications

Simple and easy for both subject and operator

The BOD POD Express is a complete turnkey system
The Importance of Body Composition and Metabolism

Excess body fat can have a negative impact on health, performance, and productivity. Forward thinking weight management organizations, corporate wellness programs, health clubs, and nutritionists use accurate body composition and metabolic assessments to understand the unique requirements of their clients’ physiology. With this information, BOD POD Express users can create tailored fitness and nutrition programs, and provides organizations with an opportunity to increase revenues through highly valuable fee-for-service body composition and metabolic testing.

Test Sequence

The BOD POD Express is extremely simple to use and does not require a license to operate. A full test requires only about 5 minutes:

- Basic subject information is entered into the kiosk control system
- The BOD POD is calibrated
- The subject’s mass is measured using the integrated digital scale (accuracy is assured by scale calibrations at regular intervals utilizing provided calibration weights)
- The subject’s body volume is measured while sitting inside the BOD POD (2 minutes)
- Thoracic Gas Volume (TGV) is predicted
- Test results are displayed and printed

Maintenance

The BOD POD Express is designed for durability over time. Each BOD POD has an internal diagnostic test function to analyze system performance and provide feedback to service personnel. Extended service agreements are available to insure optimal performance for long term use.
## Technical Specifications

### Tests
- Total Weight, Fat Mass, Fat-Free Mass, Resting Metabolic Rate (RMR) estimate, Total Energy Expenditure (TEE) estimate, Thoracic Gas Volume (TGV) estimate

### Hardware
- **Dimensions**: 65 x 33 x 52 in (165 x 84 x 132 cm)
- **Weight**: 310 lb (141 kg)
- **Maximum patient weight**: 550 lb (250kg)
- **Temperature**: 70-80°F (21-27°C) - operating; 40-100°F (5-38°C) - storage
- **Humidity**: 20-70% (non-condensing)

### Standard Packaging Includes
- BOD POD Express unit, electronic scale, kiosk, calibration kit, printer, user manual

### Electrical Requirements
- Input (50/60 Hz): 100VAC – 2.4A; 120VAC – 2.0A; 220VAC – 1.1A; 230VAC – 1.1A; 240VAC – 1.0A

### Safety and Quality Standards
- Equipment has received FDA 510(k) clearance and complies with MDD (93/42 EEC), EN 60601-1 (Safety) and EN 60601-1-2 (EMC)
- Class I Equipment, Type B
- The COSMED USA, Inc. quality management system is certified to the ISO13485:2003 standard

### Suggested room layout

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**Published Research (Partial Listing):**