Metabolic Solutions
Fast, Flexible Ways to Get Metabolic Data

Metabolic Measurement Made Easy
Clinicians are all too familiar with the travails of traditional gas exchange and energy expenditure measurement: The cumbersome “metabolic cart” with its bulky equipment and specialized training; the constant recalibration of devices; and the limited hours of the PFT lab, which constrains the ability to perform tests at the optimal time for the patient.

There is a simple, fast, and flexible way to get metabolic measurements: the sleek E-COVX Compact Airway Module from GE Healthcare.

“The E-COVX is able to reliably record spirometry and metabolic indices as early as 5 min after suctioning at different ventilator modes.”

The E-COVX module is a lightweight module that plugs into the Engström Carestation™, the critical-care mechanical ventilator from GE Healthcare. Now you can lose your dependence on the PFT lab and specialized users and regain control over when you do a study. You can take a broad range of measurements at the patient’s bedside, including end-tidal CO2 and CO2 production, oxygen consumption (breath-to-breath measurement of inspired and end-tidal volumes), airway graphics, as well as Respiratory Quotient (RQ) and Energy Expenditure (EE).

All parameters are measured at the patient’s airway, so you get a fast, reading, and full numerical and graphical trends of all measured data are clearly displayed. Equally important, the data can be integrated with other vital measurements and stored within the Engström Carestation, so key patient information is all at the fingertips of the clinician.

“The E-COVX metabolic module is suitable for repeated measurements in well-sedated mechanically ventilated children with stable respiratory patterns using the PRVC, SIMV, or BiVent modes of ventilation.”

The E-COVX module is also useful for nutritionists who are working with chronic lung disease patients and hypermetabolic patients, as it replaces RQ and EE predicted values with actual, real-time data, helping to establish the feeding level.
E-COVX Advantages

- Compact plug-and-play module, integrated at the bedside
- Easy to use; quick learning curve
- Fast, readings at the patient’s airway
- Supports paramagnetic (breath to breath) measurement of Patient Oxygen
- Supports adult and pediatric flow sensor and gas sampler for airway graphics

Engstrom Carestation Highlights

- Integrated ventilation and monitoring
- Metabolics, advanced monitoring parameters, and gas exchange measurements via plug-and-play modules
- Direct lung volume measurement with FRC/INview
- Easy to maintain, low cost of ownership
- Adaptable and flexible to your environment—NICU through Step-down
- Advanced aerosolized medication delivery via Aeroneb Pro and Aeroneb Solo
- Dual-mode (pressure controlled volume guarantee) and Non-Invasive (NIV) ventilation capability (optional)

1 The Effects of Endotracheal Suctioning on the Accuracy of Oxygen Consumption and Carbon Dioxide Production Measurements and Pulmonary Mechanics Calculated by a Compact Metabolic Monitor, by George Briassoulis, MD, PhD*, Panagiotis Briassoulis, MD, Evi Michaeloudi, MD*, Diana-Michaela Fitrolaki, MD*, Anna-Maria Spanaki, MD*, and Efrossini Briassouli, MD (2009).

2 Influence of different ventilator modes on V02 and VCO2 measurements using a compact metabolic monitor, by George Briassoulis, Evi Michaeloudi, Diana-Michaela Fitrolaki, Anna-Maria Spanaki, Efrossini Briassouli, Nutrition (June 2009).