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(54) Title: Lung function measurement arrangement

(56) Cited documents: US 2001029339 A1 · US 2013253359 A1

(57) Abstract:

A measurement arrangement (2) for measuring carbon dioxide partial pressure of exhaled air from a person (4), the arrangement comprises a calculation unit (8), a carbon dioxide analyser device (10), and a gas conduit assembly (12).
A perturbation volume member (15) is provided, defining a predetermined known perturbation volume. The perturbation volume member (15) is configured to be selectively connected and disconnected to the person such that both inspiratory and expiratory air flows can pass either through said perturbation volume member (15) or not, thereby introducing a variation of the determined end-tidal carbon dioxide.
The calculation unit (8) is configured to calculate the effective pulmonary blood flow (EPBF) and the effective lung volume (ELV) based upon these induced variations of the determined end-tidal carbon dioxide partial pressure, the known perturbation volume, and the respiratory rate.