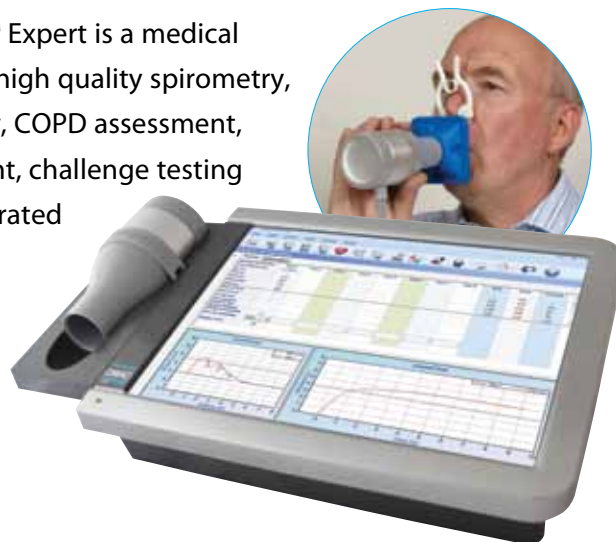


the difference is clear

# Vitalograph COMPACT

## Sophisticated, integrated cardio-respiratory diagnostic workstation

The Vitalograph COMPACT™ Expert is a medical workstation that integrates high quality spirometry, 12-lead ECG, Pulse Oximetry, COPD assessment, blood pressure measurement, challenge testing and more in a flexible, integrated solution. COMPACT features secure data management using data encryption in SQL databases.



**Vitalograph is a world leading provider of outstanding quality cardio-respiratory diagnostic devices, clinical trial services and medical equipment servicing. With a pioneering heritage of excellence spanning half a century Vitalograph continues to make valuable contributions to effective medical care and enhanced quality of life.**

### COMPACT Workstation

The COMPACT Expert workstation integrates the management of your subjects, visits and all of your clinical testing. Functionality can be customised for clinical studies or other major projects.

The Vitalograph COMPACT offers:

- Networking of multiple COMPACT devices in their own network or to a central database on your existing networks
- Simple icon driven menu on a large colour touch screen with on-screen keypad and optional biometric ID for users and patients. A standard mouse and keyboard may be used if preferred
- Intuitive user interface with workflow orientated presentation in four primary information panels: subjects, test sessions, information and session test panel
- Automatic storage and traceability of all test data and events, including calibration logs and audit trails
- Designed for secure encrypted data transmission via the internet to Vitalograph hosted central servers for reporting, archiving, analysis, review, over-reading, etc.
- Manual data entry and data export in PDF or CSV format
- Automated, secure data management designed to comply with the technical requirements of FDA 21 CFR 11, 95/46/EC and HIPAA compliance

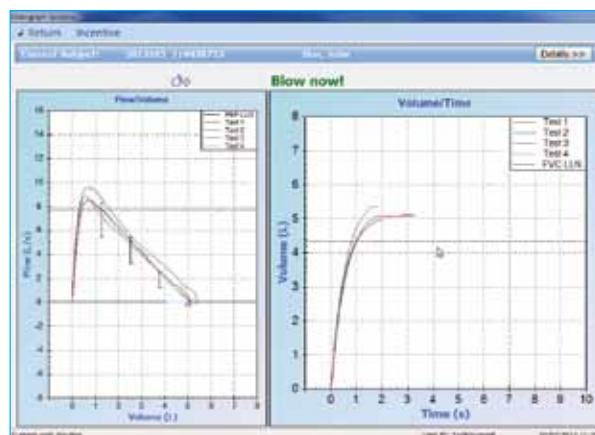
Visit	Time	Label
16/01/2013	09:22	MDE
16/01/2013	12:01	Routine
VC	12:01	
FVC	12:12	
POST	12:19	
SpO2	12:22	
6MWT	12:26	
BP	12:31	
ECG	12:37	
16/01/2013	13:22	MDE



## Spirometry

The COMPACT Expert is the latest evolution from Vitalograph's range of world leading spirometers. With vastly increased power, and storage capacity to accommodate many other types of medical device connectivity, the integrity of the spirometry device is not lost but enhanced. The spirometry module features:

- Scalable volume/time & flow/volume curves using single-breath or multi-breath spirometry
- Automatic and scalable FEV<sub>1</sub> trend chart view as subject is selected prior to testing, designed to reflect the trend of FEV<sub>1</sub> over the lifetime of the subject
- Optional choice of child incentives with sound effects and transparency so that real-time curves are simultaneously viewable
- Pre-post spirometry comparison for bronchodilator or longer-acting treatments
- User selection from a choice of over 50 test parameters
- User preference for comparison with a 'normal' population in % predicted or Z-score (SDS)



## Vitalograph COMPACT for Communication and Training

- Ethernet x 2, Serial ports x 2
- USB 2.0 x 4
- Bluetooth® and WIFI Dongle option
- Audio out (stereo) and microphone input
- DVI video output for connection to a monitor or projector

## Vitalograph COMPACT High Quality Flexible Reports

- On any network or USB printer



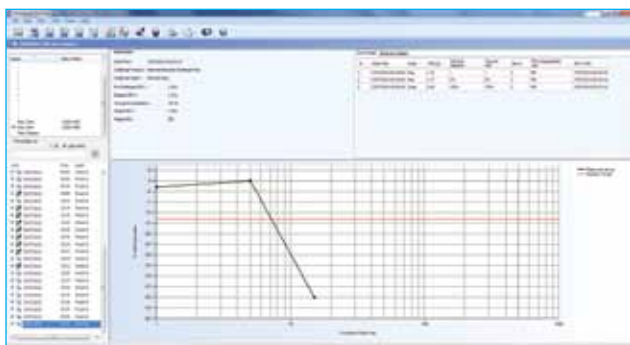
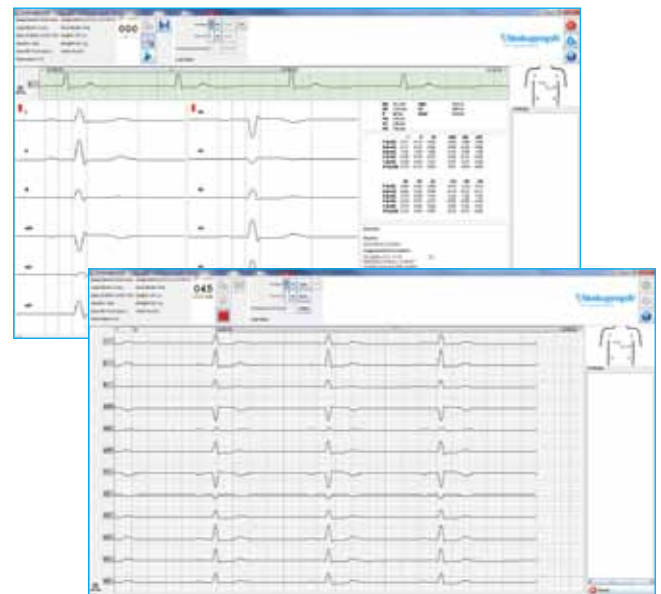


## ECG (EKG)

The COMPACT Expert with ECG offers full 12-lead electrocardiography with very low occurrence of lead artefact. Analysis and interpretation come as standard using the world class University of Glasgow interpretation algorithm which provides detailed diagnostic suggestions and evaluation of results. ECG measurements are captured and transmitted wirelessly for display in real-time and data is automatically saved for recall, reporting or printing. Transmitting ECG traces wirelessly is fast and safe with no leads to trip over or create artefacts from movement or electrical sources. The built-in display provides information on electrode contact problems, heart rate, battery status, communication status and digital pacemaker detection. The COMPACT Expert with ECG features:

- Operator controlled selection of a 10-s sample trace, but can capture and store several minutes of 12-lead ECG recording
- Visual electrode contact indication to assist operator
- Wireless data transmission via Bluetooth (range: approx. 10m)
- High quality multi-channel and 12-lead overview for viewing and printing
- Print configurable 1 or 2 page reports
- View traces as 1 x 12; 2 x 6 or 3 x 4 plus rhythm strip
- Calculation of the heart rate with acoustic and visual signal
- Full range of parameters are available (e.g. P duration, PQ interval, QRS period)

- Automatic pacemaker detection
- Rhythm analysis



## Bronchial Challenge (ATS and Mannitol)

The causes of asthma and allergy can be difficult to diagnose, but bronchial provocation with specific sensitisers, methacholine or mannitol is of value to identify the extent and cause of bronchial hyper-responsiveness.



## Pulse Oximetry

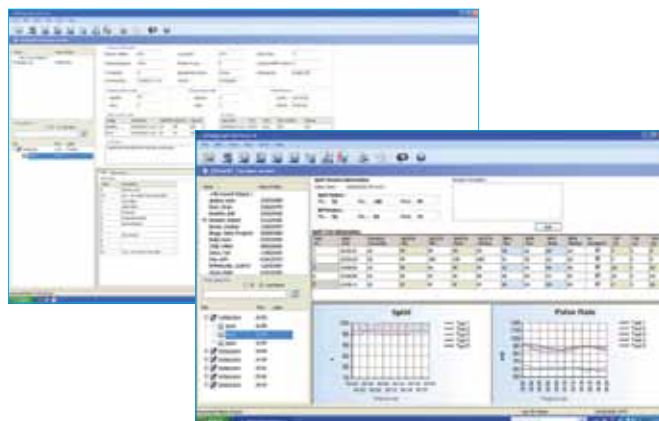
The Spirotrac® Pulse Oximetry Software feature allows you to plug an SpO2 sensor directly in to the USB port on your COMPACT Expert to deliver accurate and high quality oximetry alongside spirometry.

This calculates, trends and reports all primary parameters including minimum, maximum and median SpO2/pulse rate. Capable of recording quick assessments or longer term recordings and up to four Tx values can be selected by the user.



## COPD Assessment

- ❖ Spirometry and pulse oximetry data is automatically or manually integrated using the ATS/ERS 6-minute walk test protocol
- ❖ 6-minute walk test Wizard runs in 10 logical stages
- ❖ The BODE\* Index (\*Body Mass Index, Obstructive Index, Dyspnoea Score, Exercise Tolerance) predicts COPD mortality based on FEV<sub>1</sub>, 6MWT, BMI, MMRC and BORG Scale



## Blood Pressure

Subject BP data can be transferred to the database from a Bluetooth Blood Pressure device or entered manually.



## Weighing Scale

Subject weight data can be transferred to the database from a Bluetooth Medical Weighing Scales or entered manually.

**Vitalograph®**  
Your respiratory partner

**UK Sales**  
Vitalograph Ltd.  
Maids Moreton Buckingham  
MK18 1SW England  
Tel: 01280 827110  
Fax: 01280 823302  
e-mail: sales@vitalograph.co.uk  
www.vitalograph.co.uk

**Export Sales**  
Vitalograph Ltd.  
Maids Moreton Buckingham  
MK18 1SW England  
Tel: +44 1280 827120  
Fax: +44 1280 823302  
e-mail: sales@vitalograph.co.uk  
www.vitalograph.eu

**Vitalograph GmbH**  
Rellinger Straße 64a  
20257 Hamburg  
Germany  
Tel: (040) 547391-0  
Fax: (040) 547391-40  
e-mail: info@vitalograph.de  
www.vitalograph.de

**Vitalograph Inc.**  
13310 West 99th Street  
Lenexa Kansas 66215 USA  
Toll Free: 800 255 6626  
Tel: (913) 730 3200  
Fax: (913) 730 3232  
e-mail: vitcs@vitalograph.com  
www.vitalograph.com

**Vitalograph (Ireland) Ltd.**  
Gort Road Business Park  
Ennis  
Co Clare Ireland  
Tel: (065) 6864100  
Fax: (065) 6829289  
e-mail: sales@vitalograph.ie  
www.vitalograph.ie

**www.vitalograph.co.uk**

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## Technical Specification:

**Product:** COMPACT

**Model No:** 6600

**Net Size:** 375mm x 235mm x 110mm

**Gross Size:** 461mm x 297mm x 226mm

**Weight:** Net: 2.5kg; Gross: 4.3kg

### **Spirometry:**

**Flow Detection Principle:** Fleisch type pneumotachograph

**Spirometry Parameters:** Selectable, in excess of 50

**Spirometry Predicted Values:** Selectable

**Spirometry Test Types:** Single breath tests, flow/volume loops, multi-breath testing, tidal breathing

**Volume Accuracy:** Better than +/- 3%

**Recommended Operating Temperature Range:** 17°C - 37°C

### **Spirometer Performance Standards:**

ISO26782:2009; ISO 23747:2009; ATS/ERS 2005

### **ECG:**

**BT12:** 12-channel, 3 leads acc. to Einthoven, 3 acc. to Goldberger, 6 Wilson leads

**Power supply:** 2 x AA batteries (1.5 V) or

rechargeable batteries (1.2 V)

**Runtime when used constantly approx. 14 h**

**Electrodes:** Standard ECG electrodes

**Operating Temperature Range:** 10°C - 40°C

### **ECG Safety & Performance Standard:**

IEC 60601-2-25

**Data Storage:** Stores up to 10,000 subjects

**Input Voltage/Frequency:** 110-250VAC 50/60Hz

**PowerSAFE Output Voltage:** 19VDC

**Storage Humidity:** 10% to 95%

**Storage Temperature:** 0°C to 50°C

**Safety Standards:** IEC 60601-1:2005

**Medical Safety Standard:** Medical Devices Directive 93/42/EEC1993 (as amended)

**Class:** IIa MDD

### **Designed & Manufactured Under:**

ISO 13485:2003, FDA 21CFR820 & CMDR

**Communications:** USB 2.0 x 4, Serial RS232 x 2, Ethernet x2

**DVI video display interface**

## Ordering Info:

67800 6600 Vitalograph COMPACT with Fleisch Pneumotachograph includes Software modules for Spirometry, ECG, SpO2, BP, Weight, Bronchial Challenge Testing, 6MWT

67900 6600 COMPACT with ECG

### **COMPACT Compatible Devices:**

70400 Pulse Oximetry Finger Probe USB

70401 Biometric Scanner USB

70403 Blood Pressure Monitor Bluetooth

70404 Medical Weighing Scales Bluetooth

### **Other Vitalograph medical devices that communicate with COMPACT:**

79400 2120 Hand Held In2itive™ Spirometer

65500 6000 ALPHA Touch™

40400 4000 Respiratory Monitor asma-1™ USB

### **Consumables and Accessories**

41301 Disposable ECG Electrodes (30)

28350 2820 BVF™ Bacterial/Viral Filters (50)

20242 2024 SafeTway® mouthpieces (200)

20980 2024 Mini SafeTway mouthpieces (50)

20303 2030 Noseclip disposable (200)

36020 2040 Precision Syringe 3-L

41302 ECG Simulator



[www.vitalograph.co.uk](http://www.vitalograph.co.uk)

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