PORTI®
SLEEP DOC

Sleep diagnostics systems

PORTI®7 SLEEP DOC
Specialist Sleep Solutions

START

100%
80%
60%
40%
20%

Akku

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DeVilbiss Healthcare introduces the SleepDoc Porti diagnostics systems powered by the technology and expertise of Dr Fenyves und Gut.

From a 7 channel respiratory screener up to a full 38 channel polysomnograph the Porti systems are ideal for home or hospital use. They are inexpensive to use due to the low cost of consumables and use the same analysis and reporting software for all devices. The Porti range is the ideal solution for the developing sleep service.

Porti Family Features:

- Low running costs due to inexpensive consumables
- Optional extended warranty through our regular service program
- Built in rechargeable battery to ensure low running costs
- Simple to operate for both patients and clinical staff
- Unique thorax and abdomen belt technology using robust accurate pressure sensors, thus removing the need for expensive specialist belts
- Removable pressure sensors in the belts, which allows them to be effectively cleaned (machine washable)
- Internal battery charges fully in 2 hours – a fully charged battery will record for 16 hours
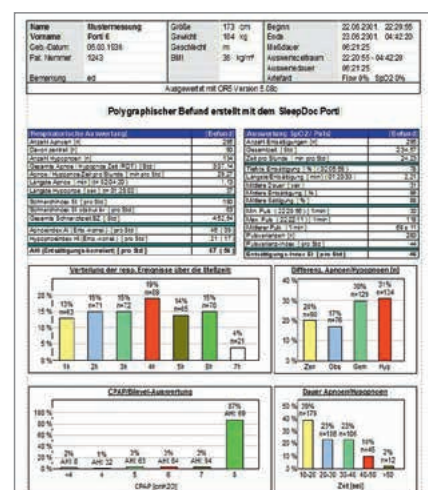
Software Features

The analysis and reporting software is extremely comprehensive, yet easy to understand. Its flexibility, allowing the user to determine the parameters, the content and design of the reports means the software can be customised to fit the needs of the sleep laboratory.

- All SleepDoc Porti systems use the same software, consumables and sensors
- Quick evaluation of reports and data
- Fully automatic evaluation, diagnosis and report generation
- Manual editing options
- Easy configuration of raw data and final reports
- Flexible parameter control for the clinician
- Quick and easy report generator
- Integration into network
- Option for data to be sent by e-mail
- Data import and export via the internet

Complete automatic report generation.

Porti 7-M

The Porti 7-M is the entry level model in the range of sleep screening devices from Dr. Fenyves and Gut. It offers the ideal solution for home sleep testing (HST) where full sleep analysis is not necessarily required.

As the successor to the original Mini Porti 5 channel device, the Porti 7-M offers 7 standard channels. In addition, it is also possible to include a further 8 external channels for extended use in the ambulatory or clinical field. The standard 7 channels measure the following:

Channels	Method
Flow	Using flow prongs or directly from the patient CPAP interface
Oxygen Saturation SpO$_2$	Using a HP finger sensor
Pulse	Using a HP Finger Sensor
Pulse wave	Using a HP Finger Sensor
Snoring	The built in microphone detects sound via the flow prongs
CPAP / BiPAP	Absolute pressure is obtained using an integrated pressure sensor which can be connected directly to the patient CPAP interface or tubing
Ambient Light	The internal light sensor allows continuous monitoring of room brightness

Porti 7

The Porti 7 is an ideal diagnostic tool for the identification of sleep disordered breathing, for use at home or in hospital. It comes as standard with 10 channels, but with the option of extending up to 24 channels. Porti 7 additional features include:

- Fast direct download via USB connection.
- No memory card required, all patient data is stored in the internal memory.
- Visual battery check on front of unit. LED's show the remaining battery life.
- No ON/OFF switch, uses an automatic start via programming in the Porti software. Can program up to 6 nights of start/finish times.

Channels	Method
Flow	Using flow prongs or directly from the patient CPAP interface
Oxygen Saturation SpO$_2$	Using an HP Finger Sensor
Pulse	Using an HP Finger Sensor
Pulse Wave	Using an HP Finger Sensor
Snoring	The built in microphone detects sound via the flow prongs
CPAP / BiPAP	Absolute pressure is obtained using an integrated pressure sensor which can be connected directly to the patient CPAP interface or tubing
Thorax	Effort belt with removable / integrated pressure sensors
Abdomen	Effort belt with removable / integrated pressure sensors
Ambient Light	The internal light sensor allows continuous monitoring of brightness of the sleeping environment
Body Position	Using an integrated magnetic sensor (5 positions)

Optional Channels	Method
Restless Leg	Using a Piezo pressure sensor
ECG	One channel lead via adhesive electrodes. Resolution up to 200Hz
Pulse Transit Time (PTT)	Calculated by using Pulse and ECG channels
Systolic Blood Pressure (RRsys)	Continuous recording of systolic blood pressure without additional sensors (PTT required)
Thermistor	An alternative method of measuring flow
NeuroPort	For automatic sleep staging
8 x External Analogue Channels	External box with voltage input for up to 8 external channels with galvanic separation

Porti 8

The Porti 8 is a modular system that caters for all; it may be used as a simple ambulatory screening device to a complete polysomnography application with up to 38 channels. With its small ergonomic profile the Porti 8 has been designed for optimum patient comfort and can be easily applied by the patient. The channels that are recorded by the Porti 8 are:

Channels	Method
Flow	Using flow prongs or directly from the patient CPAP interface
Oxygen Saturation SpO$_2$	Using an HP finger sensor
Pulse Frequency	Using an HP finger sensor
Pulse Wave	Using an HP finger sensor
Snoring	The built in microphone detects sound via the flow prongs
CPAP / BiPAP	Absolute pressure is obtained using an integrated pressure sensor which can be connected directly to the patient CPAP interface or tubing
Thorax	Effort belt with removable / integrated pressure sensors
Abdomen	Effort belt with removable / integrated pressure sensors
Body Position	Using an integrated magnetic sensor
Light Sensor	The internal light sensor allows continuous monitoring of the brightness of the sleeping environment

Optional Channels	Method
2 x Leg Movement (EMG)	Separate recordings for right and left legs is possible
6 x ECG	Six channel lead via adhesive electrodes. Resolution up to 200 Hz
Pulse Transit Time (PTT)	Calculated by using Pulse and ECG channels
Systolic Blood Pressure (RRsys)	Continuous recording of systolic blood pressure without additional sensors (PTT required)
NeuroPort	Special electrode for frontal lead with fully automatic sleep staging
6 x EEG	Six channel lead via adhesive electrodes
2 x EOG	Two channel lead for eye movement (both eyes) using adhesive electrodes
1 x EMG	One channel lead of muscular movement from chin
8 x External Channels	External box with voltage input for up to 8 external channels with galvanic separation
Audio / Video	Real time audio/video recording including two way communication

Thorax belt with two removable pressure pads

Port 7-M

Porti 7

Porti 8

Inexpensive flow sensor for recording respiration and snoring

Robust, colour coded connectors

The reusable HP SpO$_2$ sensor finger cuff is durable and comfortable for the patient

ECG leads

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SPECIFICATIONS

Dimensions (H x W x D)
Porti 7-M	30.5 x 62.7 x 140 mm
Porti 7	30.5 x 62.7 x 140 mm
Porti 8	35 x 75 x 168 mm

Weight (including battery)
Porti 7-M	160 g
Porti 7	160 g
Porti 8	260 g

Storage medium
Porti 7-M	Internal Flash memory
Porti 7	Internal Flash memory
Porti 8	Internal Flash memory

Storage capacity
Minimum of 48 hours

Measurement range SpO$_2$
99 % to 80 % (± 2 %) / 79 % to 60 % (± 4 %)

Measurement range Pulse
50 1/min – 150 1/min (± 2 %)

Power supply
Porti 7-M	3 V Li-ION Battery
Porti 7	3 V Li-ION Battery
Porti 8	3 V Li-ION Battery

Temperature range	+15˚C to +45˚C
Humidity	60 % to 80 %
Fault indicator	2 LEDs (front)

DeVilbiss
HEALTHCARE

DeVilbiss Healthcare Ltd.
Unit 3, Bloomfield Park, Bloomfield Road
Tipton, West Midlands DY4 9AP
United Kingdom
Phone + 44 (0) 121 521 3140
Fax   + 44 (0) 121 521 3141
www.devilbisshc.com
enquiries@devilbisshc.com

Comparison chart of the Porti devices

Channels	Porti 7-M	Porti 7	Porti 8
Flow (via flow prong)	■	■	■
Flow (via Thermistor)	✖	❏	❏
Oxygen Saturation SpO$_2$	■	■	■
Pulse	■	■	■
Thorax effort (chest belt sensor)	✖	■	■
Abdomen effort	✖	■	■
Obstruction and phase shift	✖	■	■
Snoring (integrated microphone)	■	■	■
Position	✖	■	■
CPAP / BiPAP (to obtain absolute pressure during CPAP therapy)	■	■	■
Neuroport (EEG, automatic sleep stage classification)	✖	❏	❏
Leg movement (restless leg, single or double)	✖	❏	❏
ECG (resolution up to 200Hz) and central heart frequency	✖	❏	❏
PTT pulse transit time	✖	❏	❏
Systolic blood pressure	✖	❏	❏
8 additional analogue channels	■	■	■
Neurology (6 x EEG, 2 x EOG, Chin EMG)	✖	✖	❏
Pulsewave (Plethysmogram)	■	■	■
Ambient light	■	■	■
Video interface (online measurements)	■	■	■

■ Available in the unit   ❏ Available as an option   ✖ Not available

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