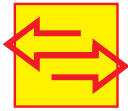


# PowerCube<sup>®</sup> Diffusion



**covers diffusion and  
distribution disorders  
in one single measurement**

**GANSHORN**  
MEDIZIN ELECTRONIC

# PowerCube®

## More transparency when determining the CO-Diffusion Single Breath!

Accurate and reliable gas analysers are the prerequisites for good measurements. Besides, the analysers used by us have a high long-time stability and are almost maintenance-free.

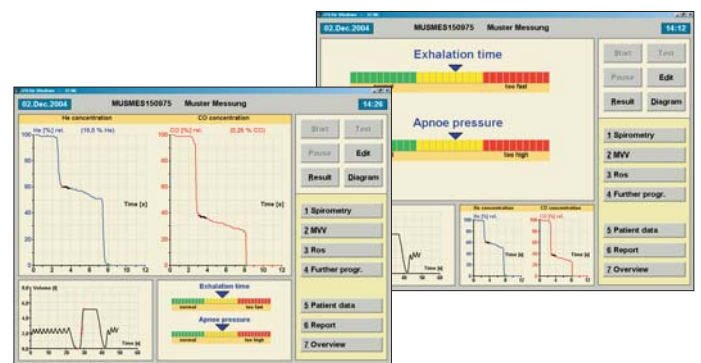
## He-FRC-measurements meeting ERS standard

The PowerCube®-Diffusion measures the He-FRC by means of the inert gas helium as per ERS-Standard. The quick helium analyser developed by GANSHORN is almost insensitive against dirt.



## Quick and reliable diagnosis of distribution disorders

The accurate and reliable analysers enable a high-resolution display of the wash-in curves of CO and He. Important information on distribution disorders become visible at first sight.



For the automated evaluation there are several standards at your disposal.

As it is standard on all GANSHORN measuring programmes a manual evaluation is possible too, and that not only immediately after the measurement, but even after some days.

The manual evaluation always refers to the original data. Evaluation distortions by repeated evaluation are excluded.



# Diffusion

## More safety during measurement

Hard- and software of the PowerCube®-Diffusion are designed to keep measurements and patients' guidance as simple as possible. An elaborated order of measurements allows quick and effective work.

The pressure free gas application with a patient-friendly Fi-gas bag is very convenient, especially for sick patients.

The breath-holding time is adjustable and, of course, complies with the ERS standard.

For the preparation of the breathing manoeuvre a »practice mode« is available, which works with ambient air instead of measuring gas.

Assisting pictures display already during measurement concrete information about the patients' cooperation and for the optimal control of the breathing manoeuvre. This helps avoiding mismeasurements and saves nerves, time, and money.



## Lung functions made to measure: the GANSHORN software LF8

for determining the CO transfer factor TLCO-SB, the Krogh factor KCO, the alveolar volume VA, the He-FRC, the residual volume RV, as well as the total lung capacity TLC.

A clear screen format and a logic user guidance support quick measurements and a smooth work routine – also for personnel which is not so familiar with computers.

- A standardised software surface for all measuring programmes simplifies different measurements on one patient.
- No matter whether measurement course, evaluation, or display of measurement readings – all that can be easily configured as per your conceptions.
- Settings can be adjusted even after measurements in order to achieve optimal results on small or inconstantly exhaled volumes, e.g. by children.
- All measurement phases are being supported by user-friendly software, by large-size graphics, and assisting pictures. The operating personnel can give its whole attention to the patients.
- Combinations of several measurements, such as CO diffusion SB with spirometry, flow/volume or body plethysmography in one report are possible.
- Freely configurable reports displaying the required parameters as numeric tables or coloured graphics for monitor, printer, network or data file (e.g. for the direct transfer to the doctor's letter).





## Measurement with system

- All hard- und software components of the PowerCube®-Diffusion are carefully coordinated.
- The gas application through Fi- gas bags requires no laborious valve and safety technique.
- The stable valve unit can be replaced with just a few turns and can easily be disinfected completely.
- The flow sensor needs not to be dismantled for cleaning and is suitable for connecting bacteria- and virus filters.
- The PowerCube® based measurement hardware is compact, stable and easy to maintain.
- The following measurement programs are included in the basic configuration of the PowerCube®-Diffusion system:  
CO-Diffusion SB  
Helium-FRC, RV and TLC  
Pre/Post-comparisons  
Bronchospasmolysis
- A wide and comfortable spirometry program with flow/volume and MVV measurements is included.
- An special sensor test program provides for quality assurance.
- Later updates by further interesting options are possible.

**CO-Diffusion and He-FRC are optionally available for other PowerCube® systems, e. g., for a bodyplethysmography system.**

## PowerCube® Diffusion

**Personal computer supported measurement module for the determination of CO-SB-diffusion, including Helium-FRC, spirometry flow/volume, and maximum voluntary ventilation MVV**

**337 030 PowerCube® Diffusion SB with software LF8 and standard accessories**  
(flow transducer, tubes, mouth pieces, etc.)

### Options

- 546 010** Compliance static and dynamic
- 337 135** P 0,1 and Pi max
- 337 125** Rhinomanometry
- 337 015** Oscillatory resistance ROS
- 433 011** Aerosol dosimeter ProvoJet
- 942 206** 230V Insulation transformer 1000 VA
- 971 010** mobile trolley standard
- 221 050** gas application by demand valve

The software is network compatible and can be connected by GDT interface with other computer systems.

- 870 010** PCS connection
- 871 040** Multi-station license for the establishment of examination places.

More options, accessories (e.g. trolleys), connections, personal computer requirements on request.

### Technical data PowerCube® Diffusion:

Active medical device class II a

Measuring principle flow transducer : variable orifice

CO analyser: Infrared

Measuring range: 0 to 5,000 ppm CO

Measurement accuracy: +/- 1% FDS

He-analyser: ultrasound (patented)

Measuring range: 0 to 20% He

Measurement accuracy: +/- 1% FDS

Dimensions:

Measuring module (depth x width x height): 15 x 15 x 15 cm

Measurement desk (depth x width x height): about. 65 x 65 x 120 cm

Weight:

Measurement module: about. 3 kg

Whole measuring system: about. 70 kg

Automatic BTPS correction

RS 232- infrared interface for a 4 KV insulation between PowerCube and personal computer

**Developed, produced and quality-controlled according to  
EN ISO 9001/12.2000 / EN ISO 13485/11.2000**

**CE 0124**

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