Geratherm®
Respiratory

PRODUCT PORTFOLIO

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ABOUT US

Geratherm Respiratory in Bad Kissingen

Global Network
Supported by over 46 sales partners across all continents

Distributors
Direct access to personalized on-site support and expert advice for product-specific needs

Geratherm Respiratory GmbH, based in Bad Kissingen, develops and manufactures medical products in the fields of Spirometry, Pulmonary Function Testing (PFT), and Cardiopulmonary Exercise Testing (CPET). To ensure high-quality standards, production is carried out exclusively in Germany.
Particular emphasis is placed on intuitive usability and a well-designed hygiene concept to ensure patient protection. All products come with the unique BLUE CHERRY® diagnostic software platform, which integrates a wide range of diagnostic capabilities into a powerful, cohesive network.

Management Team


PD Dr. med. Oliver Gödje
Managing Director CEO

Oliver is a highly experienced clinician and executive in Medtech and Pharma Industries, with 25 years of international experience in medical and commercial roles and serves Geratherm Respiratory as CEO. During his career, he has gained an in-depth understanding of European, North, and South American, Chinese, and other Asian markets. Oliver holds a PhD and a Professorship in Cardiac Surgery, and he developed extensive medical knowledge during his tenure at leading German universities.

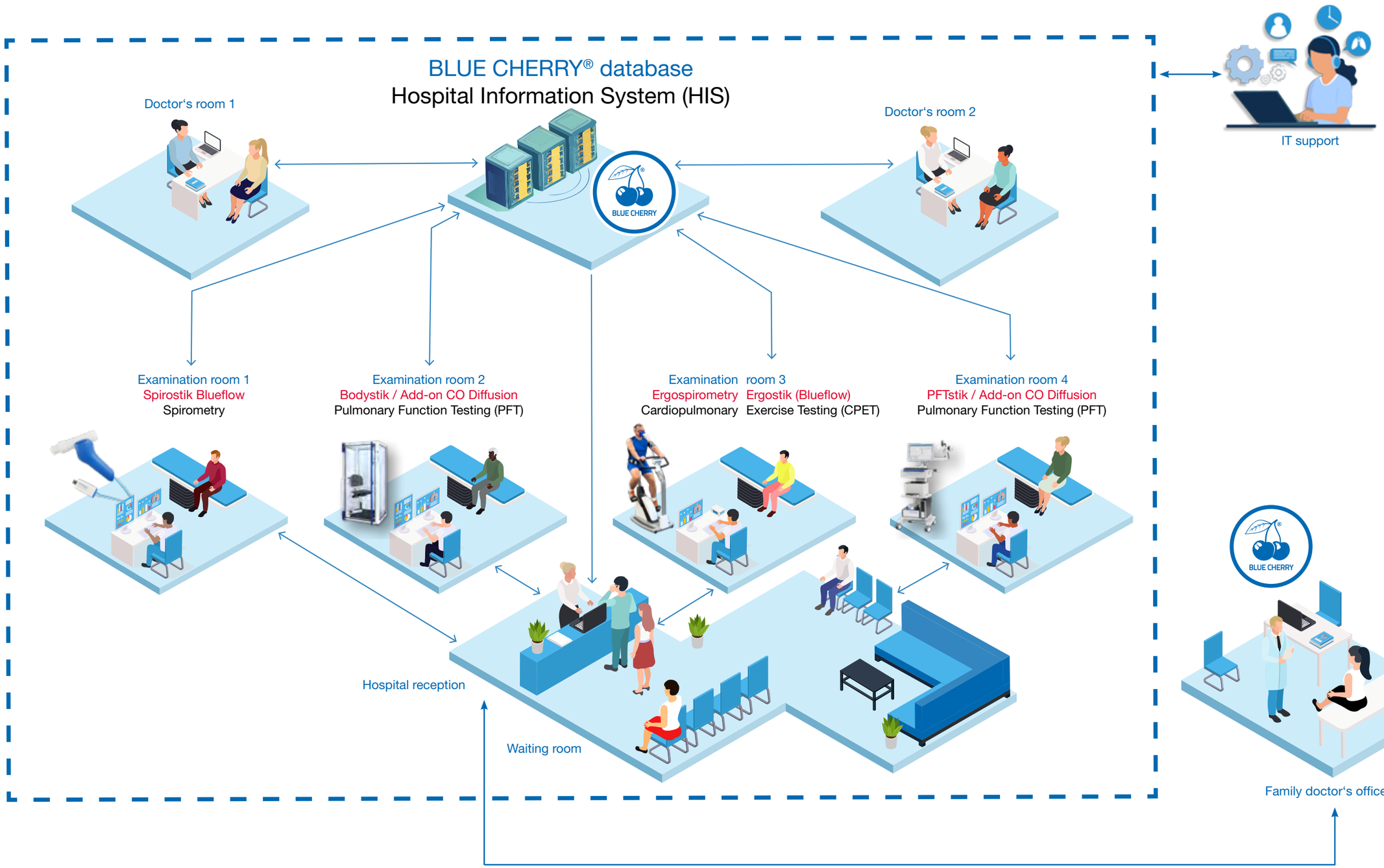

Florian Dassel
Managing Director COO

As a founding member of Geratherm Respiratory, Florian played a key role in developing the first generation of products. In his career, he has been actively involved in the production process as well as various areas of corporate management and is responsible for these areas in his current role as COO. He earned his diploma in Electrical Engineering with focus on Medical Technology and has been working in the medical technology sector ever since.


Thomas Bindig
Vice Präsident of Sales

Thomas is responsible for strategic planning and implementation of sales and marketing initiatives that drive growth and increase market share for Geratherm Respiratory. He leads the sales team to achieve ambitious targets and build long-term customer relationships while striving to maximize customer satisfaction. With his degree in Medical Technology and over 25 years of industry experience he owns a deep knowledge in respiratory diagnostics, particularly in Cardiopulmonary Exercise Testing.

HOSPITAL INTEGRATION OF GERATHERM RESPIRATORY PRODUCTS



PRODUCTS

Spirostik Blueflow

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SmartCoach Motivation *plus*

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PFTstik

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Bodystik

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BlueFlow Unit HexaBlue Protect Blueflow *max*

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Ambistik

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Ergostik (classic)

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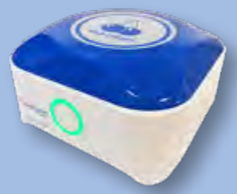
Ambistik CPET



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Ergostik Blueflow

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Spirometry

Spirometry is a crucial diagnostic tool in respiratory medicine, offering significant benefits for both patients and healthcare providers. This non-invasive test measures how much air a person can inhale and exhale, as well as how quickly they can do so. By providing detailed insights into lung function, Spirometry plays a vital role in the early detection, monitoring, and management of various respiratory conditions.

One of the primary reasons Spirometry is essential is its ability to detect respiratory diseases at an early stage. Conditions such as Chronic Obstructive Pulmonary Disease (COPD), asthma, and pulmonary fibrosis can be identified before symptoms become severe.

Spirometry also provides objective measurements of lung function, which are critical for diagnosing and assessing the severity of respiratory diseases. Key parameters measured during the test include Forced Vital Capacity (FVC) and Forced Expiratory Volume in one second (FEV1). These values help healthcare providers determine the presence and extent of airflow obstruction or restriction.

Moreover, Spirometry is invaluable for monitoring disease progression and the effectiveness of treatment. Regular Spirometry tests can track changes in lung function over time, helping to adjust treatment plans as needed. This ongoing monitoring is particularly important for chronic conditions like asthma and COPD, where lung function can fluctuate based on various factors, including medication adherence and environmental triggers.

In addition to its diagnostic and monitoring capabilities, Spirometry is a valuable tool for patient education. By visualizing their lung function, patients can better understand their condition and the impact of their treatment. This understanding can motivate patients to adhere to their treatment plans and make lifestyle changes that support their respiratory health.

In summary, Spirometry is a fundamental component of respiratory care. Its ability to detect diseases early, provide objective measurements, monitor disease progression, and educate patients makes it an indispensable tool in the management of respiratory conditions. Regular Spirometry testing can lead to better health outcomes and improved quality of life for individuals with respiratory diseases.

Spirometry

SPIROSTIK BLUEFLOW

For Spirometry, Geratherm Respiratory offers Spirostik Blueflow, a USB device with a hose connection and an ergonomic handle.
Spirostik Blueflow operates on the powerful BLUE CHERRY® diagnostic software platform, enabling Spirometry testing in compliance with the latest ATS/ERS guidelines. Integrated quality control and interpretation tools ensure the validity of test results and support daily workflows. A robust report configuration feature allows customizable reports, presenting all relevant information in the desired format to meet your team's preferences. BLUE CHERRY® is scalable, supporting everything, from single workstation setups to complex network installations across multiple labs.

SmartCoach

Spirometry

SMART COACH

With Geratherm SmartCoach, waiting time becomes learning time, optimizing your workflows and increasing efficiency. Patient waiting time can be used effectively for virtual teaching by animated explanation videos. Within minutes patients are well prepared when entering the examination room.
Designed for all ages, the animated explanation videos are specifically tailored to young and adult patients. They help to still fears, reduce anxiety and nervosity prior to unknown procedures. Available in English, German, Spanish, French, and Portuguese by default. Any other language can be added by request in cooperation with local partner and AI-support.

SmartCoach integrates seamlessly across all Geratherm platforms, providing instructional videos for Spirostik, Bodystik, PFTstik, and Ergostik.

Motivation*plus*

MOTIVATION PLUS

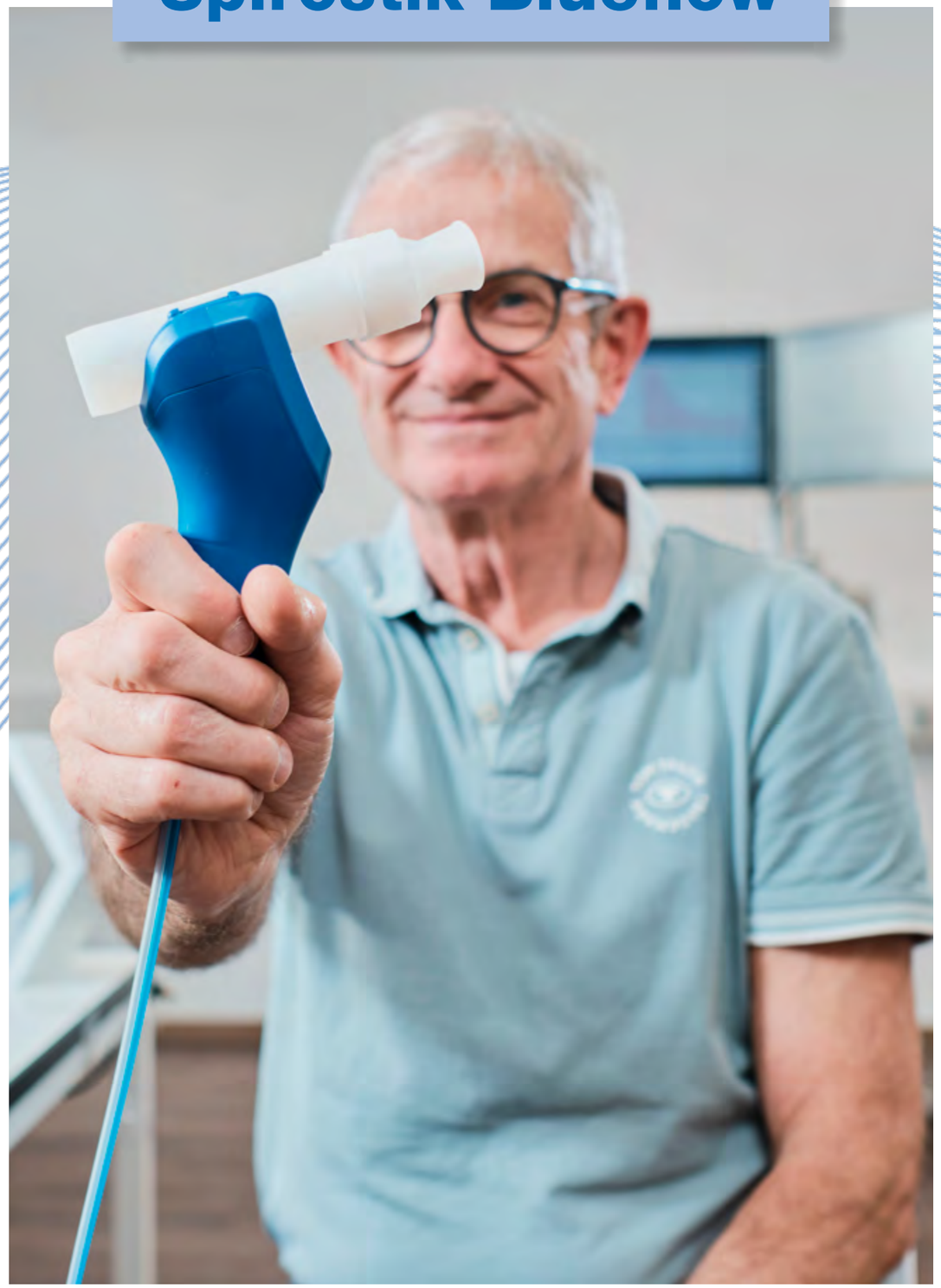
Designed with flexibility and user engagement at its core, the system seamlessly adapts to the preferences of healthcare providers. Animations can be displayed either in full-screen or split-screen mode, and a dual-monitor setup enables a clear separation between patient-side visuals and operator-side medical data, ensuring an optimal workflow for both parties.

Patients can be guided through the required manoeuvres either directly by the examiner or independently through the BLUE CHERRY® system. Using intuitive acoustic instructions, the software supports multiple languages, including English, German, Spanish, French, and Portuguese, making it ideal for international use. Additional languages available upon request.

To further enhance patient motivation, the system incorporates gamified breathing exercises under the engaging concept of “Collect – Avoid – Exhale!”. A personal high-score feature encourages patients to achieve their best possible results, turning every exhalation into a small success and driving consistent performance improvement.

With a wide range of 11 different animated scenarios, the testing process becomes an enjoyable and interactive experience. From children to adults, patients can select their preferred gaming environment, transforming routine procedures into an engaging and motivating activity.

Spirostik Blueflow



Safe

Lightweight

Easy to use

REF-Nr.: 361333-BF

Product Details

MAXIMUM PATIENT SAFETY

Spirostik Blueflow uses the Blueflow single-patient-use flow sensor, eliminating cross-contamination risks. Unlike traditional sensors of other manufacturers, this design reduces dead space and flow resistance, at the same time improving testing efficiency.
The ergonomic „roll-in“ handle allows users to insert and remove the Blueflow sensor without direct contact, ensuring a cleaner environment. Because it does not require bacterial or viral filters and is designed to reduce dead space and airflow resistance, Spirostik Blueflow helps lower CO_2 rebreathing. This is particularly beneficial for pediatric and compromised patients.

HIGHEST ACCURACY

The accuracy of Spirostik Blueflow has been validated and confirmed against ATS waveforms, demonstrating its reliability as a diagnostic spirometer. Its accuracy is warranted through continuous quality control during production, ensuring proper calibration theoretically even without the need for a calibration syringe.
Accuracy can be further enhanced by adding the USB-based environmental module, Ambistik. Ambistik continuously monitors ambient conditions such as temperature, pressure, and humidity, ensuring accurate BTPS compensation at all times, eliminating the need for users to manually input these values.

Spirostik Blueflow offers advanced Spirometry measurements, including Slow Vital Capacity (SVC), Forced Vital Capacity (FVC), and Maximum Voluntary Ventilation (MVV), in compliance with ATS/ERS guidelines. It automatically calculates multiple parameters such as SVC, FEV1, FEV1/FVC, PEF, IC, ERV, and MEF25-75.

Spirostik Blueflow

QUICK AND EASY TO USE IN DAILY PRACTICE

Thanks to its compact design and simple USB connection, any PC running the BLUE CHERRY® software suite can easily transform into a Spirometer by just plugging the Spirostik Blueflow into an USB port.
This makes the Spirostik Blueflow ideal for use in different rooms or even in mobile applications, such as community screenings. Supplied in a durable carrying case, everything is kept secure and organized during transport.

INTUITIVE SOFTWARE PLATFORM BLUE CHERRY®

The Spirostik Blueflow operates under the powerful BLUE CHERRY® diagnostic software platform and can be integrated with other products from Geratherm Respiratory to create a complete suite of cardiopulmonary diagnostic testing tools.

BLUE CHERRY® is fully scalable, ranging from simple single workstation setups to complex network solutions, and can be customized to meet a wide variety of needs — from daily medical practice to clinical research.
The software integrates quality control according to ATS/ERS guidelines and includes Spirometry interpretation algorithms along with proprietary graphics. It supports the latest GLI predicted values (2012 and 2017) and Z-Scores and offers long-term test trending, allowing for the overlay of multiple tests.
Reports are fully customizable.

User accounts with different access levels are available, and workflows are optimized through interfaces with HL7 or GDT, enabling seamless integration with existing hospital systems.
BLUE CHERRY® also provides powerful reporting capabilities, including pdf export, and supports complex and secure network installations with a central SQL database.

PULMONARY FUNCTION TESTING - PFT

Pulmonary Function Testing is an essential diagnostic tool in respiratory medicine, providing critical insights into lung health and function. It provides detailed diagnosis, grading, and monitoring of pulmonary diseases, enhancing the diagnostic value of Spirometry (for detailed description of basic Spirometry see previous chapter). PFT devices are indispensable tools in internal medicine and pulmonology. Measurements of total lung capacity and residual volume are crucial for distinguishing between restrictive and obstructive lung diseases. The diagnosis and grading of obstructive lung diseases, such as COPD or asthma, can be further supported by measuring airway resistance.

Additionally, determining the diffusion capacity of the lungs for carbon monoxide aids in diagnosing interstitial lung diseases and detecting vascular diseases. Timely interventions, based on PFT can significantly improve patient outcomes and quality of life.

In addition to diagnosis, PFT is crucial for monitoring the progression of respiratory diseases. Regular testing can track changes in lung function over time, providing valuable data on whether a condition is stable, improving, or worsening. This information is essential for adjusting treatment plans to ensure they remain effective. For example, in patients with COPD, periodic PFT helps to assess the effectiveness of bronchodilator therapy and other treatments.

PFT also plays a significant role in evaluating the impact of environmental and occupational exposures on lung health. Individuals exposed to pollutants, chemicals, or dust in their workplace can undergo a PFT to detect early signs of lung damage. This proactive approach can lead to early interventions that prevent further deterioration of lung function.

Moreover, PFT is used to assess a patient‘s fitness for surgery, particularly in procedures that may impact respiratory function. Preoperative PFT helps to determine the risk of postoperative complications and guides the management of patients with existing respiratory conditions. This ensures that surgical interventions are as safe as possible and that appropriate measures are taken to support respiratory health during recovery.

Another critical aspect of PFT is its role in research and development of new treatments. By providing detailed data on lung function, PFT helps researchers understand the mechanisms of respiratory diseases and evaluate the efficacy of new therapies. This contributes to the advancement of medical knowledge and the development of innovative treatments that can improve patient care.

In summary, Pulmonary Function Testing is a cornerstone of respiratory medicine. Its ability to diagnose diseases early, monitor disease progression, evaluate environmental impacts, assess surgical risks, and support research makes it an indispensable tool in the management of respiratory health. Regular PFT can lead to better health outcomes and an improved quality of life for individuals with respiratory conditions.

Pulmonary Function Testing

Geratherm Respiratory
offers 2 different PFT products:

PFTSTIK

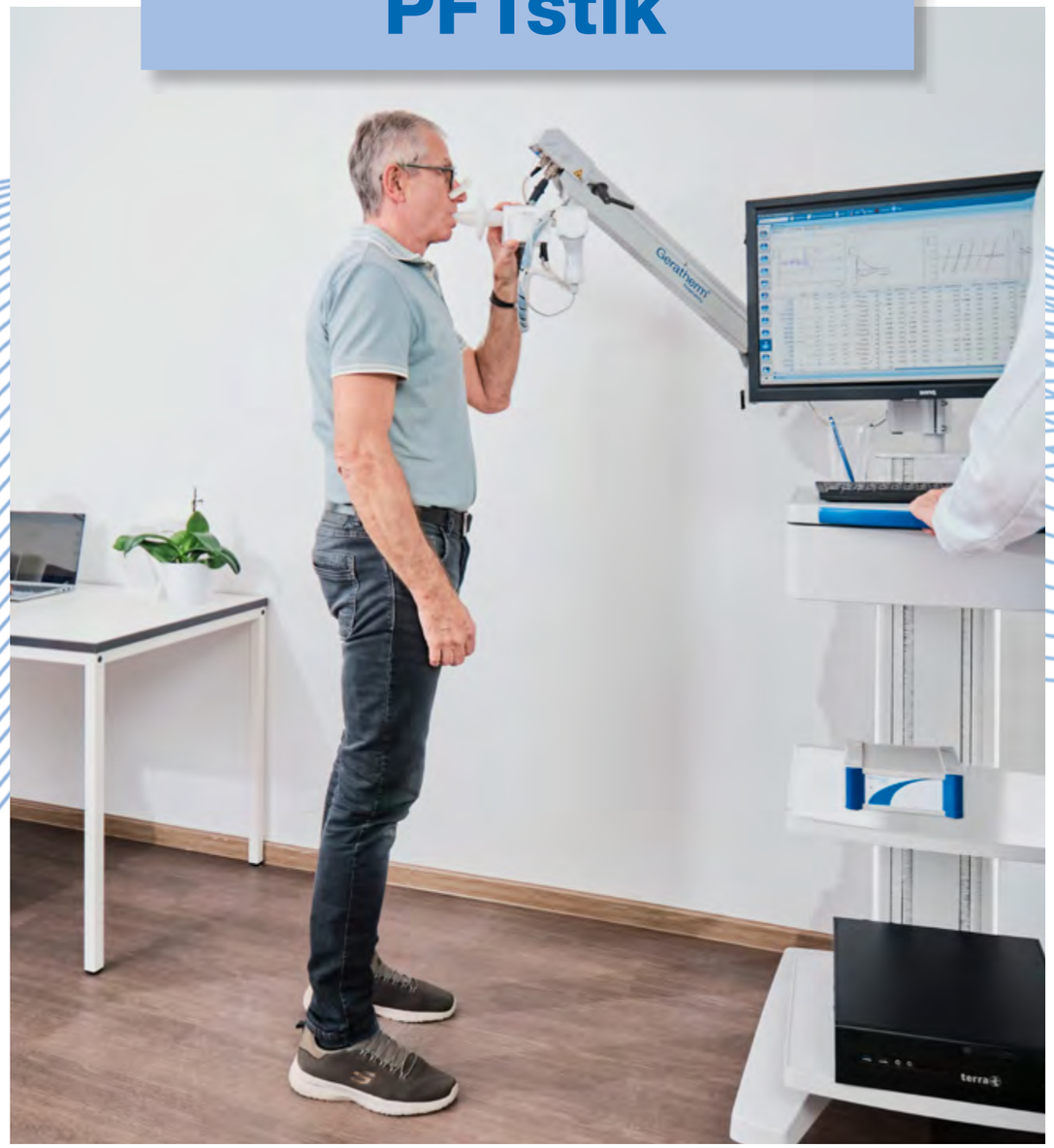
for classic Spirometry
and resistance measurement

BODYSTIK

for Gold Standard classic
Body Plethysmography and
comfortable patient testing

All Geratherm Respiratory PFT devices utilize the powerful BLUE CHERRY® diagnostic software platform, enabling PFT in compliance with the latest ATS/ERS guidelines. Integrated quality control and interpretation tools ensure the validity of test results and support daily workflows. A robust report configuration feature allows customizable reports, presenting all relevant information in the desired format to meet team preferences. BLUE CHERRY® is scalable, supporting everything from single workstation setups to complex network installations across multiple labs.

PFTstik



PFTstik is the optimal device for cost-effective measurement of full Spirometry and dynamic respiratory parameters which provide critical information about respiratory drive, respiratory muscles, and auxiliary respiratory muscles. This capability is particularly useful for investigating neuromuscular disorders, such as ALS (Amyotrophic Lateral Sclerosis). PFTstik consists of a height-adjustable measuring device arm allowing examinations in both sitting and standing positions, a flow unit with shutter, and a control box which can be connected to any PC.

Modular concept

Large swiveling range

Easy to use

REF-Nr.: 131710

Product Details

PFTstik can be further enhanced with the addition of a Bronchial Provocation package. Using different methacholine concentrations, this package provides insight into the degree of bronchial hyperreactivity (particularly for asthma) and helps determine the appropriate treatment.
Combining PFTstik with the Add-on CO Diffusion (see page 30), PFTstik becomes a standalone CO Diffusion measuring station.

MODULAR CONCEPT

Software options allow the PFTstik to be expanded with the inclusion of MIP (Maximum Inspiratory Pressure) and MEP (Maximum Expiratory Pressure) measurements.
Another software option enables the measurement of airway resistance, including Rocc (Resistance by Occlusion), respectively Rint (Resistance by Interrupter). This test is especially beneficial for less collaborative patients, such as those with advanced diseases, geriatric patients, or preschool children.

LARGE SWIVELING RANGE

Test standardization requires the subject to be in either a standing or sitting position. The PFTstik flexible arm accommodates this need with the ability to move easily up and down within a range of approximately 60 degrees. Once in place, the arm can be locked, ensuring patient comfort. This freedom of movement provides a wide range of measurement positions and can be comfortably adapted to patients of various heights, making it also ideal for wheelchair users.

PFTstik

INTUITIVE SOFTWARE PLATFORM BLUE CHERRY®

PFTstik is controlled by the powerful BLUE CHERRY® cardiopulmonary diagnostic software, which manages measurement, evaluation, and results display. The simple-to-understand graphical display throughout the test helps users quickly identify issues, such as leaks at the patient mouthpiece connection, while also providing valuable insights into lung anatomy.

Bodystik

Bodystik, the Geratherm Respiratory Gold Standard full-body plethysmograph, enables the measurement of respiratory resistance, lung volumes (including residual volume), full Spirometry, and inspiratory/expiratory pressure measurements. Body Plethysmography aids in the differential diagnosis of obstructive and restrictive lung diseases and plays a crucial role in identifying the underlying causes of dyspnea.

Bodystik is designed with patient and user comfort in mind, featuring a sturdy swing-out chair and a fully height-adjustable arm. It is electronically controlled via a simple and intuitive control panel located on the outside of the cabin, enabling small adjustments even with the cabin door closed. This compact electronic arm maximizes internal space, further enhancing patient comfort.

The powerful BLUE CHERRY® software suite includes functions that support breathing performance and control, allowing operators to easily monitor and assist the patient during testing.

- Easy cabin entry
- Swing out chair
- Modular concept

REF-Nr.: 785155

Product Details

EASY CABIN ENTRY

The Bodystik cabin is designed with patient experience in mind. Featuring an extremely low step, it makes cabin entry easier, especially for elderly or infirm patients. The unique 60 degrees swing-out chair design allows patients to sit comfortably outside the cabin and then swing in for testing, ideal for wheelchair users.

To accommodate a wide range of patients, both the chair and measurement arm are height adjustable. The measurement arm can be adjusted during testing from outside without interrupting the measurements. The cabin door is secured with electromagnetic locks, which can be opened from inside and outside of the cabin with a simple push of a button. To support different room layouts and workflows, the Bodystik is also available in a mirrored layout with a right-hinged door, providing greater flexibility in space planning. Additionally, the locks disengage automatically in the event of a power failure, this enhancing patient safety. Patient and operator communication is facilitated by an integrated intercom system, with a microphone in the control panel and loudspeakers inside the cabin. This allows the operator to provide clear instructions to the patient throughout the test.

OPTIMAL PATIENT CARE

Bodystik is built with a robust aluminum framework, ensuring stable, reliable measurements. Comfort is further enhanced by ESD glazing on all sides and the top, providing a clear view of the surroundings and creating a bright, inviting interior. The five large tempered glass windows offer patients a clear view of the operator during the test, contributing to a more comfortable testing environment. They facilitate visual communication while the integrated intercom system ensures the patient can hear instructions clearly during the test. The expansive glass surfaces also help to reduce non-compliance from patients who might otherwise hesitate to enter a Body Plethysmograph.

Bodystik

ENHANCED CAPABILITIES

The Bodystik can optionally be upgraded with the Add-on CO Diffusion, enabling lung diffusion (DLCO) measurements directly within the Bodystik via the standard device arm. The gas supply is delivered to the patient through a demand valve, while the integrated infrared gas analyzer enables fast diffusion measurements without moving the patient.

INTUITIVE SOFTWARE PLATFORM BLUE CHERRY®

Testing and analysis with the Bodystik are controlled by the powerful BLUE CHERRY® software platform and help ensure the test adheres to ATS/ERS guidelines. The software displays key data, such as breathing frequency and exhalation time during the test maneuver, assisting the operator in maintaining optimal testing conditions.

Further software options expand the capabilities of the Bodystik with the addition of MIP (Maximum Inspiratory Pressure) and MEP (Maximum Expiratory Pressure) measurements. These parameters provide valuable insights into respiratory drive, muscle function, and auxiliary respiratory muscles, making them essential for investigating neuromuscular disorders like Amyotrophic Lateral Sclerosis (ALS).

Additionally, BLUE CHERRY® allows the creation of predefined measurement sequences, permitting repetitions or multiple attempts of specific measurements. This helps operators to focus on the patient and ensure accuracy while reducing test time. On-screen instructions further assist in streamlining the testing process and enhancing result reliability. After the test, BLUE CHERRY® provides a powerful comparison and reporting suite, allowing users to compare results via overlays and assess measurements against ATS/ERS acceptability criteria to ensure sufficient patient cooperation.

BlueFlow Unit

MDR-compliant – Smart Workflow – Effortless Integration

THE ALL-IN-ONE SOLUTION

Designed to meet the highest standards of modern clinical environments, this all-in-one solution combines MDR compliance with a smart, streamlined workflow and effortless integration into existing systems. Engineered specifically for clinics and healthcare professionals, it delivers reliability, efficiency, and ease of use in every step of the diagnostic process.

At the core of the system is the illuminated Blueflowplus sensor, which is based on a well-established measurement principle and enhanced through modern system integration. Its intuitive visual feedback and user-friendly design support precise and confident operation in daily practice.

The integrated 360° heated flow sensor maintains a constant operating temperature, ensuring stable measurement conditions. This design helps minimize the impact of moisture and rapid ambient temperature changes, contributing to consistent and dependable results.

Optimized flow dynamics allow for reliable performance even at higher flow rates, supporting accurate and reproducible measurements. The system achieves a high level of precision in accordance with ISO 26782 (±2%), ISO 23747 (±2%) and is fully aligned with current ATS/ERS recommendations, ensuring clinical confidence and compliance with international standards.

BLUEFLOW SENSOR

For added flexibility, the unit can be operated with two different sensor options depending on clinical needs. The HexaBlue Protect configuration includes the Blueflowplus sensor and is designed for measurements with up to 100 patients, supplied with 100 HexaFilt Blue and a SensorKey. Alternatively, the Blueflowmax sensor option supports measurements with up to 1,000 patients and also includes a SensorKey, making it ideal for high-throughput environments.

HexaBlue Protect

REF-Nr.: 347344

SensorKey Reader

REF-Nr.: 643845

Blueflow*max* Sensor

REF-Nr.: 747751

Measurement of Lung Diffusion Capacity

The measurement of lung diffusion capacity, often referred to as DLCO (Diffusing Capacity of the Lung for Carbon Monoxide), is a crucial diagnostic tool in pulmonary medicine. This test assesses the ability of the lungs to transfer gas from inhaled air to the bloodstream, which is essential for effective oxygenation of the body. The test is quick, non-invasive, and provides immediate results, making it a practical choice for routine clinical use.

DLCO measurement is vital in diagnosing and managing various lung conditions, including interstitial lung diseases, chronic obstructive pulmonary disease (COPD), and pulmonary hypertension. It helps in identifying the extent of impairment in gas exchange, which is critical for tailoring appropriate treatment plans.

Before lung surgery, evaluating the DLCO is important to predict postoperative outcomes and potential complications. A reduced DLCO can indicate a higher risk of postoperative morbidity, guiding clinicians in making informed decisions about surgical interventions.

For patients with chronic lung conditions, regular DLCO measurements can track disease progression and the effectiveness of treatments. This ongoing monitoring helps in adjusting therapies to maintain optimal lung function and improve patient quality of life.

DLCO testing typically involves the patient inhaling a small amount of carbon monoxide (CO) mixed with air. CO binds to hemoglobin similar to oxygen, allowing for an accurate assessment of the lung‘s gas transfer capability. The concentration of CO in the inhaled and exhaled air is compared and helps to calculate the DLCO value, indicating how effectively the lungs are transferring gas to the blood.

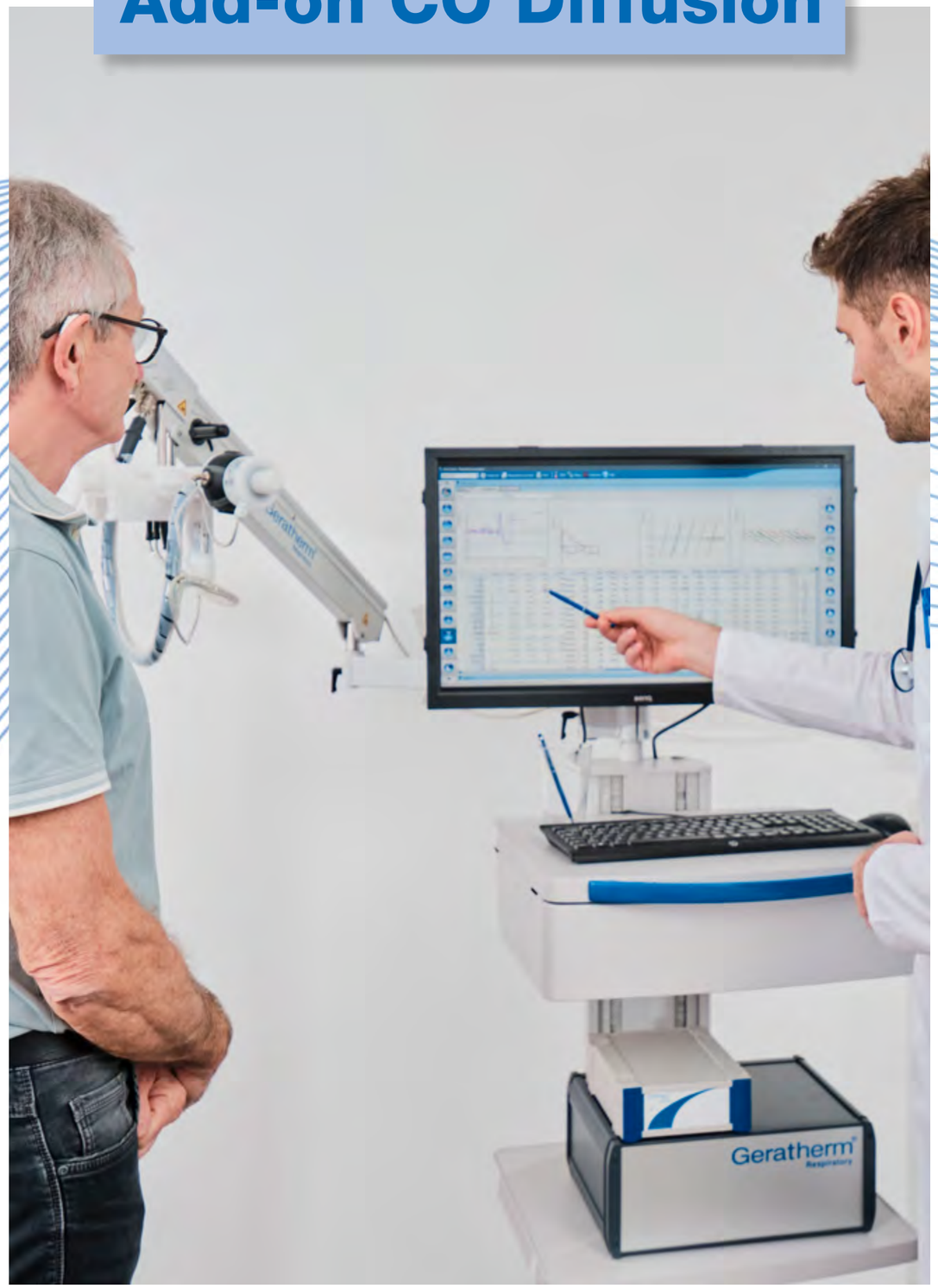
In summary, incorporating DLCO measurements into daily clinical practice enhances the ability to diagnose, monitor, and manage lung diseases effectively. It provides valuable insights into the functional status of the lungs, aiding in the delivery of personalized and precise medical care.

ADD-ON CO DIFFUSION

The Geratherm Respiratory Add-on CO Diffusion is the ideal device for calibration-free lung diffusion testing. Developed as part of a modular system, the Add-on CO Diffusion can be combined with PFTstik and Bodystik.

BLUE CHERRY

Add-on CO Diffusion



Calibration free

Modular concept

Fast analyzer

REF-Nr.: 913857

Product Details

MODULAR CONCEPT

The Add-on CO Diffusion can be added to either the Bodystik or the PFTstik, enhancing both devices' capabilities profoundly. At the same time, this concept eliminates the need for operators to get used to different handling concepts.

FAST AND RELIABLE

The Add-on CO Diffusion delivers reliable and reproducible results during both inspiration and expiration by using an infrared fast gas analyzer. The use of carbon monoxide and methane enables the system to determine diffusion capacity and provides a single-breath lung volume. Its concept of real-time analysis offers the ability to collect and adjust data post-test; with Add-on CO Diffusion, both the sample point and sample volume can be adjusted after the test. This allows for easy modifications, such as increasing discard volume or adjusting the sample size by simply dragging and dropping marker lines to the desired position. The software instantly shows the effect on recorded results. Additionally, the ATS/ERS checks ensure that all tests meet the required criteria.

Add-on CO Diffusion

CALIBRATION-FREE

The system is calibration-free due to being based on advanced technologies that enable automatic adaptation to different conditions.
By using intelligent algorithms and sensors, the system can perform precise measurements and data analyses in real time without the need for manual calibration.

This not only reduces maintenance but also increases the efficiency and accuracy of results by eliminating human error and time-consuming calibration processes. As a result, this calibration-free system offers a user-friendly solution that is reliable and ready for use at any time.

BLUE CHERRY

CARDIOPULMONARY EXERCISE TESTING – CPET

Cardiopulmonary Exercise Testing (CPET) is a comprehensive diagnostic tool that evaluates the performance and interaction of heart, lungs and metabolism during physical activity. This test is crucial for understanding how well these organs work together to supply oxygen to the body during exercise. The importance and necessity of CPET can be highlighted through its applications in diagnosing, monitoring, and managing various health conditions.

Firstly, CPET is invaluable for diagnosing unexplained exercise intolerance. Many patients experience symptoms like shortness of breath or fatigue during physical activity, but the underlying cause can be difficult to pinpoint. CPET measures parameters such as oxygen uptake (VO_2), carbon dioxide production (VCO_2), and ventilation, which – when combined with ECG parameters - provides detailed insights into the cardiovascular, pulmonary, and muscular systems. This helps in identifying whether the root cause of exercise intolerance is related to the heart, the lungs, or the muscles, leading to more accurate diagnoses and targeted treatments.

In addition to diagnosis, CPET is essential for assessing the severity and progression of cardiovascular and pulmonary diseases. For instance, in patients with chronic heart failure or pulmonary hypertension, CPET can evaluate the functional capacity and predict outcomes. By measuring the peak oxygen consumption (VO_2 max), healthcare providers can determine the severity of the disease and monitor changes over time. This information is crucial for tailoring treatment plans and making informed decisions about interventions such as medication adjustments or surgical procedures.

CPET also plays a significant role in preoperative assessments. Before major surgeries, especially those involving the heart or lungs, it is important to evaluate a patient‘s fitness and ability to withstand the stress of the procedure.

CPET provides a comprehensive assessment of the patient‘s cardiorespiratory fitness, helping to predict potential complications and guide perioperative care. This ensures that patients are adequately prepared for surgery, reducing the risk of adverse outcomes and improving recovery times.

Moreover, CPET is used in the management of chronic diseases and rehabilitation programs. For patients with conditions like COPD or heart disease, regular CPET can help monitor the effectiveness of treatments and rehabilitation efforts. By tracking improvements in exercise capacity and endurance, healthcare providers can adjust therapy plans to optimize patient outcomes. This ongoing monitoring is essential for maintaining and improving the quality of life for individuals with chronic conditions.

Finally, CPET is also widely used in performance diagnostics of athletes. It measures endurance and helps determine maximum exercise capacity, guiding tailored fitness or recovery plans based on individual needs and capabilities. It allows further insight into aerobic and anaerobic metabolism, including identification of VAT (ventilatory anaerobic threshold) and RCP (respiratory compensation point) enhancing athlete training planning compared to traditional lactate diagnostics.

In summary, Cardiopulmonary Exercise Testing is a vital tool in modern medicine. Its ability to diagnose unexplained exercise intolerance, assess disease severity, evaluate surgical risk, assessing athlete performance, and monitor treatment effectiveness makes it indispensable in the management of cardiovascular and pulmonary health. Regular use of CPET can lead to better diagnostic accuracy, more personalized treatment plans, and ultimately, improved patient outcomes.

Cardiopulmonary Exercise Testing

Geratherm Respiratory offers two established, yet innovative CPET products:

ERGOSTIK

the classic device
with reusable light-weight flow sensor

ERGOSTIK BLUEFLOW

for advanced hygienic application
with light-weight disposable flow sensor

Both Geratherm Respiratory CPET devices utilize the powerful BLUE CHERRY® diagnostic software platform, enabling CPET in compliance with the latest ATS/ERS guidelines. Integrated quality control and interpretation tools ensure the validity of test results and support daily workflows. A robust report configuration feature allows customizable reports, presenting all relevant information in the desired format to meet team's preferences.
BLUE CHERRY® is scalable, supporting everything from single workstation setups to complex network installations across multiple labs.

Ergostik

Ergostik is a classic state-of-the-art cardiopulmonary exercise testing device, offering reliable results for a variety of uses, from fitness assessments and sports medicine to respiratory diagnosis and perioperative evaluations by measuring O_2 and CO_2 flow rates. It features the lightweight (< 20 g) Ergoflow flow sensor, ensuring optimum patient comfort. It integrates with various high-quality devices, such as ECG systems, SPO_2 monitors, and non-invasive blood pressure monitors, enhancing diagnostic capabilities and providing a complete testing solution.

- Lightweight flow sensor
- Automatic gas calibration
- Automatic threshold

REF-Nr.: 618751

Product Details

KEY VENTILATORY AND RESPIRATORY PARAMETERS

With BLUE CHERRY®, Ergostik simplifies the calculation of crucial parameters like VO_2max, Aerobic-anaerobic Threshold (AT), and Respiratory Compensation Point (RCP). These insights are essential for interpreting data, optimizing treatments, and creating personalized training plans, especially for athletes. The device also incorporates spirometry data for enhanced diagnostics.

INTELLIGENT THRESHOLD CALCULATION

The BLUE CHERRY® software simplifies threshold calculations (AT and RCP) using advanced algorithms. These thresholds help with prognosis, diagnosis, and creating personalized training plans for both patients and athletes.

LIGHTWEIGHT AND COMFORTABLE SENSOR

The Ergoflow flow sensor is one of the lightest available on the market, weighing less than 20g, ensuring comfort and durability during tests.

Ergostik

CUSTOMIZABLE REPORTING OPTIONS

Ergostik and BLUE CHERRY® offer flexible reporting options. Data can be displayed in various formats with customizable filters, axis labels, and colors. A built-in text editor simplifies report creation.

OPTIONAL ENHANCEMENTS

The Ergostik can be expanded with optional hardware such as 12-lead ECG, SPO_2 monitoring, non-invasive blood pressure measurement, ergometer control, and integration with Ambistik and Ambistik CPET for environmental, respectively CO_2 concentration compensation, ensuring accurate results.

Ergostik Blueflow

Ergostik Blueflow is a cutting-edge cardiopulmonary exercise testing device offering reliable results for fitness, sports medicine, respiratory diagnosis, and perioperative assessments by measuring O_2 and CO_2 flow rates. Featuring the Blueflow disposable flow sensor, it ensures highest patient comfort and hygiene during testing. Like the classic Ergostik, it integrates with various high-quality devices, such as ECG systems, SPO_2 monitors, and non-invasive blood pressure monitors, enhancing diagnostic capabilities and providing a complete testing solution.

- Disposable flow sensor
- Measurement of ambient CO_2
- Automatic calibration

REF-Nr.: 171612

Product Details

IMPROVED HYGIENIC CONCEPT FOR MAXIMUM PATIENT SAFETY

The Blueflow disposable flow sensor eliminates the need for cleaning and maintenance of a conventional flow sensor. It features all the benefits of the classic reusable flow sensor, at the same time it improves patient hygiene at a very attractive and affordable price.

KEY VENTILATORY AND RESPIRATORY PARAMETERS

With BLUE CHERRY®, Ergostik Blueflow easily calculates important parameters like VO_2max, Aerobic-anaerobic Threshold (AT), and Respiratory Compensation Point (RCP), crucial for data interpretation and creating personalized training plans. It also includes Spirometry data, such as flow volume measurements and Maximum Voluntary Ventilation (MVV) to further enhance diagnostics.

INTELLIGENT THRESHOLD CALCULATION

The BLUE CHERRY® software calculates accurate aerobic/anaerobic thresholds (AT and RCP) using advanced algorithms, aiding prognosis, diagnosis, and the creation of customized training plans for both patients and athletes.

Ergostik Blueflow

FLEXIBLE REPORTING OPTIONS

Ergostik Blueflow offers customizable reporting capabilities with graphical, tabular, and interval reports. Data can be adjusted with filters, axis labels, and colors, and reports can be generated using pre-written templates for convenience.

OPTIONAL ENHANCEMENTS

The Ergostik Blueflow system can be expanded with optional components like 12-lead ECG, SPO_2 monitoring, non-invasive blood pressure, ergometer control, and integration with Ambistik and Ambistik CPET for environmental, respectively CO_2 concentration compensation, ensuring accurate results.

BTPS DEVICES

BTPS correction, which stands for Body Temperature, Pressure, Saturated, is essential in spirometry and lung function tests to ensure accurate and reliable measurements. When performing these tests, the air is measured at ambient conditions, known as ATP (Ambient Temperature and Pressure). However, the conditions inside the lungs are different; they are at body temperature and pressure, and fully saturated with water vapor (BTPS). Without BTPS correction, the measurements taken at ambient conditions would not accurately reflect the true lung volumes and capacities. This discrepancy arises because the volume of gas changes with temperature and pressure. For instance, a given volume of air at room temperature will expand when it reaches body temperature. Similarly, the presence of water vapor in the lungs affects the volume of air.

By applying BTPS correction, the measured values account for these differences, ensuring that results represent the actual conditions within the lungs. This is crucial for diagnosing and monitoring respiratory conditions accurately and allows healthcare professionals to make informed decisions based on the most precise data.

In summary, BTPS correction is vital for converting the flow and volume of air measured at ambient conditions to those within the lungs, providing accurate and meaningful results in spirometry and lung function tests.

For BTPS correction, Geratherm Respiratory offers two modern devices:

AMBISTIK

AMBISTIK (CPET)

AMBISTIK

Ambistik is a modern USB-connected device for measuring ambient conditions, temperature, barometric pressure, and humidity. The measurement of these values is continuously fed back to the powerful BLUE CHERRY® software suite to allow the software to continuously calculate BTPS corrections.

REF-Nr.: 634247

AMBISTIK CPET

Ambistik CPET has all the functionality of Ambistik and additionally offers integrated CO_2 measurement of the ambient air. Continuous CO_2 measurement is essential for compensating elevated CO_2 levels of the ambient air, for example, caused by multiple people in one room or during athletes' exercise testing. This not only increases the accuracy of a CPET measurement but also protects the user from any misinterpretation of the measurement.

REF-Nr.: 493425

WORLDWIDE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Phillippines
Lebanon
Australia
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OUR CERTIFICATIONS – A WARRANTY OF QUALITY AND TRUST

Geratherm Respiratory GmbH manufactures and CE marks its products according to the latest regulations, e.g. EU 2017/745 (Medical Device Regulation, MDR) and Directive 2011/65/EU (RoHS). The quality management system complies with DIN EN ISO 13485, the risk management with DIN EN ISO 14971. Medical devices adhere to applicable parts of the DIN EN ISO 60601 series and the ATS/ERS Guidelines. All relevant technical standards and medical guidelines are followed.

Geratherm Respiratory GmbH is working with
SLG Prüf- und Zertifizierungs GmbH, 09232 Hartmannsdorf, Germany (Notified Body 0494).

Your Geratherm Respiratory Partner

Geratherm Respiratory GmbH is certified according to DIN EN ISO 13485.

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