DESIGNED AND MANUFACTURED IN SWITZERLAND

THE ART OF DIAGNOSTICS

SCHILLER. We save lives.













50 years Swiss medtech innovations

SCHILLER
The Art of Diagnostics

Alfred E. Schiller

Innovative Swiss Medtech Worldwide

SCHILLER was founded in 1974 by Alfred E. Schiller. Starting in a four-room flat as a one-man business, the company has become a successful group with about 1400 employees, 31 subsidiaries and a global sales network. Today, SCHILLER is a world-leading manufacturer and supplier of devices for cardiopulmonary diagnostics, rescue and patient monitoring as well as software solutions for the medical industry.

For more than 50 years, SCHILLER has been committed to the fight against sudden cardiac death. The success story began with the launch of a handy emergency electrocardioscope. In one stroke, the company not only made a name for itself, but also

set new standards. Thanks to suitable therapies and rehabilitation measures, physicians can thus protect people of all age groups from sudden cardiac death.

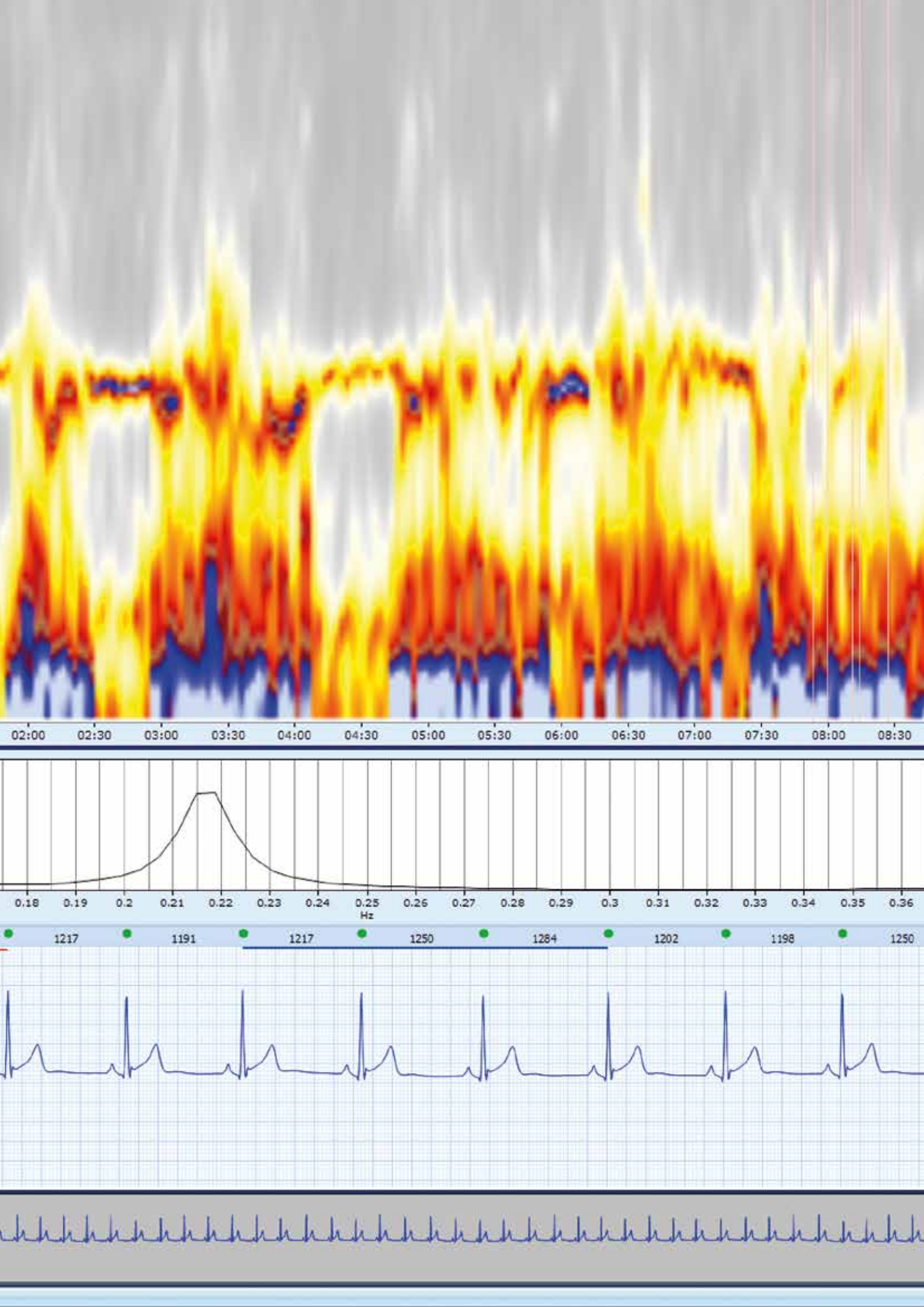
As success grew, so did the product portfolio: devices such as blood pressure monitors and spirometers enhanced the range, and complete diagnostic stations and monitoring devices started being produced for clinics and medical practices.

Similarly, the production sites and competence centres also expanded. In addition to the headquarters in Baar (Switzerland), a competence centre was established in Wissembourg (France), specialising in the fields of defibrillation and monitoring.

Another competence centre opened in Graz (Austria): The company medilog became part of the SCHILLER Group. This new alliance allowed SCHILLER to acquire additional know-how in the field of high-end long-term ECG. The next major step was achieved through the alliance with GANSHORN, a company specialising in the field of pulmonary function diagnostics, which is now also a part of the SCHILLER Group.

We are pleased to present you our products in this brochure.

For more information: **www.schiller.ch**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CONTENT

RESTING ECG

- **CARDIOVIT AT-1 G2**
- **CARDIOVIT AT-102 G2**
- **CARDIOVIT AT-180**
- **CARDIOVIT FT-1**
- **CARDIOVIT FT-2**

CARDIOVIT AT-1 G2

The power of simplicity

Building on the solidly proven AT-1 and enhanced with the latest technology, the AT-1 G2 distinguishes itself by its outstanding signal quality and the newest interpretation algorithm.

User-friendliness is guaranteed with a step-by-step workflow and easy patient data entry. A colour screen and an easy-to-clean keyboard complete this intuitive and reliable electrocardiograph.

- Easy patient data entry
- Outstanding signal quality for adult and paediatric ECGs
- Lead reversal detection
- Hook-up adviser with colour-coded waveforms
- ETM interpretation and CCAA (optional)

CARDIOVIT AT-1 G2

CARDIOVIT AT-102 G2

Easy, smart and state-of-the-art

The CARDIOVIT AT-102 G2 features an 8" colour display with touch function keys. Moreover, its sealed alphanumeric keyboard ensures easy cleaning, making it highly suitable for the daily clinical routine. Smart battery technology guarantees more than 8 hours of ECG recording.

Bi-directional communication allows for easy data access and fast transmission of ECG reports to EMR / HIS systems. Standard Wi-Fi and LAN connectivity, combined with ECG review on the display and a large memory, supports paperless workflows and cost saving. When a paper report is required, customisable printouts can be generated on the internal high-resolution A4 thermal printer.

- High-resolution 8" colour display
- Touch function keys
- Easy-to-clean sealed alphanumeric keyboard
- More than 8 hours battery capacity with ECG printout
- Resting rhythm for up to 10 minutes
- Hook-up adviser with colour-coded waveforms and anatomical model
- Lead reversal detection
- Fast and secure bi-directional Wi-Fi communication via SCHILLER Link and SCHILLER Server
- ETM including ETM Sport as well as CCAA (optional)
- Basic exercise software (optional)
- Worklist (optional)
- Spirometry, based on the ultrasound technology of the SpiroScout SP plus (optional)

CARDIOVIT AT-102 G2

CARDIOVIT AT-180

High-performance 16-channel ECG system

This multi-use workstation combines the largest touch screen with advanced clinical tools.

SCHILLER's high-end electrocardiograph AT-180 is based on the new SCHILLER software platform. It offers robust design for the busiest hospitals, as well as a combination of applications that makes it the ideal multi-use workstation for private practices.

- 18.5" high-resolution multi-touch screen for easy ECG review
- Full-size keyboard with a durable, exchangeable cover keeping dust, dirt and liquids out, making it highly hygienic
- Resting rhythm for up to 20 minutes
- ECG Framer: Create a 10-seconds resting ECG from a resting rhythm recording
- Hook-up adviser with colour-coded waveforms and anatomical model
- Lead reversal detection
- Fast and secure bi-directional Wi-Fi communication, PDQ
- Worklist
- Exercise test (optional)
- Various diagnostic analysis programs: ETM, ETM Sport, SAECG, Vector ECG, arrhythmia detection, ECG re-measurement (optional)
- Resting 16-lead acquisition and analysis: based on real measurement data, not just calculations (optional)

CARDIOVIT AT-180

CARDIOVIT FT-1

Maximum performance in a compact electrocardiograph

CARDIOVIT FT-1 is an ultra-portable electrocardiograph, has an intuitive 8" high-resolution multi-touch screen and an integrated thermal printer.

Designed for users who value state-of-the-art technology, the CARDIOVIT FT-1 is a networked device providing connectivity and a paperless workflow.

- Power and flexibility of a PC in a portable ECG device
- Fast and secure bi-directional Wi-Fi communication
- Various optional diagnostic analysis programs: automatic interpretation ETM, ETM Sport based on Seattle Criteria, CCAA for early STEMI detection
- Resting rhythm for up to 4 minutes
- Hook-up adviser with colourcoded waveforms and anatomical model
- Lead reversal detection
- Outstanding signal quality for adult and paediatric ECGs
- Worklist (optional)

CARDIOVIT FT-1

CARDIOVIT FT-2

Designed for hospital use

CARDIOVIT FT-2 is the first mobile SCHILLER electrocardiograph with an optional thermal printer.

Designed for the hospital environment, with an innovative approach, the CARDIOVIT FT-2 has a highly hygienic 15" multi-touch display, advanced cybersecurity and extensive connectivity features.

- Large, easy to clean and easy to use 15" multi-touch display
- Resting ECG with the SCHILLER ECG interpretation algorithm ETM, including ETM Sport
- Resting rhythm recording up to 20 minutes
- Spirometry, based on the ultrasound technology of the SpiroScout SP plus (optional)
- Security-hardened Linux kernel to minimize the risk in case of cyberattacks
- Configurable access control
- Wi-Fi protocols including certificate-based authentication
- Optional thermal printer
- Customised trolley, to tidily store cables

CARDIOVIT FT-2

EXERCISE STRESS ECG

- **CARDIOVIT CS-104**
- **CARDIOVIT CS-200 Excellence**
- **CARDIOVIT CS-200 Office ErgoSpiro**
- **CARDIOVIT CS-200 Excellence ErgoSpiro**
- **CARDIOVIT CS-300**
- **BP-200 plus**
- **Ergometers**
- **Treadmills**

CARDIOVIT CS-104

Exercise ECG in an integrated system

CARDIOVIT CS-104 combines all essential ECG features and desired possibilities in an integrated system. It includes a PC, a monitor, a trolley and a wireless (MS-12 BT) or wired (MS-12 USB) acquisition module. Optionally, CARDIOVIT FT-1 can be used for ECG acquisition. Everything is pre-installed and tested by SCHILLER, ready to be used in the clinical practice.
CARDIOVIT CS-104 is also available as PC software for resting ECG, with optional stress test and spirometry add-ons.

- Exercise ECG with optional arrhythmia detection
- Pharmacological stress test
- Resting ECG with the SCHILLER ECG analysis program ETM as well as ETM Sport, the automatic interpretation for athletes
- Resting rhythm recording for up to 60 minutes, with optional arrhythmia detection
- ECG Framer: 10-second resting ECG derived from resting rhythm
- Vector ECG, optional
- Spirometry, based on the ultrasound technology of the SpiroScout SP plus, optional
- BP-200 plus for optional blood pressure and SpO_2 measurement during the stress test
- Integrated workstation for data review from all SCHILLER devices connected to the SCHILLER Server
- Bi-directional connectivity (including worklist and PDQ) to EMR, HIS and PACS systems

CARDIOVIT CS-104

CARDIOVIT CS-200 Excellence

High-end exercise ECG system

The CS-200 Excellence cardiac assessment system for exercise testing from SCHILLER puts great emphasis on performance.

With industry-leading algorithms, the CS-200 Excellence enables you to quickly and easily optimise your digital workflow with seamless connectivity to EMR, SEMA cardiology information system and PACS.

- Outstanding data quality with algorithms that provide the clearest, most accurate test results
- ECG measurement software with accurate measurements of recorded cardiac signals
- Resting rhythm
- Hook-up adviser with signal quality check, helping to improve poor waveform quality
- Pharmacological exercise testing
- 16-lead acquisition and analysis for resting and exercise ECG: based on real measurement data, not just calculations
- Various diagnostic analysis programs: ETM, ETM Sport, HyperQ (Resting and Stress), SAECG

CARDIOVIT
CS-200 Excellence

CARDIOVIT CS-200 Office ErgoSpiro

Covers all essential ErgoSpiro applications

The CARDIOVIT CS-200 Office ErgoSpiro performs cardiopulmonary exercise tests (CPET) according to the latest ATS / ERS guidelines.

The metabolic tests combined with diagnostic-quality 12-lead exercise ECG is suitable for a wide range of subjects, from clinical patients to high-performance athletes. The PWC Ergo forms the heart of the system. Together with the pneumotach, it ensures the highest possible accuracy.

- Breath-by-breath gas exchange analysis (VE, VO_2, VCO_2) with unique maintenance-free ultrasonic cell for CO_2 measurement; easy, quick and fully assisted calibration for highly accurate measurements; charts and data display through standard or user-defined 9 panel
- Fully integrated 12-lead exercise ECG with wireless acquisition improves patient comfort
- Full disclosure storage of unfiltered, continuous ECG signals
- Resting ECG with ETM automatic interpretation; ETM sport for interpretation of athletes' hearts
- Automatic blood pressure measurement with optional built-in SpO_2 module from the BP-200 plus
- Optional LFSport for the performance assessment and exercise scheduler are two comprehensive features for the use in sports medicine

CARDIOVIT CS-200 Office ErgoSpiro

CARDIOVIT CS-200 Excellence ErgoSpiro

The Art of Cardiopulmonary Exercise Diagnostics

The CARDIOVIT CS-200 Excellence ErgoSpiro system performs both pulmonary function tests and metabolic tests with diagnostic-quality 12- or 16-lead exercise ECG conveniently and accurately in a single device, with none of the compromises that sometimes have to be made in combined systems.

It can be used for children and adults, patients and athletes, collecting full breath-by-breath data.

- Breath-by-breath gas exchange analysis (VE, VO_2, VCO_2) with unique maintenance-free ultrasonic cell for CO_2 measurement; easy, quick and fully assisted calibration for highly accurate measurements; charts and data display through standard or user-defined 9 panel
- Fully integrated 12- or 16-lead exercise ECG
- Resting ECG with ETM automatic interpretation
- ETM Sport for interpretation of athletes' hearts
- Automatic blood pressure measurement with optional built-in SpO_2 module from the BP-200 plus
- Optional LFSport for the performance assessment and exercise scheduler are two comprehensive features for use in sports medicine

CARDIOVIT CS-200 Excellence ErgoSpiro

CARDIOVIT CS-300

Precision and confidence in every beat

The SCHILLER high-end stress test solution CARDIOVIT CS-300 is designed for the busy hospital in terms of hygiene, efficiency, and accuracy.

CARDIOVIT CS-300 features wireless ECG acquisition, customisable high-end analysis options, extensive connectivity and enhanced cybersecurity.

- Standard features: Resting ECG, Resting Rhythm (up to 60 minutes), ECG Framer (10-second Resting ECG derived from Resting Rhythm), Exercise ECG, Pharmacological Stress Test
- Additional software features: Advanced Arrhythmia Detection, Test Comparison, ECHOView
- Optional software features: Signal-Averaged ECG (SAECG), Vector ECG
- Automated interpretation for Resting ECG with the SCHILLER algorithms ETM and ETM Sport
- Wireless 12-lead ECG acquisition module MS-12 BT or standard patient cable (10 wires/12 leads or 14 wires/16 leads ECG)
- Bright and clear 27" 4K touch screen
- Waterproof keyboard with quick-access buttons
- BP-200 plus for blood pressure and SpO_2 measurements (optional)
- Bi-directional communication and extensive connectivity ensure data security and data accuracy, and enable fast and automated data transfer
- Integrated high-volume thermal printer

CARDIOVIT CS-300

BP-200 plus

Accuracy and performance

BP-200 plus is a non-invasive exercise test blood pressure monitor, designed to automatically measure and display a patient's systolic and diastolic blood pressures at preset intervals, or on demand of the operator.

BP-200 plus uses two measuring methods: the SCHILLER K-sound analysis with or without QRS trigger for measurements during exercise test, and oscillometric measurements for resting situations.

- Real-time display with waveform and measurements
- Tabular and graphic trend data
- RS-232 interface for communication with SCHILLER ECG systems
- BP measurements initiated automatically or manually
- SpO_2 measurement, optional
- Specially designed for exercise tests

BP-200 plus

ERG 910 plus / ERG 911 plus

Quiet, compact, configurable

The bike ergometers ERG 910 plus and ERG 911 plus were developed for use in the cardiology sector.

The devices are used to perform defined exercises during ergometric examinations and therapeutic applications. All major exercise data (such as blood pressure, heart rate, pedalling rate, colour-coded information concerning correct pedalling rate) is displayed in a compact format.

- Two operational modes:
  - Remote operation with a master device (ECG, PC, ...)
  - Standalone operation with either a user-definable step protocol or manual load control
- Display rotatable (180°), handlebar adjustable (360°)
- Bluetooth and RS-232 connection
- Ergonomic sitting position for patients measuring between 1.40 m and 2.10 m
- Patient weight up to 160 kg
- Low frame for easy access
- Maintenance-free and almost noiseless thanks to belt drive
- Stable steel tube construction, minimal use of floor space
- Optimal gyrating mass for a pleasant pedalling sensation
- Mains connection 230 V

Options and accessories

- Blood pressure measurement with QRS trigger
- Mains connection 115 V
- Child saddle and pedals for patients from 1.20 m
- With stabiliser for patients who weigh more than 140 kg or are taller than 190 cm

ERG 910 plus

- Load range 20 – 500 watts, optional 20 – 999 watts

ERG 911 plus

- Load range 20 – 999 watts
- Handle bar height adjustable
- Saddle height electrically adjustable (optional)

ERG 910 plus

ERG 911 plus

ERG 911 L

Medical couch / semi-couch safety ergometer

The couch / semi-couch safety ergometer ERG 911 L was developed for use in the cardiology sector.

Special safety aspects require the use of a couch / semi-couch safety ergometer: patients with suspected problems of the cardiovascular system during exercise following a myocardial infarction or after bypass surgery as well as the examination of elderly and disabled patients. Thanks to the optimal positioning of the patient on the lying surface, a performance identical to bike ergometry is achieved.

- Two operational modes:
  - Remote operation with a master device (ECG, PC, ...)
  - Standalone operation with either a user-definable step protocol or manual load control
- Infinitely electrically variable (0° – 45°)
- Seat and headrest electrically adjustable
- Accurate blood pressure measurement unit with armrest (optional)
- Connected via Bluetooth or RS-232
- Very quiet (even at high speed) and maintenance-free thanks to belt drive
- Stable steel tube construction for patients weighing up to 160 kg
- Low frame for easy access

ERG 911 L

ERG 911 LS

Medical couch / semi-couch safety ergometer with possibility to tilt to the left

The development of the ERG 911 LS is based on the technology of the ERG 911 L couch / semi-couch safety ergometer.

Thanks to an additional pivot axis of the couch, the patient can be positioned in an angle of up to 30 degrees to the left during exercise. This ensures a particularly favourable position for high-quality ultrasound images during stress echocardiography.

- Opening in the lying surface at heart level for convenient ultrasound examinations
- Infinitely rotatable to the left by means of a motor (0° – 30°)
- Stable handlebar and shoulder rest for safe positioning of the patient when the couch is tilted
- Hip support for increased safety

ERG 911 LS

ERG 911 comfort

Seat ergometer

The seat ergometer has been developed for very heavy patients up to 200 kg. Intended for use with high-risk, elderly or physically handicapped patients.

- Two operational modes:
  - Remote operation with a master device (ECG, PC, ...)
  - Standalone operation with either a user-definable step protocol or manual load control
- Rotatable display
- Dimensions / basis: 40 x 130 cm; weight: 68 kg
- Max. patient weight: 200 kg
- Almost noiseless mechanism due to computer-controlled eddy current brakes with torque measurement, independent of revolutions per minute

ERG 911 comfort

MTM-1400 / MTM-1400 med

Treadmill ergometer

SCHILLER's treadmill ergometer MTM-1400 is available as a sports and as a medical treadmill class IIb. It is particularly suitable for use in the fields of cardiology, neurology, cardiac rehabilitation and physiotherapy.

The MTM-1400 / MTM-1400 med treadmill is virtually indestructible with its sturdy frame. It is very low maintenance and provides the runner or patient a comfortable run with its advanced construction.

- Running surface: 150 x 50 cm, 0 – 22 km / h, 0 – 25 % motorised slope adjustment
- Compatible with all SCHILLER exercise ECG recorders
- Connection to ergospirometry systems, blood pressure measuring devices and software programs via the coscom protocol
- Automatic control by computer via RS-232 interface (5 m interface cable included)
- Emergency stop switch
- Max. user weight: 250 kg
- Optional: Children handrails (only in combination with the safety arch)

MTM-1400 med

MTM-1500 med

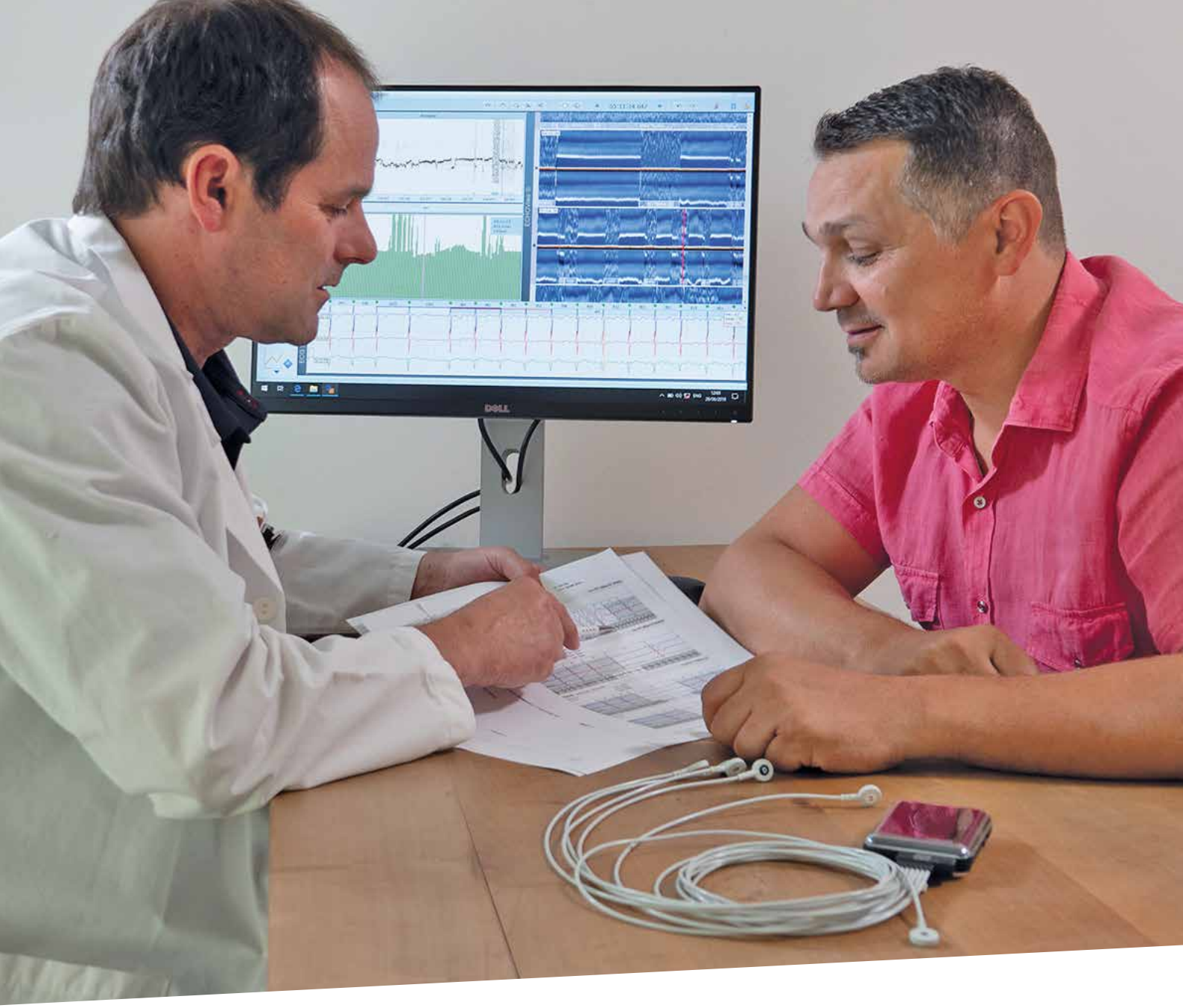
Treadmill ergometer

The SCHILLER treadmill ergometer MTM-1500 is designed for exercise testing, sports medicine and cardiology.

The ergometer is equipped and tested with the latest safety systems and has been manufactured to stringent quality requirements according to MDD 93 / 42.

- Running surface: 150 x 50 cm, 0 – 22 km / h, 0 – 25 % motorized slope adjustment
- Compatible with all SCHILLER exercise ECG recorders
- Automatic control by computer via RS-232 interface
- Emergency stop switch, individually adjustable
- Max. user weight: 300 kg

MTM-1500 med



ECG AND ABPM HOLTER

- **medilogAR**
- **medilogFD**
- **medilog DARWIN2**
- **Fire of Life**
- **BR-102 plus**
- **BR-102 plus PWA**

medilogAR

Record longer – edit less

Atrial fibrillation / atrial flutter detection in zero seconds thanks to true P-wave analysis, easy, fast and hygienic to handle, flexible dual-battery concept for more than 14 days recording duration. This is the SCHILLER medilogAR Holter.

The SCHILLER medilogAR Holter is robust, shock- and splash-proof as well as easy to clean. Thanks to the dual-battery concept, the patients can be screened for more than 14 days without having to see the doctor to change the batteries. Zero-second atrial fibrillation / atrial flutter detection based on true P-wave analysis is one of the engineering highlights of this Holter solution.

- Flexible dual-battery concept for more than 14 days recording duration
- Superior resting ECG-grade 32,000 Hz sampling rate on 3 channels, for true P-wave analysis, sophisticated artefact suppression and motion detection
- Zero-second atrial fibrillation / atrial flutter detection based on true P-wave analysis
- HRV analysis – Fire of Life
- Thanks to ECG-derived respiration recording, the medilogAR is able to screen for potential respiratory episodes during sleep
- The optional SpO_2 sensor, connected via Bluetooth, provides additional respiratory information
- Removeable patient cable
- Recharge internal battery via USB
- Robust, shock- and splash-proof as well as easy to clean
- The analysis is carried out using the renowned medilog DARWIN2 software

medilogAR

medilogFD

The 12-lead Holter ECG

medilogFD is the Holter ECG recorder with the holistic approach. Instantaneous detection of atrial fibrillation onset, analysis of respiratory episodes, and high-resolution HRV are just some of the exceptional features.

The 12-lead Holter ECG is preferred for detailed and spatial heart analysis. Regional assessment of myocardial ischemia: distinguish anterior, septal, lateral, inferior region in the dynamic setting of everyday life. medilogFD identifies the origin of ectopic beats, whether they are from the left or right ventricle. This SCHILLER Holter is superior in identifying abnormal heartbeats that start in the right or left atrium.

- 12-lead Holter ECG allows assessing the full spectrum of cardiac ECG conditions
- Instantaneous atrial fibrillation/atrial flutter detection based on true P-wave analysis thanks to a superior resting ECG-grade 128,000Hz sampling rate on 12 leads
- Optional SpO_2 sensor for additional respiratory information
- Multifactor signal check based on impedance, amplitude and amount of noise
- High-contrast colour display for easy operation. Live ECG preview: 3 channels shown at a time, all 12 can be scrolled through
- Microphone to record patient ID. In an anonymous start, a voice recording is a must to prevent patient mix-up.
- Easy-to-clean carrying case
- Eco-friendly: runs on an internal rechargeable battery, or, if needed, on normal AAA batteries for fast turnaround times

medilogFD

medilog DARWIN2

Sophisticated and precise Holter recording analysis

Save time and detect health risks at a glance: with the medilog Holter system.

DARWIN2 is designed to maximise speed and ease of use. The automatic analysis of a 24-hour Holter recording takes less than 90 seconds, with extremely accurate results. Data review is faster than ever: it takes only three mouse clicks to generate a comprehensive report.

- Real-time P-wave detection for accurate atrial fibrillation screening
- PureECG technology for superior signal quality
- ECHOView for instantaneous detection of atrial fibrillation onset
- Respiration analysis during sleep with synchronised ECG, respiration waveforms and SpO_2 readings
- Fire of Life: a brilliant approach to Heart Rate Variability analysis
- Blood pressure analysis: use ABPM-recorder and evaluate with medilog DARWIN2
- It is available in three different versions to suit the needs of any organisation and to grow with it:
  - **DARWIN2 Office:** optimised for routine application in physicians' offices
  - **DARWIN2 Professional:** perfect for a small to mid-sized Holter scanning centre with the need for fast atrial fibrillation detection
  - **DARWIN2 Enterprise:** for the most demanding research centres and high-volume hospitals. Includes atrial fibrillation, respiration analysis, SpO_2 and an option for scanlab web-service
- Branded and personalised medilog DARWIN2 reports
- Recording upload from anywhere with medilog DARWIN2 Liberty for organisations with patients in remote locations

Fire of Life

Heart rate variability (HRV) and the autonomic nervous system

Fire of Life is a very intuitive visual presentation of frequency-domain HRV that makes the assessment of 24-hour results fast and simple.

As the heart rate is controlled by the autonomic nervous system, the condition of the autonomic nervous system can be assessed through an analysis of the heart rate.
It can be used very effectively in the occupational health sector to control the stress burden and sleep quality, and also in sports medicine to check the recovery process.

Fire of Life

medilog DARWIN2

BR-102 plus

The discreet, small BP monitoring unit

The SCHILLER BR-102 plus gives the highest degree of patient comfort while maintaining most precise measurements.

It is distinguished by its small dimensions and low weight. Incorporating a special technology, the cuff is only inflated as much as required.

Choose between two versions:

- Measurements are made using both the auscultatoric and the oscillometric methods, where the oscillometric measurement is used as backup to ensure accurate results for each measurement.
- Purely oscillometric method – enables reliable blood pressure measurement without microphone.

The analysis is carried out using the renowned medilog DARWIN2 software.

BR-102 plus BR-102 plus PWA

BR-102 plus PWA

Pulse Wave Analysis (PWA)

SCHILLER's Pulse Wave Analysis (PWA): circadian central haemodynamics and blood pressure measurement in one.

SCHILLER presents the first solution that combines the non-invasive, cuff-based precise auscultatoric and the reliable oscillometric measurement to generate a 24-hour profile of stiffness parameters like pulse wave velocity, augmentation index as well as central and peripheral blood pressures.

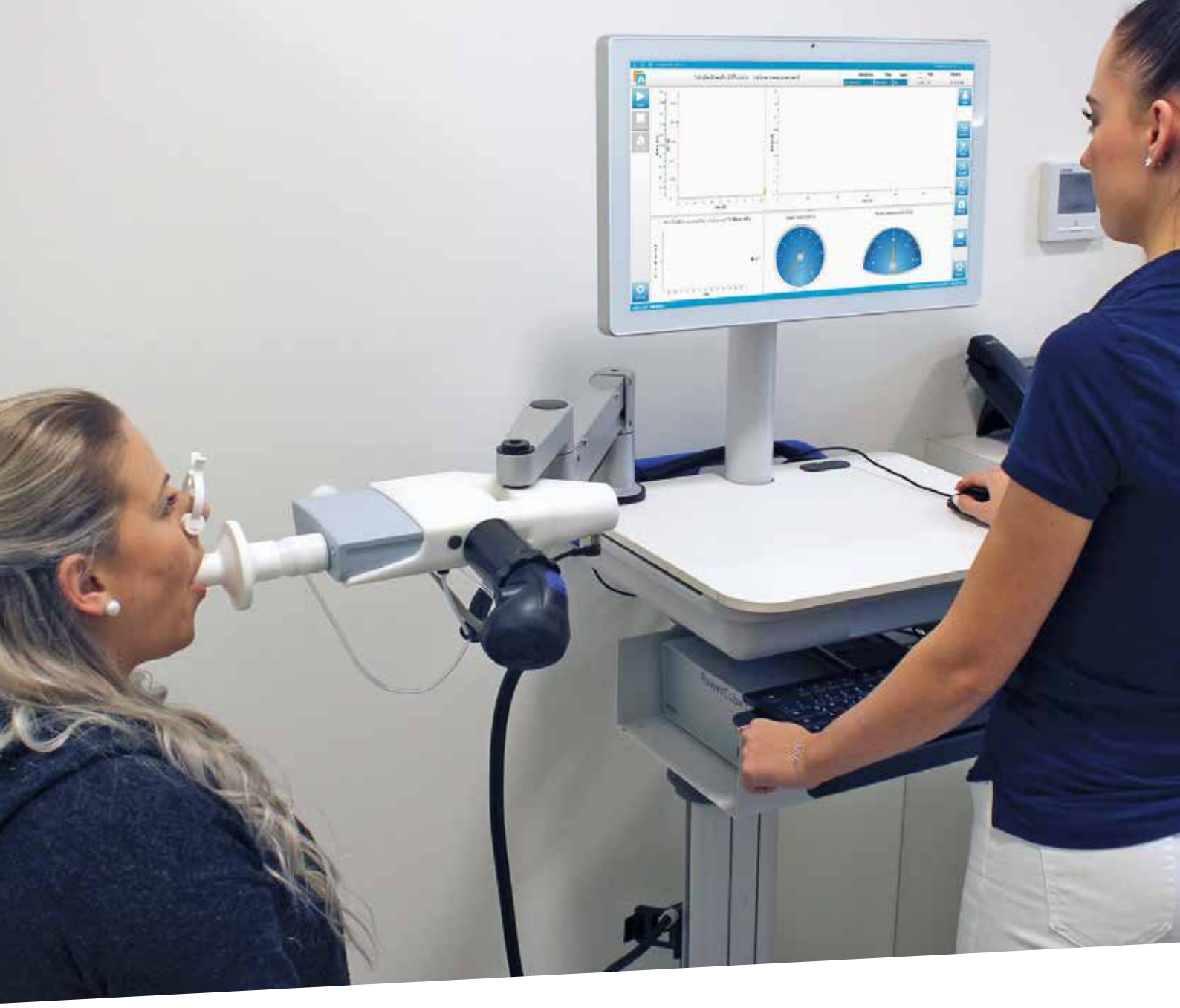
Based on individual arterial behavior, it is now possible to evaluate the risk of developing a cardiovascular disease and helps to prevent severe organ damage.

As an autonomic operating device, it perfectly integrates into ABPM routine – no specially trained operator is needed for PWA measurements.

The algorithm was used in several studies, including comparisons with the gold standard (invasive blood pressure measurements); it is therefore recommended by the ESH / ESC in their guidelines.

- Easy user interface with color display
- Measurement on diastolic level for increased patient comfort
- Up to 48 hours profile and not just spot measurements (tonometric method)
- Includes the auscultatoric measurement which is much more reliable
- Fully integrated with the wide range of SCHILLER diagnostic products, with seamless connectivity to SEMA data management system and to HIS
- Spot measurement

The analysis is carried out using the renowned medilog DARWIN2 software.



PULMONARY FUNCTION TESTING

- **GANSHORN PowerCube Body+**
- **GANSHORN PowerCube Diffusion+**
- **GANSHORN SpiroScout**
- **SpiroScout SP plus**
- **SPIROVIT SP-1 G2**
- **GANSHORN Provo.X**
- **GANSHORN EucapSys**
- **GANSHORN AltiTrainer**
- **GANSHORN tremoflo**

GANSHORN PowerCube Body+

GANSHORN body plethysmograph

Body plethysmography is a very sensitive lung measurement used to detect complex or mixed lung pathologies that might otherwise be missed with conventional pulmonary function tests.

The long-term stability in conjunction with our new analysis algorithms enables you to initially differentiate between asthma, COPD, airway restriction or any combination of these disorders just by looking at the shape of the curves.

- 3D swivel arm can be easily adjusted
- Choice of either a broad bench seat (max. 250 kg) or a height-adjustable swivel chair (max. 120 kg)
- Automatic and simultaneous calibration of both cabin and mouth pressure at three different frequencies
- BodyLiveCal
- Ambilight
- LEDs indicating whether the door is locked or not
- Patient speaker and microphone for maximum cooperation
- Multiple options: easy integration of diffusion and / or provocation

GANSHORN PowerCube Body+

GANSHORN PowerCube Diffusion+

Diffusion measurement system

Accurate and reliable analysers enable a high-resolution display of the wash-in curves of CO and helium.

Any existing diffusion and distribution disorders become immediately visible. Our system's demand valve regulates the gas intake, providing economical benefits.

- No volume calibration needed
- Determination of diffusion capacity (TLCO) and helium-FRC SB in accordance with ERS / ATS standard
- Continuous display of the exhalation concentrations of CO and helium for the precise differentiation of dead space and alveolar plateau
- Economical measurement of gas consumption
- Optimisation of the breathing manoeuvres aided by informative assistance diagrams
- Fast multigas CO analyser
- Real-time molar mass helium analyser
- Detect diffusion and distribution disorders at a glance
- Assistance diagrams optimize breathing manoeuvre
- 3D swivel arm: flexible, height-adjustable interface
- Real-time breath: for patients that are unable to hold their breath for a prolonged period
- Measurement can be carried out without breath being held
- Intelligent Demand Valve (IDV) secures patient, lowers the cost per test, and optimises gas usage

GANSHORN PowerCube Diffusion+

GANSHORN SpiroScout

Respiratory Gas Analysis

The SpiroScout is a complete lung function laboratory based on GANSHORN's unique ultrasound measurement principle. It enables precise determination of all spirometric parameters.

As the first of its kind, the SpiroScout simultaneously measures flow and gas density, providing all necessary information about the volume and gas exchange from one single measurement.

- High-precision spirometry due to direct flow measurement
- Sensor is not influenced by humidity, barometric pressure or contamination
- Used with ScoutTubes*, the hygienic mouthpiece for single-patient use
- Different options available such as rhinomanometry, capno-volumetry, emphysema test, and tidal breath analysis

GANSHORN SpiroScout

SpiroScout SP plus

Ultrasound Spirometry in combination with SCHILLER ECG devices

The SpiroScout SP plus helps to make your office more efficient by adding spirometry measurements to your existing compatible SCHILLER ECG device. You'll enjoy all the benefits of a full-featured ECG and spirometer with data organised in the same fashion, facilitating data management. The SpiroScout SP plus incorporates an ultrasound flow sensor to measure the flow of air into and out of the patient's lungs. There are no moving parts, no screens to catch sputum and no disposables to calibrate.

- High-precision spirometry due to direct flow measurement
- Sensor is not influenced by humidity, barometric pressure and contamination
- Maintenance-free
- Used with ScoutTubes*, the hygienic mouthpiece for single-patient use
- Connected via USB connector

* To ensure a sustainable product, SCHILLER makes a contribution to climate protection for the ScoutTubes and the SpiroDef ScoutTube filters. Follow our tracking number 01-20-162037 on www.myclimate.org

SpiroScout SP plus

SPIROVIT SP-1 G2

Portable / desktop spirometry for large and small healthcare providers

All-in-one solution in lung function testing – portable / desktop spirometry for large and small healthcare providers.

Thanks to GANSHORN's ultrasound technology, measurements are highly accurate and the sensor is maintenance- and calibration-free. The spirometer offers FVC, SVC and MVV. Moreover, Pre and Post tests are possible. The SPIROVIT SP-1 G2 automatically interprets the results and provides information on a possible diagnosis. Results can be printed directly on site using the integrated thermal printer.

- For portable or desktop use
- Respiratory testing without a PC
- Using ultrasound technology: highly accurate, maintenance-free and calibration-free
- Disposable ScoutTubes for maximum hygiene and patient safety
- FVC, SVC, MVV, Pre / Post testing, wide range of predicted normal values
- High resolution built-in thermal printer
- Colour LCD – information displayed in real time
- Incentive screen for paediatric spirometry
- Easy export of Spirometry reports as PDF, to store on external media
- Highly hygienic sealed keyboard keeping dust, dirt and liquids out
- Device is available with a trolley – including a bin for consumables such as ScoutTubes
- Compliance with 2019 ATS / ERS Guidelines

SPIROVIT SP-1 G2

GANSHORN Provo.X

Broncho-provocations for inhalational provocation tests

GANSHORN Provo.X is an aerosol dosimeter that performs inhalational provocation tests very rapidly and with reproducible results, independent of a measurement lab.

The threshold-controlled, breath-synchronous application of the preset aerosol dose during the inspiration phase, guarantees outstanding reproducible results.

- Perfect user guidance, simple handling and well-structured display
- Creation of own multiple stage tests with easy-to-use software
- Storage of an unlimited number of protocols with up to 14 stages – the most commonly used ones are pre-installed (e.g. ATS, DGP)
- Due to optimal droplet size, constant over the entire bolus time, the aerosol reaches particularly deeply into the respiratory tracts
- Change dose by increasing fluid concentration and / or changing atomising time
- Highly effective filter for exhaled air prevents contamination of the room air
- Three-liter compressed air tank for stable atomising pressure, refilling in less than 2 minutes and at a low noise level
- Components for single-patient use ensure perfect hygiene and safety

GANSHORN Provo.X

GANSHORN EucapSys*

Bronchial provocation without medication

The eucapnic voluntary hyperpnea (EVH) test is an alternative method to other indirect or direct bronchial challenge tests, such as exercise challenge, or methacholine challenge tests[1].

The huge advantage of EVH is that no medication is needed. Traditionally it has been used for elite athletes[2] and is widely regarded as the gold standard for assessing exercise induced bronchoconstriction (EIB) among athletes[3].

As EVH perfectly imitates the breathing while exercising, the provocative method is the best tool to diagnose exercise-induced airway narrowing. EucapSys is the first commercially available system which makes EVH applicable for a wide range of users. As it mixes the eucapnic gas concentration by itself, the test becomes more affordable and independent from expensive gas mixtures.

- One step protocol saves time
- More comfortable for the patient
- Drug free provocation with dry air
- Easy to implement stand-alone device
- High specifity and fewer false positive results
- Low operating costs

* Legal manufacturer: SMTEC (Sport & Médical Technologies) S.A.

1 J W Dickinson, McConell, & Whyte; Br J Sports Med; 2011; 45(14) 1126-31
2 J W Dickinson et al.; Br J Sports Med; 2006; 40:179–183
3 J H Hull et al.; Br J Sports Med; 2016; 46:1083–1093

GANSHORN EucapSys

GANSHORN AltiTrainer*

Altitude simulation

AltiTrainer is an innovating device for research in hypoxic, hyperoxic, and hypercapnic conditions.

Exposure to high altitude environment causes reactions in the body. The versatility of the AltiTrainer configures appropriate tests for performance and research safely. Simulated altitude training with regeneration at sea level is now possible with AltiTrainer. The device makes it possible to simulate altitudes up to 5500 m. With AltiTrainer it is possible to train subjects to intensive training in hypoxia conditions with ventilatory flows up to 200 l / min.

AltiTrainer is designed to deliver the large amounts of hypoxic air required by a high performance athlete at full exertion. The working altitude can be freely selected and controlled by a microprocessor in conjunction with an oxygen probe. AltiTrainer combines reliability, efficiency, simplicity and economy.

- Simulates altitudes up to 5500 m
- Safe and comfortable
- Time-efficient altitude training
- Improvement of aerobic fitness
- IHHT: mitochondrial interval training
- Easy to use

* Legal manufacturer: SMTEC (Sport & Médical Technologies) S.A.

GANSHORN AltiTrainer

GANSHORN tremoflo*

Airwave oscillometry

The tremoflo Airwave Oscillometry System (AOS) is a portable medical device intended to monitor lung function and assess human respiratory diseases such as asthma and COPD in adults and children.

The tremoflo Airwave Oscillometry System (AOS) has revolutionized the Forced Oscillation Technique (FOT), by using a vibrating mesh to superimpose a gentle oscillatory pressure and flow wave onto the patient's spontaneous breathing to measure respiratory impedance as lung resistance (R) and reactance (X). The resulting waveforms from the tremoflo AOS provide measurements of the mechanical properties of the large central and smaller peripheral airways. This unique information is clinically valuable and complementary to spirometry.

- Just tidal breathing
- Easy to use and very fast
- Reversability and provocation testing
- Suitable for geriatric and paediatric use
- Semi-automatic calibration verification
- Compact and portable

* Legal manufacturer: THORASYS Thoracic Medical Systems Inc.

GANSHORN tremoflo

EMERGENCY CARE AND RESUSCITATION

- **FRED easyport plus**
- **FRED PA-1 / FRED PA-1 Online**
- **FRED easy G2**
- **LifeDataNet G2**
- **DEFIGARD HD-7**
- **ARGUS PRO LifeCare 3**
- **DEFIGARD Touch 7**
- **Mirroring Screen App**
- **SentioWeb**
- **EASY PULSE**

Multipulse Biowave

Most SCHILLER defibrillators feature the sophisticated Multipulse Biowave technology. This defibrillation waveform is pulsed at high frequency. It consists of two phases of current flowing in opposite directions (biphasic). The characteristics of Multipulse Biowave ensure that the defibrillation shock is very effective and safe while the energy is extremely low.

FRED easyport plus

Small and powerful defibrillator for anyone – anytime – anywhere

FRED easyport plus' outstanding weight of only 780 g and its small size, combined with greatest functionality, are unique worldwide.

Thanks to a 1-2-3 workflow and detailed information provided on the large colour screen, the FRED easyport plus is extremely easy to use.

- Metronome and real-time CPR feedback
- The ARGUS LifePoint sensor provides accurate guidance for effective chest compressions
- Suitable for all environments: automatically adjusts the large colour LCD screen's brightness
- Intuitive paediatric mode, while using the same electrodes as for adults
- 2-lead ECG signal mode
- Data transmission via WiFi, Bluetooth or USB
- Regular self-tests ensure its operability, signalling its status with the flashing on / off button
- FRED easyport plus is operational with both primary or rechargeable batteries for even more flexibility
- FRED easyport plus is available as a semiautomatic, fully automatic or manual defibrillator

FRED easyport plus

FRED PA-1 / FRED PA-1 Online

Simplicity as a priority

By lifting the device cover, the FRED PA-1 starts up immediately and guides the rescuer step by step during the entire resuscitation process. The ideal defibrillator for public access areas.

Both versions, the semi-automatic as well as the fully automatic, are available as connected defibrillators: FRED PA-1 Online, with LifeDataNet G2. Check the status of the device or the consumables (battery, electrodes) on the computer, tablet or smartphone and be notified in case of an abnormality. FRED PA-1 Online provides highest possible security that the whole defibrillator fleet is working properly.

- Ease of use: interface with 1-2-3 steps
- Pre-connected electrodes for faster application to the patient's chest
- Automatic self-tests for detection of electrode expiration and battery capacity:
  the FRED PA-1 Online sends an alert via e-mail, the FRED PA-1 as well as the Online version indicate their status via LED on the device
- Multilingual (option)
- Chest compression assistant with metronome and FreeCPR (feedback on the frequency) (option)
- LifeDataNet G2: simplifying AED fleet management thanks to an online dashboard to remotely check the status of the device and the consumables

FRED PA-1 /
FRED PA-1 Online

Training units available for FRED easyport plus and FRED PA-1

FRED easy G2

A flexible AED, robust and intuitive

The FRED easy G2 defibrillator by SCHILLER is intended for Basic Life Support and Advanced Life Support. It guides the rescuer through all the intervention and complements every emergency kit.

The device is available in semi-automatic and automatic mode. The semi-automatic mode provides flexibility for professional user in time critical situations. The fully automatic mode allows the layperson to be confident while performing the resuscitation and delivers a shock automatically, if required. Both versions assist in performing cardiopulmonary resuscitation.

- Semi-automatic and automatic mode
- 5" touch screen
- Always ready: flashing LED and regular self-tests
- CPR assistance: metronome, FreeCPR (option) and ARGUS LifePoint sensor (option)
- Integrated paediatric mode: same electrodes for adult and paediatric
- Choose among four predefined languages (option)
- USB, Bluetooth, cellular network (option) and Wi-Fi
- LifeDataNet G2: visualise AEDs on map, check status, perform software updates remotely, etc.

FRED easy G2

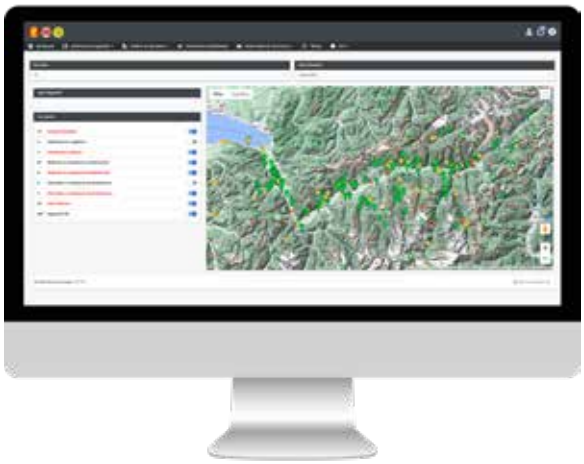
LifeDataNet G2

The solution for your AED fleet management

SCHILLER's LifeDataNet G2 remote fleet management system allows you to see the status and manage the SCHILLER defibrillators from your desktop, tablet or smartphone.

Hosted by an approved provider for health and medical data (ISO 27001), LifeDataNet G2 is a robust solution that complies with the highest security standards. With LifeDataNet G2 you can remotely check the status of the device and the consumables thanks to an online dashboard.

- Locate each of your devices
- Visualise your AED park's status on a map
- Check consumables condition (battery, electrodes)
- Be notified in case of an abnormality (connection time out, the electrodes are expiring,...) and when a device is in use
- Be notified when maintenance is needed or advised
- Schedule tasks and update your device remotely and effortlessly, without any technical intervention or device replacement
- Access the intervention data in PDF format
- Available for FRED PA-1 Online, FRED easy G2 and FRED easyport plus



LifeDataNet G2

DEFIGARD HD-7

Renewing defibrillation

The DEFIGARD HD-7 is a concentration of SCHILLER's long and proven experience in defibrillation, ECG and connectivity. Available with defibrillation paddles or pads, the DEFIGARD HD-7 will support all healthcare professionals.

The DEFIGARD HD-7 is designed to be intuitive, with a large 7" touch screen as well as its one-step mode selector. The Touch'n'Save interface allows direct access to the desired feature without losing time. The device automatically transmits self-test results and facilitates device pool management thanks to its remote software and configuration updates.

- 4 modes: monitoring, manual defibrillation, AED and pacer
- Single connector for defibrillation paddles, pads or spoons
- Internal defibrillation mode (optional) for open-heart surgical procedures
- CPR feedback
- USB and Wi-Fi data transmission
- Remote software and configuration updates
- Automatic self-test transmission
- Large 7" touch screen
- 6-lead ECG: SCHILLER technology
- Non-invasive blood pressure: SCHILLER technology
- SpO_2: MASIMO or Nellcor technology
- $EtCO_2$: MASIMO technology (side stream)
- Integrated large 3-channel printer
- Trolley available (optional)

DEFIGARD HD-7

ARGUS PRO LifeCare 3

Robust, compact, lightweight defibrillator/monitor

For all time-critical situations in and out of the hospital, fast start up and intuitive interface for immediate action, advanced connectivity for data transfer and fleet management.

- Advanced ruggedness and durability, through protection against water and dust (IP 55) and by withstanding direct impact (IK09)
- Only 4 seconds start-up time
- Complete set of monitoring parameters: 12 leads ECG with ETM interpretation, SpO_2, SpMet, SpCO, SpHb, SpOc, PVI, RRp, NIBP, 4 x IBP, $EtCO_2$ (mainstream/sidestream), 2x temperature (oesophageal, rectal, cutaneous)
- 8" colour LCD touch screen with high-contrast mode and auto-brightness adjustment, numerical values can be enlarged
- Direct access to AED even if device is switched off
- CPR assistance with metronome, Free CPR (optional), and ARGUS LifePoint 2 (optional)
- Available with pads and paddles
- Cellular network, Wi-Fi, and USB
- Remote fleet management, update, and maintenance through LifeDataNet G2
- 4-channel built-in printer
- Volume can be adapted: low/medium/high

ARGUS PRO LifeCare 3

DEFIGARD Touch 7

Emergency monitor and defibrillator with touch screen

The DEFIGARD Touch 7 is an indispensable tool for rescuers.

The device is extremely compact and offers the latest defibrillation technology in combination with comprehensive monitoring functions. It is the first emergency monitor / defibrillator equipped with a touch screen – making it the most intuitive device on the market – as well as with the latest data transmission technology.

- ECG with 6 to 12 leads
- Diagnostic ECG with ETM interpretation
- Non-invasive blood pressure measurement
- SpO_2 MASIMO Rainbow® (SpCO, SpMet, PI), with plethysmogram
- $EtCO_2$ (mainstream or sidestream)
- Invasive blood pressure measurement
- Bluetooth printer
- ePCR ready
- Temperature
- AED
- Manual defibrillator (sync / async)
- Transcutaneous pacemaker
- CPR feedback
- Metronome
- Cellular network, Wi-Fi data transmission

DEFIGARD Touch 7

Mirroring Screen App

Helping emergency and healthcare professionals work more efficiently

Easily follow the patient's vitals remotely by Bluetooth, allowing a better visualization. This is especially advantageous when the patient is being moved or when there are too many people at the scene. The device is simply paired with the app via Bluetooth, and the professionals can access live data from the device, directly on their smartphones and tablets.

- Compatibility with all Android and iOS (smartphones, tablet) devices
- Bluetooth connection to a DEFIGARD Touch 7
- Real-time display of:
  - Curves: ECG I, II, III, DEFI, SpO_2, $EtCO_2$, IBP
  - Parameters: HR, SpO_2, $EtCO_2$ with Respiration Rate (RR), NIBP, IBP, SpCO, SpMet
- Define the curves to be displayed by default
- Download R-ECG in a PDF format
- Accurate display of data transmitted from the DEFIGARD Touch 7
- Multilingual option (English, French, German, Italian, Spanish)
- Demo mode available

Mirroring Screen App

SentioWeb

Remote physician decision-making in any emergency situations to improve patient outcomes

SentioWeb™ is designed to help emergency and healthcare professionals make informed decisions about appropriate therapy in the shortest possible time. Data transmitted in real time from SCHILLER devices is accessible via a web browser, allowing experienced professionals to monitor the patient's condition and provide immediate feedback to the team in the field. This ensures that both field teams and remote professionals can access the same information at the same time. SentioWeb™ improves coordination and decision making, enabling medical teams to respond faster and more efficiently, ensuring the best possible outcome for patients.

- Remote live-streaming
- Display of live waveforms and vital signs (parameters and trends)
- Resting ECG and intervention report
- Event Log: All information on a live updating screen
- Data visualisation from multiple devices on one dashboard
- Real-time tracking of EMS teams on a map
- Seamless device integration
- Ability to send photos and notes
- High-end cyber security: Role-based access control, encrypted data transmission, GDPR compliant

SentioWeb

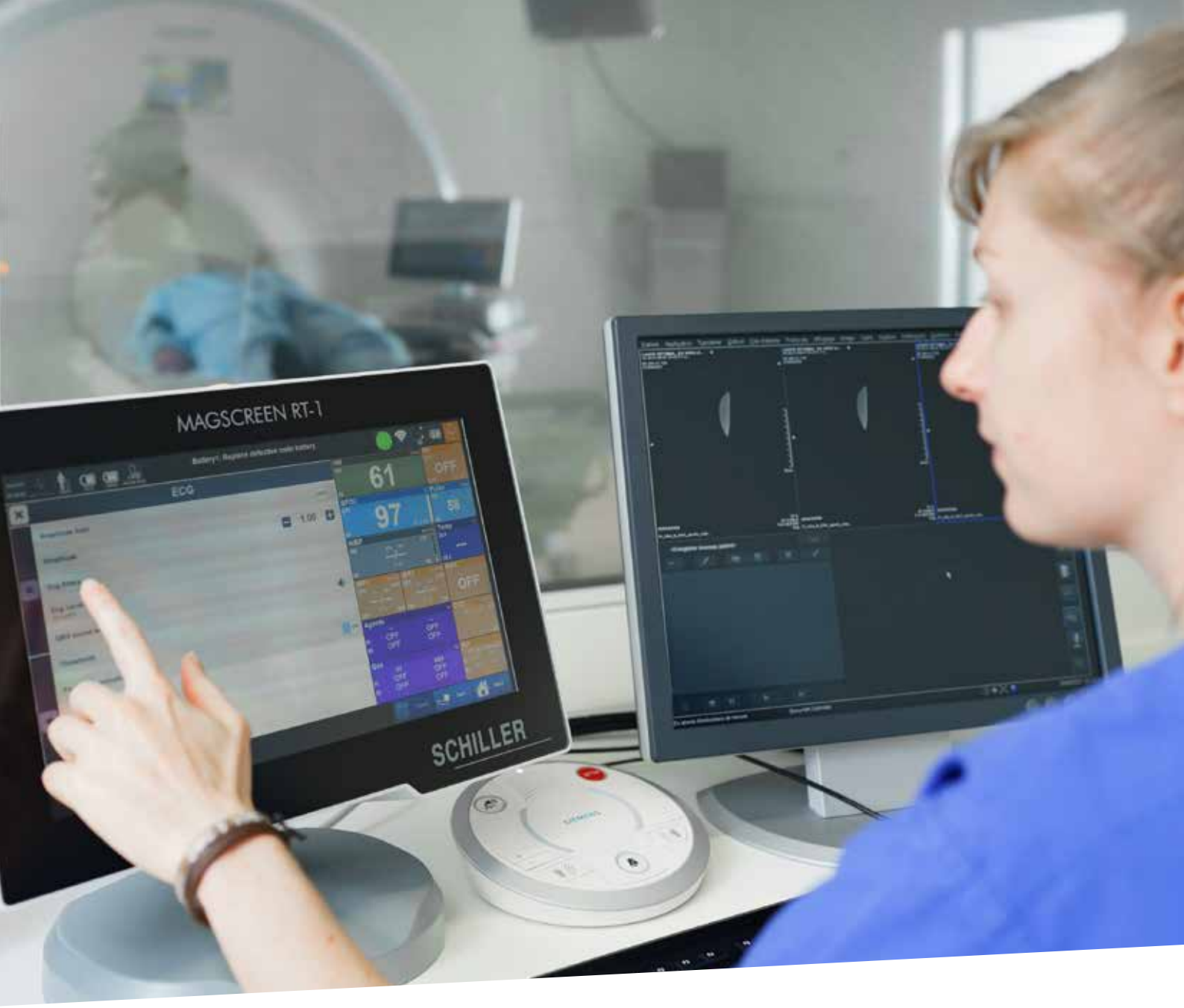
EASY PULSE

Efficient and compact mechanical CPR thanks to technological innovation

Performing manual chest compressions well for an extended period of time is almost impossible. SCHILLER's EASY PULSE is the solution for more effective resuscitation: this portable, stand-alone device delivers high-quality chest compressions automatically at a consistent rate and depth.

- Unique combination of stamp and band which allows a 3D compression and therefore maximum efficiency
- Easy to position, easy to operate
- Thanks to slider and buckle system, a single person can easily attach the device
- Possible to use in head-up position
- Continuous or 30:2 cycles, frequency 100 compressions per minute
- Replaceable battery with charge level indicator (device delivered with two batteries)
- Autonomous operation for 45 minutes (with just one battery)
- External DC input
- Ideal for confined spaces, suitable for aircraft

EASY PULSE



MRI-COMPATIBLE MONITORING

› **MAGLIFE RT-1**

MAGLIFE RT-1

Revolutionary patient monitoring in the MRI environment

The MAGLIFE RT-1 performs patient monitoring in an MRI environment including all necessary vital parameters during anaesthesia. The system is designed for all patients: adults, children and neonates.

- Compatible with MRI systems from any manufacturers that have a field strength between 0.2 and 3 Tesla
- 10 vital parameters at a glance: ECG, SpO_2, NIBP (standard); IBP (optional); $etCO_2$, anaesthetic agents, O_2, N_2O (optional); spirometry (optional); optical temperature measurement (optional)
- Wireless ECG and SpO_2 sensors: suitable for all types of patients, even premature babies
- Remote control through the display unit MAGSCREEN RT-1 outside the Faraday cage: full control of the MAGLIFE RT-1 monitor and adjustment of all parameters and functions
- The MAGLIFE RT-1 can be used as close as 50 cm from the MRI
- Mains or battery operated
- MAGLIFE RT-1 and MAGSCREEN RT-1 are equipped with a 15.6" colour TFT touch screen

MAGLIFE RT-1

CONNECTIVITY AND DATA MANAGEMENT SOLUTIONS

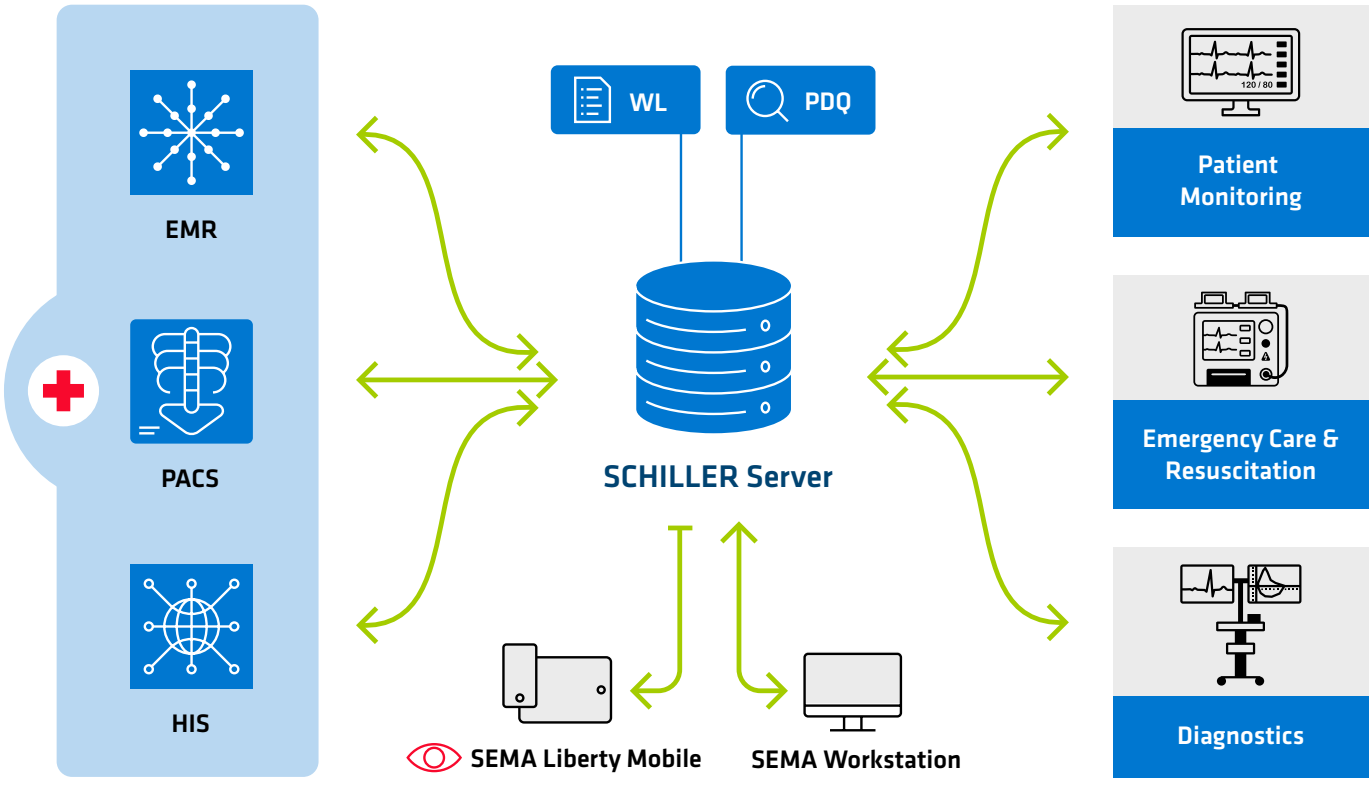
- **SCHILLER Server**
- **SCHILLER Gateway**
- **SCHILLER Link**
- **SEMA Workstation**
- **SEMA Liberty Mobile**

SCHILLER Server

Hospital level communication solution

SCHILLER Server is a hospital-level communication solution. It allows SCHILLER devices and clinical applications to exchange information with Hospital Information Systems (HIS) via Health Level 7 (HL7) messages or PACS system communication via DICOM standard, as well as supporting enhanced functionality including database support for SCHILLER's clinical analysis and reporting system SEMA.

- Bi-directional communication enables import and export of data and measurements to all systems involved.
- Profit from all possibilities of SEMA Workstation when using SCHILLER Server: The SCHILLER clinical data management system SEMA is connected via SCHILLER Server.
- Communication with all SCHILLER devices (emergency, pulmonary, monitoring, exercise ECG, etc.)
- Support for role-based user authentication on supported SCHILLER devices and software applications, optionally integrated into existing Hospital LDAP (Lightweight Directory Access Protocol) user management systems (like Microsoft Active Directory).
- Device Management – logging of device connection and status, self-test reports, and maintenance scheduling.
- HL7 ADT Patient demographic data import directly into the SEMA database.
- Additionally supports interfacing via HL7 ORM, GDT
- Moreover, SCHILLER Server features all possibilities of SCHILLER Gateway.



SCHILLER Gateway

Pass-through communication interface

SCHILLER Gateway is a hospital-level communication solution. It allows SCHILLER devices and clinical applications to exchange information with Hospital Information Systems (HIS) via Health Level 7 (HL7) messages or PACS system communication via DICOM standard, as well as supporting enhanced device functionality.

- Bi-directional communication enables import and export of data and measurements to all systems involved.
- Patient Demographic Query (PDQ) speeds up access to information, reduces manual data entry and minimises errors (DICOM C-Find or HL7 A19). Enter or scan a patient ID to a SCHILLER device, and the PDQ interface will seamlessly and quickly provide the patient demographics, ensuring accuracy and convenience, when a worklist or orders are not appropriate.
- Supports the import of a worklist to SCHILLER devices and Clinical Applications directly from a HIS or PACS system by using DICOM Modality Worklist.
- Export of the clinical results as a final report and/or raw diagnostic data and waveforms directly to any third-party Electronic Patient Record via HL7, DICOM, PDF, XML or GDT.
- SCHILLER Gateway is an application installed on the hospital server but without its own database.

SCHILLER Link

Small and easy to install communication application

Fast and easy PDF export and bi-directional communication with EMR systems. SCHILLER Link is the perfect tool for small clinics and doctor's practices where a paperless ECG workflow is preferred.

- Bi-directional communication between acquisition device and PC
- Auto-detects ECG machines over wi-fi – minimal configuration required on ECG device
- Automatically print the ECGs in high quality to any connected laser printer
- Export resting ECG, exercise ECG reports, rhythm ECG, SAECG, and spirometry as high resolution diagnostic PDF reports to a folder
- Customisable filename based on patient ID, name etc.
- GDT Support (import orders and export)
- Available for Windows and Mac OS
- Suitable for a doctor or a very small clinic
- SCHILLER Link is an application installed on the local PC

SEMA Workstation

The SCHILLER Data Management System

The SEMA data management system allows the user easily to manage, analyse, and store recordings acquired with devices from the SCHILLER Group in a few clicks. Customisable, for physicians' offices up to the most complex hospital environments.

SEMA is designed to speed up work processes thanks to advanced tools like the inbox (continuously updated recording list), batch editing, and user-defined search criteria.

Easily tailor screen layouts and workflows to the needs of every user. User-defined interpretation templates, acronyms, and reports are available. Each user selects the appropriate language. With role-based user login and LDAP authentication, access to patient data is strictly controlled.

The SEMA system comprises the SCHILLER Server and SEMA installed on a PC. Recordings are stored in the SCHILLER Server database and accessed for viewing on SEMA. Users and user privileges are defined on the SCHILLER Server.

SEMA Office up to 10 licenses
SEMA Enterprise unlimited licenses and LDAP integration

- Resting ECG and rhythm recordings from SCHILLER devices can be measured, analysed, and stored in SEMA.
- The 10-second extraction function "ECG Framer" allows resting ECGs to be extracted from rhythm recordings with standard ECG capabilities.
- Conveniently finalise stress test reports at a SEMA workstation, where the complete test is available for analysis and reporting in editable format. CPET can also be reviewed in SEMA.
- Holter ECG or BP reports analysed in DARWIN2 are sent to SEMA for viewing with other recordings.
- Pulmonary test results from SCHILLER devices are stored and analysed in SEMA.
- Pulmonary data recorded with LFX software (GANSHORN) is also stored in SEMA.
- Intervention data from SCHILLER emergency products can be viewed and analysed in SEMA.
- SEMA offers combinable reports and text templates for standard examinations.
- User management via LDAP supports access control within the software.
- SEMA enables bi-directional communication and seamless integration with PACS, HIS, and EMR systems using DICOM, HL7, GDT, and PDF, supported by numerous application parameters.

SEMA Liberty Mobile

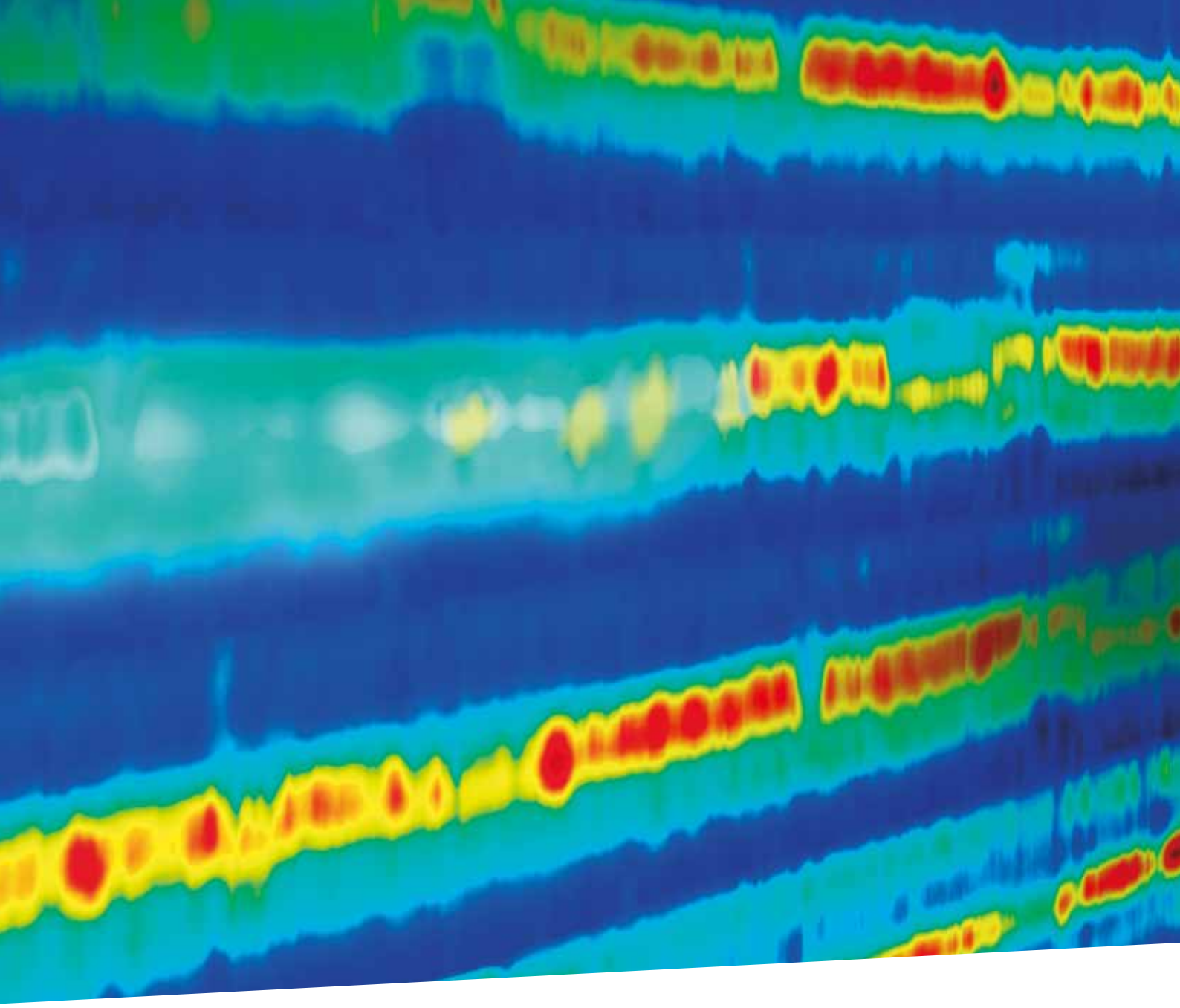
Review ECGs anytime, anywhere

SEMA Liberty Mobile allows remote data review from your tablet or smartphone for all recording types.

If for example a second opinion is needed quickly, SEMA Liberty Mobile allows you to access and review recordings rapidly. Simply log in with username and password, search for a patient name or ID and click on the recording of interest.

You can review all data coming from devices connected to SCHILLER Server on your mobile device.

SEMA Liberty Mobile



DIAGNOSTIC ANALYSIS PROGRAMS

- **HyperQ Resting**
- **HyperQ Stress**
- **ETM**
- **ETM Sport**
- **SAECG**
- **CCAA – Culprit Coronary Artery Algorithm**
- **Vector ECG**

HyperQ Resting

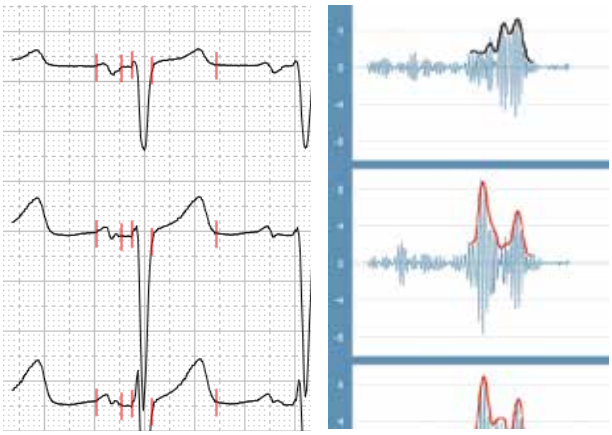
Non-invasive diagnosis of ischaemic heart disease

Early detection of acute coronary syndrome

Chest pain is one of the main reasons for hospital emergency department visits worldwide. Early risk stratification of patients presenting with chest pain and suspected acute myocardial schaemia or infarction is a major clinical challenge.

Resting 12-lead ECGs, a mainstay in the management of acute myocardial ischaemia, are limited by low sensitivity, especially in cases of non-ST elevation myocardial infarction and unstable angina.

- HyperQ Resting provides high accuracy, early detection and superior diagnostic value
- Extracts additional, previously unseen data from a 3-minute resting rhythm recording
- Suitable for emergency departments, emergency medical services, primary care clinics and telemedicine services



Patient with positive HyperQ and ACS.
62 years, female, ACS: ST-segment analysis shows no abnormalities. However, the HyperQ analysis correctly detects significant ischaemia.

HyperQ Stress

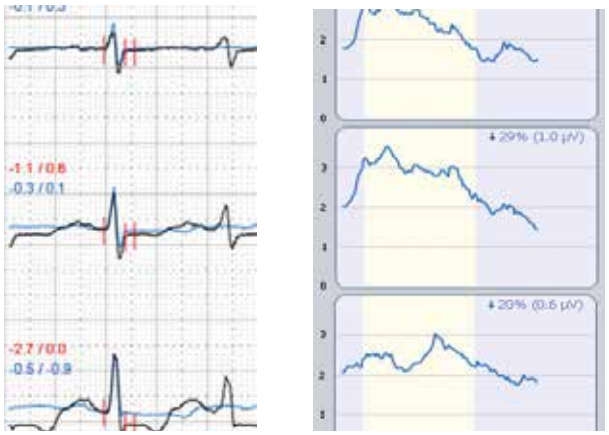
Non-invasive diagnosis of ischaemic heart disease

Revolutionising the detection of coronary artery disease

Coronary Artery Disease (CAD) screening is largely based on exercise ECG testing that has a limited diagnostic accuracy, especially in women. Additionally, there are growing concerns over exposure to radiation and cutbacks on payment for costly cardiac imaging.

HyperQ Stress ECG testing provides a low-cost, non-invasive, radiation-free and highly reliable first line CAD diagnostic solution for private cardiology practices as well as cardiology departments in hospitals. HyperQ is based on solid scientific and clinical research.

- Higher sensitivity in diagnosing ischaemia
- Fewer false alarms in non-ischaemic patients
- Performs equally well in women and men
- Provides clear results in patients with equivocal standard exercise ECG test results



Woman with negative HyperQ and abnormal ST.
65 years: ST-segment analysis shows significant abnormalities. However, the HyperQ analysis correctly detected normal coronary arteries.

ETM

The innovative ECG analysis program
For the clinical application and quality of ECG analysis

The ECG analysis program ETM can be used with SCHILLER ECG diagnostic and monitoring systems. Thus, our long-standing experience in the area of ECG interpretation brings significant added value to the broad field of cardiology and emergency services.

Many SCHILLER products are networked and offer the option of using the SCHILLER data management tool SEMA. This makes them suitable for a wide range of care and examination environments in clinics and practices. Multiple parties (acquisition/second opinion) can access the data and benefit from ETM interpretation and analysis results.

- Complies with standards for the measurement of 12-lead ECGs and provides ECG analysis for adult as well as paediatric patients
- Automatic second opinion tested against gold standard interpretations on a comprehensive ECG database comprising numerous diseases and deviations from the norm
- Arrhythmia analysis including atrial arrhythmias, pacemaker detection and QT measurement
- Minimises the time spent on the evaluation of ECG recordings
- Accurate, validated measurements of the heart rate, axes, and intervals
- Gender- and age-specific interpretation criteria for acute myocardial infarctions in adults to ensure a high level of security for the detection of significant changes in the most critical blood supply areas

ETM Sport

The automated ECG interpretation module
Designed for athletes

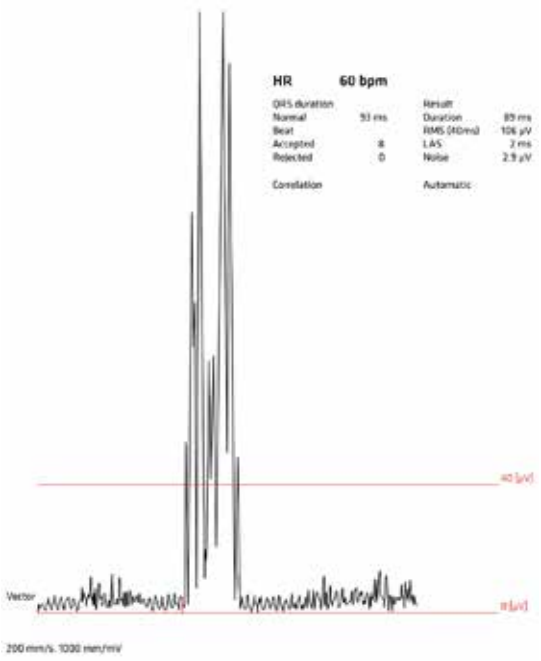
The distinction between physiological and pathological ECG variations in athletes represents a major challenge.
SCHILLER's ETM Sport, when used in sport aptitude tests, allows the number of false-positive results to be reduced while the sensitivity to detect heart disease remains unchanged.
ETM Sport is based on the refined Seattle Criteria.

ETM Sport

SAECG

Analysis of Signal-Averaged ECG
Estimating Arrhythmic Risk using SCHILLER's SAECG Analysis

- Thanks to signal averaging and high-pass filtering, high-frequency late potentials can be recognised.
- Gain time thanks to straightforward measurement data recording: pressing one button is enough
- Comprehensive and clear evaluation within the shortest possible time
- QRS start and end of the vector amplitude can be edited on screen
- The optimum reference ECG lead for signal averaging can be defined automatically or can be selected by the user



SAECG

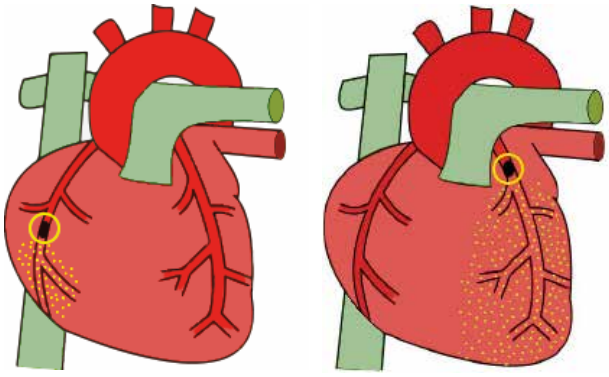
CCAA – Culprit Coronary Artery Algorithm

Because time matters: immediately evaluate the cardiac area at risk.
CCAA detects the location of coronary obstruction in patients with acute chest pain.

CCAA effectively uses 12 ECG leads to optimise diagnosis and management of patients with acute chest pain. To know which cardiac area is threatened to be lost, if coronary flow is not restored, is of critical importance in decision making. It allows optimal management of the acute chest pain patient both outside the hospital and in the emergency room, identifying patients in need of admission to a hospital, where a percutaneous coronary intervention (PCI) can be performed.

The optional SCHILLER CCAA software offers following benefits:

- Cost-effective quick pre-hospital decision-making regarding next treatment steps
- Identifying patients requiring coronary reperfusion therapy (PCI / thrombolysis)
- Limiting duration of cardiac ischemia and thereby damage to the heart muscle



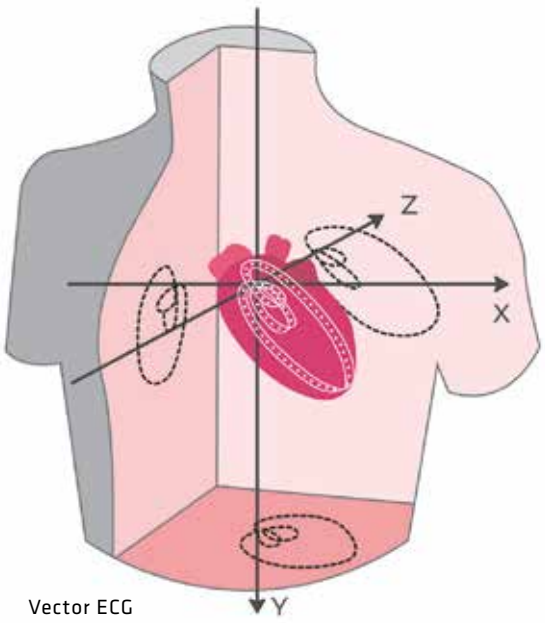
The closer the occlusion site to the origin of the coronary artery, the larger the size of the area at risk

Vector ECG

A 3D view of the electrical heart activity

Vector electrocardiography provides a three-dimensional view of the heart's electrical activity, and adds value to the diagnostic of the heart's inferior wall.

A vector cardiogram traces the direction and magnitude of the heart's electrical activity during a cardiac cycle. With the SCHILLER algorithm, the vector cardiograms and measurements are calculated and displayed from a standard 12-lead recording.



Vector ECG

SCHILLER

The Art of Diagnostics

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