

# EP-TRACER<sup>®</sup> 2

The portable electrophysiological measurement system to support Conduction System Pacing (CSP)-Procedures

**schwarzer  
cardiotek**  
SMART. PRECISE. RELIABLE.



## EP-TRACER 2 simplifies and improves CSP Procedures

The innovative electrophysiological measurement system is perfectly suited to support CSP implantations due to specific excellent features. With its fully-integrated stimulator it assists the programmer unit during pacing lead placement.

With the EP-TRACER 2 the morphology of the 12-channel surface ECG can be displayed simultaneously during stimulation. Due to its small and handy footprint, the EPT 2 can be easily hand carried to any place where the user may want to put it into operation.

## EP-TRACER 2 Features

### Amplifier

The EP-TRACER 2 amplifier allows the connection of a 12-channel surface ECG and 2 additional His-channels. If necessary, invasive blood pressure can be displayed. All signals can be displayed simultaneously. The excellent preamplifier and the intelligent filters provide sharply defined His signals - a valuable guide for the placement of the electrode.

### Integrated Stimulator

The EP-TRACER 2 is equipped with a built-in 2-channel stimulator. If needed, the stimulator can be used in parallel with the pacemaker or to the programmer.

### Smart Keyboard

The Smart Keyboard offers an intuitive user interface to support a streamlined workflow, combining the benefits of a digital display with the haptic feedback of a traditional keyboard. Customized stimulation protocols can be accessed via the Smart Keyboard in a short time. Additionally annotations are supported by the Smart Keyboard.

### Software

- The EP-TRACER 2 software has an intuitive interface that supports your requirements at every stage of the procedure.

- Visible at one glance: 12 -channel surface ECG and His-signals are displayed simultaneously and clearly.
- The screen can be split in a comfortable way to overlay consecutive beats. It allows the comparison of the signal's morphologies.
- In trigger mode, the response signal can be superimposed after stimulation and reproduced again at each stroke. Time and amplitude measurements can be carried out, e.g. to determine and evaluate the effectiveness of stimulation pulse and place.
- An excellent, noiseless signal amplification allows a better visualization of His-signals at the crucial points of the procedure.
- The 12-channel surface ECG allows immediate control of the stimulation point, for example in the His-bundle (selective vs. non-selective capture).
- Optional measurement of invasive blood pressure (IBP) supports statements about the contractility of the left ventricle.
- The software allows you to seamlessly evaluate LVAT and V1-V6-Intervall in real time or on a triggered view, to assess the conductivity during the CSP implantation.
- It offers state of the art indicators for ideal captures: Current of Injury (COI) and derivative of pressure over time (dp/dt).

### Further Advantages

- Fast setup: the system is ready for use in 5 minutes.

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## Components

- EP-TRACER 2
  - Laptop (Windows 10 IoT, 64bit)
- Software EP-TRACER 2
  - Recording software
  - Instruction manual
  - Dongle license key
- EP-amplifier
  - 2 intracardiac channels
  - 12 surface ECG channels
  - 3 pressure channels
  - Integrated stimulator with 2 outputs
  - Allows custom stimulation via intracardiac channels without external wiring
  - Input mode: bipolar or unipolar
- Smart Keyboard (optional)
- Power-box, 100-240 V
- Cabling
  - ECG cable with electrodes

### Smart Keyboard (optional)



- 4.3 inch LCD display
- 15 transparent keys with full haptic feedback
- configurable key assignment\*

\*Note: editing of the digital layers may only be performed by Schwarzer Cardiotek personnel or an approved affiliate.

## Technical details

<b>Medical device directive (93/42/EEC):</b>	Class IIb
<b>EP-TRACER 2</b>	
<b>Intracardiac channels</b>	2
Sampling rate	1 kHz per channel
Catheter connection	Input modes: bipolar and unipolar
<b>12 ECG channels</b>	Leads I, II, III, aVL, aVR, aVF V1-V6 Standard: DIN DB15 Calibration equivalent to 1 mV
<b>Additional channels</b>	3 AUX channels Connections: 3 × 9 pin REDEL Input mode: bipolar
<b>Current leakage</b>	< 50 µA
<b>Back-up stimulation mode</b>	60 beats per min at Out1-Out2 simultaneously; current = 8 mA (Out1), current = 4 mA (Out2), pulse width = 2 msec
<b>Stimulator</b>	Current 0 – 25.5mA (customizable) Minimum increment 0.1 mA Maximum output-voltage: 20 V
<b>Analog/digital converter</b>	Resolution: 12 bit (20 bit dynamic) Bit weight: 1.25 µV/ LSB
<b>Computer operating system</b>	Windows 10 IoT, 64bit
<b>Applicable standards</b>	EN 60601-1: 2006 + A1:2013 EN 60601-1-2: 2015 EN 60601-1-6: 2010 EN 60601-2-27: 2014 EN 60601-2-34: 2014 EN 62366: 2015 EN 62304: 2006
<b>Patient safety</b>	Safety class I ; type CF according to EN 60601-1; Patient connections protected against the effects of defibrillation impulses
<b>Dimensions (h × w × t)</b>	
Portable system in an aluminium suitcase	150 × 460 × 370 mm
EP-TRACER 38	60 × 280 × 270 mm
<b>Weight</b>	
Portable system in aluminium suitcase	ca. 8 kg
EP-TRACER 38	ca. 2.2 kg
<b>Labelling</b>	only for EP-TRACER 38 medical device

Notice: The EP-TRACER Portable version is sold as system pack while the main device, EP-TRACER, is a CE marked medical device of Class IIB.  
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