

EP-TRACER[®] 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 with new software version 2.2

EP-TRACER 2 Features

Amplifier

The EP-TRACER 2 amplifier allows the connection of a 12-channel surface ECG and 2 or 10 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 electrodes.

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 2 or 10 (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).



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Technical details

Components

- EP-TRACER 2
 - Laptop (Windows 10 IoT, 64bit)
- Software EP-TRACER 2
 - Recording software
 - Instruction manual
 - Dongle license key
- EP-amplifier
 - 2/10 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.

Medical device directive (93/42/EEC):	Class IIb
EP-TRACER 2	
Intracardiac channels	2/10
Sampling rate	1 kHz per channel
Catheter connection	Input modes: bipolar and unipolar
12 ECG channels	Leads I, II, III, aVL, aVR, aVF V1-V6 Standard: DIN DB15 Calibration equivalent to 1 mV
Additional channels	3 AUX channels Connections: 3 × 9 pin REDEL Input mode: bipolar
Current leakage	< 50 µA
Back-up stimulation mode	60 beats per min at Out1-Out2 simultaneously; current = 8 mA (Out1), current = 4 mA (Out2), pulse width = 2 msec
Stimulator	Current 0 – 25.5mA (customizable) Minimum increment 0.1 mA Maximum output-voltage: 20 V
Analog/digital converter	Resolution: 12 bit (20 bit dynamic) Bit weight: 1.25 µV/ LSB
Computer operating system	Windows 10 IoT, 64bit
Applicable standards	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
Patient safety	Safety class I ; type CF according to EN 60601-1; Patient connections protected against the effects of defibrillation impulses
Dimensions (h × w × t)	
Portable system in an aluminium suitcase	150 × 460 × 370 mm
EP-TRACER 38	60 × 280 × 270 mm
Weight	
Portable system in aluminium suitcase	ca. 8 kg
EP-TRACER 38	ca. 2.2 kg
Labelling	only for EP-TRACER 38 medical device
	CE 0197

Notice: Content may be subject to change