# EP-TRACER® 2 ProCart

## The electrophysiological measurement system with a fully-integrated stimulator

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

The EP-TRACER 2* with its fully-integrated stimulator can be used for clinical EP studies. The EP-TRACER 2 ProCart offers an ideal platform for EP procedures in EP or hybrid laboratories.

Due to its compact design, the ProCart in particular can be rapidly moved between laboratories as required. The system consists of a fully functional EP system, including two high resolution monitors - one that displays real-time signals while the second can be used for playback and analysis.

* EP-TRACER with software version 2

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## Features of the EP-TRACER 2 ProCart

### Amplifier

EP-TRACER 2 amplifiers offer the connection of either 20, 52 or 84 intracardiac channels. All amplifier models allow connection of 12 surface ECG channels and 6 auxiliary channels which, for example, can be used for the measurement of invasive blood pressure.

### Integrated Stimulator

The EP-TRACER 2 is equipped with a built-in 2-channel stimulator. The software allows stimulation on any intracardiac channel with the click of the mouse, without further external wiring or equipment. Stimulation protocols are easily customized and accessed, thus further streamlining the procedural workflow.

### Software

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

Special display modes, such as triggered mode, pressure mode and multiple user-configurable split-screen modes provide the perfect framework to display data from multiple sources. For example, surface and intracardiac ECG signals, invasive blood pressure, as well ablation data (RF- and cryo-ablators supported) can all be displayed within your customized layout.

One-touch commands to start/stop stimulation, decrement interval time, load a saved stimulation protocol, save events, add comments etc., allows for the seamless operation of the EP-TRACER within your preferred workflow.

All events are time-stamped and added to the user-customizable procedure log to facilitate reporting and later review from anywhere in the hospital network using our specialized review software.

### Further Features

- New Export tool for the export of calibrated trace values (in mV)
- One-click report generation: Customizable Report templates allow for a maximum of reporting flexibility
- Well-visible presentation of annotations and measurements within a recording
- Automated detection of connected ablators (RF- and cryo-ablators)
- Icon-based operation: Pin-drop, Screenshot and AutoText features for rapid procedural annotation and streamlined reporting
- Measurement of invasive blood pressure (IBP) to better determine the catheter position during transseptal puncture.

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## Technical details

| | |
|---|---|
| **Medical device directive (93/42/EEC)** | Class IIb |
| **EP-TRACER 2** | |
| **Intracardiac channels** <br> Sampling rate <br> Amplification factor <br> Catheter connection box | 20/52/84 <br> 1 kHz per channel <br> 0.1 – 25 <br> 2/4/6 x DIN DB25, Input modes: bipolar and unipolar |
| **ECG-Channels** | Electrode connections: <br> R, L, F, N, C1-C6 <br> Standard: DIN DB15 <br> Leads I, II, III, aVL, aVR, aVF <br> C1-C6 <br> Calibration equivalent to 1 mV |
| **Additional channels** | 6 AUX channels <br> Connections: 3 × 9 pin REDEL <br> (2 channels per connection) <br> Input mode: bipolar |
| **Current leakage** | < 50 µA |
| **Back-up stimulation mode** | 60 beats per min at Out1-Out2 simultaneously; <br> current = 8 mA (Out1), current = 4 mA (Out2), <br> pulse width = 2 msec |
| **Stimulator** | Current 0 - 25.5mA (customizable) <br> Minimum increment 0.1 mA <br> Maximum output-voltage: 20 V |
| **Analog/digital converter** | Resolution: 12 bit (20 bit dynamic) <br> Bit weight: 1.25 µV/ LSB |
| **Computer operating system** | Windows 10 IoT, 64bit |
| **Monitor** <br> **Printer** | 2 × 24" high-resolution <br> Laser |
| **Applicable standards** | IEC 60601-1:2005 + A1:2012 / IEC 60601-1-2: 2014 <br> IEC 60601-1-6: 2010 + A1:2013 <br> IEC 60601-2-27: 2011 / IEC 60601-2-34: 2011 <br> IEC 62366: 2007 + A1:2014 / IEC 62304: 2006 |
| **Patient safety** | Safety class I, type CF according to IEC 60601-1;  Patient connections protected against the effects of defibrillation impulses |
| **Dimensions (h x w x d)** <br> ProCart (incl. monitors) <br> EP-TRACER 2 38/70/102 | <br> 1650 × 850 × 650 mm <br> 60 × 280 × 270 mm / 110 × 290 × 260 mm / 110 × 290 × 260 mm |
| **Weight** <br> ProCart <br> EP-TRACER 2 38/70/102 <br> Monitor | <br> approx. 100 kg depending on the configuration <br> approx. 2.2 kg / 3.3 kg / 3.8 kg <br> approx. 10.6 kg |
| **Labelling** <br> only for EP-TRACER 2 <br> medical device | CE 0197 |

Notice: The EP-TRACER ProCart version is sold as a system pack while the main device, EP-TRACER, is a CE marked medical device of class IIB. Content may be subject to change.

## Components

- ProCart
  - Isolation transformer, approx. 1.600VA
  - PC system (Windows 10 IoT, 64bit)
  - 2 × 24" monitors
  - Laser printer
  - Smart Keyboard

- Software EP-TRACER 2
  - Recording software
  - Instruction manual
  - Review software
  - Dongle licence key

- EP-amplifier
  - 20, 52 or 84 intracardiac channels
  - 12 surface ECG channels
  - 6 auxiliary channels; e.g., for the invasive measurement of blood pressure
  - Integrated stimulator with 2 outputs
  - Allows custom stimulation via intracardiac channels without external wiring
  - Input mode: bipolar or unipolar
  - Isolated power supply

- Catheter connection boxes
- Power-box, 100-240 V
- Filter set with EP-TRACER 70 and 102

- Cabling
  - Cable for catheter connection box (around 3m)
  - ECG cable with electrodes
  - Carbon-fiber cable RTBG-3605, L = 90cm