

Literature:

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Ismer B et al. AV Delay optimization using Electrical Velocimetry. Presentation at *Cardiostim 2006*. *Europace* Vol. 8, Supplement 1, June 2006, 58P/35.

Schmidt C et al. Comparison of electrical velocimetry and transoesophageal Doppler echocardiography for measuring stroke volume and cardiac output. *Br J Anaesth*. 2005 Nov; 95 (5): 603-610. Epub 2005 Sep 9.



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Window to the Heart[™]



U.S. Patent Nr. 6,511,438. Other patents pending.

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**Noninvasive
Cardiac
Output**



OSYPKA MEDICAL
Berlin, Germany · San Diego, California, USA

ICON®

Noninvasive measurement of cardio-dynamics in adults, children, and neonates.

Blood Flow

Electrical Velocimetry™ (EV™) determines:

- Stroke Volume (SV) / Stroke Index (SI)
- Stroke Volume Variation (SVV)
- Heart Rate (HR)
- Cardiac Output (CO) / Cardiac Index (CI)

Contractility

- Index of Contractility (ICON®)
- Variation of Index of Contractility (VIC™)
- Systolic Time Ratio (STR = PEP/LVET)

Fluid Status

- Thoracic Fluid Index (TFI)

ICON® Pacemaker Clinic™

AV sequential or cardiac resynchronization therapy (CRT): Pacemaker Clinic™ is the ingenious optimization tool derived from the top-of-the line AESCULON® monitor.

- Sophisticated detection of pacemaker stimuli
- Parallel documentation of applied pacing parameter values and corresponding hemodynamic measurements
- Synchronization with new PACE 300™ CRT and PACE 203™ DDD temporary cardiac pacemakers and compatible models. Automatic determination of hemodynamically optimal settings for atrio-ventricular (AV) delay and inter-ventricular (VV) delay by Auto Scan™ or Smart Scan™ functions

ICON® Features

Continuous monitoring of user-defined hemodynamic parameters

- 3.5" high resolution color display
- Rechargeable battery backup for up to 120 min of operation
- Continuous surveillance of proper sensor contact
- Stand-alone or attachment to pole



In control: display of four hemodynamic parameters and one signal waveform or two parameters and two waveforms.

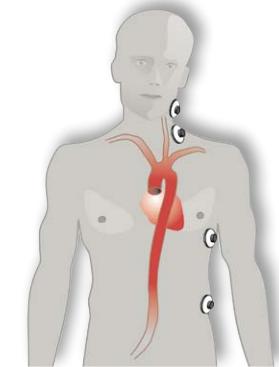
Peace of mind: Signal Quality Indicator (SQI™) and the battery / AC power status indicator



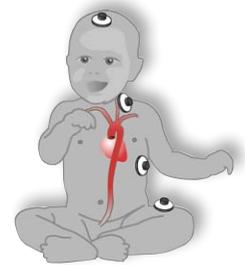
Enhanced Display: View the hemodynamic pattern over time – know the patient's condition one or two minutes, or five, 10 or 20 minutes ago

Electrical Cardiometry™ – Application

Easy attachment of only 4 standard ECG surface adhesive sensors:



Sensor located at the left side of neck and thorax



Sensor placement for small children and neonates



AESCULON®

Noninvasive comprehensive cardiovascular monitoring of adults, children, and neonates.

- 12" high resolution color display
- Measurements are recorded to PC based scientific database
- Noninvasive oscillometric blood pressure monitor
- USB Interface for convenient backup of patient data
- Pacemaker Clinic™ (extended version)
- Masimo® SET® Pulse Oximeter (Option)

