

rheoscreen[®]

light



Vessels
IN A GOOD LIGHT

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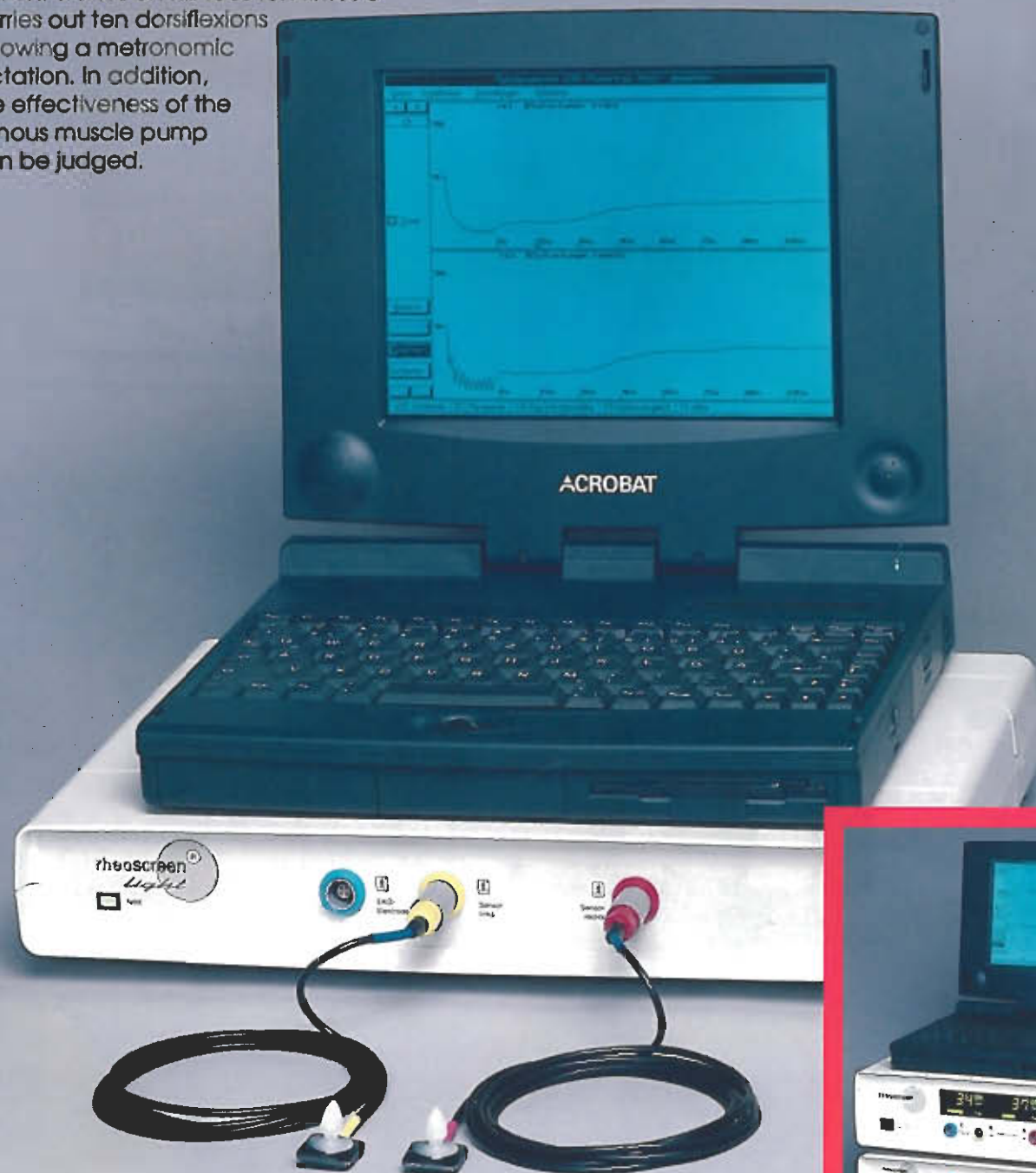
Diagnosis of venous diseases

Venous insufficiencies

By comparing sides of the body, venous insufficiencies can be recognized at an early stage if, during exercise (**tip-toe test**), the patient stands on his toes ten times or carries out ten dorsiflexions following a metronomic dictation. In addition, the effectiveness of the venous muscle pump can be judged.

Checking the deep venous system before operations on varicose veins

The tip-toe test shows, in the case of occluded surface veins, the functioning of the venous valves in the deep venous system and thus the expected success of any operation on varicose veins.



Combination with rheoscreen compact for venous occlusion plethysmography and rheographic pulse wave analysis

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Diagnosis of arterial diseases

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Peripheral arterial occlusive diseases and acute occlusions

Acute and compensated occlusions and stenoses can be recognized by means of **pulse wave analysis** easily, quickly and without burdening the patient. Furthermore, they can be evaluated differentially in terms of diagnostics. Pulse wave analysis by means of photo-plethysmography is suitable for, in particular, the acral area (fingers and toes).



Arteriosclerotic changes

During photo-plethysmography, the microcirculation of the skin is recorded. By means of pulse wave analysis, arteriosclerotic changes can be recognized at an early stage without burdening the patient. This examination is therefore also suitable for monitoring high-risk patients such as, e.g., diabetics.

Functional circulatory disturbances

By comparing the pulse wave analysis before and after exposure to coldness or heat, it is possible to differentiate a circulatory disturbance with regard to a functional or organic origin.



rheoscreen[®] is easy

All examinations are automatically controlled and evaluated. The measuring system does not have to be calibrated.

rheoscreen[®] is precise and time-saving


Measurements can be taken at both sides of the body at the same time. That means: By comparing the sides directly, a better diagnosis is possible and additional time is saved.

rheoscreen[®] is future-oriented

The software-based system of control and evaluation can be constantly updated to current standards.

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Technical Data

Measurement Principle	Light-Reflection-Rheography (LRR), Photo-Plethysmography (PPG)
Measurement Channels	2 x LRR / PPG 1 x ECG
Light-Reflection-Rheography Photo-Plethysmography	automatical adjustment to type of skin, protected against room light, output values relatively to basic skin transparency, digital signal processing, frequency ranges: pulse wave 0.2 - 25 Hz, other 0 - 10 Hz
ECG Input Voltage CMRR	+/- 10 mV; 0,8 - 30 Hz > 90 dB
Signal Outputs PC-Connector Connector for rheoscreen [®] compact	opto-electronically decoupled, 4 kV insulation voltage digital (RS 232) digital (RS 232)
Main Supply, Power Input	230 V +/- 10 % or 115 V +/- 10 %; 50 - 60 Hz; < 25 VA
Dimensions, Weight	370 x 250 x 70 mm (W x D x H), < 1,5 kg
Electrical Safety	DIN IEC 601-1, VDE 0750-1, MDD class Iia,  insulation class II, classification for patient protection BF

Measurement Programs

Program	Diagnosis	Measurement Segment	Evaluation
Pulse Wave Analysis	<ul style="list-style-type: none"> ● arterial occlusive diseases ● arteriosclerosis (at an early stage) ● functional circulatory disturbances 	finger, toe	automatically
Tip-Toe Test	<ul style="list-style-type: none"> ● venous insufficiencies ● check-up of venous muscle pump 	calf	automatically
Recorder <i>Pulse Wave</i>	<ul style="list-style-type: none"> ● various exercise tests ● course of hyperemic state ● thoracic outlet syndrome 		manual
Recorder <i>Venous Blood Volume</i>	<ul style="list-style-type: none"> ● various exercise tests 		manual