

# vasoquant® 2000

Quantitative  
Photoplethysmography

Competence in vascular  
diagnosis

dual-channel-photoplethysmograph  
Arterial acral function diagnosis  
Venous function diagnosis  
D-PPG / LRR



# LRR



**VQ2000** INT

**ELCAT**  
innovative medical products

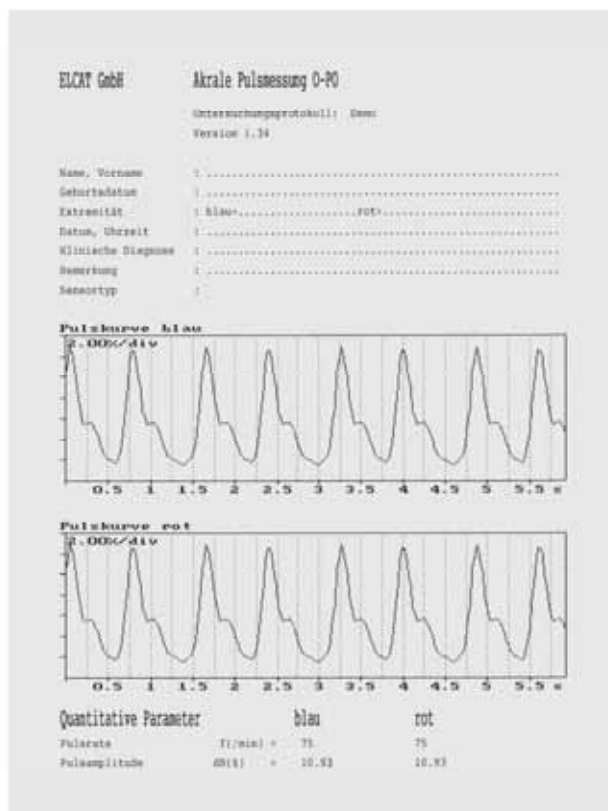
## VQ2000

In 1981 light reflexion rheography (LRR) was developed in Germany as a method to diagnose venous insufficiency. With appropriate wavelengths and well designed lightray geometries, changing amounts of blood in the superficial veins can be recorded. The critical parameter is skin reflectivity that changes within the measured area.

Venous pump power is determined by the movement of patient calf muscle contraction. As peripheral venous pressure decreases with calf muscle action, arterial inflow refills the leg.

### Arterial function diagnosis

- determination of the actual arterial blood circulation and quantification of form and amplitude of the pulse
- special sensors for micro- and macro-circulation
- peripheral acral pressure measurement
- post ischaemic reactive hyperemia

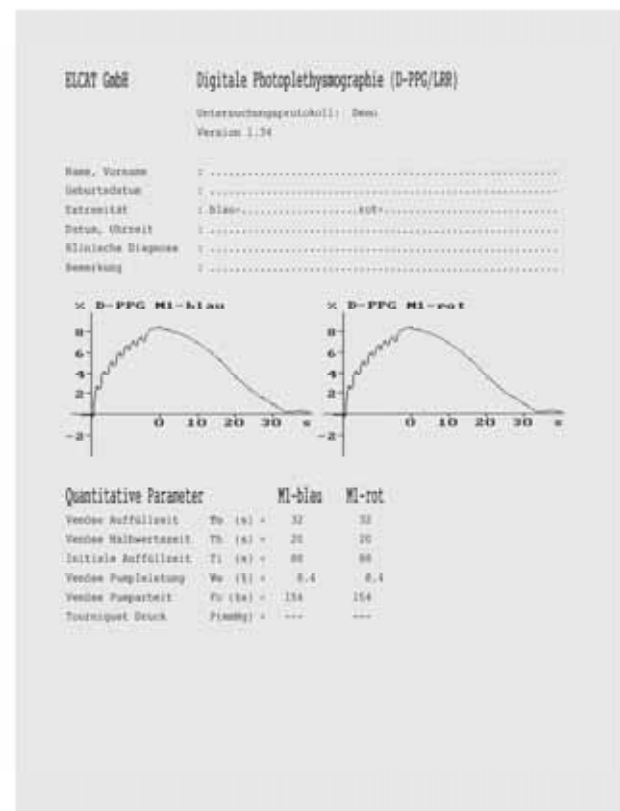


The D-PPG method is a consequent patented further development of the LRR-method.



### Venous function diagnosis

- measurement of venous function i.e. quantifying the venous pump power of the calf muscle pump even while wearing medical stockings
- determination of the degree of venous insufficiency
- evaluation of leg pain with uncertain origin, assessment of need for surgical or medical intervention



## Functional range of vasoquant 2000

- automatic saving-feature for up to 60 measurements
- freely portable (no cable because of rechargeable batteries); an automatic shut-down after three minutes ensures long operating time
- automatic self-test before every measurement ensures a reliable measurement-process
- the display shows menus, measurement-process, measurement results and charging state of batteries
- special sensors with an optimized measurement range improve findings about the blood filling of acral vessels



### All in one case...

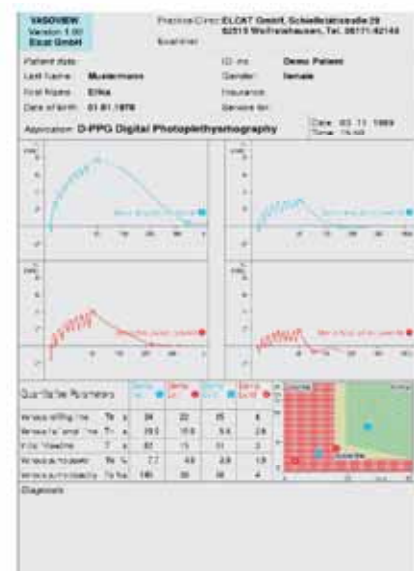
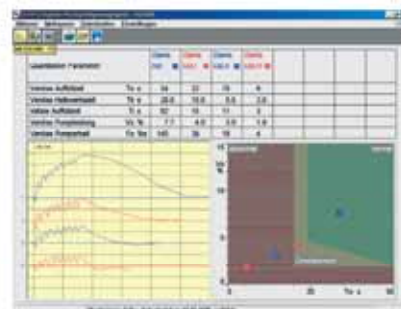
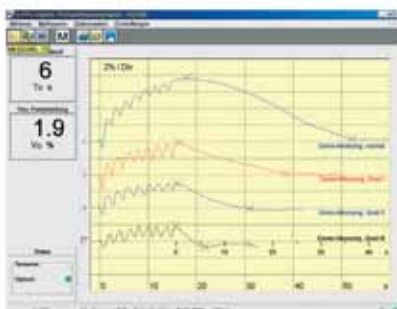
- vasoquant 2000-device
- sensors and cuffs
- battery charger
- connection cable (to printer)
- 1 box of adhesive collars (for approx. 500 measurements)
- user manual

### Included in delivery

- inkjet-printer

## vasoview® (Option)


vasoview® vasoquant 2000-software (Windows-software) connects the vasoquant VQ2000-device to your PC or clinic's IT (GDT / BDT). Examination results can be displayed online or transferred to a PC at a later point of time. The saving-feature enables documentation and follow-up after medical intervention.



**VQ2000 technical data** (technical data is subject to change without notice)

basic device		
<b>Dimensions</b>	<b>Weight</b>	<b>Energy supply</b>
245 x 280 x 35mm (W x H x D)	approx. 1,5 kg	rechargeable batteries; a special electronic-feature keeps your batteries from overcharging or deep discharging
Sensor (A-PPG)		
<b>Dimensions</b>	<b>Weight</b>	<b>Electronics</b>
25 x 10 mm (D x H)	approx. 5 g	low-noise signal pre-amplifier
Sensor (D-PPG)		
<b>Dimensions</b>	<b>Weight</b>	<b>Electronics</b>
20 x 9 mm (D x H)	approx. 7 g	low-noise signal pre-amplifier; wavelength of the LED: 940 nm
Battery charger		
<b>Line voltage</b>	<b>Power consumption</b>	<b>Charging voltage</b>
230 VAC / 50 Hz	15 VA	12 V

**Tourniquet-Cuffs** (Option)

Width	Length	
3 cm	optional 45, 60 or 90 cm adjustable by velcro fastener	

**vasoview®** (Option) technical data (technical data is subject to change without notice)

Included in delivery		System requirements	
<b>Software</b>	<b>Processor</b>	<b>Interface</b>	
CD	Pentium or higher	free serial interface (COM1 to COM4) or USB-interface (with adapter)	
<b>Cable</b>	<b>Harddisk</b>	<b>Operating system</b>	
Connection cable VQ2000 / workstation	min.20 MB free disk space	Windows 9x, 2000, XP	
<b>Additional</b>	<b>Data base</b>	<b>Data base interface</b>	
Installation instructions and operating manual	approx. 5KB per measurement approx. 1KB per patient	GDT / BDT	

Are you interested in the vasoquant 2000?

Then call us!

We would be pleased to tell you more about your possibilities with the VQ2000!

**ELCAT** GmbH  
medizinische systeme

Bgm.-Finsterwalder-Ring 27 Phone +49 08171 4214-0  
82515 Wolfratshausen Fax +49 08171 4214-49  
Germany E-Mail info@elcat.de  
ISO 13485:2003 Homepage www.elcat.de

presented by