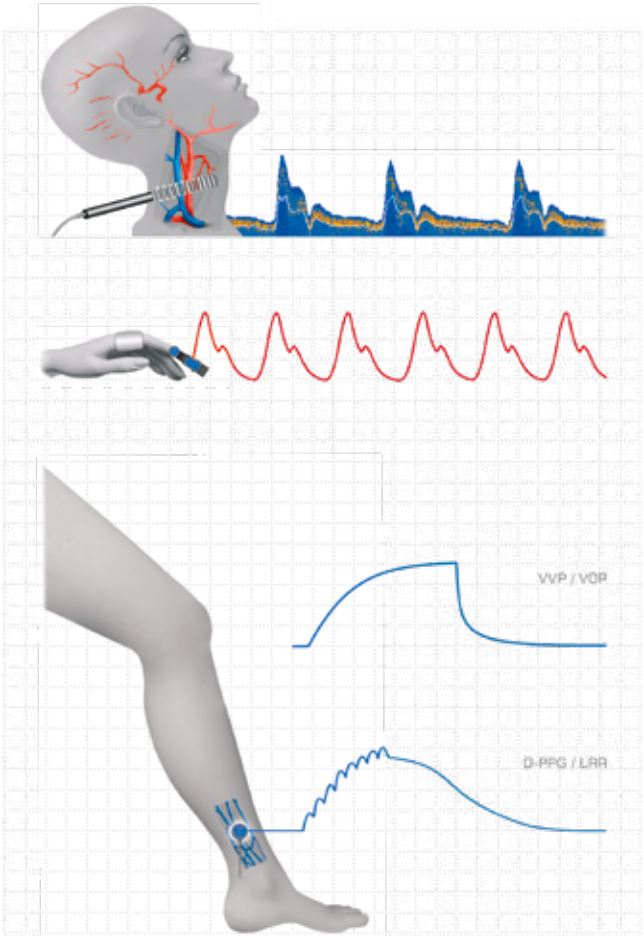
vasolab® 320

Vascular Diagnosis Center

- Arterial function diagnosis
- Venous function diagnosis
- Doppler



vasolab® 320

- modular concept
- easy to use
- ergonomic design

The vasolab® 320 is a modular designed system for the non-invasive vascular diagnosis.

Measurement results of 2 extremities can be taken at the same time.

Examination processes, analysis of measurement results and evaluations of examinations are efficiently supported by examination programs which can be adjusted freely to examiners needs.

Main System

- Windows software
- Workstation type All-in-One-PC 21,5“
- Examination database
- Equipment cart / vasocart® 320

Arterial function diagnosis

- Acral Pulse Oscillography (O-PO)
- Acral Pressure Measurement (O-AP)
- Reactive Hyperemia (SG-AR)
- Segmental Pulse Oscillography (P-SPO)

Venous function diagnosis

- Digital Photoplethysmography (D-PPG / LRR)
- Vein Occlusion Plethysmography (VOP)
- Filtration test

Bidirectional Doppler

- Peripheral and extracranial (CW)
- Transcranial (TCD)
- Automatic examination programs to calculate ABI and TBI with automatic cuff control.

Cuff holder

- up to 16 cuffs are supported
- clear assignment of the cuffs

HD display

- backlit (IPS)
- 170° wide viewing angle
- calibrated and color-fast

System unit

- Sensor management
- Cuff Control; up to 16 cuffs are supported

Sound system

- 2-way Stereo sound
- clear signals

Probe holder

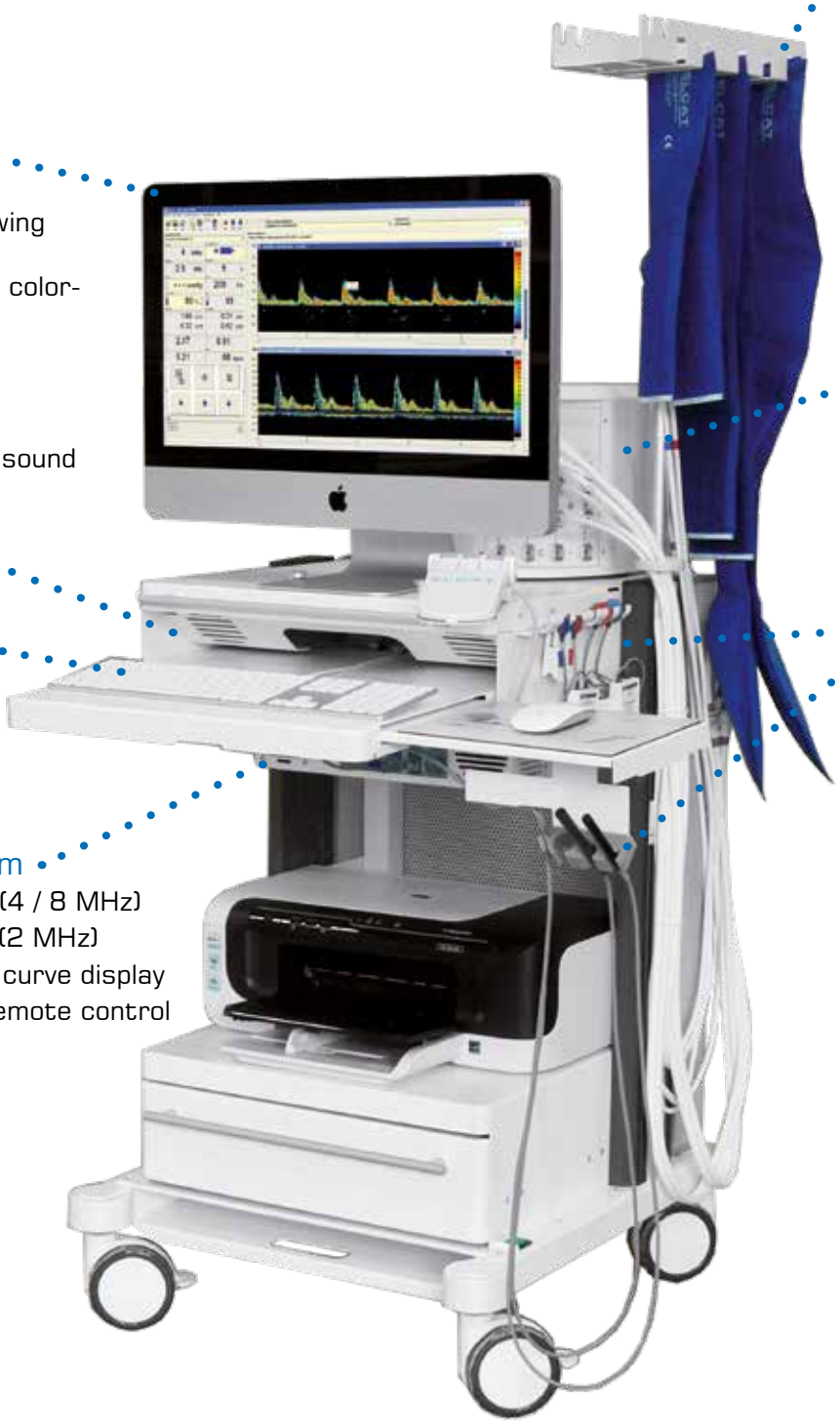
- ergonomic alignment of the probes and sensors
- clear assignment of the sensors and probes

Control panel

- extendable
- ergonomic

Doppler system

- CW - Doppler (4 / 8 MHz)
- PW - Doppler (2 MHz)
- FFT / envelope curve display
- Vasocontrol remote control



vasolab® 320

User interface

- The structured screen design is characterized by high operating comfort and a short learning curve.
- User friendly operation with control bars, structured menus and interactive controls.
- System operation by keyboard, mouse or by remote-control

Applications interface

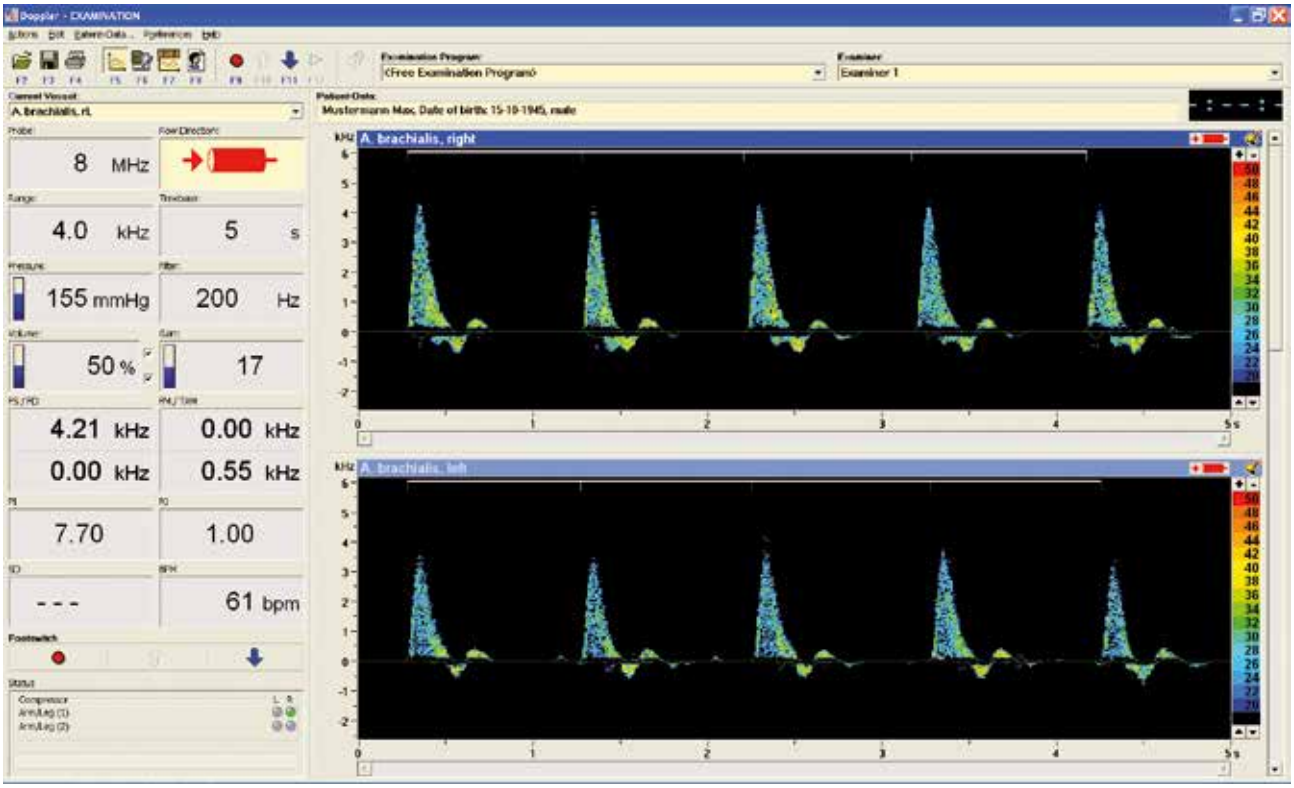
- In the application interface the selected application will be started by using the default examination program.
- For monitoring purposes you can load previous examinations from the patient database.

Entering patients data

- Selection of patients data from the patient database, using chipcards or add patient data manually.
- Transfer patient data from your existing IT-System, we support GDT and DICOM interfaces on option.

Examination - work area

- Display the actual examination in real time. In addition the user is informed about the system status.
- Settings of predefined examination programs can easily be changed. In this way the examination follows defined worksteps.

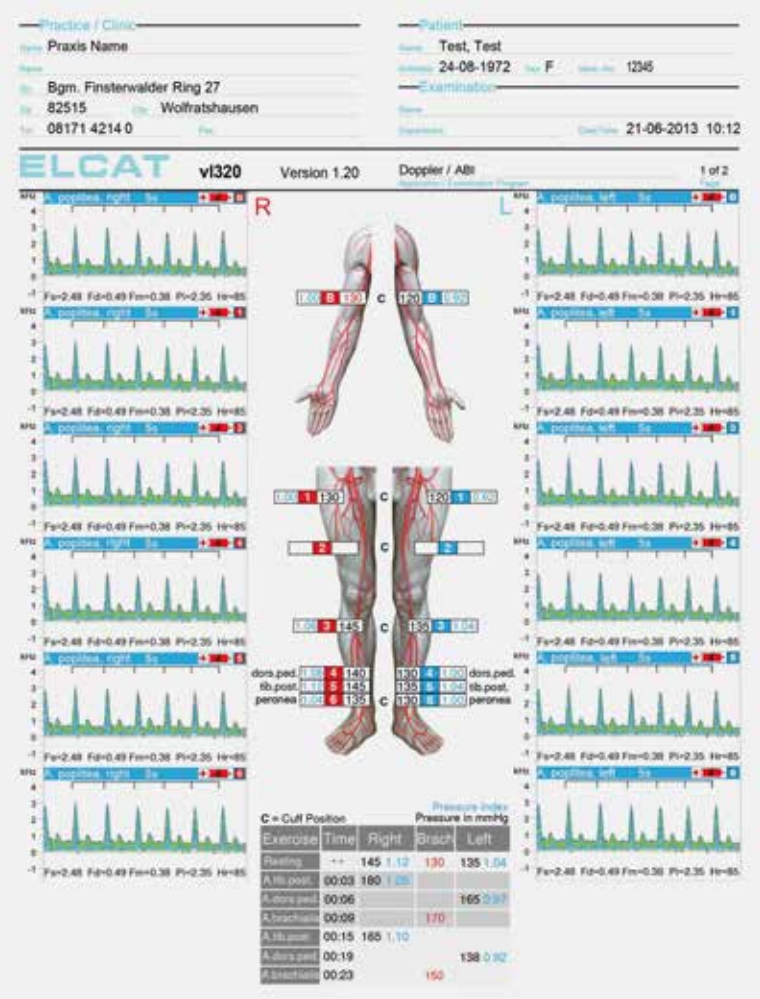


Result - work area

- Clearly arranged examination results
- Easy and fast reporting by using text templates
- Automatic markers can be corrected manually.
- Using stored examination results makes patient monitoring possible.

Documentation

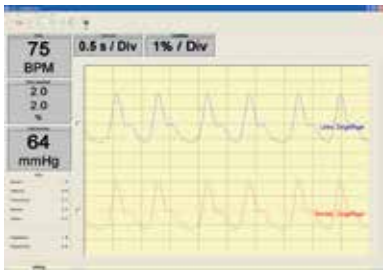
- On the printer protocol you will find all details about examiner, hospital, doctor's office, examination notes and comments.
- All Examination results can be stored in a database and can be transferred (with optional interface GDT / DICOM) to an existing IT-System.
- Additionally it is possible to save the examination results as PDF file.



Analysing software

- The network compatibility of the vasolab® 320 offers the opportunity to connect analysing stations across the network.
- Analysing Stations can be used for working on an examination (e.g. setting a marker), for making comments (e.g. findings) or for print out of examinations.

Arterial function diagnosis



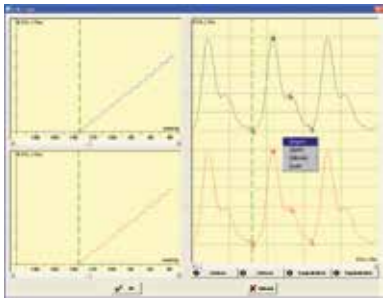
Acral Pulse Oscillography (O-PO)

An automatic calibration ensures adaption to different skin structures and skin pigmentations.

Optical sensors measure the acral pulsation. Different sensor types can be selected:

- transmission sensors
- reflexion sensors (standard)
- microcirculation sensors

Acral Pressure Measurement (O-AP)
Detection of the Toe-Brachial-Index (TBI)



Acral pressure measurement is carried out with congestion cuffs. Optical sensors are used to record pulsation (acral pulse oscillography).
The pneumatic system ensures a correct inflation of the cuffs and also controls the deflation.
The routine examination is controlled by an examination program (up to 5 cuff positions). Curve analysis can be carried out in different ways:

- automatic reading of systolic pressure
- automatic calculation of the Toe-Brachial-Index (TBI)
- pulse curve evaluation

Segmental Pulse Oscillography (P-SPO)

During the segmental pulse oscillography cuffs are controlled by a pneumatic unit. The examination program starts with a high cuff pressure. The decrease of air in the cuffs can freely be selected by the examiner. The examination program runs automatically.

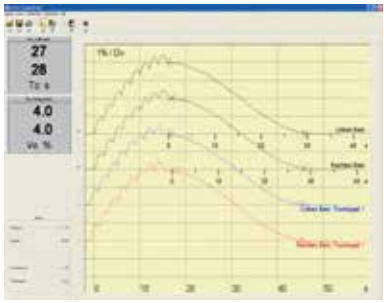
- Automatic measurement with all pairs off cuffs (can be adjusted individually)
- Up to 10 segments are measurable with up to 10 pressure levels.
- Passive and active stress tests

Reactive Hyperemia (SG-AR)

During the reactive hyperemia examination cuffs are automatically inflated to a supra-systolic level. After the occlusion phase, the arterial reserve will be measured. The settings can be changed individually.

- During the occlusion phase the pressure can be increased to a maximum of 250 mmHg.
- Measurement of arterial blood circulation at rest

Venous function diagnosis



Digital Photoplethysmography (D-PPG / LRR)

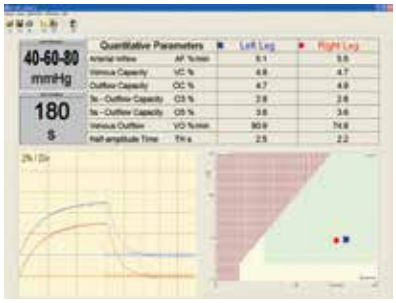
Automatic calibration ensures adaption to different skin structures and skin pigmentations

- Automatic detection of the venous refill time and venous blood absorption
- Automatic Tourniquet-Test

Vein Occlusion Test (SG-VOP), (O-VOP)

During the vein occlusion test the congestion maneuver as well as draining dynamic is measured with classic strain gauge sensors or optical sensors.

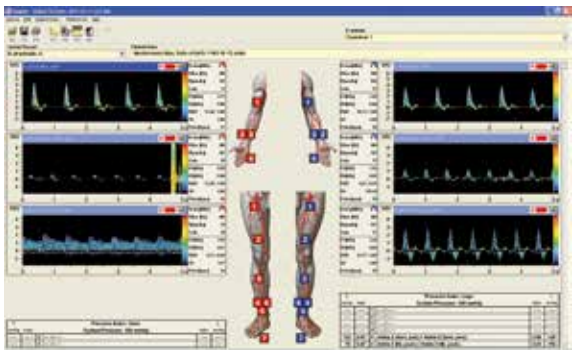
- Automatic detection of the venous refill time, the venous blood absorption and the venous outflow

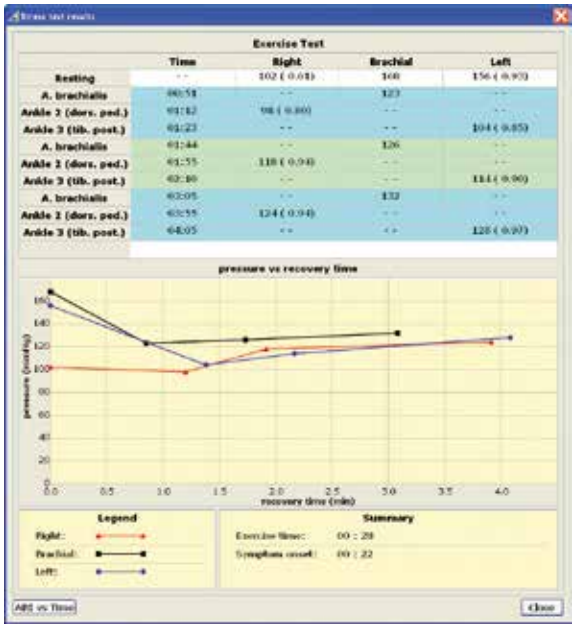


vasodop - the integrated Doppler system

Doppler system for peripheral, extracranial and transcranial vessel diagnosis.

- Ultrasound Doppler frequency
  2 MHz (TCD)
  4 MHz and 8 MHz (CW)
- Examination programs (vessel list) can be adjusted freely to the examiners needs.
- Examination program to calculate Ankle-Brachial-Index (ABI) and Toe-Brachial-Index (TBI) with automatic cuff control.
- Doppler pressure measurement before and after exercise
- Clearly arranged examination results





vasolab® 320 System: technical data

vasolab 320 System		Software
Dimensions	**Power / Consumption**	**Operating system**
77 x 160 x 85 cm (W x H x D)	approx. 230 VAC / max. 850 VA	Microsoft Windows
Pneumatic	**Weight**	**Interfaces**
max. pressure 250 mmHg	approx. 90 kg	LAN / BDT / GDT / DICOM
vasocart 320	**PC-Hardware**	
Dimensions	**All-in-One-PC 21,5“**	**Display** 21,5“, 1920x1080 Pixel
58 x 94 x 62 cm (W x H x D)	**RAM** 4 GB	**Keyboard**
Weight	**Harddisk** > 500 GB	**Mouse**
approx. 50 kg	**USB, ext. HUB**	**Sound system** 128 Bit Stereo

vasolab® 320 Sensors and additional equipment technical data

Optical sensor for arterial function diagnosis O-AP / O-PO		
Sensor		**Dimensions**
Reflexion	LED 940 nm	17 x 12 mm (D x H)
Transmission	LED 940 nm	17 x 12 mm (D x H)
Microcirculation	LED 940 nm	17 x 12 mm (D x H)
Digital Photoplethysmography D-PPG / LRR		
Sensor		**Dimensions**
D-PPG	LED 940 nm	25 x 12 mm (D x H)
Vein Occlusion Plethysmography SG-VOP		
Sensor	**Lenghts**	
Strain-Gauge-Sensor	20, 26, 30, 35, 40, 46 and 61 cm	

Are you interested in the vasolab® 320?

Then call us!

We would be pleased to tell you more about your possibilities with the vasolab® 320.

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