

ERGOPOINT

ECG Stress Test System



exercise/stress test with continuous 12-channel ECG acquisition



wireless ECG transfer — clear ECG traces



real-time monitoring of all test parameters



support of CPET systems



full battery of exercise testing protocols

ECG



Neurosoft



**COMPLETE BATTERY OF
EXERCISE STRESS TESTS!**



Ergopoint is a high-performance system designed to solve the multiple tasks such as diagnostics of coronary artery disease (CAD), assessment of exercise tolerance, study of rhythm disturbances under workload, diagnostics of heart and respiratory failures and evaluation of exercise performance in apparently healthy individuals.

Diagnostic Testing

Ergopoint is complex solution for diagnostic testing. The system includes the scalable software with simple, user-friendly interface. The battery of integrated predefined protocols consists of the cycle ergometer protocols: ramp, multistage, (+25 W and +50 W), PWC170, Astrand and treadmill protocols (ramp, Bruce, Cornell, Naughton, Cattus, Balke). The number of possible tests is not limited as you can create your own ones!



CLINICAL APPLICATION:

- evaluation of ST-segment elevation/depression to diagnose the coronary artery disease;
- follow-up of patients after myocardial revascularization surgery;
- determination of threshold HR to tailor the exercise training program;
- evaluation of exercise tolerance;
- assessment of interrelation between the rhythm and conduction disturbances and physical workload;
- monitoring of arterial pressure during physical activity;
- evaluation of risk factors for cardiovascular complications in patients with CAD.



APPLICATION:

- maximum performance profiling for athletes
- evaluation of sudden cardiac death risk
- determination of optimum exercise intensity for fitness and sports trainings



Ergospirometry. Cardiopulmonary Exercise Testing (CPET)

CLINICAL APPLICATION

- differential diagnosis of the causes of dyspnea in patients (ventilatory dysfunction, cardiovascular diseases, overweight)
- evaluation of oxygen uptake efficiency to confirm or exclude the chronic cardiac failure or myocardial ischemia diagnosis
- assessment of anaerobic threshold and maximum oxygen uptake
- tailoring of physical workload for rehab programs and determination of work capacity

CPET is a highly informative technique applied in respiratory medicine, cardiology, sports medicine, occupational medicine, rehabilitation, intensive care and nutrition.

Ergopoint allows obtaining high-precision data, ensures simple customizable workflow and provides a clear overview of test results.

Evaluation of Exercise Performance in Apparently Healthy Individuals

Improperly tailored sports-related workloads, overtraining and the incorrect evaluation of adaptation reserves may impact negatively on cardiovascular system of an athlete. Using the Poly-Spectrum.NET software protocols (including CPET), a physician can identify tired and at-risk athletes in real-time and adjust the adequate workload. Thus, the trainer or team physician can get the recommendations on range of exercise including evaluation of different aerobic and anaerobic performance ranges, point out the limitations (pulmonary, cardiac, peripheral, motivational), assess the exercise capacity and optimize the training profile.

ERGOPOINT — YOUR CHOICE FOR EXERCISE TESTING

The base delivery set includes the following:



Ergospirometry system (optional)

Set of ECG electrodes

Reliable 12-channel ECG recorder

BP monitor for exercise testing

Exercise machine

Physiotherapist's workstation with installed and configured Poly-Spectrum.NET software for exercise stress tests

We can always offer the individual configuration for you! Already bought the bicycle ergometer or treadmill? Great! We can ensure the seamless sync of the Poly-Spectrum.NET software with your equipment. Already bought the Neurosoft ECG recorder? Need to perform exercise stress testing also? Just purchase the required equipment and software module and expand your system functionality!

BEST ECG RECORDERS OF POLY-SPECTRUM SERIES



Poly-Spectrum-8/EX

- ✓ 12-channel ECG
- ✓ wireless signal transfer
- ✓ clear ECG traces
- ✓ patient is free to move
- ✓ 8-hour operation without battery replacement



signal transfer via Bluetooth



communication range – 8 m



Poly-Spectrum-8

- ✓ 12-channel ECG
- ✓ data transfer via USB without quality loss
- ✓ stand for top fixation of ECG cable

The use of standard ECG patient cable with lead wires allows replacing it quickly and ensures that the smart equipment is always used at peak efficiency!



Poly-Spectrum.NET software is equipped with the battery of powerful digital filters that allow obtaining ECG of premium quality.

MAIN ACQUISITION WINDOW

ECG Data Panel

Shows the obtained ECG parameter values in real-time: HR, percentage of maximum HR, arterial pressure and displays the most important testing parameters including total record time, name and time of current test phase, workload, MET, etc.



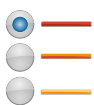
automatic or manual BP measurement



button to enter the workload manually



manual switch to previous/next workload phase



rating of perceived exertion (RPE) to monitor workload according to Borg scale

Exercise Testing Report

You can create the comprehensive testing report using pre-test/post-test questionnaire data and set of predefined report templates. By default the report includes all the required data: patient data, exercise testing phases, graphical and tabular information and also automatic interpretation.



Electrode Placement Quality

During the signal monitoring or acquisition you can control the electrode placement quality using the indicators in the bottom part of the screen. Each electrode is matched with the related cell of the color-coded lead bar. The green color indicates reliable contact and the red one shows the detached electrode.

12-channel ECG

The software allows recording high-quality 12-channel ECG. We reduced significantly the noises and artifacts for clear ECG traces. It was achieved due to wireless ECG transfer and recorder positioning on a patient with easy-to-use belt.



Heart Rate Chart

Here you can see heart rate charts, specified workload and arterial pressure values. The HR chart window can be customized according to your needs.

Averaged QRS Complexes

The "Averaged QRS complexes" window shows the cluster of averaged QRS complexes. The software arranges the markers of each QRS complex onset/offset and shows rightward the values related to ST-segment displacement and slope.

ST-segment Displacement Chart

If the ST-segment displacement goes beyond the specified limits, the chart fragment becomes red. Such color-coding ensures rapid clinical assessment and on-the-fly clinician's response.

EXERCISE MACHINES

Our Poly-Spectrum.NET software supports bicycle ergometers and treadmills of different manufacturers – Lode, GE Healthcare, Ergoline, Kettler, etc.* However, this list can be enhanced upon your request.**

TREADMILLS

Lode



Speed:
1–20 km/h

Grade:
0–25%

Patient weight up to:
160 kg

Convenient hand rails:
optional

Emergency stop button:
optional

GE Healthcare



Speed:
0.5–20 km/h

Grade:
0–25%

Patient weight up to:
160 kg

Convenient hand rails:
yes

Emergency stop button:
yes

h/p/cosmos



Speed:
1–22 km/h

Grade:
0–25%

Patient weight up to:
290 kg

Convenient hand rails:
optional

Emergency stop button:
yes

BICYCLE ERGOMETERS

Lode



Load range:
7–1000 W

Load increment:
1 W

Allowed patient weight:
160 kg

BP measurement:
optional

Kettler



Load range:
25–400 W

Load increment:
5 W

Allowed patient weight:
150 kg

BP measurement:
no

Ergoline



Load range:
20–999 W

Load increment:
1, 5, 10, 25 W

Allowed patient weight:
290 kg

BP measurement:
no

* Phone us: +7 (4932) 24-04-34 or e-mail: info@neurosoft.com to find out the list of supported bicycle ergometers and treadmills.

** If your exercise machine is not supported by our Poly-Spectrum.NET software, we can easily integrate it! After the exercise machine manufacturer approval we can add it using the obtained data exchange protocols.

ACCESSORIES



Belt with embedded ECG electrodes

- ✓ fast-fit
- ✓ standard ECG connector
- ✓ easy to clean and disinfect
- ✓ adjustable size

Disposable ECG electrodes

- ✓ reliable fixation
- ✓ high-quality signal



Rubber belt for ECG electrode fixation on the chest

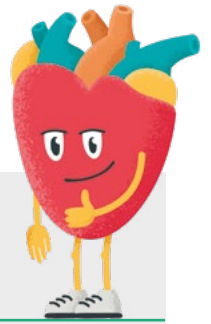
- ✓ adjustable size
- ✓ no patient's skin irritation


Find the full list of ECG accessories
in our catalogue on site:

www.neurosoft.com



ECG PRODUCT LINE



	ECG channels	Arrhythmia detection	Detection of cardiac pacemaker pulses	Interface	Application
 VNS-Micro	6	-	-	Wire: USB	Rest ECG test, evaluation of autonomic status (HRV)
 Poly-Spectrum-8/E	12	+	+	Wire: USB	Rest ECG test with measurement and interpretation, QT, HR, AV, evaluation of autonomic status (HRV)
 Poly-Spectrum-8/EX	12	+	-	Wireless: Bluetooth	Rest ECG test with measurement and interpretation, exercise ECG, QT, HR, AV, evaluation of autonomic status (HRV)
 Poly-Spectrum-8/G	12	-	-	Wireless: Bluetooth, GSM	Rest ECG, telemedicine
 Poly-Spectrum-AM	3	+	+	Wireless: Bluetooth	Ambulatory ECG with measurement and interpretation



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