



Physical Ability Test 01

is a computer based system for evaluating physical capabilities of athletes. The system allows for testing speed, agility, jumping heights (explosive power), isometric and isoinertial strength as well as the ability to jump.

Physical Ability Test 01 consists of a data acquisition device, a set of cables, application software, three sensors used to measure running speed, sensor's mat, three LEDs with the camera tripods, load cell and wire-actuated encoder.



✓ TESTS OF SPEED AND AGILITY

By measuring the elapsed time at a given distance and lap times between the start and the finish, it is possible to estimate the speed as well as changes in speed with time. In addition, test could be initiated by randomly generated light signal, which enable to measure response time to the light stimulus. Combining appropriate sensors, various repeated sprint and agility tests could be performed.

✓ JUMPING TESTS

By measuring elapsed time between two contacts with the ground at the start and the end of the jump, it is possible to calculate the vertical jump heights as well as the relative power. The measurement starts when the examinee either contact the ground after the jump or when he/she release the ground at the beginning of the jump. The measurement

ends after a predefined number of jumps or after specified time interval.

✓ ISOMETRIC DYNAMOMETRY

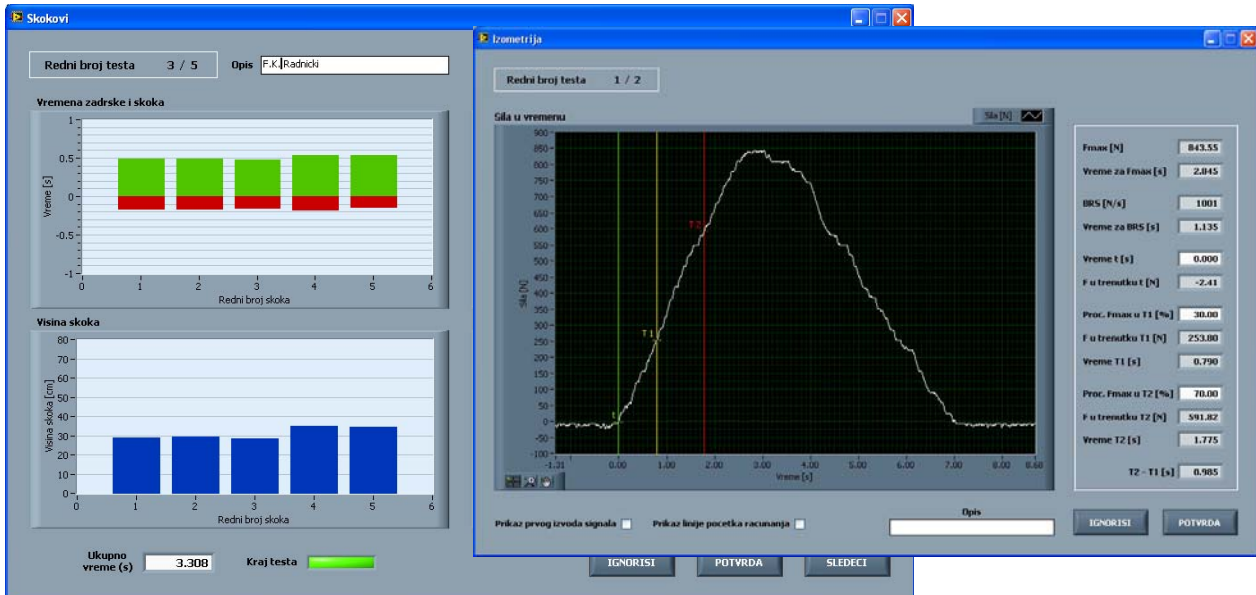
By measuring force exerted against the external loads and its change in time, it is possible to estimate the isometric muscular strength as well as the rate of force development.

✓ ISOINERTIAL DINAMOMETRY

Measuring distance covered by moving external load it is possible to compute dynamic characteristics of that movement and based on these characteristics to estimate so called isoinertial strength of muscular groups of interest. Maximal distance, speed, power and work done could be measured: in concentric (lifting the weight), eccentric (lowering the weight) and concentric-eccentric (lifting and lowering the weight) modes.

The user writes name, description and configures the parameters of the test. When the measurement is over, the results are stored and presented in a table. It is possible to define the number of repetitive measurements that need to be performed during single test. Data can be exported to Excel and measurement results can be easily stored and retrieved.

✓ **System is available for various combinations of test types!**



Physical Ability Test 01

IME TESTA: []

OPIS TESTA: []

VREME TESTA: 10:36:47.031
21.7.2009

Redni broj	Opis	Uk. opter. [kg]	Maks. uzd. 1 [cm]	Uk. vreme faze 1 [s]	Vmax 1 [m/s]	Vsr 1 [m/s]	Fmax 1 [N]	Fsr 1 [N]	Pmax 1 [W]	Par 1 [W]	Vreme za Pmax 1 [s]
1		11,0	71,9	1,145	0,88	0,52	386,1	207,9	95,1	66,9	0,625
2		31,0	85,8	2,330	0,42	0,28	343,0	304,0	127,2	85,8	1,660
3		41,0	47,5	3,350	0,24	0,14	617,4	402,1	96,5	57,0	0,440
4		31,0	31,2	4,335	0,16	0,07	404,6	500,1	79,8	36,0	1,600

Rezima rada

IME TESTA: **Rekreacija grupa A**

OPIS TESTA: Merenje vremena reakcije i prolaznih vremena.

Trcanje Skokovi **Izometrija** Izoinercija

Rezim rada: sa lampicama Lampice rezim: slucajno

Start - tip: senzor Broj lampica: 1

senzor Broj uključenja lampice: 1

senzora Max vreme uključenja [s]: 5

pora: 1 Vreme ignorisanja [s]: 0.5

POTVRDA



Satisfied customers include:

- Faculty of Sport and Physical Education, University of Belgrade
- Republic Bureau of Sport, Serbia
- Sport medicine association of Serbia.



UNO-LUX NS d.o.o.

ENGINEERING, MANUFACTURING AND SERVICES CORPORATION

Generala Milutina Vlaljica 36, 11147 Belgrade, Serbia

Tel/fax: (+381 11) 23 61 296, 23 61 768, 25 111 22 ♦ office@unoluxns.com