



REHABILITATION COMPLEX EXOHAND-2

The complex provides passive opening and closing a human hand based on the commands from the brain-computer interface in order to give proprioceptive and touch feedback while imagining hand opening and closing.

DELIVERY SET:

- 1 Hand exoskeleton with two degrees of freedom (for the left and right hands)
 - 2 Exoskeleton control system
 - 3 Multifunctional medical chair
 - 4 Power supply stand
 - 5 Software
 - 6 Neurovizor NVX2
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FUNCTIONALITY:

1. The complex combines mechanotherapy and rehabilitation.
2. It is applicable in cases, when the use of active motion methods is restricted.
3. Rehabilitation includes stimulation of brain neuroplasticity mechanisms activated by movement imagining.
4. The technology is based on fundamental research of brain neuroplasticity and was tested by more than 100 patients in the multicenter blind random study.





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The complex has the registration certificate of Federal Service for Supervision in Healthcare No. P3H2018/7681, dated 10/10/2018.

TECHNICAL CHARACTERISTICS:

Number of anthropomorphic hand exoskeletons	2 (left, right)
Rotational angles of:	
– hand gripper	0..15 degrees
– finger gripper	0..75 degrees
Number of degrees of freedom of the hand exoskeleton, not less than	2
Number of independent degrees of freedom of the hand exoskeletons, not less than	1
Equivalent tangent accelerator stiffness in the hand exoskeleton joints of:	
– hand gripper	$4 \leq k_h \leq 8 \text{ Nm/rad}$
– finger gripper	$4 \leq k_f \leq 8 \text{ Nm/rad}$
Maximum torques in the hand exoskeleton joints of:	
– захвата кисти	$\leq 0.25 \text{ Nm}$
– захвата пальцев	$\leq 0.25 \text{ Nm}$
Torque control of electric motors with time delay	<50ms
Time of continuous operation of the hand exoskeleton	>20min
Ethernet	10/100 BASE-T

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