



| isoforce
power. motion. endurance

| isoforce

multi joint testing & rehabilitation system

isoforce is a sophisticated rehabilitation and evaluation system that accommodates different resistance modes. It can be used for more than 20 joint movement patterns.



multiaxial progression

Test and Target

Neuromuscular testing with isoforce generates comprehensive reports that are easy to read and interpret.

With the wide variety of the available test modes many parameters such as power, endurance, work or the level of spasticity can be evaluated. isoforce helps to set specific and realistic rehabilitation or training goals and record the progress.

Treat

Restore range of motion, coordinate, stretch, strengthen, empower and build endurance.

The different exercise modes make the system suitable for every stage of the rehabilitation cycle.

No matter what type of muscle contraction (concentric/eccentric) or exercise mode (isometric, isotonic, isokinetic, cpm) you need - isoforce offers the possibility to implement them all.

Evaluate and Prevent

The progress achieved can be monitored during a training or rehabilitation program. Retesting your athlete during the sport season provides training directions and decreases risk of injuries.



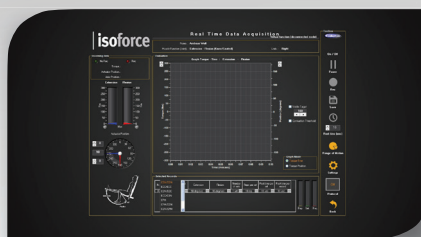
- Torque limits (CON, ECC & CPM)
- Torque threshold (ECC & CPM)



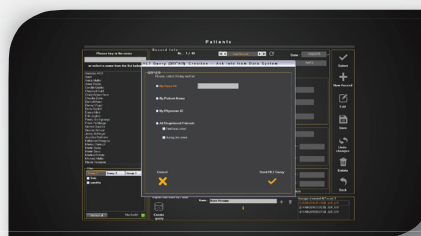
- Contraction time (ISOM)
- Soft stops (CON, ECC, ISOT & CPM)



- Intuitive, self-explanatory software architecture that guides the user



- Change of resistance modes and settings with one click



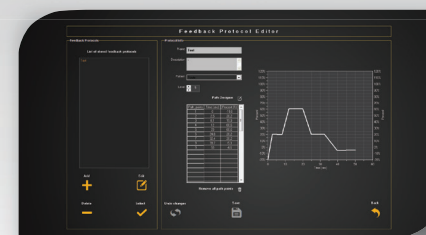
- HL7 communication interface



- Selection of frequency rate



- Export raw data in xls



- Biofeedback with different exercise modes and report of the training results



- 5 different report types: Analytical for each side on each resistance, bilateral both numerical and graphical, progress report, exercise overview report, and biofeedback training report

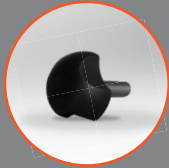
Occupational therapy adapters



WSA26



WSA22



WSA24



WSA28



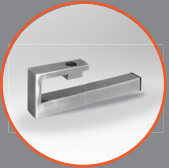
WSA23



WSA27



WSA29



WSA20



WSA40



The wide variety of optional add-ons broaden the therapeutic and rehabilitation possibilities of isoforce, these include:

- Occupational therapy adapters
- Trunk adapter
- Closed kinetic chain adapter for upper and lower limbs
- Pulley adapter
- Pediatric adapters



Trunk adapter



Pulley adapter

Features



Reliable

- Self sensor calibration during power on
- No need for weight calibration before test
- Real time online position, sensor and status monitoring



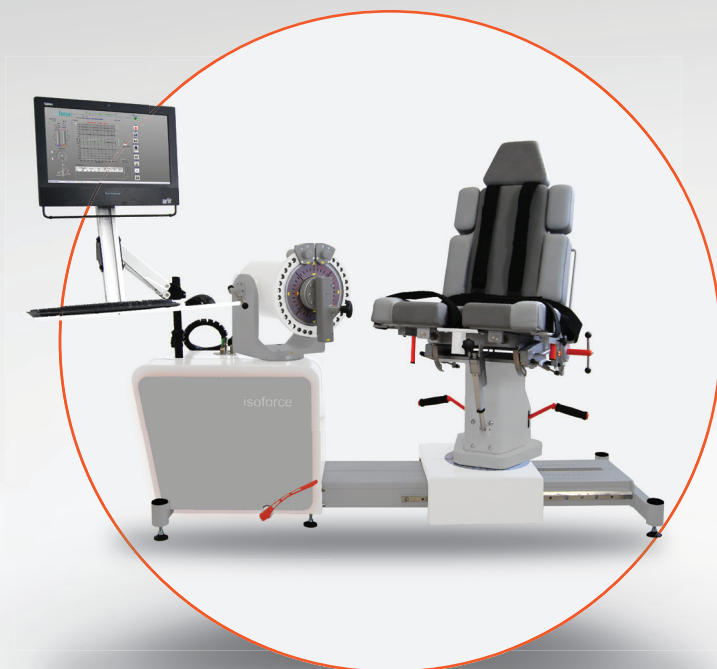
Tailored to your needs

- Selection of frequency among 200, 1000 and 2000Hz of real samples
- Customized ranges of speeds (code protected)
- Easy synchronization with EMGs without any need of expensive toolkits



Technically robust

- Maintenance free locking mechanisms
- No chance of motor break down due to linear design and shaft coupling mechanism
- Interchangeable electronic parts
- 2 years standard warranty / Extension options available



Safe

- Automatic release of the dynamometer in case of loss of power
- Three levels of ROM limitations, system imposed depending on the performed pattern, software set by the user, mechanical
- Torque limits on con, ecc, and cpm leading to doubling the speed, instantly stop the motion, and return to initial position respectively. No need to restart the system after



Stabilization with flexible Velcro bands

- Extra anchoring points
- Inexpensive to replace
- Can be combined for all sizes



Position and Alignment

- Stepless setting of dynamometer rotation and height, seat rotation, horizontal position, bottom seat settings
- Laser point for quick alignment

Patterns standard



plantarflexion / dorsiflexion
(ADA1 + ADL3, ADS1 + ADS4)



extension | flexion (seated)
(ADL3, ADS1 + ADS2)



inversion / eversion
(ADA1, ADS1 + ADS4)



extension / flexion (supine)
(ADL3)



plantar / dorsiflexion prone
(ADA1 + ADL3)



knee internal / external rotation
(ADA1, ADS1 + ADS4)



internal / external rotation seated
(ADA1)



radial / ulnar deviation
(ADL2 + ADW1, ADL1 + ADS4)



extension / flexion
(ADL3)



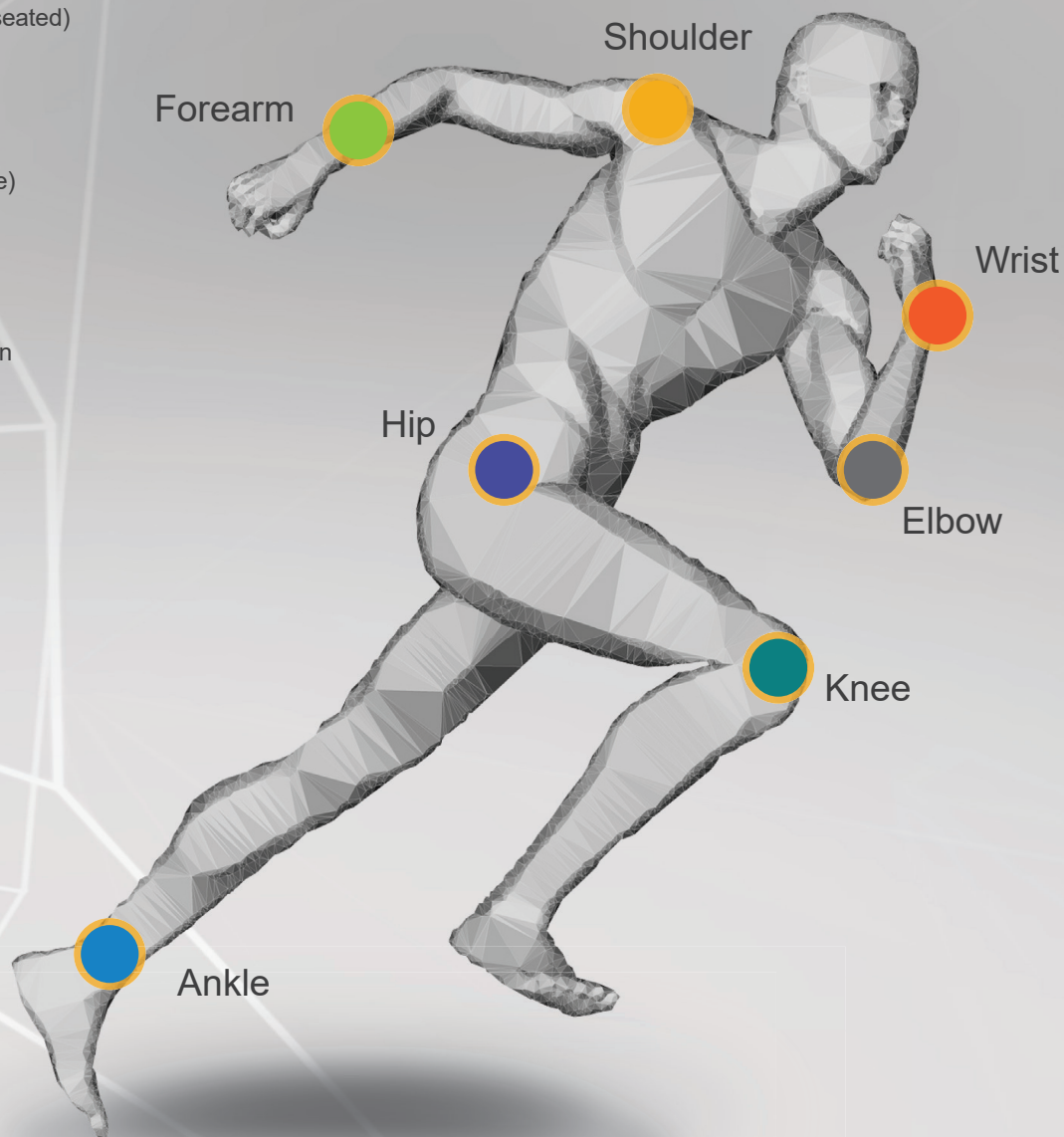
adduction / abduction
(ADL3)



internal / external rotation
(ADA1)



internal / external rotation (seated)
(ADS1 + ADS3)



Adapters

extension / flexion
(ADL4 + ADW1, ADT1)



adduction / abduction horizontal
(ADL4 + ADW1, ADT1)



internal / external rotation in 90°
(ADL1 + ADW1 + ADS3)



flexion-adduction / extension-abduction
(ADL4 + ADW1)



pronation / supination
(ADL2, ADW1)



external / internal rotation
(ADL1 + ADW1 + ADS3)



extension / flexion
(ADL2, ADW1)



adduction / abduction seated
(ADL4 + ADW1, ADT1)



pronation / supination
(ADL2, ADW1)



int. / ext. rotation in 90° abduction
(ADL1 + ADW1 + ADS3)



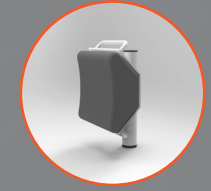
extension / flexion
(ADL2 + ADW1, ADL1 + ADS4)



int. / ext. rotation (standing)
(ADL1 + ADW1 + ADS3)



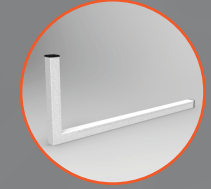
ADA1



ADK1



ADK2



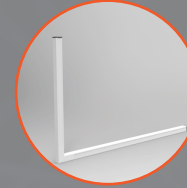
ADL1



ADL2



ADL3



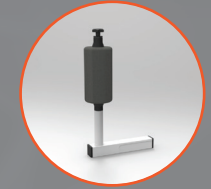
ADL4



ADL5



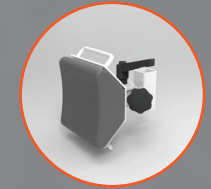
ADS1



ADS2



ADS3



ADS4



ADT1



ADW1

Technical specifications

Resistance modes

- isokinetic:
- concentric/concentric
- eccentric/eccentric
- combination of eccentric & concentric
- continuous passive motion (cpm)
- cpm/concentric, cpm/eccentric
- isometric
- isotonic

Technical Specifications

ROM: up to 360°
Max. peak torque: 700 Nm
Angular velocity: 0,5 - 500°/s
Dynamometer type: servo motor

Functional Features

Dynamometer: electrical lifting, tilting, rotation
Chair: electrical movements for horizontal translation, bottom seat for / aft, back seat inclination, bottom seat tilt, rotation

Computer

Operation System: windows 11 or later
CPU: Intel®
Monitor: LCD19" (touch screen optional)
UPS: optional
Dimensions: 2000 / 700 / 1700 mm (l / b / h)
Dimensions (seat horizontal): 2600 / 700 / 800 mm (l / b / h)

Optional Accessories

Trunk Flexion / Extension
Lower / Upper limb closed kinetic chain
Work Simulation Tools

| isoforce academy

In 2011 the isoforce academy has been officially started.

In close connection to academia seminars and workshops are held on a regular basis.

Regular application trainings are scheduled in Athens, Greece and Berlin, Germany.

Upon request seminars are organized by our scientific team to be held around the world and at the place of your convenience.



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