



First Product - Model made from wood 1989
by Reinhold Ferstl



The IsoMed2000 product-family 2021



X-Series

Legpress
athletic

Back Module

PUMP
ROTATION



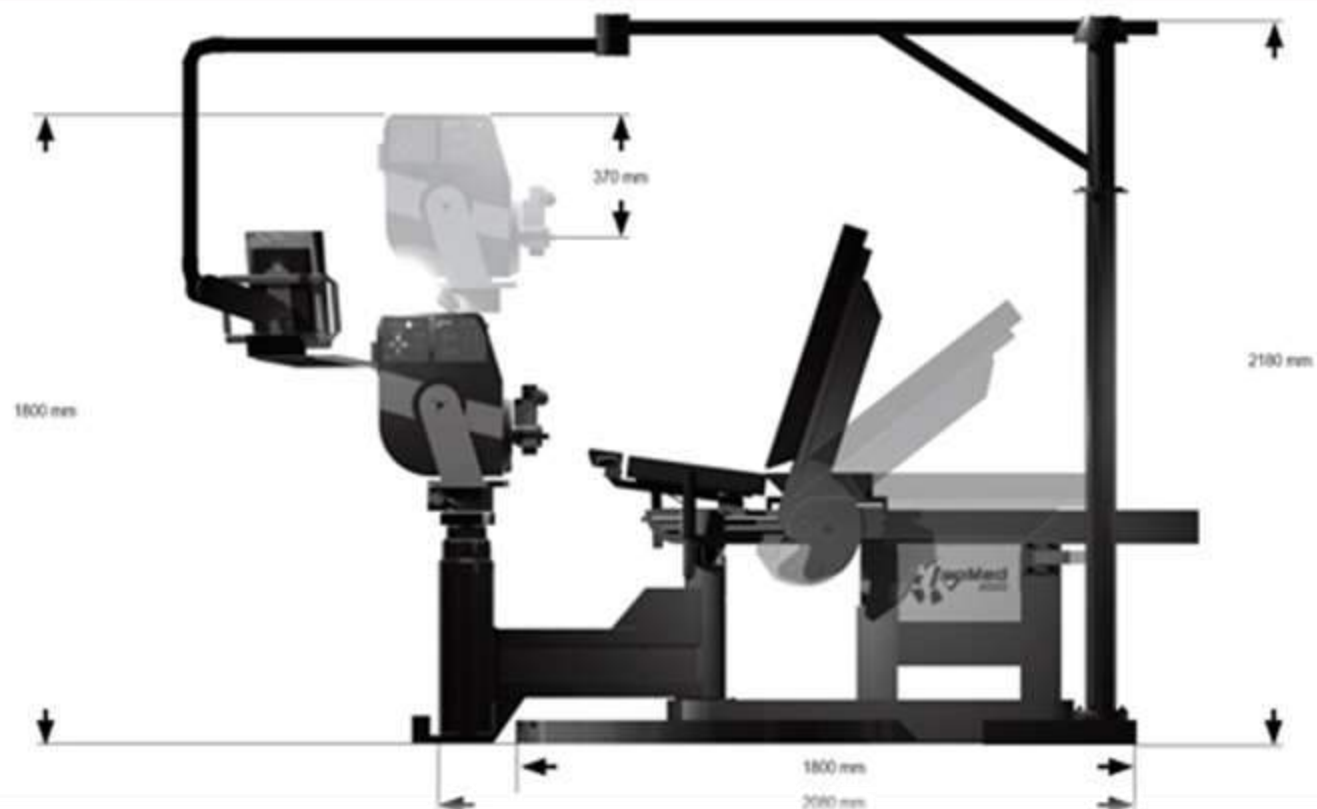


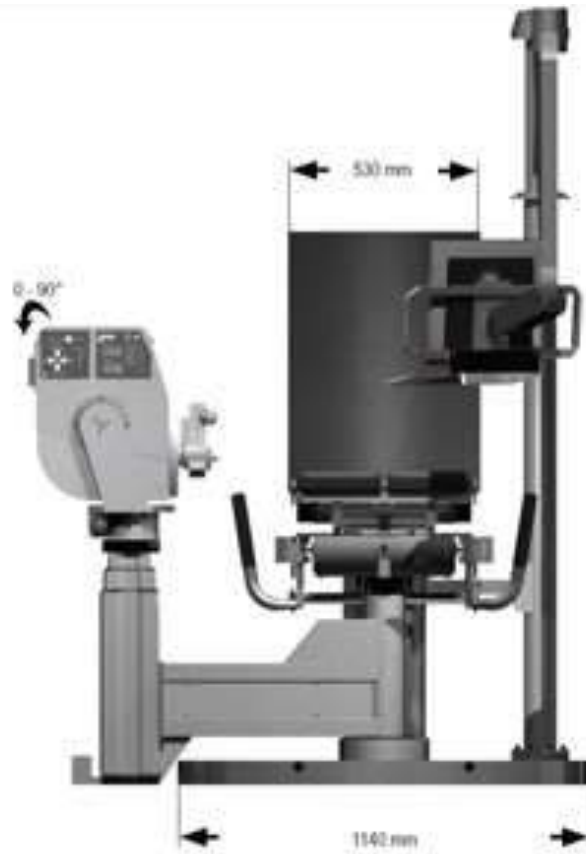
The basic units of the IsoMed 2000 series

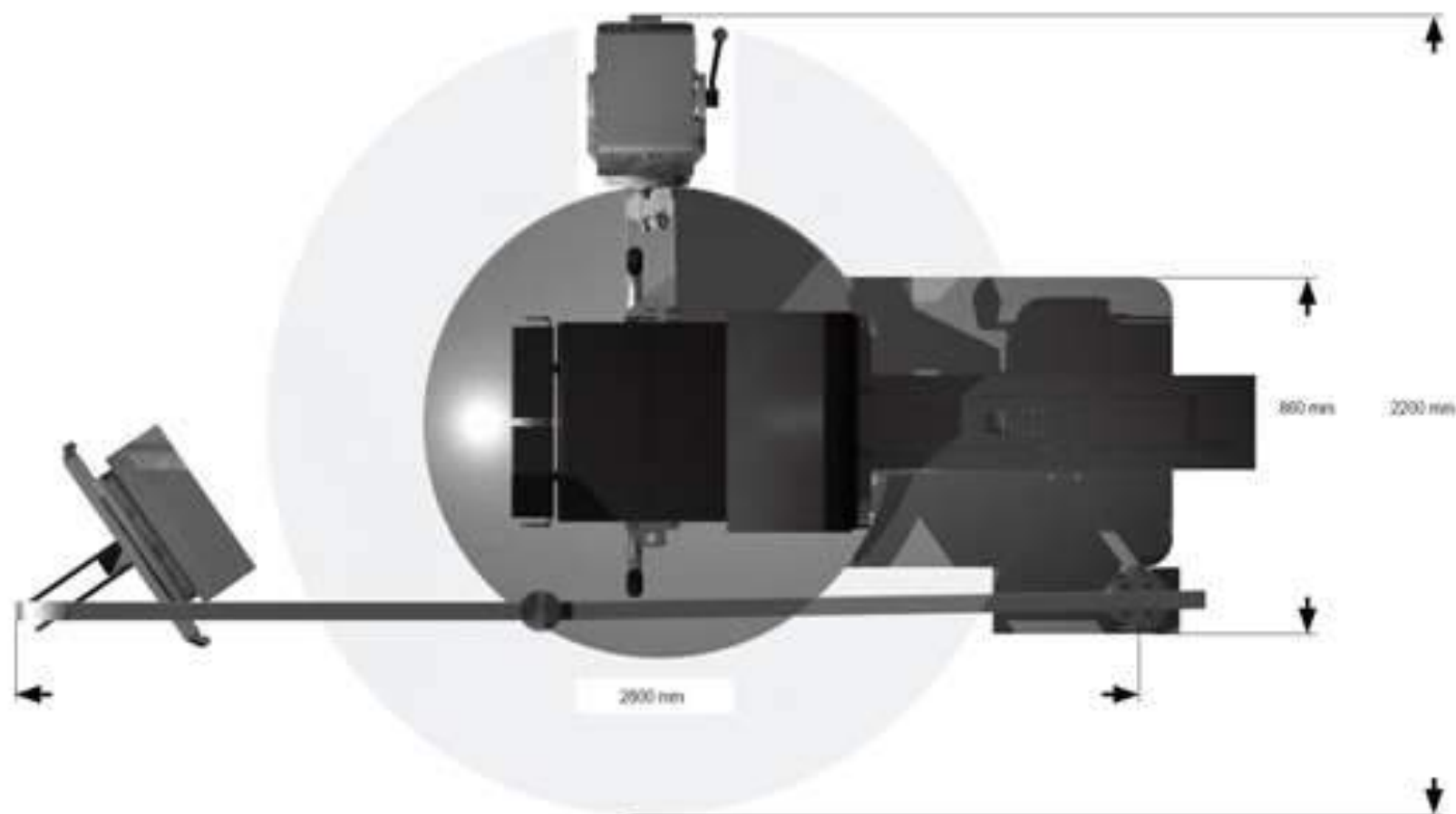
Technical data

	Standard	Optional
Torque, maximum, concentric/excentric	500Nm	700 750Nm
Torque, maximum at Emergency-Stop	1680Nm	1950Nm
Integrated electro-mechanic holding break	380Nm	-
Speed, minimum/maximum	2°/s 450°/s	1°/s 560°/s
Operating range, any segment of a circle up to	340°	-
Acceleration and deceleration, maximum	8500°/s ²	11000°/s ²
Max. motor capacity, 2,5s/10 minutes/unlimited	15/8/2.8 KW	20.5/11/2.8 KW
Torque measuring precision	0.25% FS	-
Torque resolution	0.0244% FS/12bit	0.0015% FS/16bit
Torque filter cutoff frequency	200Hz	1000Hz
Angle precision directly on driveshaft	0.035% FS < 0.125°	-
Reverse backlash in cycloid gearbox without backlash	0°	-
Stiffness at +/-175Nm, +/-350Nm, +/-500Nm	28/39/45(Nm/arc min)	-

Dimensions











DIRECT VIEW

Overhead monitoring system for maximum ergonomics and efficiency.



DIRECT CONTROL

for electronic adjustments on both sides of the dynamometer.



SLED System, ball bearing

For flexible mounting of various extra adapters.



MEMOTRONIC plus

5 servo motors:

- Inclination of backrest
- Displacement of backrest
- Lifting height
- Swivel range
- Dynamometer rotation

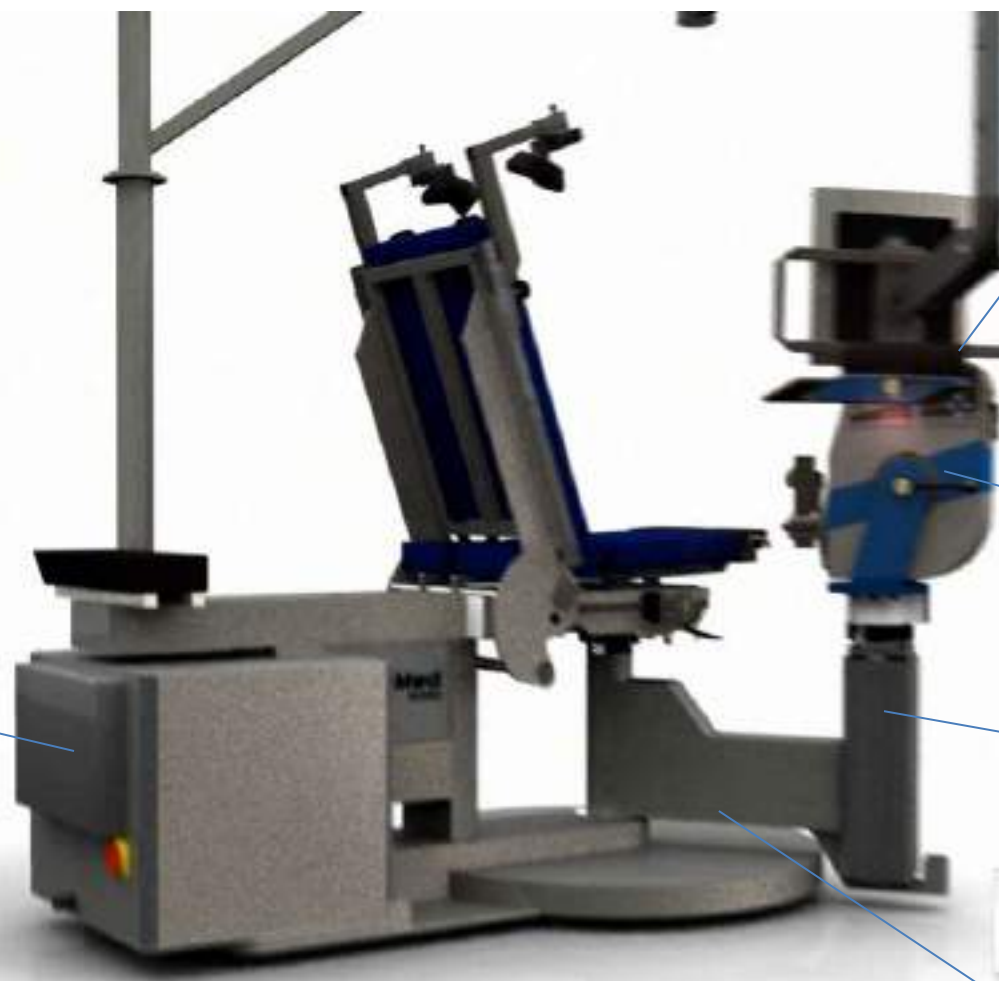


Shoulder support, adjustable

A slowly for precise measurements using skid motion.







Compact design

including all the electronics preserve you
from wires and cabling over them.

DIRECT CONTROL

for electronic adjustments
on both sides of the
dynamometer.



High-End Dynamometer

- Robot gears without backlash
- Torque wire signal transmission
- AC servo motors for up to 200W impulse power

Electronic lifting column

with maximum height of 1.6m.

Dynamometer stability concept

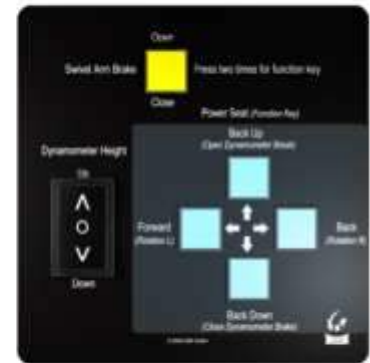
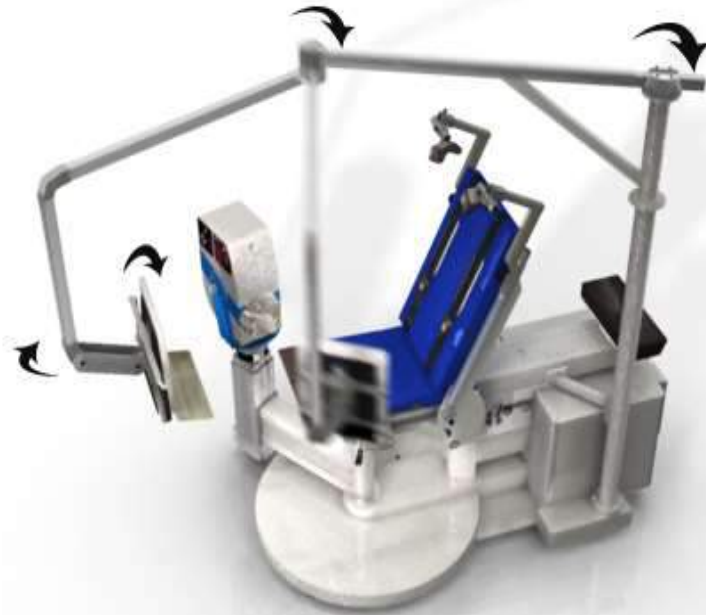
combines function with extreme stability

www.iso-med.com

info@iso-med.com



Use some of the best ideas on market with IsoMed 2000



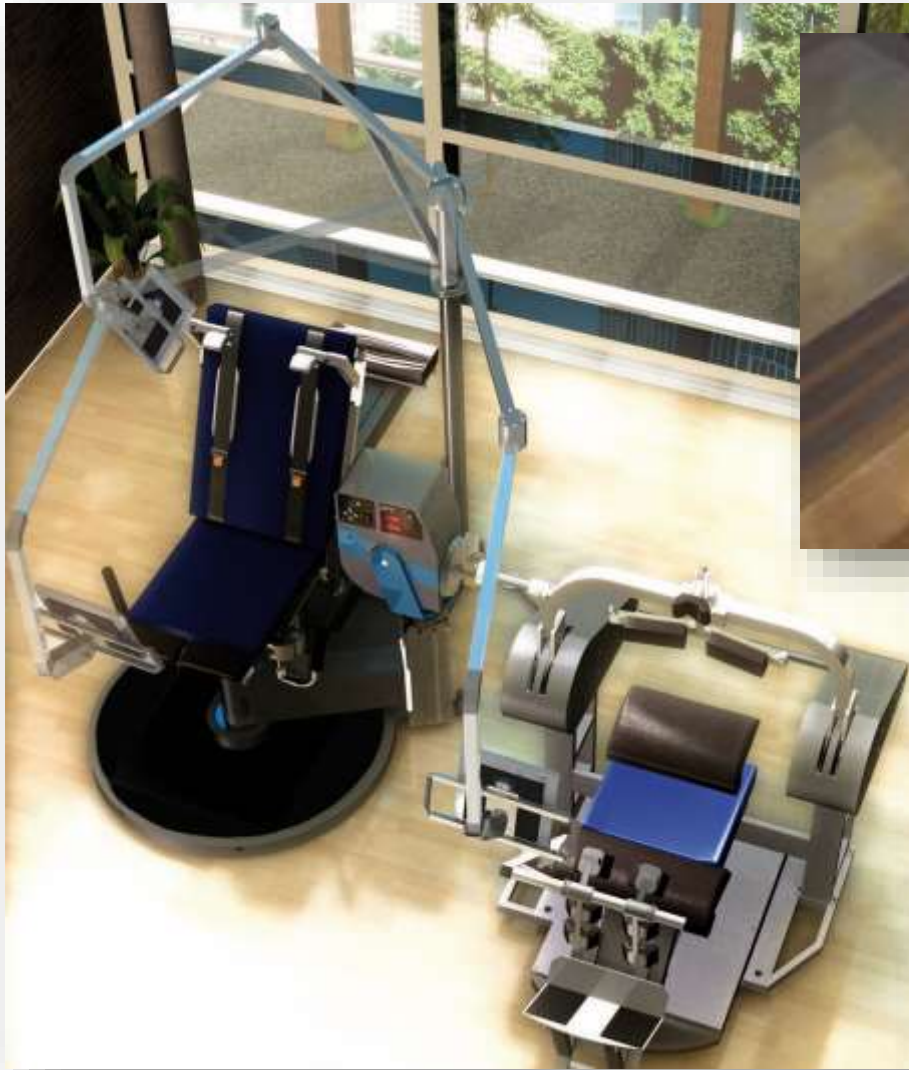
Direct View for reliable and anatomical correct Biofeedback in nearly every situation.

Due to this highly flexible system it is even possible to get the perfect monitor positions on other modules like the Back Module or Legpress athletic.

Direct Control to set any desired position absolutely perfect and precise. Nearly any position or rotation can be viewed and controlled from here.

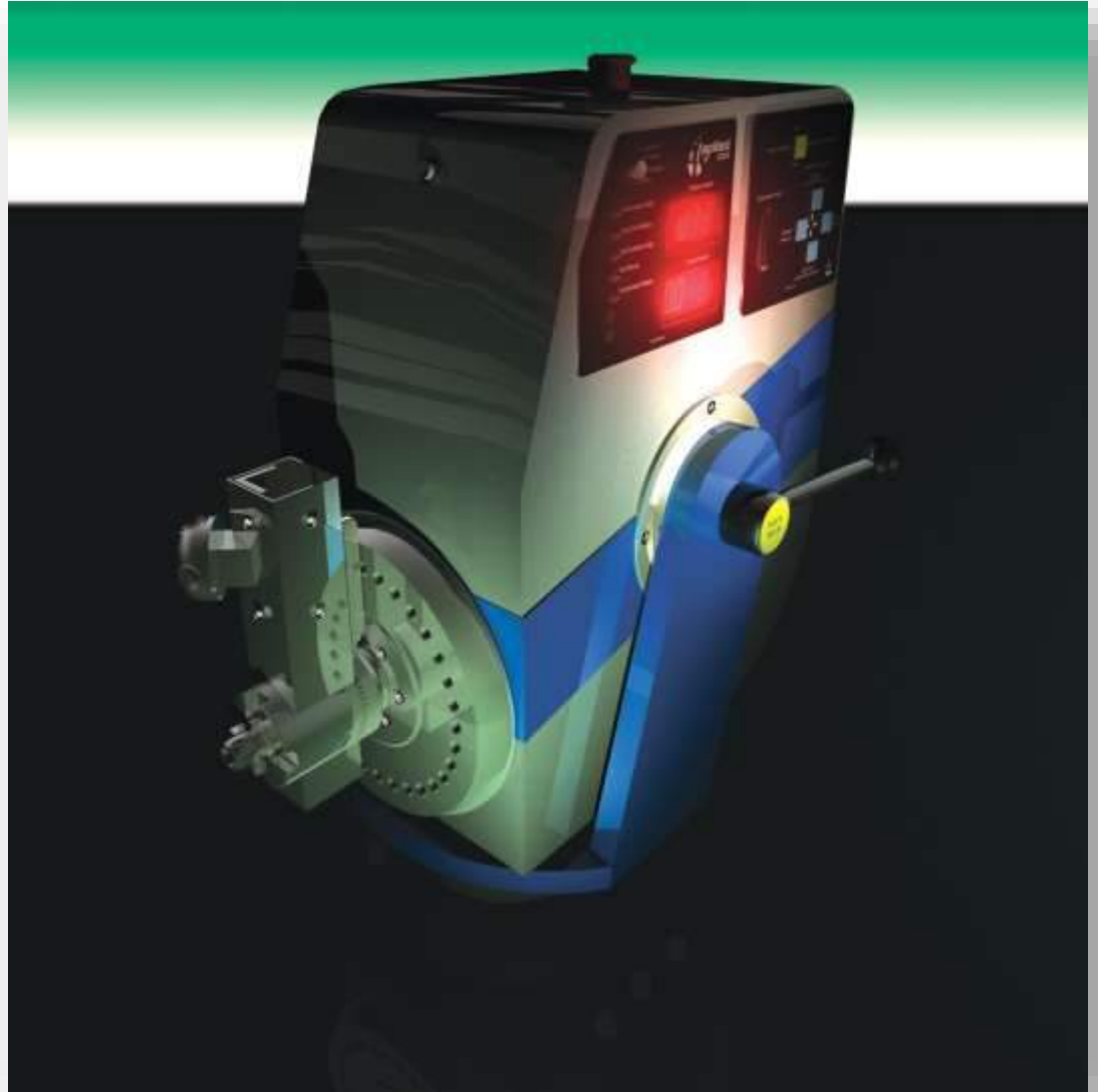


Very flexibel Monitor – overhead – construction. DIRECT-VIEW

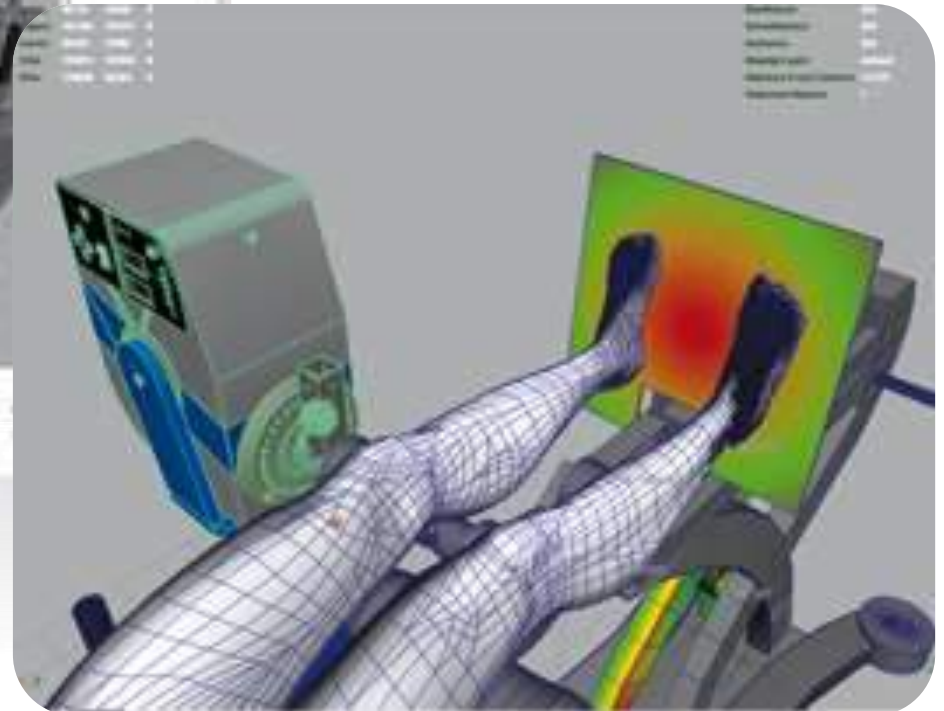


Isomed2000 Dynamometer

- - Brushless Synchronous AC-Servodrive.
- Torque sensor with telemetric signal transmissen (Kistler, Swiss)
- Gap-free Gearbox from robotic arms: Zero „back-lash“
- Nominal peak torque up to 1570Nm software reduced to max 750Nm.
- both side push-button control unit for easy operating
- Hardened shaft for long term module-docking
- Dynamometer digital inclination sensor.
- Dynamometer digital rotation sensor



Isomed2000 3d development





Use some of the best ideas on market with IsoMed 2000



Direct Connect integrated in the IsoMed dynamometer allows you to dock virtually every module available by D&R without messing around with screws, lockers or other uncomfortable stuff.

Your time for switching over modules will decrease drastically.



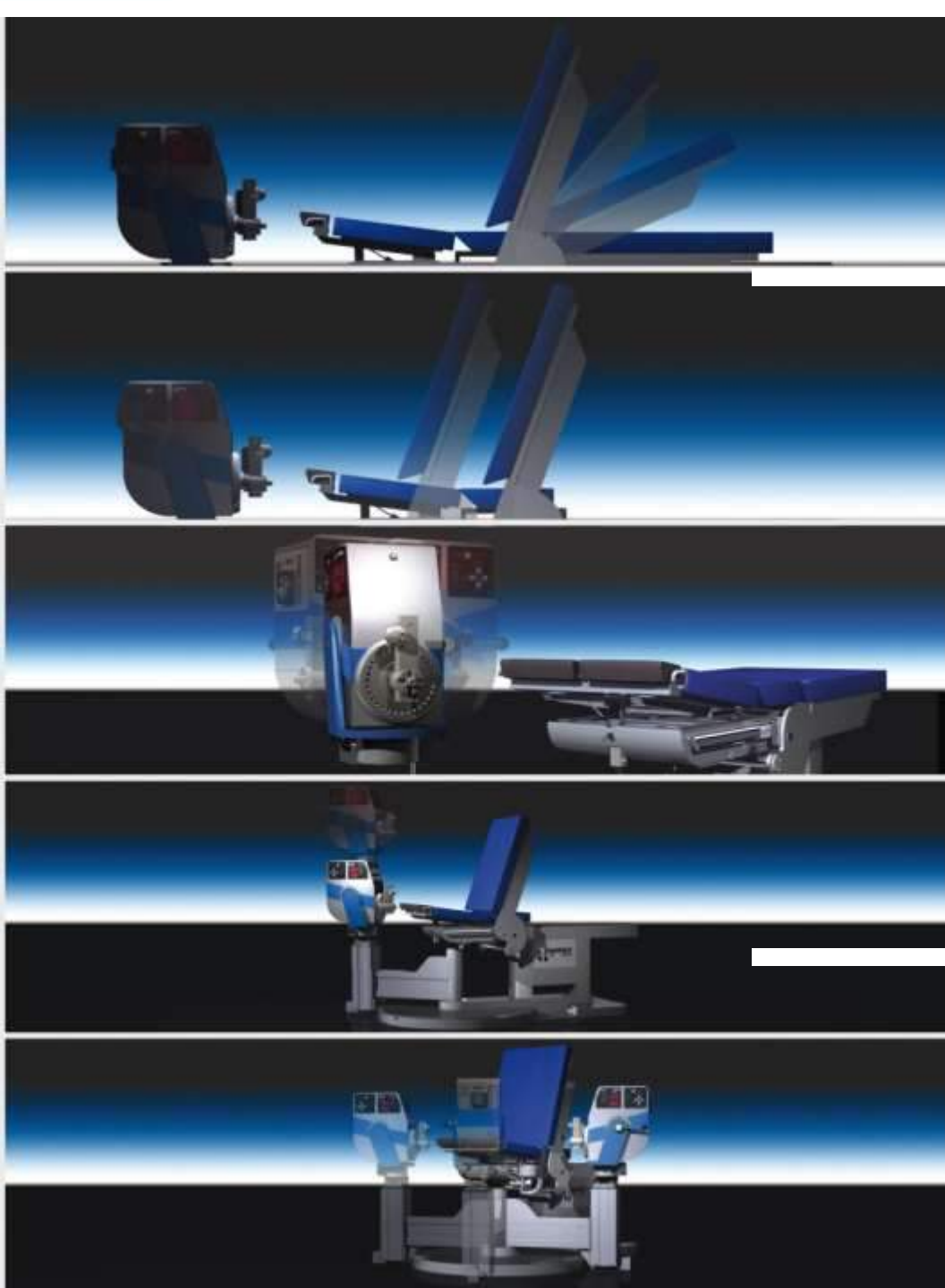
No more unstable fixations or slack belts will stand in your way for recreating the most precise measuring results available. The Shoulder support of the IsoMed 2000 keeps the test person stable in the desired position, even in high performance test or training.



Always wondered why people using an IsoMed 2000 get their results that fast?



Our **MEMOTRONIC** *plus+* gives its best!



MEMOTRONIC is a unique system of the IsoMed 2000 series. It enables you to do highly precise recurrences of already saved test person positions, to get lasting and reproducible measurement results - including all extra positions, like back rest inclination, back rest displacement, dynamometer rotation , dynamometer height or satellite arm can be adjusted automatically through servo drives.

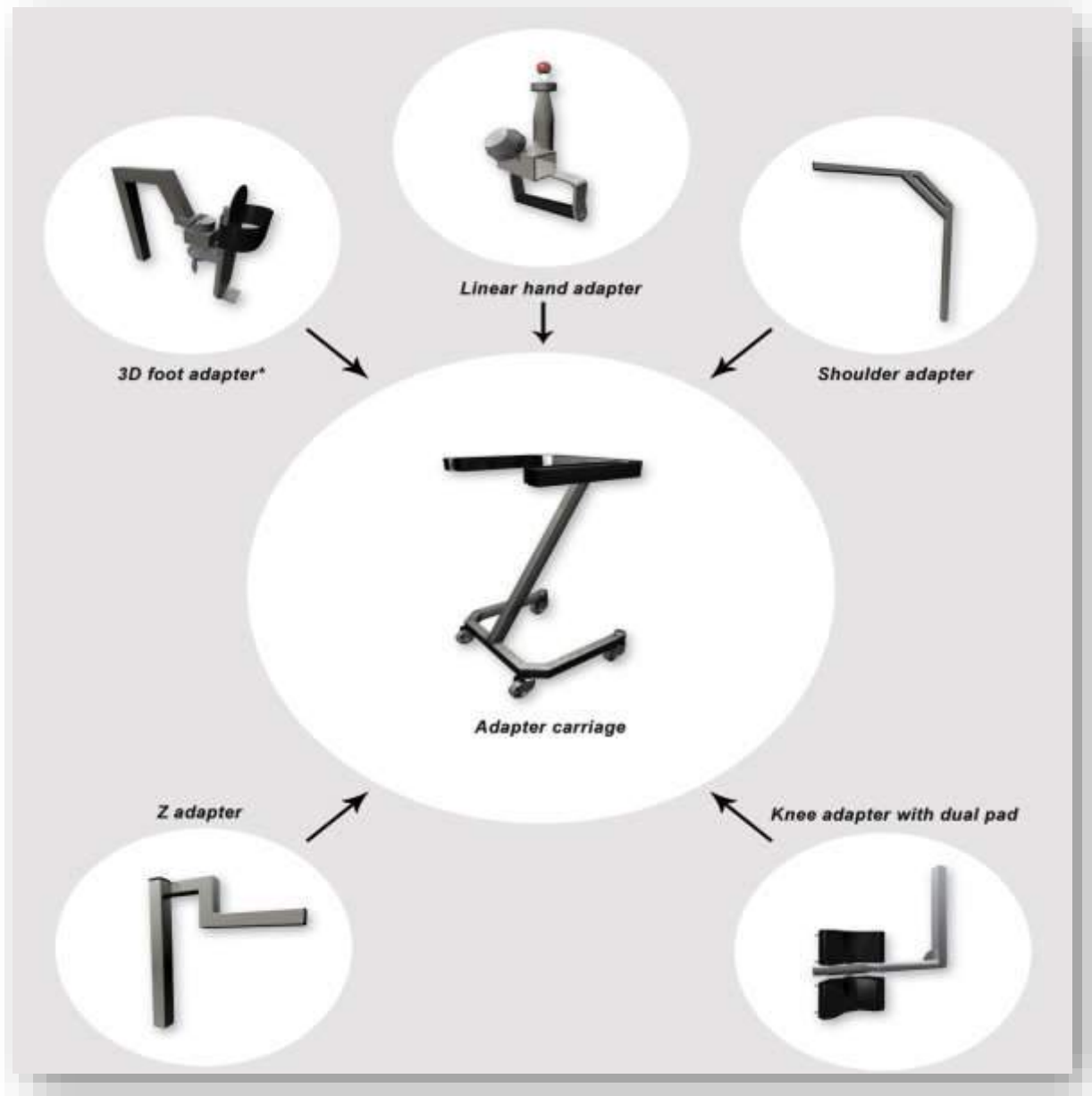
But see for yourself what *MEMOTRONIC* can do for you!



All seen adjustments are motor driven
with „memotronic- self-positioning“

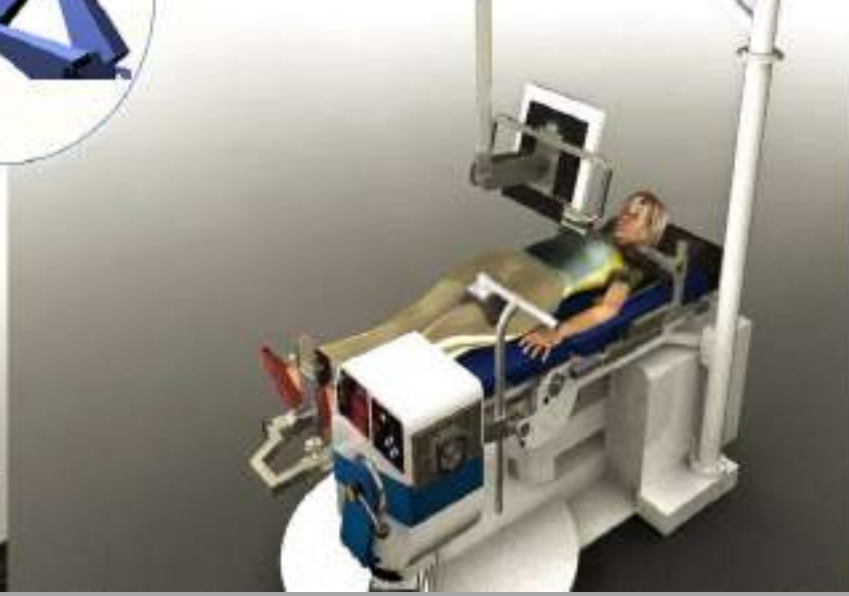
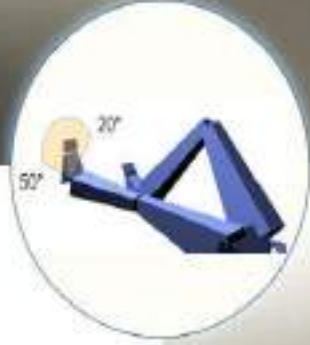


Selection of the IsoMed2000 adapters for adjustment the different joints,



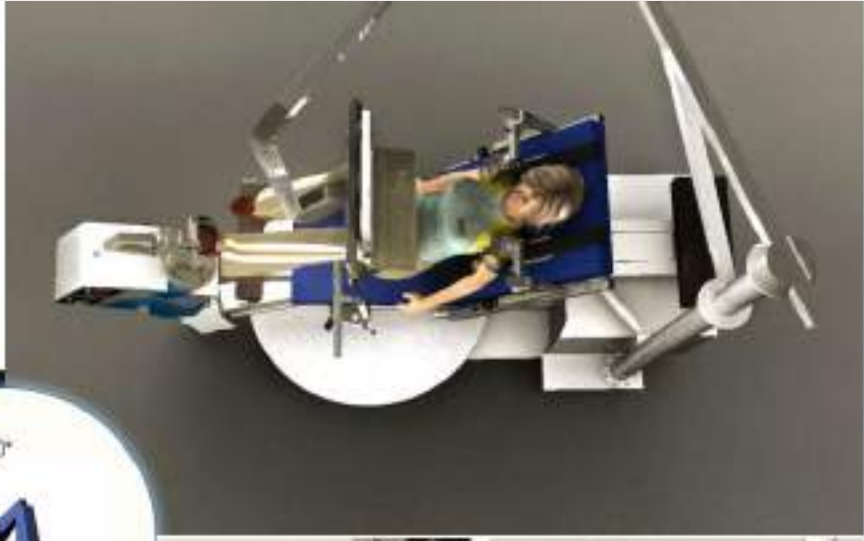
Selection of Position and Exercise

Basic unit



Ankle - Flexion/Extension

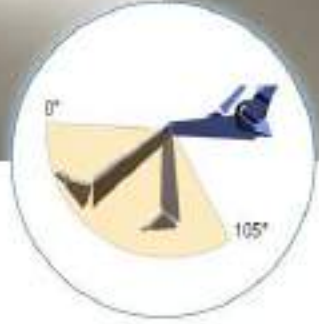




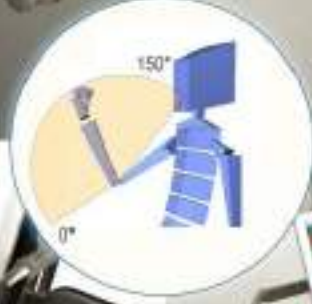
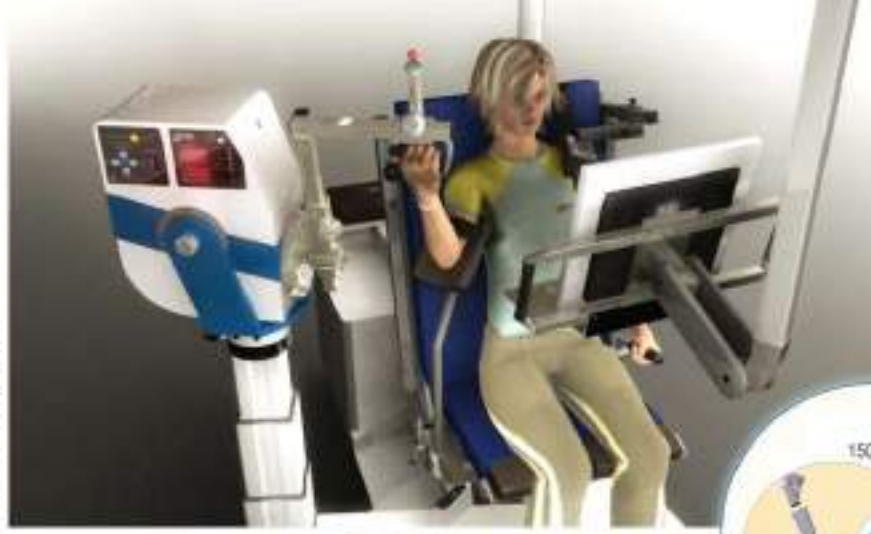




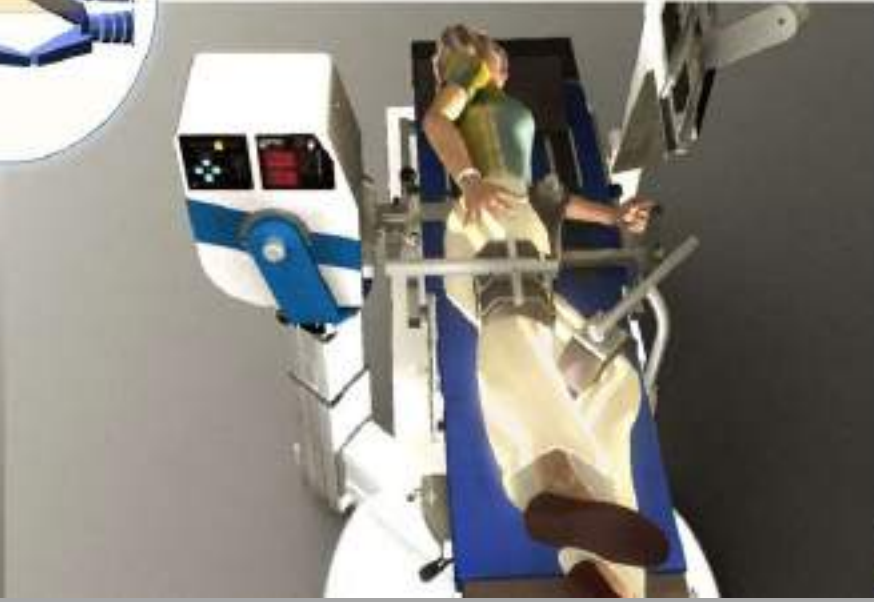
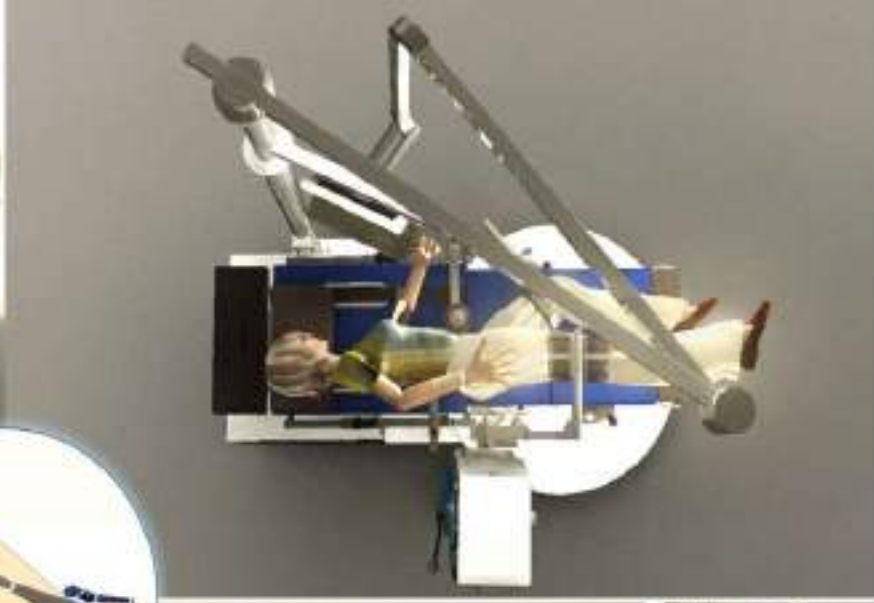
Knee - Flexion/Extension



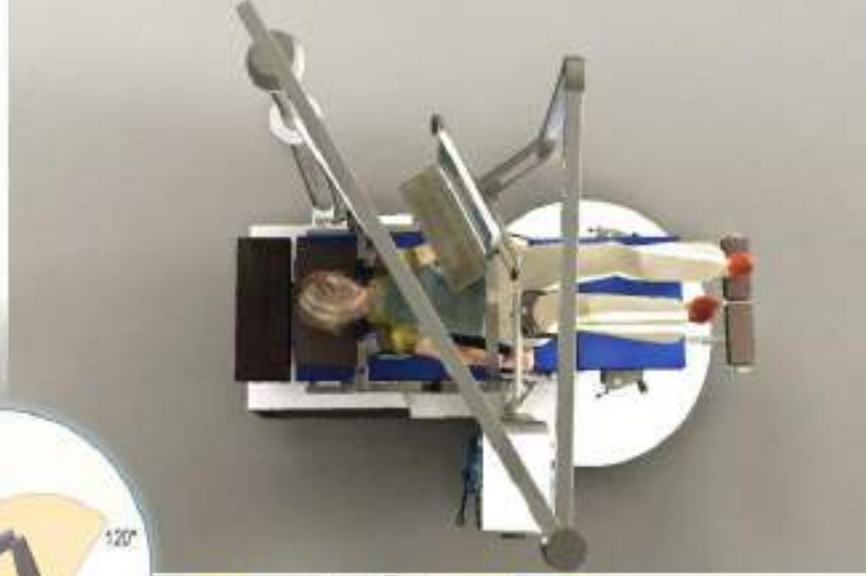
Elbow - Extension/Flexion



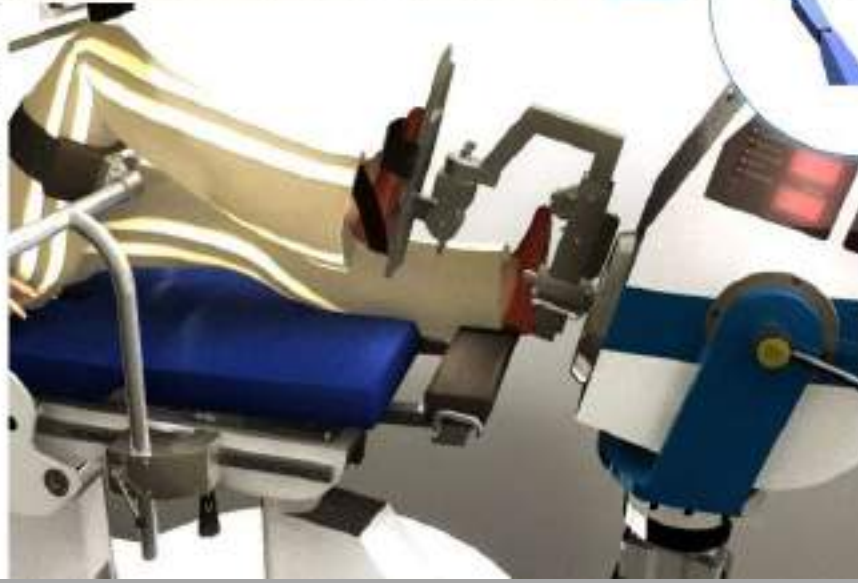
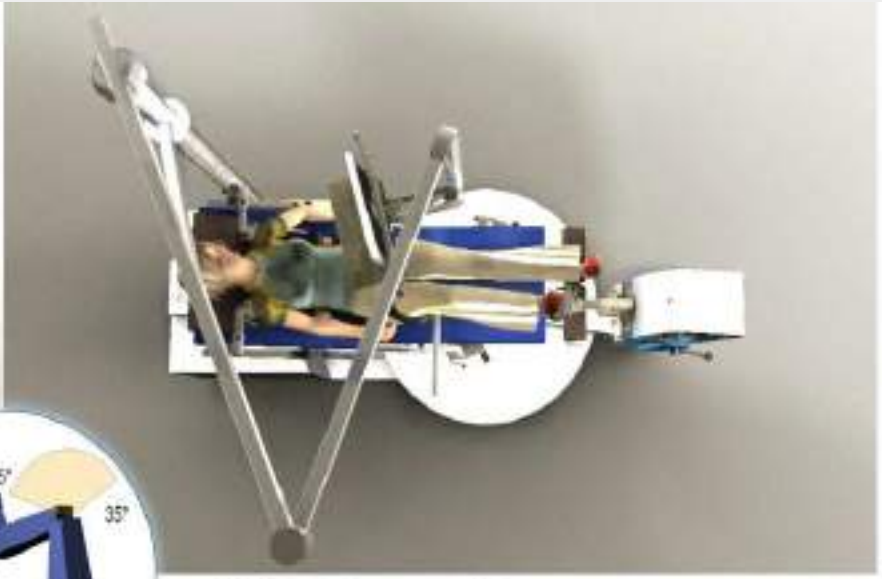
Hip - Ab/Adduction



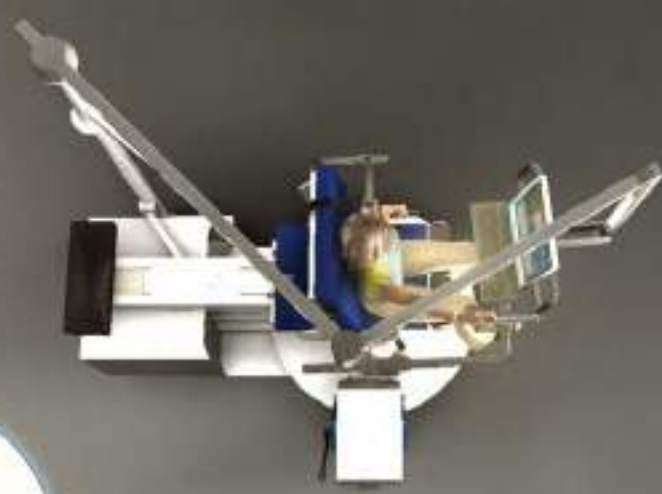
Hip - Flexion/Extension



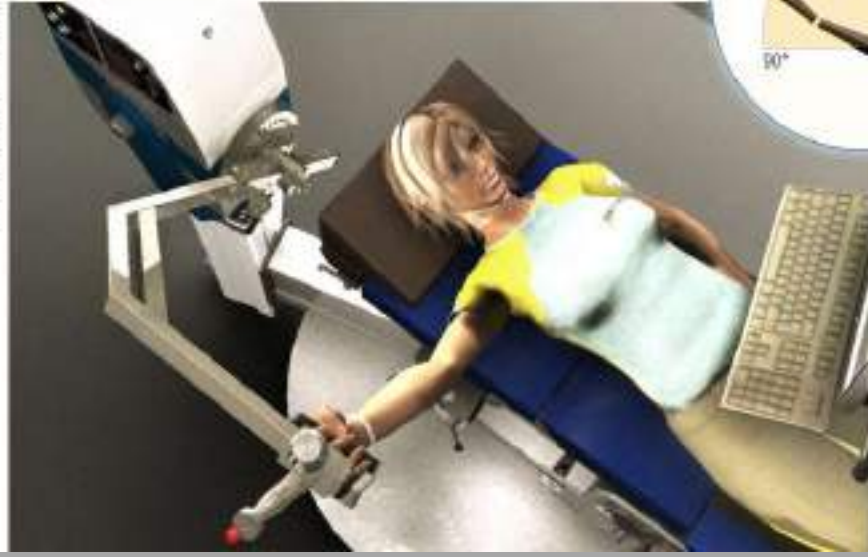
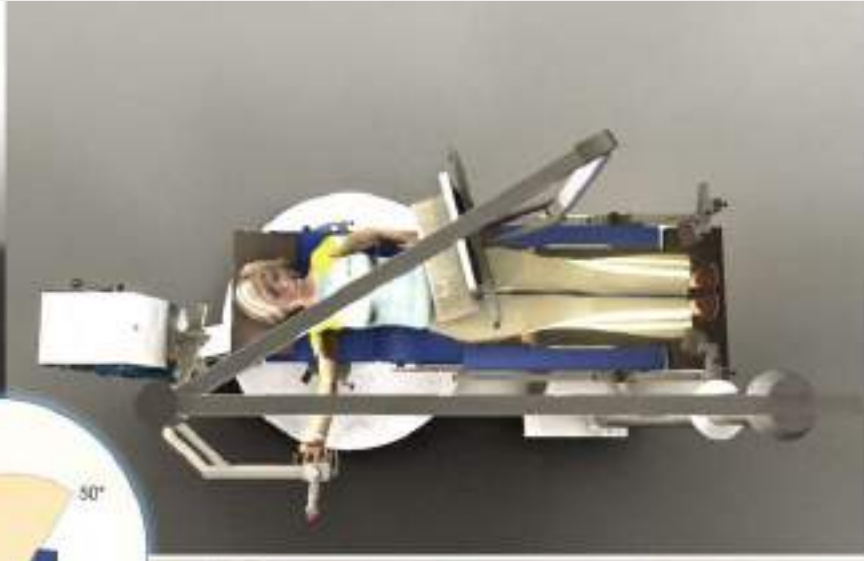
Knee - Internal/External Rotation



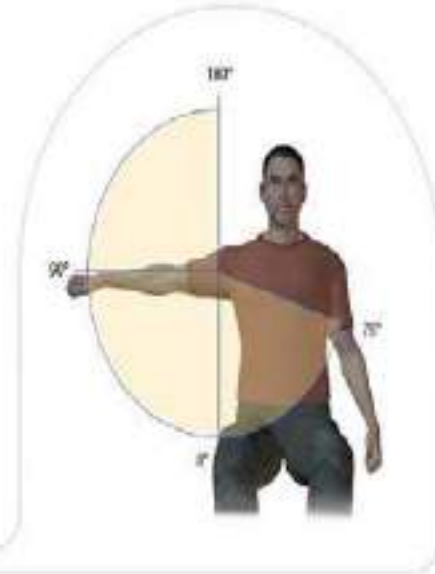
Shoulder - Flexion/Extension



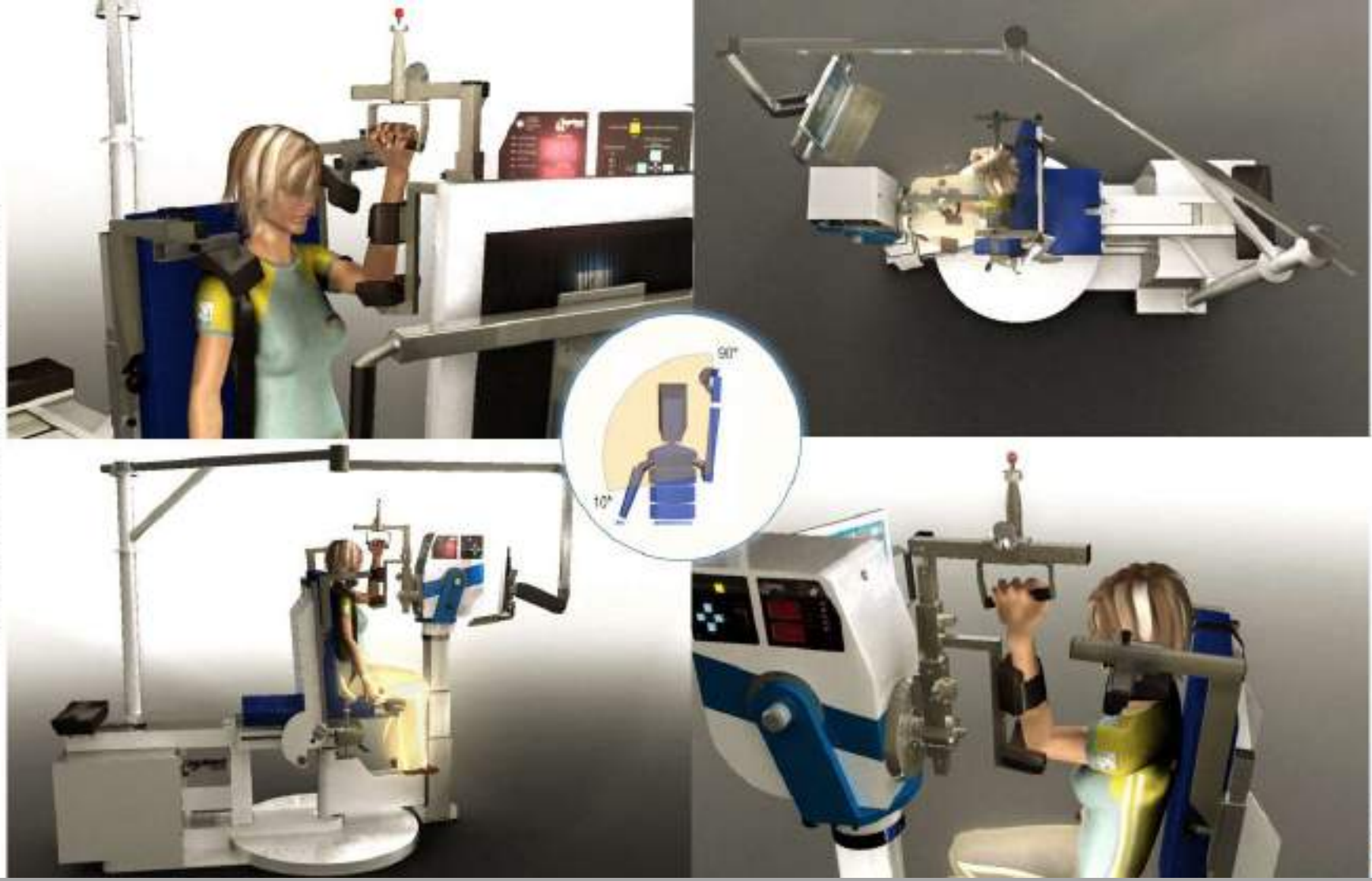
Shoulder - Abduction/Adduction



SHOULDER - ABDUCTION/ADDUCTION



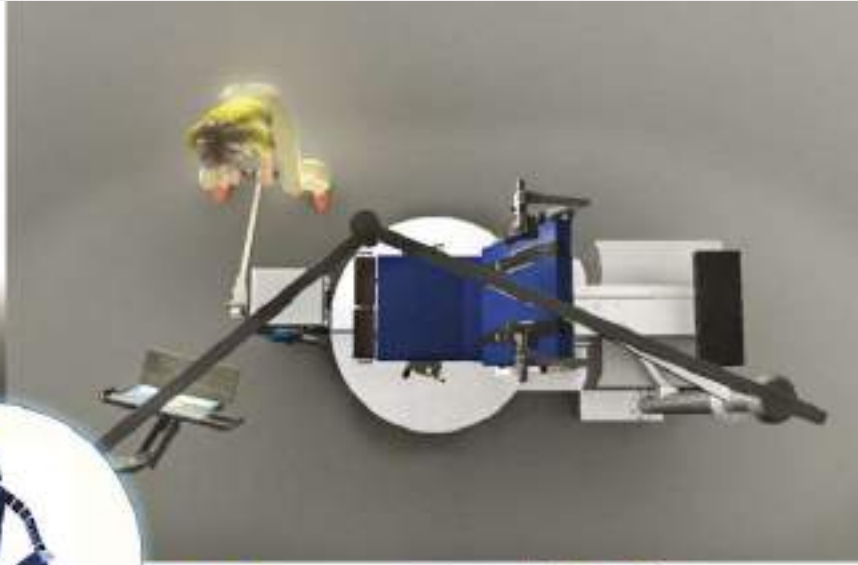
Shoulder - Internal/External Rotation



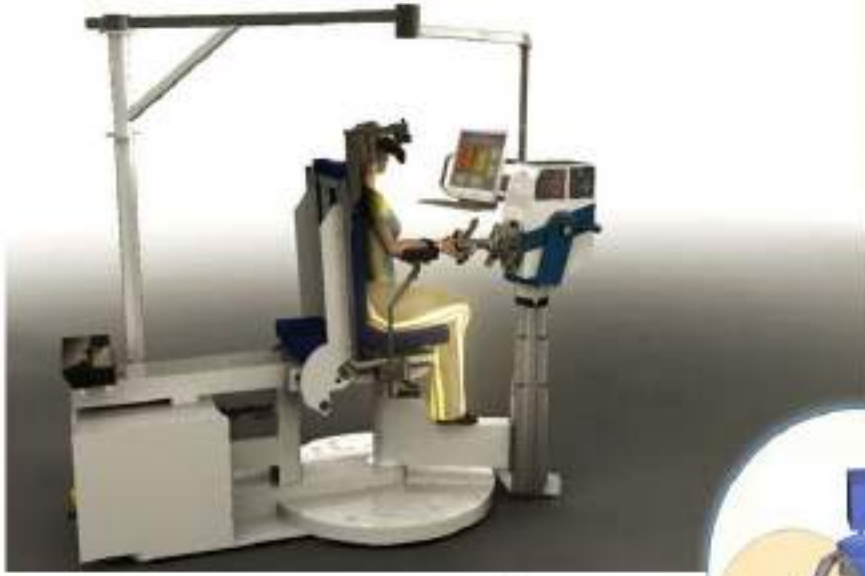
SHOULDER - INTERNAL/EXTERNAL ROTATION (NEUTRAL)



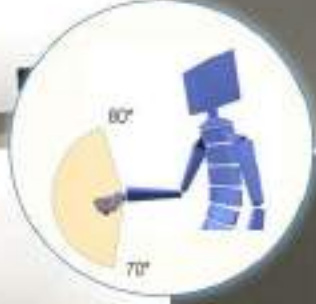
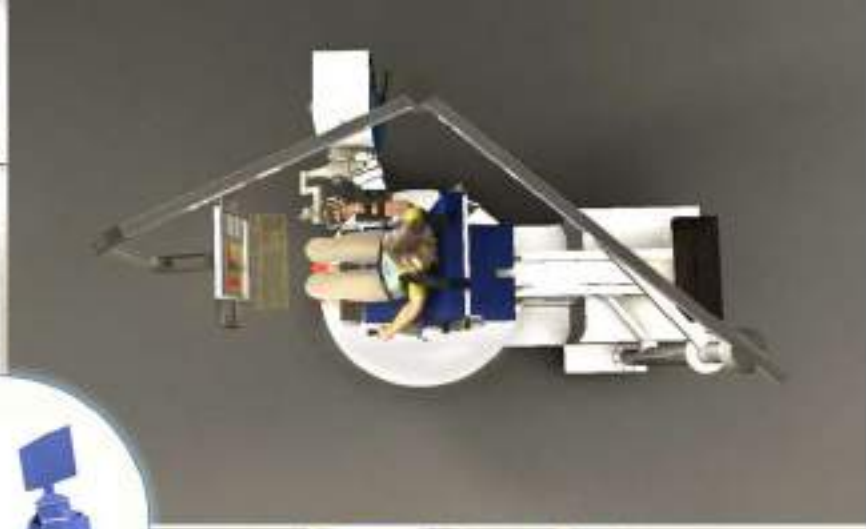




Wrist/Forearm - Pronation/Supination



Wrist - Extension/Flexion



The Isomed Basic device and its modules can be used for a wide range of test and trainings indications.

Isomed2000 at professional soccer club „ HSV „ Hamburg



Isomed2000 at soccer club „Bayer Leverkusen“



Isomed2000 at brand new ENVIHAB DLR
Airspace research center build for preparing
human flight to Mars



- In genuine Scientific area due to
- high validity as a result of a sophisticated drive and measurement system.
 - highest noise immunity by excellent electrical shielding and BRUSHLESS Servo Drives very essential for good EMG - Readings
- * Up to 4 Analog outputs available for synchronization



For top athletes in rehabilitation eg.
the professional Cyclist and „Tour de France“ winner during his
rehabilitation after Knee surgery



[illegible]

The Isomed2000 has a very wide range of anthropometric sizes of the test persons. In sitting and also lying position.
From hugest Basketball players down to



China national Basketball player 218 cm



down to

young children (e.g. 7 1/2 Year old Julian 1,25 m)

