OMNICYCLE™ ELITE
Neuro - Ortho - Cardio Rehabilitation Cycle System

PRODUCT HIGHLIGHTS

The Omnicycle™ Elite is the most advanced therapeutic exercise cycle available. The system supports improved outcomes and expanded therapy services for neurological, orthopedic and cardio pulmonary rehabilitation. Unlike traditional resistance exercise cycles, the Elite provides both upper and lower extremity exercise options in three different “Motor-Assist” operation modes. The Omnicycle™ Elite’s “Smart-Assist” technology automatically senses fluctuations in patient participation and shifts between “assisted” cycling (full motor-assist), “active-assisted” (partial motor-assist) and “active” exercise modes (no motor-assist) as needed. Developed around the medical complexities of aging adults, the Omnicycle™ Elite accommodates patients who might not otherwise be able to participate in therapeutic exercise due to strength, coordination, neurologic or cardiorespiratory challenges.

• Provides earlier therapeutic exercise intervention to support faster strength gains and recovery of function
• Ideal for post acute patients and others with physical limitations who may benefit from therapeutic exercise
• Helps improve strength, endurance and range-of-motion
• Assists with balance, flexibility and coordination
• Helps stimulate circulation, respiratory function and mobility
• Integrated Spasticity Detection System recognizes and helps manage episodes of spasticity
• Upper and lower extremity biofeedback capabilities
• Biofeedback and “Motor-Assist” capabilities provide symmetrical training for right-left lower extremity deficits
• Adjustable pedal radius minimizes joint stress and enables patients with L.E. contractures, post-op TKA and THA to participate in a therapeutic exercise program
• Integrates seamlessly with ACP’s Omnistim® FX2 Patterned Electrical Neuromuscular Stimulation (PENS) device for advanced neuromuscular re-education
TECHNOLOGY HIGHLIGHTS AND FEATURES

• Pre-set exercise protocols for patients with neurologic, orthopedic and cardiac conditions
• Upper and lower extremity biofeedback for improved patient motivation and participation
• Large color touchscreen display for ease of operation
• Wheelchair accessibility eliminates need for patient transfers
• Anti-tip restraint straps for wheelchair stability and safety
• Adjustable pedal radius accommodates range-of-motion limitations
• Tool-free adjustment of hand, forearm and calf supports for therapist efficiency
• Integrated heart rate monitor alerts clinician if established heart rate maximum is exceeded
• Voice-activated stop for patient safety
• Compact, portable design works well in therapy gyms and other areas with limited space

Motor-Assist technology enables patients with physical limitations to participate in a therapeutic exercise program

The system’s “Smart-Assist” technology continually monitors patient involvement and engages its “Motor-Assist” function as needed. The Omnicycle™ Elite also integrates seamlessly with ACP’s Omnistim® FX² PENS cycling protocols for advanced neuro-muscular re-education.

Interactive Biofeedback capabilities improve patient participation and provide symmetrical training

The Omnicycle™ Elite’s upper and lower extremity biofeedback system helps engage patients mentally and physically to improve participation and exercise effectiveness. The large color screen enables patients to visualize their exercise performance and adjust their efforts as needed for optimal therapeutic exercise. In addition to monitoring time, heart rate, cadence and distance pedaled, the system provides three biofeedback options: Road Course (lower extremity only), Right/Left Symmetry (lower extremity only) and Speed-Power Effort.

Integrated Spasticity Management System detects, manages and reports episodes of spasticity

The Omnicycle™ Elite features a unique Spasticity Detection and Management System that recognizes episodes of spasticity and automatically stops pedal rotation to help relieve spasms before the exercise program is resumed. The number of spasms that occur are reported at the end of the exercise session.

Printable Patient Summary Report

Training session data is summarized at the end of each session to track patient progress and support documentation requirements. The Omnicycle™ Elite Bluetooth® communication system and optional wireless printer allows this information to be printed from one or more cycles.
CLINICAL OVERVIEW

The Omnicycle™ Elite complements the comprehensive treatment approach required for medically complex patients, including those with paresis, spasticity, neuromuscular disease, muscle disuse atrophy, etc.

**Clinical Indications**
- Post-stroke
- Multiple Sclerosis
- Nerve injury
- Parkinson’s Disease
- Post-operative joint replacement TKA, THA, Shoulder, UE
- Patients too weak or unbalanced to use a regular cycle
- Muscle disuse atrophy
- COPD

**Clinical Objectives**
- Neuromuscular re-education
- Address muscle disuse atrophy
- Promote neuromotor activity
- Increase coordination
- Decrease edema - increase ROM
- Stable, safe active-assisted exercise
- Increase strength and endurance
- Improve peripheral muscle performance

*The Omnicycle™ Elite addresses a broader spectrum of patients and conditions than traditional “resistance cycling” systems*

### Neurological Rehabilitation
Designed to increase neural drive and motor timing performance. Active-assisted reciprocal movement with cycling, biofeedback and PENS can help retrain reciprocal movement in preparation for active walking and functional activity.
- Stroke recovery
- Neuromuscular re-education
- Neuromuscular diseases with components of abnormal tone

In “Neuro” mode, both pedaling speed and resistance varies in response to patient’s exercise performance.

### Orthopedic Rehabilitation
Helps reduce muscle inhibition by increasing circulation. Helps decrease edema and pain. Passive and active-assisted cycling provides joint ROM with limited or no active participation:
- Shoulder surgeries
- Hip fracture repair
- Total hip replacement
- Total knee replacement
- Arthritis
- Musculoskeletal lesions

The “Ortho” mode enables clinicians to limit the force output generated by patients to avoid over-stressing traumatized tissues.

### Cardio-Pulmonary Rehabilitation
Supports cardio-pulmonary conditioning and the development of muscle strength, power and endurance.
- Helps enhance extremity muscle performance in COPD patients for improved endurance
- Supports functional recovery for patients with COPD

In “Cardio” mode, resistance is automatically reduced when target heart rate is exceeded.

Push-button operation and pre-set exercise modes for ease-of-use and therapist efficiency
Clinicians simply press “START” for a 15-minute automatic program with integrated “warm up,” “training” and “recovery” stages. In “Cardio” mode, the Omnicycle™ Elite’s Heart Rate Monitor automatically varies the load to maintain the targeted heart rate. In “Neuro” mode, the system’s speed may be set to synchronize with ACP’s Omnistim® FX² Patterned Electrical Neuromuscular Stimulation (PENS) for advanced neuromuscular re-education.

<table>
<thead>
<tr>
<th>Report</th>
<th>Pulse: 0 1/min</th>
<th>Power: 42 Watt</th>
<th>Distance: 0.7 km</th>
<th>Duration: 12:09 min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration: 10:05 min</td>
<td>Activity: ~ 6 %</td>
<td>Activity left: ~ 13 %</td>
<td>Activity right: ~ 87 %</td>
<td>Distance: 0,3 km</td>
</tr>
<tr>
<td>Spasms: 6</td>
<td>Calories: ~ 0.0 kcal</td>
<td>Motor power begin: ~ 7.9 Nm</td>
<td>Motor power end: ~ 2.9 Nm</td>
<td></td>
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</table>

Large color monitor displays patient pulse, power, distance and training session duration

At the end of a training session, a Patient Summary Report is automatically produced on the screen

Patient Summary Report may be printed at end of session using optional Bluetooth® wireless printer
**PRODUCT SPECIFICATIONS**

- Upper and lower extremity exercise ergometers
- Powerful 200 watt motorized system operates in three modes:
  - Constant speed with adaptive load
  - Constant power with variable speed
  - Heart rate targeted load
- Pre-set therapy protocols
  - Neurological Rehabilitation
  - Orthopedic Rehabilitation
  - Cardio-Pulmonary Rehabilitation
- Biofeedback with large color display for upper and lower extremity
- Training Summary Report including:
  - Session time (minutes less pauses in participation)
  - Patient participation (percentage of time that patient's efforts were performing the work)
  - Left side activity in percent - Right side activity in percent
  - Distance
  - Number of spasms
  - Calories
  - Starting motor power (assistance at the start of the session)
  - Finishing motor power (assistance at the end of the session) Lower number at end of session indicates reduced muscle spasticity/rigidity

**OMNICYCLE™ TECHNICAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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<tbody>
<tr>
<td>ASSISTED, ACTIVE-ASSISTED, &amp; ACTIVE EXERCISE MODES ADJUST AUTOMATICALLY TO ACCOMMODATE VARYING PATIENT PARTICIPATION</td>
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<tr>
<td>HEART MONITOR AND VOICE ACTIVATED &quot;STOP&quot;</td>
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<tr>
<td>MULTIPLE HAND ATTACHMENTS FOR DIFFERENT PATIENT POSITIONING NEEDS</td>
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<tr>
<td>UPPER EXTREMITY HORIZONTAL ADJUSTMENT</td>
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<tr>
<td>NEOPRENE PADDED CALF SUPPORTS</td>
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<tr>
<td>INTERACTIVE BIOFEEDBACK SYSTEM ENGAGES PATIENTS MENTALLY AND PHYSICALLY FOR IMPROVED PARTICIPATION AND RECOVERY OF FUNCTION</td>
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<tr>
<td>HEIGHT ADJUSTABLE UPPER EXTREMITY EXERCISE MECHANISM</td>
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<tr>
<td>COMPACT AND EASY-TO-MOVE DESIGN - IDEAL FOR SMALL AREAS</td>
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<tr>
<td>POWERFUL 200 WATT MOTOR FOR DURABILITY AND RELIABILITY</td>
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<td>MODEL NUMBER: A000-533</td>
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**Product Specifications**

- Neuro, Ortho, Cardio therapy modes
- Large 10.75” color display screen
- Touchscreen operation
- Voice activated stop
- Three biofeedback modes
- Programmable parameters
- Heart monitor
- Motor: Powerful, quiet 200 watt motor
- Construction: Durable heavy gauge metal frame
- Width: 18.0”
- Depth: 30.0 - 40.0”
- Height: Adjustable from 46.0 - 51.0”
- Weight: 100 lbs.

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