

## MYO Electric Hand

The MYO Electrical Hand system from Centri is a low profile, cost effective Myo Electrical Upper Extrimity alternative. The anatomical tenodesis of motion and the cosmetic design offer the user a lightweight and highly functional prosthesis with a variety of control options.

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The MYO Electrical hand can be used with single or double Myo or Touch Pad Controls; proportional to both grip force and grip speed.

The low profile wrist design allows the fitting of longer transradial, wrist disarticulation, and transcarpal levels.

The new control unit automatically adjusts the level of signals according to the background level of noise and optimizes function.

The MYO Electrical hand system is easily hybridized with other system components to allow greater range of control options.



# CENTRI

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## MYO Electric Hand System Description

The CENTRI electrical hand system is a new developed system for myoelectrical hand prosthesis for the upper extremity. It consists of the following parts;

- Centri Electric Hand
- Centri Quick Change Wrist
- Centri Control Unit
- Centri Stud Electrode
- Centri NiMH Battery and Battery Case
- Centri Battery Charger
- Centri Withdrawal Tool
- Centri on/off Switch
- Centri Sensor
- Centri Li-Ion Battery
- Centri Touchpads

The Centri Electrical Hand System can be used as system or be used in combination with other systems.

### General description

The CENTRI Electrical Hand System is a system for myoelectrical controlled prosthesis for the upper extremity. The anatomical pattern of motion and the cosmetic appearance of the system offer the user a lightweight and highly functional prosthesis.

The System can be used as single or a double channel system. The double channel system is proportional to both grip force and grip speed.

The short wrist of the hand makes it very easy to build in the hand to most types of below elbow amputation and wrist amputation.

The new control unit adjusts the level of signals according to the background level of noise.

The CENTRI Electrical Hand System offering a wide range of combinations with components from other systems, to make it a highly flexible system for the prosthetist.

### Electric Hand

The electric hand is a life like hand with anatomical motion in the finger group and wrist. The hand is lighter, shorter and faster than most available electrical hands. It uses myo-electrical signals from the residual limb for controlling the grip. It is proportional regarding both to grip force and grip speed. With the benefit of new alloys and the new microprocessor based Centri control unit the hand will be easy to use and control for the user. The hand also has two separate precision motors, one for gripping and one for locking the grip.

### Control Unit

This micro-processor controlled unit is a proportional and grip force controlling system. The grip force control locks the grip when the grip force is reached for saving battery capacity. It also makes it possible for the user to control the hand when making slow movements. Centri Control Unit measures the background noise and adapts the signal to a proper level.

### Quick Change Wrist

The wrist unit is passive or manual operated, which makes possible to rotate the electric hand 350°. It is also possible to calibrate the friction between the electric hand and the wrist unit. To release the Centri Electric Hand from the Quick Change Wrist unit by rotating the hand to the end position and then press forward to unlock the hand. Quick Change



## Electrodes

The Centri Electrodes are proportional so that grip speed and grip force is controlled by the level of muscle contraction, measured by the Centri Electrode. The electrode may be used in all countries due to filtering of both 50 and 60 Hz frequencies. The adjustment of the electrodes is easy because of a precision amplifier.

## Li-Ion Battery and NiMH Battery and Case

The interchangeable batteries is produced with the best available materials and advanced technology allowing the batteries to perform with outstanding reliability. No cadmium, lead or mercury is added to the batteries making them environment friendly.

## Battery Charger

The Centri Battery Charger is a high quality product designed for charge of Centri batteries. The Centri Battery Charger complies with European safety standards.

## Withdrawal Tool

The withdrawal tool is used to pull out the connection plugs from the Centri Control Unit.

Data for Electric Hand				
Size	6 3/4"	7 1/4"	7 3/4"	8 1/4"
Input voltage	6-9 V	6-9 V	6-9 V	6-9 V
Output grip force (6V)	63 N	68 N	81 N	81 N
Output speed (6V)	150 mm/second	150 mm/second	100 mm/second	100 mm/second
Weight	205 grams	215 grams	250 grams	250 grams
Opening width	66mm	76 mm	76 mm	76 mm

Data for Control Unit	
Power input	6-9 V
Input signal	0-5 V
Measuring frequency	1000 Hz
Weight	18 grams
Length*Height*Width	43 x 27 x 11 mm
The Centri Control Unit may be used with Centri Electrodes, Centri Touch Pads or Otto Bock electrodes.	

Data for Centri Electrodes	
Supply Voltage	5-8.5 V
Supply Current	2 mA
Output Voltage	0.3-4.6 V
Gain	50000-150000times
Common mod rejection	> 90 dB
Filter 50/60 Hz rejection	> 50 dB
Weight	8 grams
Length*Height*Width	32 x 20 x 9 mm

Data for NiMH Battery and Case	
Nominal Voltage	6 Volt
Capacity	500 mAh
Length*Height*Width	80 x 18.5 x 27 mm
Weight	75 gram

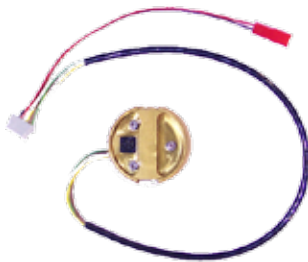
Data for Li-Ion Battery	
Nominal Voltage	7,4 Volt
Capacity	1000 mAh
Length*Height*Width	66 x 36 x 15 mm
Weight	59 gram



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	<p>610 634 011 610 634 012 610 714 011 610 714 012 610 734 011 610 734 012</p>	<p>Centri MYO Electric hand 6V Left 6 3/4 Centri MYO Electric hand 6V Right 6 3/4 Centri MYO Electric hand 6V Left 7 1/4 Centri MYO Electric hand 6V Right 7 1/4 Centri MYO Electric hand 6V Left 7 3/4 &amp; 8 1/4 Centri MYO Electric hand 6V Right 7 3/4 &amp; 8 1/4</p>
	<p>610 734 009 610 734 010 610 814 009 610 814 010</p>	<p>Inner shell for Electric hand 7 3/4 Left Inner shell for Electric hand 7 3/4 Right Inner shell for Electric hand 8 1/4 Left Inner shell for Electric hand 8 1/4 Right</p>
	<p>X11 609 XXX X11 610 XXX X21 613 XXX X21 614 XXX X21 615 XXX X21 616 XXX X31 607 XXX X31 608 XXX X31 619 XXX X31 620 XXX</p>	<p>Cosmetic Glove, Left 6 3/4, Youth Cosmetic Glove, Right 6 3/4, Youth Cosmetic Glove, Left 7 1/4, Female Cosmetic Glove, Right 7 1/4, Female Cosmetic Glove, Left 7 3/4, Female Cosmetic Glove, Right 7 3/4, Female Cosmetic Glove, Left 7 3/4, Male Cosmetic Glove, Right 7 3/4, Male Cosmetic Glove, Left 8 1/4, Male Cosmetic Glove, Right 8 1/4, Male</p>
	<p>610 000 001 610 000 002</p>	<p>Quick change wrist with rotation for Centri Battery. Quick change wrist Dummy for Lamination</p>
	<p>610 000 010 610 000 027</p>	<p>Centri Electrode w/studs ( 3pcs ), proportional Stud, 1pc</p>
	<p>610 000 012 610 000 013 610 000 014 631 000 026</p>	<p>Control unit for Centri Electric Hand Cable for control unit to Centri electrode Cable for control unit to Otto Bock electrode Withdrawl tool 3-6 pol. plug</p>
	<p>631 000 004 631 000 005</p>	<p>Touch Pads Kit, 3pcs TP01 TP Cable unterminated 1 m, 1pc TP10</p>
	<p>610 000 015 610 000 016 610 000 019 610 000 018</p>	<p>Battery NiMH 6V 500 mAh, external use Battery case Battery charger 110-240V for NiMH Battery Traveler version Dummy Battery for Lamination</p>
	<p>610 000 020 610 000 023 610 000 022 610 000 021</p>	<p>Battery Li Ion Polymer 7,4V 1000mAh, internal use Battery charger 110-240V for Li Ion Battery Charge plug for Li-Ion Battery Sensor for Li-Ion Battery</p>
	<p>610 000 024 610 000 026</p>	<p>On/Off Switch Adapter cable for O.B. Battery</p>



Part no. 610 000 001

**Option: Centri Electrode w/ studs**



Part no. 610 000 010

**Option: Touch Pads Kit**



Part no. 631 000 004  
Part no. 631 000 005

**Option: Cable for Otto Bock Electrode**



Part no. 610 000 014

**Option: Centri Internal Battery 7,4 V Li-Ion**



Part no. 610 000 020



Part no. 610 000 021



Part no. 610 000 022



Part no. 610 000 024

**Option: Centri External Battery 6 V Ni MH**



Part no. 610 000 015  
Part no. 610 000 016



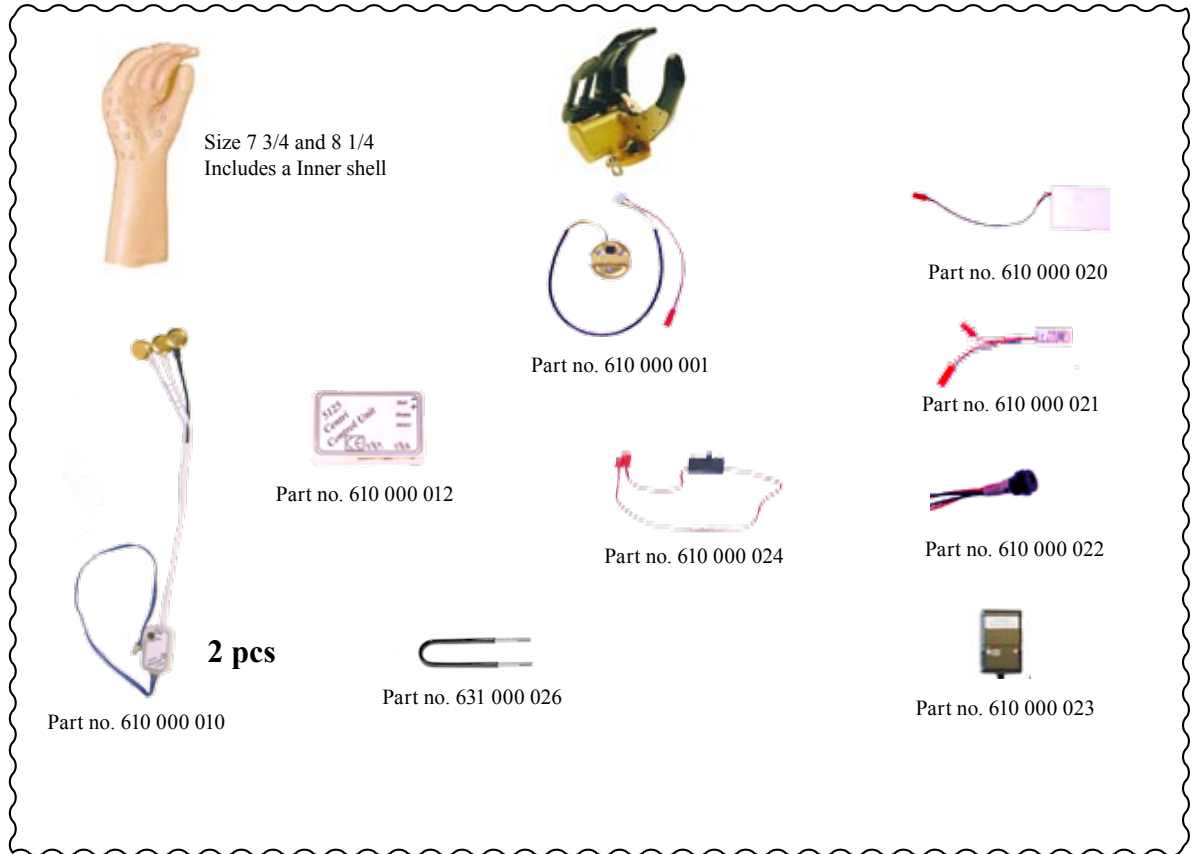
Part no. 610 000 012

**Option: Cable For Otto Bock Battery**



Part no. 610 000 026

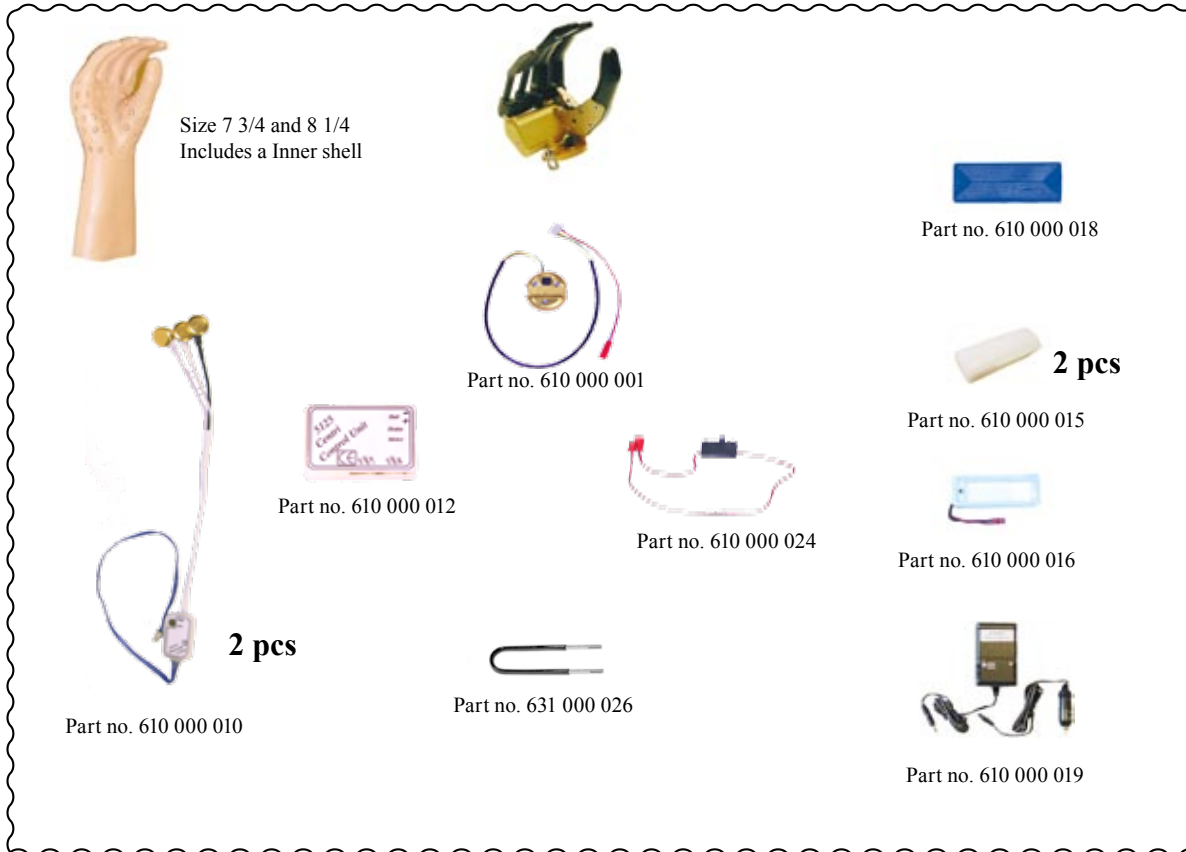
## MYO Kit 1 w/ Li-Ion Battery ( Internal use )



### MYO Kit 1 w/ Li-Ion Battery

610 634 111	Myo Hand 6 3/4 Left
610 634 112	Myo Hand 6 3/4 Right
610 714 111	Myo Hand 7 1/4 Left
610 714 112	Myo Hand 7 1/4 Right
610 734 111	Myo Hand 7 3/4 Left
610 734 112	Myo Hand 7 3/4 Right
610 814 111	Myo Hand 8 1/4 Left
610 814 112	Myo Hand 8 1/4 Right

## MYO Kit 2 w/ NiMH Battery ( External use )



### MYO Kit 2 w/ NiMH Battery

610 634 211	Myo Hand 6 3/4 Left
610 634 212	Myo Hand 6 3/4 Right
610 714 211	Myo Hand 7 1/4 Left
610 714 212	Myo Hand 7 1/4 Right
610 734 211	Myo Hand 7 3/4 Left
610 734 212	Myo Hand 7 3/4 Right
610 814 211	Myo Hand 8 1/4 Left
610 814 212	Myo Hand 8 1/4 Right

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