

Proper Care

The 7.4 Volt Arm Prosthetic System for Children



Quality for life



Individual and Flexible

Exploring the World

Fittings for children have always represented a major medical technology challenge because children have special requirements in terms of functionality, flexibility and mobility. This is why it is important to offer a system that meets the individual needs of various age groups while simultaneously preparing the children for a future fitting with the system for adults.

The innovative 7.4 volt system for children achieves these objectives. In combination with the Electric Hand 2000, the MyolinoWrist 2000 and the MyolinoSkin Natural glove, it uses myoelectric components from the adult segment in order to establish the foundation for a flowing transition in the prosthetic fitting process. The 12K12 MovolinoArm Friction is the perfect complement to the Ottobock portfolio for upper arm fittings in children aged 3 to 5 years.



Electric Hand 2000

8E51

Children want to explore everything

Fittings for children demand ultimate functionality. A choice of various control options is available for the Electric Hand 2000 in order to support individual adaptation. In combination with the MyolinoWrist 2000 ball wrist joint with adjustable friction, the Electric Hand 2000 can be positioned in all directions. Compensating movements of the arm are largely avoided. Movement patterns and the body posture appear more natural. The redesigned battery for children serves as the power supply. A further development of battery technology offers greater capacity – for fittings that meet the needs of children.

Ottobock Electric Hand 2000 for MyoBock® system, 7.4 Volt

The Electric Hand 2000 is suitable for all residual limb lengths. Depending on the controller, it can be used for 4.8 V and 7.4 V children's hand fittings.

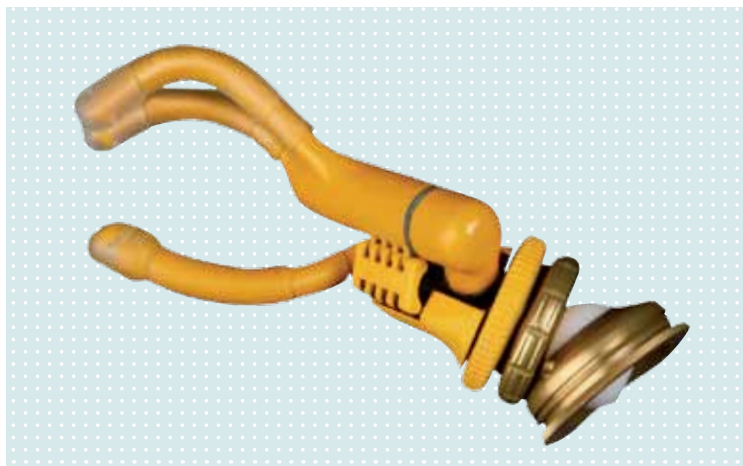
Available in three sizes:

Size 5	for children aged 1 ½ to 3 years
Size 5 ½	for children aged 3 to 6 years
Size 6	for children aged 5 to 10 years
Size 6 ½	for children aged 8 to 13 years

Intelligent Battery Management

In order to ensure that the user notices the drop in battery capacity in a timely manner, the hand gradually slows down and gripping strength is reduced. Only when the battery capacity gets very low is the hand turned off in order to protect the battery against harmful deep discharge.

Order no.	Side	Size	Lamination ring	Prosthesis glove
8E51=L5	left	5	10S16=34	8S20(N)=136x41 L...
8E51=R5	right	5	10S16=34	8S20(N)=136x41 R...
8E51=L5 ½	left	5 ½	10S16=34	8S20(N)=147x45 L...
8E51=R5 ½	right	5 ½	10S16=34	8S20(N)=147x45 R...
8E51=L6	left	6	10S16=38	8S20(N)=162x56 L...
8E51=R6	right	6	10S16=38	8S20(N)=167x56 R...
8E51=L6 ½	left	6 ½	10S16=38	8S20(N)=177x64 L...
8E51=R6 ½	right	6 ½	10S16=38	8S20(N)=177x64 R...



Technical Data

		Gr. 5	Gr. 5½	Gr. 6	Gr. 6½
Operating voltage	V	7,4	7,4	7,4	7,4
Opening width	mm	28	37	52	58
Minimum gripping strength approx.	N	8	25	35	35
Weight (without prosthesis glove)	g	86	115	125	130

MyolinoSkin Natural

8S20N

Naturally beautiful.

Especially in childhood, children and their parents have high expectations of a prosthetic glove. They want the prosthesis to be inconspicuous and fit harmoniously with the child's overall appearance, while also being sturdy and durable enough for everyday use while playing and learning.

The Skin Natural prosthetic glove has a very natural and especially attractive appearance details such as blood vessels, knuckles and fingernails make it look remarkably similar to a real human hand.

Practical.

The multi-layered PVC glove features good mechanical strength, good durability (sturdy, does not tear easily) and low abrasion and also protects the prosthesis from environmental influences such as moisture, dirt and dust.

A special finish makes it soil-resistant and makes cleaning noticeably easier.

Please follow the care and cleaning instructions:

Soap and water are enough for daily cleaning. For more stubborn stains, the special cleaner for prosthetic gloves (640F12) with the appropriate spray pump (640F13) should be used. The glove should be cleaned immediately after soiling (so the stain does not penetrate the PVC) and without using excessive pressure.

The Skin Natural prosthetic glove is available in 6 colours; the 646M47 colour pattern set should be used to determine the individual colour.



MyolinoWrist 2000

10V51

The MyolinoWrist 2000 is a mechanical friction wrist joint that supplements the hand system for children. It is only compatible with the Ottobock Electric Hand 2000.

It can be used with all 4 sizes (5, 5 1/2, 6, 6 1/2) of the Electric Hand 2000 and is suitable for either side. The wrist joint is available with a lamination ring or for bonding into pre-fabricated forearm or elbow components.

Additional degrees of freedom in prostheses for children are very important for the child's continued development. The early prevention of unnatural compensating movements of the arm and shoulder supports a physiologically correct posture. Positioning the hand with flexion of up to 30° is possible in all directions in combination with hand rotation. This provides many positioning options for the Ottobock Electric Hand 2000.

Friction can be configured using the supplied angled allen wrench.

Two Versions

10V51=1 (for lamination)

10V51=2 (for bonding into prefabricated components)



7in1 Controller

9E420

The 9E420=* 7in1 Controller is a control system for the Electric Hand 2000 that processes muscle signals and transmits them to the prosthetic hand. The 7in1 Controller runs on 7.4 volts and offers 7 control programmes, some of which are derived from the system for adults. The advantages are apparent: Children can benefit from the range of possibilities offered by systems for adults, their prosthetic hand can be adapted individually and they are simultaneously prepared for a later fitting with the adult system.

Numerous Control Programmes

7 programme versions and the option to make patient-specific adjustments are available for optimum adaptation to the needs of the patient.

- DMC control unit with 2 electrodes
- DMC LowInput..... control unit with 2 electrodes
- AutoControl LowInput..... control unit with 2 electrodes
- DigitalControl..... control unit with 2 electrodes
- VarioControl control unit with 1 electrode
- DoubleChannel..... control unit with 1 electrode
- EVO Digital control unit with 1 electrode

Adjustments to the hand are made using Bluetooth® data transfer and the applicable 560X3=V1.0 MyolinoSoft software. A wireless connection is established between the electric hand and the PC for this purpose using the 60X6 MyolinoLink. The MyolinoLink is previously connected to the charging receptacle of the MyoEnergy Integral. Naturally, detailed information is provided in the instructions for use.

Power Supply

Power is supplied to the 7in1 Controller and the prosthesis components by the 757B35=* MyoEnergy Integral.

Enhanced Safety

In an emergency, it is possible to open the electric hand without myosignals from the patient. Pressing the charging receptacle button of the MyoEnergy Integral opens the electric hand and the system turns off. The button has to be pressed for approximately 3 seconds.

Order no.	
9E420=L	
9E420=R	

Technical Data	
Operating voltage	7,4 V
Weight	5 g
Voltage supply	757B35=*



MyoCharge Integral

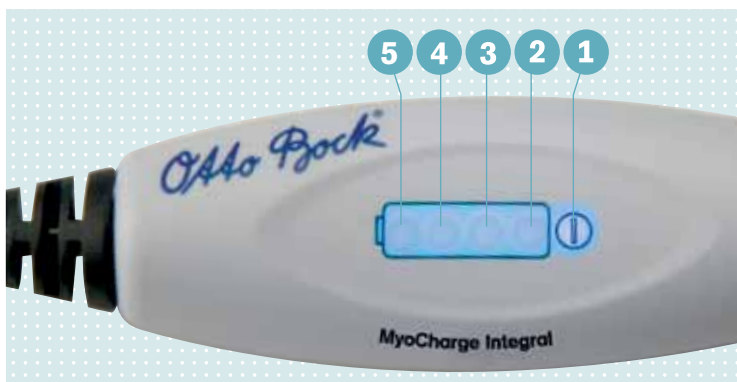
757L35

MyoCharge Integral

The MyoEnergy Integral integrated into the socket is charged using the 757L35 MyoCharge Integral. This is done by simply connecting the charging plug to the charging receptacle on the outside of the socket. Thanks to an integrated magnet, the charging plug readily connects to the charging receptacle. The special contour of the charging plug and receptacle ensures that the two components are correctly aligned quickly and reliably. LEDs indicate the readiness of the charger and the current battery capacity.

Technical Data	
Max. charging current	1 A
Max. charging voltage	10 V
Operating temperature	0°C to +60°C (+32°F to +140°F)
Storage temperature	-20°C bis +60°C (-4°F to +140°F)

Battery capacity	LED 1	LED 2	LED 3	LED 4	LED 5
Battery empty	●	★	★	★	★
Battery 25% charged	●	●	★	★	★
Battery 50% charged	●	●	●	★	★
Battery 75% charged	●	●	●	●	★
Battery 100% charged	●	●	●	●	●
LED-display	● → LED steady ★ → LED flashing				



MyoEnergy Integral

757B35

MyoEnergy Integral

The 757B35=* MyoEnergy Integral is a complex power supply system consisting of several components.

- 1 The **charging receptacle** – which is installed by bonding it inside the outer socket – serves several functions:
 - Contacts for battery charging
 - LED to display the current battery capacity
 - Button to turn the prosthesis on and off and to obtain the battery capacity
 - Beeper to provide feedback on operating states
- 2 The **battery** consists of two cells. The integrated electronics protect the device against short circuits, overvoltage, undervoltage and charging outside the allowable temperature range.
- 3 The **communication cable** with a 3-pin receptacle is used for the exchange of data.
- 4 The **supply cable** establishes the connection between the battery and the respective prosthesis component.

Easy Handling

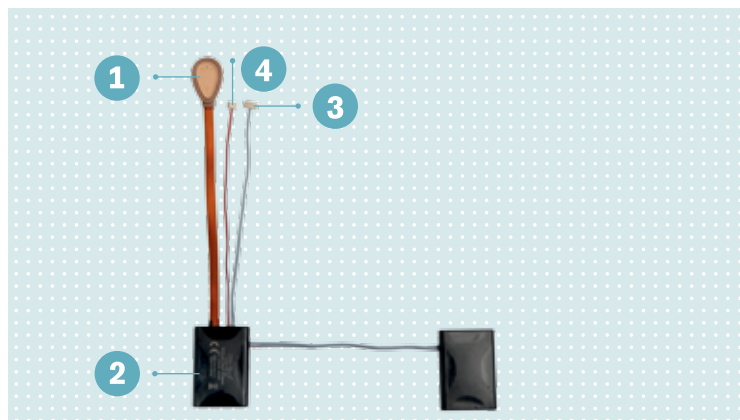
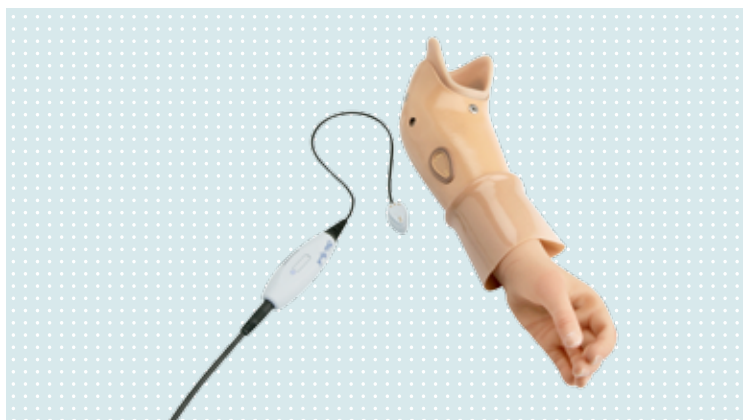
The battery is very easy and straightforward to use.

In order to **charge the battery**, simply connect the charging plug to the charging receptacle and allow it to snap into place. A short beep sounds, the prosthesis is turned off and the charging process starts automatically.

When the user wants to know the **battery capacity**, this may be obtained at any time without turning the prosthesis off. In order to do so, the charging receptacle button is pressed for less than one second and the LED displays the battery capacity.

Turning the prosthesis on and off using the charging receptacle button is just as simple. Two short beeps sound and the LED is illuminated when the prosthesis is turned on.

Technical Data		
Article number	757B35=1	757B35=3
Capacity	600 mAh	1.150 mAh
Type	Lithium-polymer	Lithium-ion
Output voltage approx.	7,4 V	7,4 V
Charging time approx.	2,5 h	2,5 h



MyolinoLink

60X6

MyolinoLink

The 60X6 MyolinoLink is used for the wireless transfer of data between the 7in1 Controller and a PC with Bluetooth® functionality. The advantage: There is no need to disassemble the prosthesis. Patient-specific settings can therefore be changed without a cable connection.

The power supply to the MyolinoLink is provided by the MyoEnergy Integral battery system integrated into the socket. The MyolinoLink itself is equipped with LEDs that are illuminated to signal operational readiness and flash to indicate the exchange of data.

The MyolinoLink is connected to the charging receptacle of the MyoEnergy Integral prior to use.

The MyolinoLink is secured to the charging receptacle by the integrated magnet.

MyolinoSoft

560X3

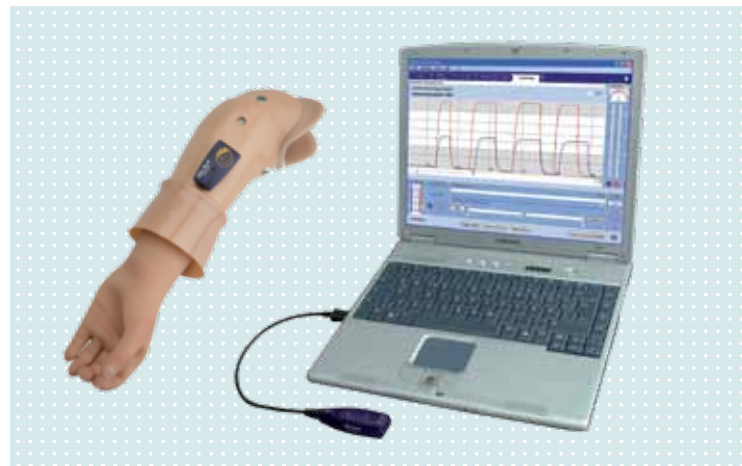
MyolinoSoft

In order to offer patient-specific controller settings, setup software is also being used for the first time in a hand system for children. Rather than using specified settings, it works with various parameters such as the patient side, control programme, threshold and gripping speed that can be individually adjusted. This is especially advantageous for children with high mobility requirements.

The 560X3=V1.0 MyolinoSoft software was developed to set up the 9E420 7in1 Controller and the connected Electric Hand 2000. 7 programme versions are available. Communication between the software and the system components takes place via Bluetooth® data transfer. The 60X6 MyolinoLink is connected to the charging receptacle of the hand system for children for this purpose, and the 60X5 BionicleLink PC is connected to the PC so that patient settings are transmitted directly to the hand system for children. Ottobock offers qualified and practical product training for users.

Technical Data

Range of the wireless connection	approx. 5 m
Power supply	MyoEnergy Integral 757B35=*



MovolinoArm Friction

12K12

The 12K12 MovolinoArm Friction is available in one size. It is the perfect complement to the current Ottobock product portfolio since it allows fittings on the right and left side for children aged 3 to 5 years.

It is compatible with passive, body-powered and myoelectric arm prosthesis systems.

The elbow has one friction setting for humeral rotation and one for flexion/extension of the forearm. These components are easy to adjust by parents.

Another advantage is that the elbow is compatible with the components of the 7.4 volt system for children - the 7in1 Controller, MyolinoLink, MyolinoSoft, MyoCharge Integral and MyoEnergy Integral - and therefore clearly benefits from the product advantages of this system.

Natural Shape

A natural shape and excellent contours: The MovolinoArm Friction features an appealing design with a highly natural appearance.

The MyoEnergy Integral offers enhanced socket design possibilities. The battery itself can be positioned in the forearm.

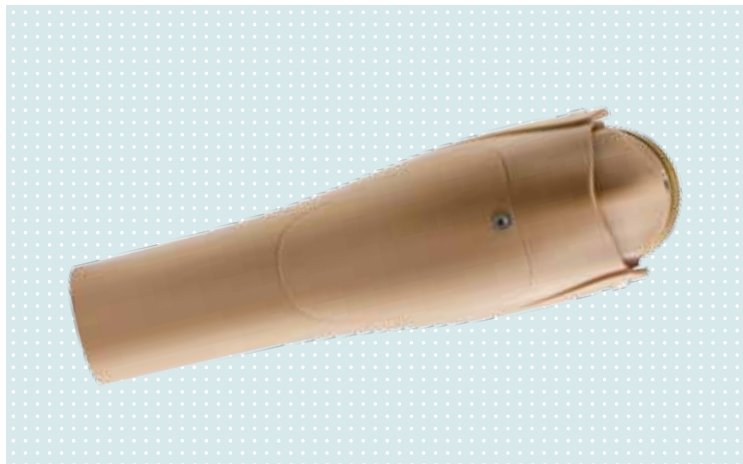
It is sealed on the outside and therefore protected against dust, dirt and splashed water: Factors that meet the special needs of children for movement and undisturbed play. Exterior cabling is also eliminated since the contacts are routed through the elbow. This improves acceptance among children in particular.

Easy Handling

Length changes by shortening the forearm are possible during assembly. The MyoEnergy Integral battery system is easy to install in the crook of the arm while the electrical cables are unobtrusively routed inside the forearm.

Numerous Fitting Options

The hand adapter of the 12K12 MovolinoArm Friction is naturally compatible with the Electric Hand 2000. The 10A40 Wood Adapter is available for passive prosthetic fittings. The 10V18=34 Wrist is compatible with body-powered fittings.



Order Guide for the 7.4 Volt Arm Prosthesis System for Children

Below Elbow	
8E51=*	Electric Hand 2000
10V51=1	MyolinoWrist 2000 (Flexible wrist joint)
9E420=L or R	7in1 Controller
757B35=1 (or 3)	MyoEnergy Integral 600 mAh (or 1,150 mAh)
757L35	MyoCharge Integral
13E129=*	Electrode cables
13E200=50 (or 60)	Electrodes
60X6 and 560X3=V1.0	MyolinoLink and MyolinoSoft (For programming – order once)
60X5	Bionic Link PC (For Bluetooth® connection – order once)
99B13=16	Pull-In Tube, PVC
Above Elbow	
8E51=*	Electric Hand 2000
11D12=34	Lamination ring
12K12	Movolino Arm Friction
9E420=L or R	7in1 Controller
757B35=1	MyoEnergy Integral 600 mAh
757L35	MyoCharge Integral
13E129=*	Electrode cables
13E200=50 (or 60)	Electrodes
60X6 and 560X3=V1.0	MyolinoLink and MyolinoSoft (For programming – order once)
60X5	Bionic Link PC (For Bluetooth® connection – order once)
99B13=16	Pull-In Tube, PVC