



# Innovative solutions in resuscitation therapy

Multifunction Electrode Pads

**PHILIPS**

# Enhance resuscitation

With pads for emergency use, monitoring, and special procedures, there are HeartStart multifunction electrode pads for every need – sized and designed for a wide variety of environments, caregivers, treatments, and patients alike.



# therapy and workflow

When connected to a manual defibrillator with advanced capabilities, HeartStart multifunction pads can provide ECG monitoring, external pacing, synchronized cardioversion, and defibrillation. The pads can facilitate ventilation detection when used with the Q-CPR measurement and feedback option on the Philips HeartStart MRx monitor/defibrillator. They are easy to use, compliant with internationally-recognized standards, and conform to the body's contours for proper current distribution. When combined, these features may enhance resuscitation therapy.

All pads are optimized for Philips defibrillators to decrease the need to change pads if you have to switch defibrillators. Most pads are compatible with defibrillators from other manufacturers using Philips HeartStart pads adapters. These adapters provide simple inter-connectivity and allow for easy standardization of pads, whether defibrillators are biphasic or monophasic, manual or automated. The end result of using Philips pads and adapters can be a more seamless workflow.



## Rugged and dependable

Constructed of a thin flexible conductor layered between a protective polymer backing and hydro-gel, Philips pads withstand the rigors of CPR while enhancing pre-hospital to hospital workflow.

# HeartStart pads for emergency and general use

## Adult/Child pads

- For patients  $\geq 22$  pounds (10kg) using manual defibrillators or 55 pounds (25kg) using AEDs or AED mode
- Conductor surface area 75cm<sup>2</sup> and gel surface area 102cm<sup>2</sup>
- Multifunction – defibrillation, pacing, monitoring, and cardioversion
- Hydro-gel thickness and adhesion suited for emergency situations
- 24 month shelf life



### Adult/Child with barrel connector (M3501A)

- General purpose
- Designed for manual defibrillators
- 24" (60cm) lead wire. Requires hands-free cable when connected to a manual defibrillator.
- Packed 10/case

### Adult/Child Defibrillator Pads (989803158211/989803158221)

#### SMART Pads II (989803139261)

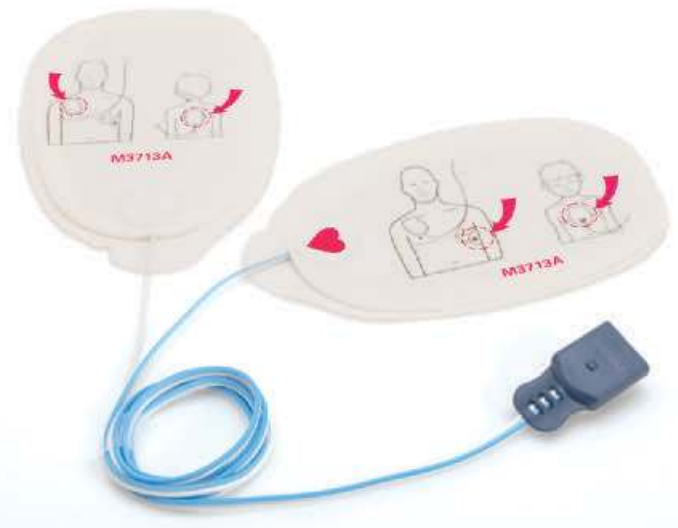
#### SMART Pads III (989803149981/989803149991)

- General purpose
- Designed for AED use
- Suitable for both BLS- and ACLS-trained responders
- 48" (120cm) lead wire. Requires hands-free cable when connected to a manual defibrillator.
- Wide storage temperature range
- Packed 1 or 5/case

### Adult/Child Plus (M3713A)

#### Adult/Child Preconnect (989803166021)

- General purpose
- Designed primarily for manual defibrillator use, and compatible with AEDs
- Package and instructions optimized for ACLS-trained responders
- 48" (120cm) lead wire. Requires hands-free cable when connected to a manual defibrillator.
- Packed 10/case



## Infant pads

- For patients < 22 pounds (10kg)
- Specially formulated gel hydrates skin, yet provides adhesion suitable for emergency situations
- Pads sized for infant patients – conductor surface area 32cm<sup>2</sup> and gel surface area 44cm<sup>2</sup>
- Multifunction – defibrillation, pacing, monitoring, and cardioversion
- Recommended anterior-posterior placement depicted on pad's outer surface
- Long shelf life



### Infant Plus (M3717A)

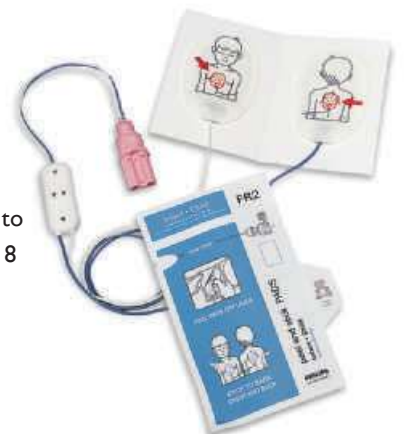
- General purpose
- Designed only for use with manual defibrillators (in manual mode); can use with HeartStart XL+ in AED mode if Infant/Child category is selected
- Not to be used with AEDs
- Package and instructions optimized for ACLS-trained responders
- 24" (60cm) lead wire. Requires hands-free cable.
- Packed 5/case

### Infant with barrel connector (M3504A)

- General purpose
- 24" (60cm) lead wire. Requires hands-free cable.
- No adapter required
- Not to be used with AEDs

### FR2 Infant/Child (M3870A)

- Designed only for use with FR2 and FR2+ AEDs
- Unique bear-shaped connector allows users to distinguish the pads
- 48" (120cm) lead wire
- Pad circuitry attenuates delivered shock to a therapy appropriate for patients under 8 years of age or 55 pounds (25kg)
- Suitable for both BLS- and ACLS-trained responders
- Packed 1/case



# HeartStart pads for special procedures and environments

## Specialty pads

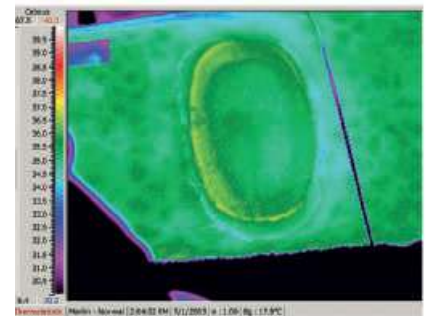
- Optimized uses – radiological procedures in the catheterization lab, electrophysiology lab, critical care unit, emergency department, telemetry, and step-down cardiac unit
- Multifunction – defibrillation, pacing, monitoring, and cardioversion
- Package and instructions optimized for ACLS-trained caregivers

### Adult/Child Radiotransparent (M3718A)

#### Reduced Skin Irritation

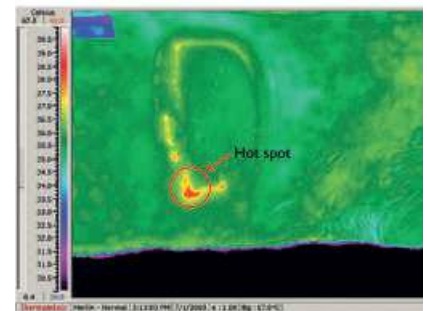
- Ideal for radiological procedures requiring increased visibility
- Completely transparent pad under typical X-ray levels
- Thick gel layer provides enhanced patient contact
- Hydro-gel with high water content allows for easy pad removal, excellent skin hydration, and reduced skin irritation
- Hydrophilic properties allow electrode to perform under diaphoretic conditions
- Adhesive properties prevent pad migration
- Lessens skin irritation by neutralizing changes in pH conditions produced during pacing
- For use on patients  $\geq 22$  pounds (10kg) when used with a manual defibrillator
- Conductor surface area and gel surface area are  $97\text{cm}^2$
- 48" (120cm) lead wire requires hands-free cable when connected to a manual defibrillator
- Packed 10/case

### Thermogram comparison\*



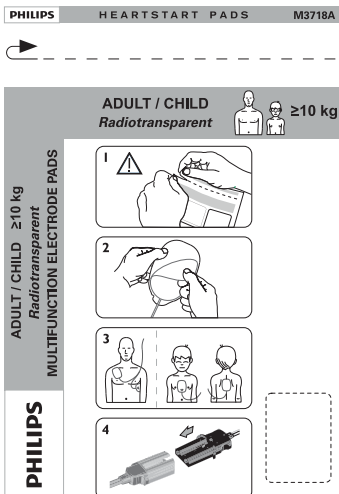
#### HeartStart Radiotransparent Pads

Provide a more uniform distribution of current under the electrode during use



#### Other Manufacturer's Pads

Exhibit concentrated energy or "hot spots" that could cause skin irritation



\* Thermograms were taken 3.6 seconds after defibrillation using a bi phase defibrillator



**Infant Radiotransparent (M3719A)**  
**Reduced Skin Irritation**

- For use on smaller patients, weighing < 22 pounds (10kg)
- Conductor surface area and gel surface area are 50cm<sup>2</sup>
- 24" (60cm) lead wire
- Not to be used with AEDs; can use with HeartStart XL+ in AED mode if Infant/Child category selected
- Designed primarily for manual defibrillators
- Packed 5/case

**Adult/Child Radiolucent (M3716A)**

- Suitable for patients who will likely require chest X-rays
- Pad casts slight shadow under typical adult X-ray levels
- Moist, long-lasting hydro-gel with 50% more water content than HeartStart Adult/Child Plus pads, yet provides adhesion suitable for emergency situations
- Package and instructions optimized for ACLS-trained responders
- 48" (120cm) lead wire requires hands-free cable when connected to a manual defibrillator
- Indicated for patients ≥ 22 pounds (10kg) when used with a manual defibrillator
- Packed 10/case

**Radiolucent vs. Radiotransparent comparison**



**HeartStart Adult/Child Radiolucent Pads**

- Cast slight shadow under typical adult X-ray levels



**HeartStart Adult/Child Radiotransparent Pads**

- Completely transparent under typical adult X-ray levels



# Technical specifications

Clear, concise labeling on the package and pads guides experienced and infrequent caregivers alike through pad selection, placement, and connection.



	989803166021	M3713A	M3716A	M3717A	M3718A
<b>Description/name</b>	Adult/Child Preconnect Pads	Adult/Child Plus Pads	Adult/Child Radiolucent Pads	Infant Plus Pads	Adult/Child Radio-transparent Pads
<b>Pads per case</b>	10	10	10	5	10
<b>Indications</b>					External pacing, defibrillation
<b>Patient</b>					
<b>Infant &lt;10kg</b>				Infant	
<b>Child ≥10kg – &lt;25 kg</b>	Child	Child	Child		Child
<b>Adult ≥25kg</b>	Adult	Adult	Adult		Adult
<b>Conductor surface area (cm<sup>2</sup>)</b>	75	75	75	32	97
<b>Approximate lead wire length (cm)</b>	120*	120	120	60	120
<b>No. of hours on skin</b>	24	24	24	24	24
<b>Number of defibrillation shocks</b>	50	50	50	50	50
<b>Duration of pacing (hours) at 100mA, 80 bpm</b>	8	8	8	8	3
<b>Temperature range for storage</b>	15° – 35°C	15° – 35°C	15° – 35°C	15° – 35°C	15° – 35°C
<b>Shelf life (in months) from date of manufacture (may be less upon receipt)</b>	24	24	24	24	24
<b>Philips adapter compatibility</b>	05-10000 05-10100 05-10200	05-10000 05-10100 05-10200	05-10000 05-10100 05-10200	05-10000 05-10100 05-10200	05-10000 05-10100 05-10200

\* (approx. 30 outside package)

## Adapters

To facilitate connection of Philips HeartStart pads to other defibrillators in your facility, we offer HeartStart adapters. A built-in tether secures the adapter to the defibrillator's hands-free cable, providing its presence when needed.

Adapters are available for connecting HeartStart pads, (except those specified NA above) to the devices listed to the right.



## Model 05-10200

Adapter fits Philips hands-free cables M3507A or M1750A/B for connection to Hewlett-Packard CodeMaster 100, XE, XL, and XL+; Agilent Heartstream/Philips HeartStart XL and XLT; Philips HeartStart MRx and XL+; and Laerdal HeartStart 4000 defibrillator/monitors





M3719A	M3501A	M3504A	989803158211 (1 set) 989803158221 (5 sets)	989803139261	989803149981 (1 set) 989803149991 (5 sets)	M3870A
Infant Radio-transparent Pads	Adult/Child Pads with barrel connector	Infant Pads with barrel connector	Defibrillator Pads	SMART Pads II	SMART Pads III	FR2 Infant/Child Pads
5	10	5	1 or 5	1	1 or 5	1
Defibrillation, monitoring, and cardioversion						Defibrillation
Infant	Child Adult	Infant	Child Adult	Infant Child Adult	Infant Child Adult	Infant Child
50	75	32	85	80	80	85
60	60	60	120	120	120	120
24	24	24	24	24	24	24
50	50	50	50	50	50	50
1.5	8	8	8	8	8	N/A
15° – 35°C	15° – 35°C	15° – 35°C	0° – 50°C	0° – 50°C	0° – 50°C	0° – 32°C
24	24	24	30	30	30	30
05-10000	N/A	N/A	05-10000	05-10000	N/A	N/A
05-10100			05-10100	05-10100		
05-10200			05-10200	05-10200		

### Model 05-10000

Removable adapter for Medtronic Physio-Control LifePak 9, 10C, 11, 12, 20 and 500 defibrillators



### Model 05-10100

Removable adapter for Zoll 1200, 1400, 1600 and M-Series defibrillators

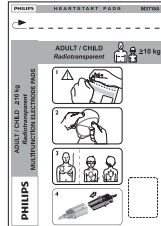
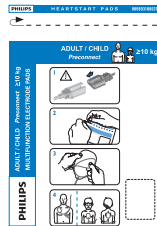
Pace, monitor, cardiovert, and defibrillate with a single pad family, as HeartStart adapters work with many popular defibrillators. When transferring a patient from one defibrillator to another, simply

plug the pad connector into the HeartStart adapter, then plug the adapter into your defibrillator's hands-free cable. (Note: The standard plug-style connector fits Philips HeartStart hands-free cable, model M3508A; no adapter necessary.)



Multifunction electrode pads

# Defibrillator compatibility



	989803166021	M3713A	M3716A	M3717A	M3718A
<b>Description/name</b>	Adult/Child Preconnect Pads	Adult/Child Plus Pads	Adult/Child Radiolucent Pads	Infant Plus Pads	Adult/Child Radio-transparent Pads

## Advanced Life Support Defibrillators (ALS)

<b>XL+</b> 861290	M3508A Therapy Cable, plug connector	●	●	●	●	●
	M3507A Therapy Cable, barrel connector					
<b>MRx/XL/XLT</b> M3535A, M3536A M4735A, M3500B	M3508A Therapy Cable, plug connector	● <sup>2</sup>	● <sup>2</sup>	● <sup>2</sup>	● <sup>1</sup>	● <sup>2</sup>
	M3507A Therapy Cable, barrel connector					

## Automated External Defibrillators (AEDs)

<b>FR3<sup>5</sup></b> 861388, 861389	● <sup>3,4</sup>	● <sup>3,4</sup>	● <sup>3,4</sup>		
<b>FRx</b> 861304, 861305	● <sup>3,4</sup>	● <sup>3,4</sup>	● <sup>3,4</sup>		
<b>FR2/FR2+</b> M3840A, M3841A, M3860A, M3861A, 861458, 861459	●	●	●		●

1 Not in AED mode, as the energy automatically delivered is 150 joules and therefore too high for an infant (<10kg)

2 In AED mode for adults (≥25kg) only, as the energy automatically delivered is 150 joules and therefore too high for a child (<25kg) or infant (<10kg)

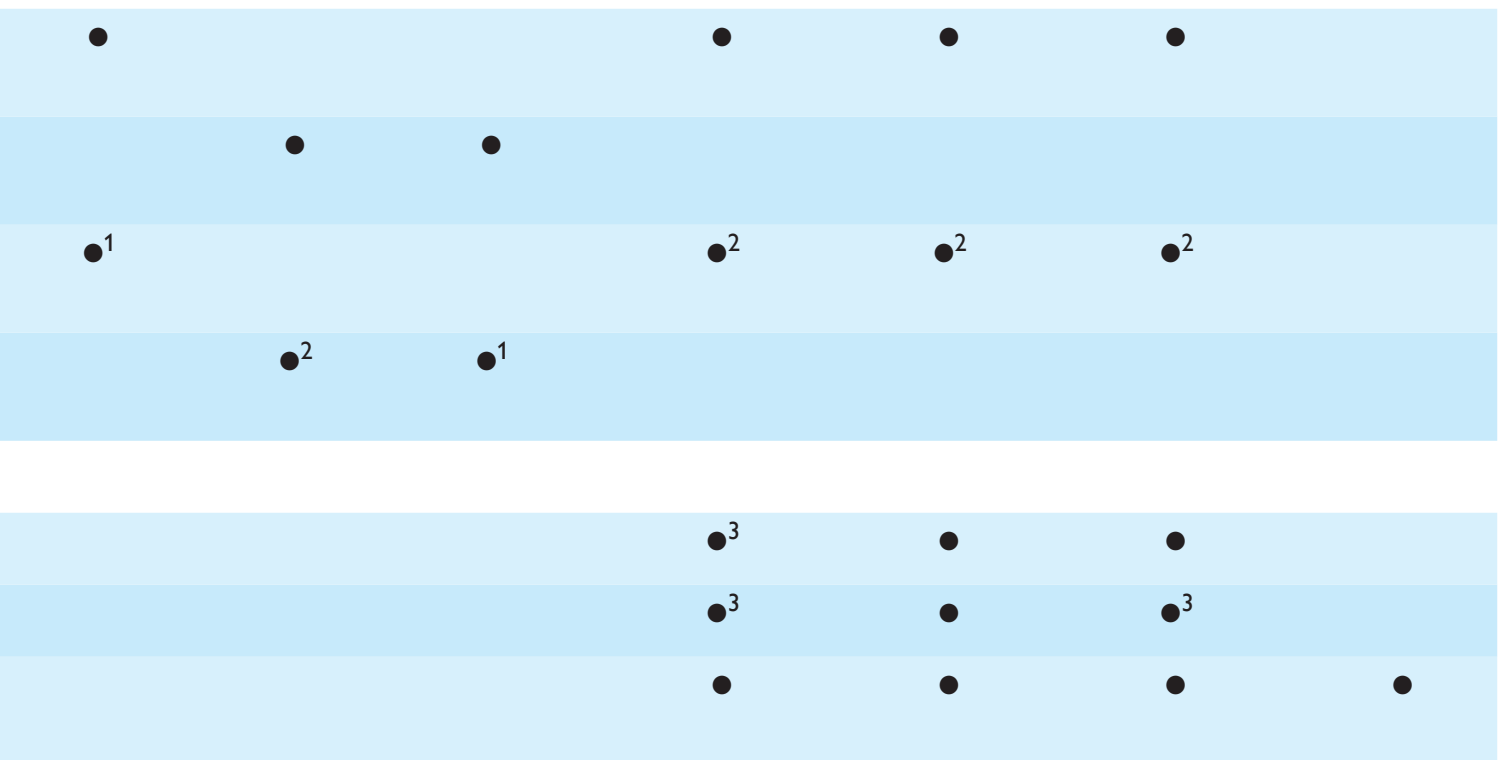
3 Pads can be used on adults and children ≥ 25kg or 8 years old.

4 Pads will operate with device for therapy, but cannot be left attached while device is in standby mode or while turned off due to self-test activity of the device

5 Not available in all geographic areas. Please check availability with your Sales and Marketing Center contact.



M3719A	M3501A	M3504A	989803158211 (1 set) 989803158221 (5 sets)	989803139261	989803149981 (1 set) 989803149991 (5 sets)	M3870A
Infant Radio-transparent Pads	Adult/Child Pads with barrel connector	Infant Pads with barrel connector	Defibrillator Pads	SMART Pads II	SMART Pads III	FR2 Infant/Child Pads



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How to reach us

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To order HeartStart pads and other  
resuscitation supplies and accessories:  
<http://www.philips.com/resuscitationsupplies>

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Please visit [www.philips.com/HeartStart/Supplies](http://www.philips.com/HeartStart/Supplies)



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