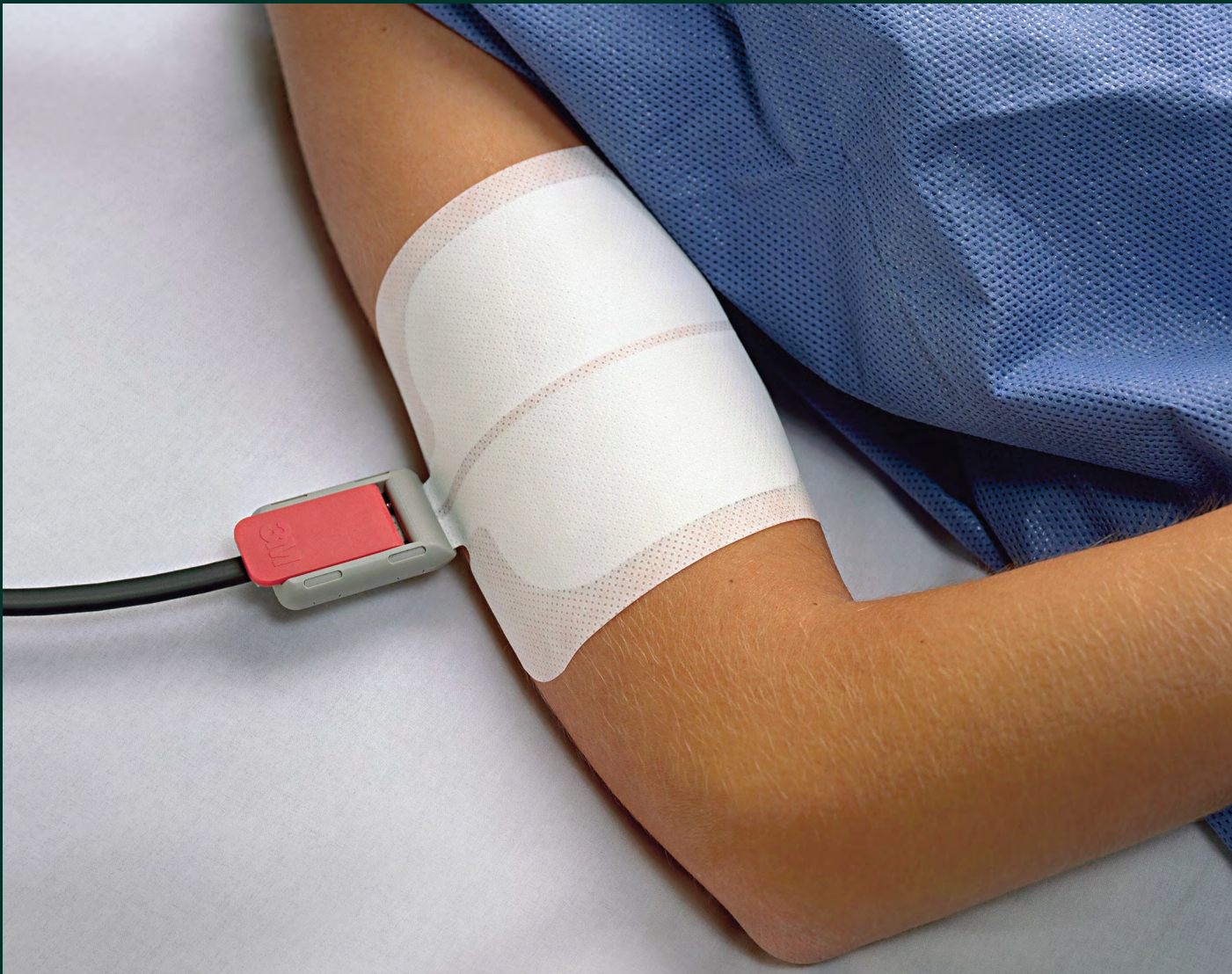




# Trusted choices for consistent performance

3M™ Universal Electrosurgical Pads  
and accessory guide



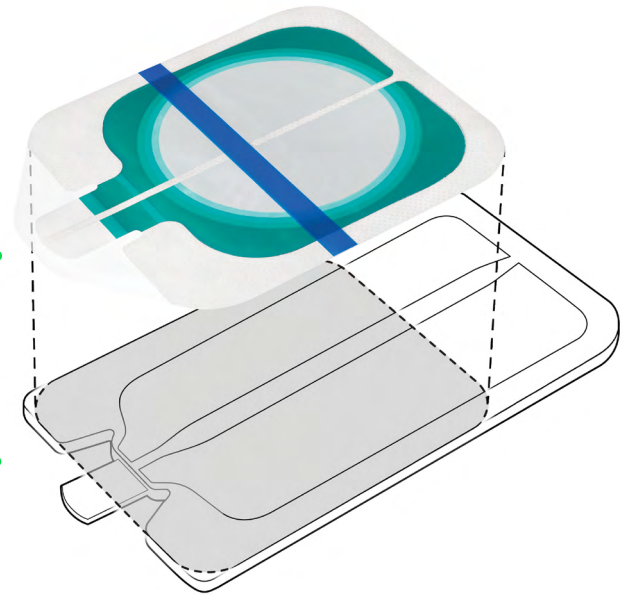
# The breakthrough electrosurgical pad

Solventum invented the Green Safety Ring and advanced electrosurgical pad technology with the 9100 Series of Universal Electrosurgical Pads. These pads are smaller in size, making them easy to place, while still meeting thermal performance safety standards.

Universal Electrosurgical Pad with Green Safety Ring

vs

Traditional larger pad size



## Safe electrosurgical pad placement can be a challenge

An electrosurgical pad should be placed on a well-vascularized, muscular surface. The small size, shape, and thin, but tough, construction of the 9100 Series of Universal Electrosurgical Pads encourages optimum use by eliminating the need for compromise on pad application sites. Since only a small area is needed for application, these pads will fit a greater number of suitable sites on the patient's body compared to larger 20 square inch pads.

### Small pads are ideal for patients who are:

- small in size and weight
- emaciated
- elderly
- with limited muscle tissue
- afflicted with a skin malady
- suffering burns over a significant percentage of the body
- requiring more than one electrosurgical pad due to multiple surgical sites

## Greater versatility

### The smaller size of the Universal Electrosurgical Pads means:

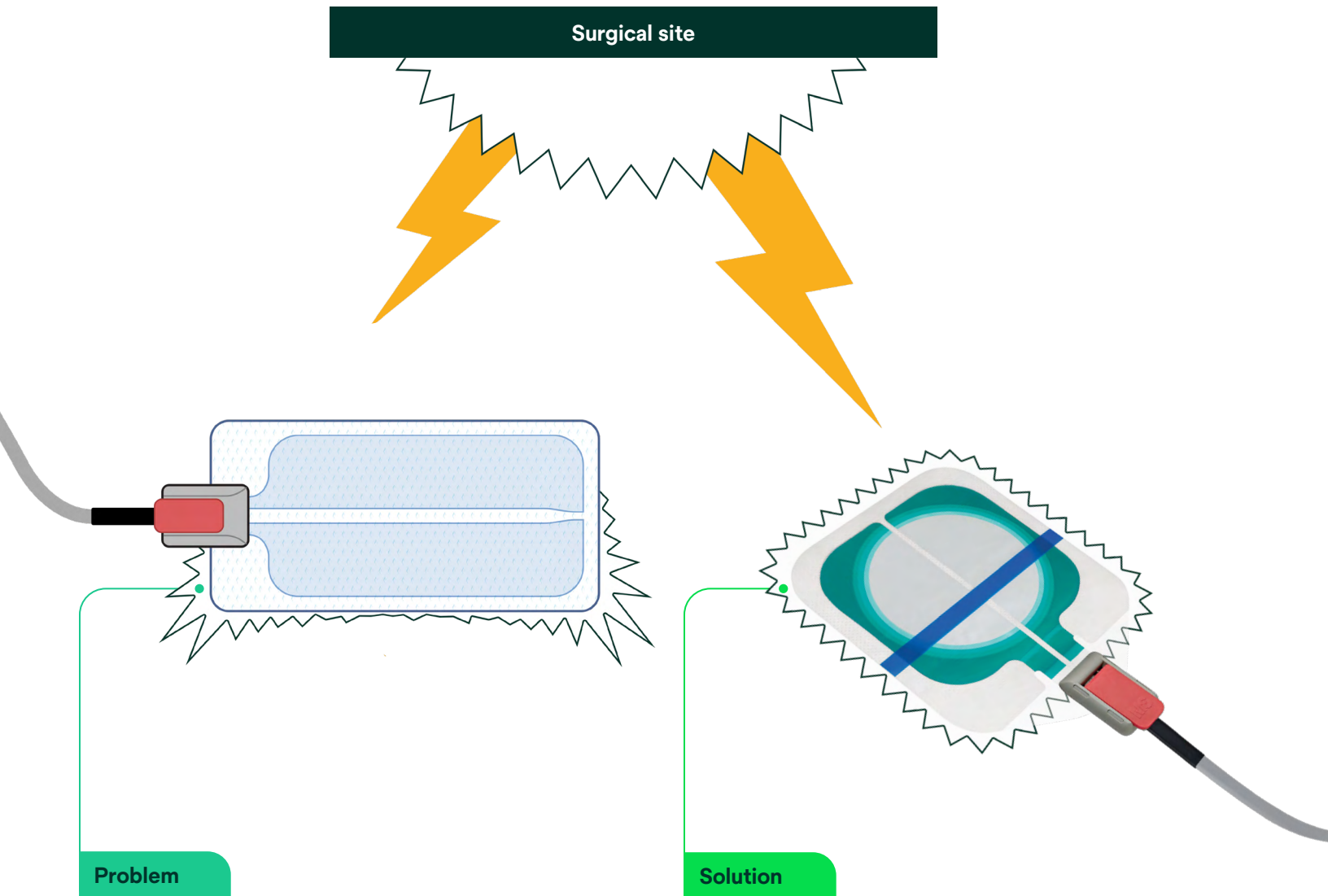
- More convenient handling
- Less area on patient to prep
- Greater number of suitable placement sites

### Placement of all electrosurgical pads can be limited by:

- scar tissue
- bony prominences
- implants
- pacemakers
- excessive hair
- weight bearing sites
- skin surfaces where fluid might pool
- suffering burns over a significant percentage of the body

# The solution to an old problem

The tendency of electrosurgical current and heat to cluster at the leading edge of a non-capacitive pad is a long-standing challenge with traditional electrosurgical pads. Because of this clustering (known as corner and edge effect), safety considerations dictate that traditional electrosurgical pads be placed with the long edge facing the surgical site (perpendicular).



## Problem

Current clusters at leading edge and corners

### Traditional Electrosurgical Pad Design

Due to inefficient current distribution, traditional electrosurgical pad designs should be positioned perpendicular to the surgical site to avoid burns.

## Solution

Uniform dispersion of current

### Universal Electrosurgical Pad with Green Safety Ring

The Green Safety Ring provides greater efficiency, reduces corner and edge effect, and the ability for universal orientation.

# The Solventum Green Safety Ring makes all the difference



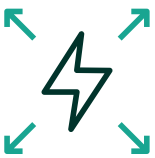
## Safe thermal performance

Universal Electrosurgical Pads meet the same thermal performance standard as traditional electrosurgical pads up to 33% larger and conforms to the ANSI/AAMI/IEC 60601-2-2 Standard (Section 201.15.101.5).



## Cost-effective

Universal Electrosurgical Pads can be used on any sized patient (including infants) when used in full accordance with the Instructions for Use. One size fits most patients allowing you to standardize your inventory and eliminate SKUs with a Solventum Universal Pad.



## Evenly distributed current

The Green Safety Ring disperses current uniformly over the entire surface area. Current is reduced at the leading edge and corners helping reduce corner and edge effect through uniform current dispersion.



## Broad compatibility

Universal Electrosurgical Pads are designed to be compatible with most electrosurgical generators (ESUs) used in surgical procedures defined by the ANSI/AAMI/IEC 60601-2-2 Standard. Refer to the Instruction for Use for more information.



## Not made with natural rubber latex

Universal Electrosurgical Pads are not made with natural rubber latex.

For additional information, please refer to the Instructions for Use.

Universal Electrosurgical Pads are easy to place on the patient. It can be oriented in any direction and can be used at all appropriate application sites that would be too small for larger traditional electrosurgical pads.



Green Safety Ring **disperses electrosurgical radio frequency (RF) current uniformly** over the pads entire surface. This allows the pad to be smaller and easier to place.

For patients with fragile skin, the non-aggressive border adhesive **helps reduce the risk of skin stripping.**

Tranthermal backing material lets **heat escape 25% faster** than foam and reduces risk of excessive heat buildup.

Non-woven laminate, polyethylene construction, and non-conductive isolation border forms a barrier to moisture, **is waterproof, and is fluid resistant.**

# 3M™ Electrosurgical Reusable Cables for Non-Corded Grounding Pads

For Split Style Pads



## 21174

*(10 ft. cable length)*

Solventum order # 21174

Solventum part # 70-2007-0195-4



## 21174L

*(15 ft. cable length)*

Solventum order # 21174L

Solventum part # 70-2007-0196-2



## 21174ABC

*(10 ft. cable length)*

Solventum order # 21174ABC

Solventum part # 70-2007-0197-0

# Frequently asked questions

## Generator and Grounding Pad compatibility

- **Can Solventum Grounding Pads be used with ANY medical device that generates or uses radio frequency (RF) current?**

No. Solventum Grounding Pads are intended for use with standard electrosurgical generators for the purposes of tissue cutting and coagulation as described in the ANSI/AAMI/IEC 60601-2-2:2017 standard. Solventum Grounding Pads have not been approved for other medical uses such as cryogenic tissue freezing or pain management procedures. If there is any question about an RF medical device, the manufacturer should be asked to certify in writing that their device is safe and efficacious for use with grounding pads that comply with the ANSI/AAMI/IEC 60601-2-2:2017 standard.
- **What does CQM stand for?**

CQM is the abbreviation for Contact Quality Monitor and is the generic term used for REM™, ARM™, or NESSY™, all of which are trademarks of individual generator manufacturers.
- **How does a CQM protect the patient against electrosurgical burns?**

The CQM is designed to be used with split style grounding pads, and will not permit the generator to work if the grounding pad does not have adequate electrical contact with the patient.
- **Can you use a split style grounding pad on any generator?**

No. For older generators which are not equipped with a CQM, only solid style grounding pads can be used. If a split pad is mistakenly used, the generator will refuse to work. Solventum no longer sells solid style grounding pads.
- **Why does Solventum no longer sell solid style grounding pads?**

This portfolio change aligns to Section 201.15.101.9. of the ANSI/AAMI/IEC 60601-2-2:2017 and EN 60601-2-2:2018 standards which specify that ground pads used for conventional high frequency electrosurgical procedures be compatible with a Contact Quality Monitor (CQM). Only split style ground pads have CQM capability.
- **What will happen if a grounding pad starts to come loose under the drapes during surgery?**

If a split style pad is being used with a generator equipped with a CQM, an alarm will sound and the generator will be deactivated. If a solid pad is being used, there will be no alarm even if the pad becomes completely detached from the patient.

## Clinical considerations

- **Should grounding pads be placed under warming blankets or warming devices?**

No. The use of a warming blanket or warming device over a grounding pad elevates the skin temperature at the pad site and does not allow the heat from under the pad to escape properly. If it is not possible to keep the pad away from the warming blanket/device, then the warming blanket/device should not be used at the same time as the electrosurgical generator.
- **What conditions can make a grounding pad stick more aggressively to a patient, and possibly cause some delamination of the conductive adhesive from the pad upon removal?**

Applying a grounding pad to a weight-bearing site will significantly increase its adhesion to the patient. In addition, perspiration from a patient will be absorbed by the conductive adhesive on the pad making it softer and stickier. Additional care and a very slow removal technique while supporting the skin should be used on any grounding pad that is strongly adhered to the patient.
- **If a patient is only under local anesthetic for a surgical procedure, it is possible that they may feel some sensation of heat under the grounding pad?**

Although uncommon, this is possible. In the extremely unlikely circumstance that the sensation is so hot as to be uncomfortable, the grounding pad should be checked to make sure that it is still in full contact with the patient.

## Grounding Pad Cables and Adapters





- **What is a Y-adapter and when is it used?**

A Y-adapter is used to connect two split style pads to an electrosurgical generator with a CQM. It is used when one split pad alone will not satisfy the CQM system on the generator due to high skin impedance or excessive adipose tissue on the patient.
- **Does the red tab side of a Solventum Reusable Grounding Pad Cable have to face a certain direction when attached to a Solventum Non-Corded Grounding Pad?**

No. The conductors inside the reusable cable will make contact with the pad either way.

# 3M™ Electrosurgical Pads

## ordering information

Catalog number	Description	Conductive adhesive area	Pads/pouch	Pads/shipper		
<b>9100 Series</b>						
	<b>9160</b>	Universal non-corded, split grounding pad for use with 3M™ Electrosurgical Reusable Cable 21174. No patient weight restrictions.	15 in <sup>2</sup> (97 cm <sup>2</sup> )	1	100	
	<b>9160F</b>			5	200	
	<b>9165</b>	Universal precorded, split grounding pad with 9 ft cord (2.74m). No patient weight restrictions.	15 in <sup>2</sup> (97 cm <sup>2</sup> )	1	40	
	<b>9165E</b>					Universal precorded, split grounding pad with 9 ft cord (2.74m). No patient weight restrictions. Europe only.
	<b>9165L</b>					Universal precorded, split grounding pad with 15 ft cord (4.57m). No patient weight restrictions.
<b>1100 Series</b>						
	<b>1182</b>	Small, non-corded, split grounding pad for use with Electrosurgical reusable cable 21174. For use with patients 15kg or less.	10 in <sup>2</sup> (64.5 cm <sup>2</sup> )	1	100	
<b>8100 Series</b>						
	<b>8180F</b>	Non-corded, split grounding pad for use with Electrosurgical Reusable Cable 21174. For use with patients greater than 15kg.	20 in <sup>2</sup> (129 cm <sup>2</sup> )	5	200	



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EN\_GL\_70-2011-8067-9