

## Spinal Cord Stimulation (SCS) System Comparison Chart

BENEFIT	FEATURE	BOSTON SCIENTIFIC PRECISION SPECTRA	MEDTRONIC RESTORESENSOR®	ST. JUDE EON MINI™ (PROTÉGÉ™*)	
OVERVIEW	System Type	3D Finite Element Model, Constant Current at Each Contact (MICC)	Constant Voltage (Single Source)	Constant Current (Single Source)	
	# of Power Sources	32	1	1	
COVERAGE	# of Contacts	32	16	16	
	16 Contact Percutaneous Lead	Yes (Infinion™ 16 Lead)	No	No	
	32 Contact Surgical Lead	Yes (CoverEdge™ 32 Lead, CoverEdge X 32 Lead)	No	No	
	Max Pulse Width	1000µs <sup>a</sup>	1000µs <sup>b</sup>	500µs <sup>c</sup>	
	Max Voltage	15 V <sup>a</sup>	10.5 V <sup>b</sup>	12 V <sup>c</sup>	
	Max Frequency	1200 Hz <sup>a</sup>	1200 Hz <sup>b</sup>	1200 Hz <sup>c</sup>	
FLEXIBILITY	# of Lead Ports	4	2	2	
	Reserve Lead Ports (with 2x8 Contact Implant)	2	0	0	
	Percutaneous Lead Options (≥ 8 Contacts)	5	5	2	
	Imaging Modality Options	CT, CT w/ Contrast, Nuclear Medicine Scans (i.e., PET CT), Ultrasound, X-Ray, MRI Conditional Head Scans <sup>d</sup>	CT, CT w/ Contrast, Nuclear Medicine Scans (i.e., PET CT), Ultrasound, X-Ray, MRI Conditional Scans (MRI conditionality varies based on system type and includes head only and full body scans) <sup>e</sup>	CT, CT w/ Contrast, Nuclear Medicine Scans (i.e., PET CT), Ultrasound, X-Ray <sup>f</sup>	
ADVANCED CONTROL	PHYSICIAN BENEFITS	3D Programming Algorithm	Yes <sup>g</sup> (Illumina 3D™ Programming)	No	No
		Contact Synchronization	Yes <sup>g</sup> (LeadSync™ Technology)	No	No
		Drag-and-Drop Programming Interface	Yes <sup>g</sup> (FluoroSync™ Interface)	No	No
		Automated Anode / Cathode Focusing	Yes <sup>g</sup> (Focus Feature)	No	No
		Ability to Detect Relative Lead Position	Yes <sup>g</sup> (EGL Scan™ Technology)	No	No
		Upgradeable	Yes	Yes	Yes
		Fractionalized Can	Yes <sup>g</sup> (Prism™ Technology)	No	No
		Move Electric Field in 1% Increments	Yes	No	No
		Tightly Spaced Contacts	Yes (1mm)	Yes (1.5mm)	No <sup>c</sup>
		Joystick Control	Yes	No	No
		Multilumen Lead Construction	Yes	No	No
	PATIENT BENEFITS	Auto Impedance Adjust at Each Contact	Yes	No	No
		Cordless Charger	Yes <sup>g</sup> (FreeLink™ Technology)	No <sup>h</sup>	No <sup>c</sup>
		Cordless Remote with up to 36" Wireless Range	Yes <sup>g</sup> (FreeLink Technology, 36")	No <sup>h</sup>	No <sup>c</sup>
		Battery with Contoured Oval Shape	Yes	No	No
		IPG Footprint	20cm <sup>2</sup> <sup>i</sup>	26cm <sup>2</sup> <sup>i</sup>	21cm <sup>2</sup> <sup>i</sup>
		Volume	22cc <sup>a</sup>	22cc <sup>b</sup>	18cc <sup>c</sup>
		Thickness (Maximum)	11mm (battery) <sup>a</sup>	11mm (connector) <sup>b</sup>	11mm (connector) <sup>c</sup>
		Warranty	5 years <sup>j</sup>	5 years <sup>t</sup>	1 year <sup>c</sup> (7 years <sup>s</sup> )
Battery Warranty Voided by Over-Discharge	No <sup>j</sup>	Yes <sup>t</sup>	Yes <sup>c</sup>		
Battery Explant Due to Over-Discharge	No <sup>j</sup>	Yes <sup>b</sup>	Yes <sup>c</sup>		

## References

- a) Boston Scientific Precision Spectra™ Implantable Pulse Generator Directions for Use, 90655621-04RevA, 2012, p 6–7.
- b) Medtronic RestoreSensor® Implant Manual, M934840A001, 2011, p 6–7, 9.
- c) St. Jude Eon Mini™ Neurostimulation System Clinician's Manual, 37-1 004-01 E Mar 08, p 17–18, 79–80, 89–90, 96–107.
- d) Boston Scientific Precision Spectra ImageReady™ MRI Guidelines, 90829497-02 Rev B, 2014.
- e) Medtronic RestoreSensor SureScan® Implant Manual, M940100A004, 2013 p 12.
- f) <http://professional.sjm.com/products/neuro/scs/generators> 18 MAY 2014.
- g) Boston Scientific Precision Spectra Programming Manual, 90780062-01 Rev E, 2014 p 50, 67-70
- h) Medtronic Patient Programmer Manual, M948430A001, 2012 p 28–9.
- i) Boston Scientific calculations. Data on file.
- j) Boston Scientific Limited Warranty, 90668557-03RevB, 2012, p 3.
- k) Medtronic Limited Warranty Statement, M930458A006, 2010.

\* FDA approved rename of Eon Mini to Protégé™. PMA P010032 Supplement Number S074.

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**Indications for Use.** The Precision Spectra Spinal Cord Stimulator System (Precision Spectra System) is indicated as an aid in the management of chronic intractable pain of the trunk and/or limbs, including unilateral or bilateral pain associated with the following: failed back surgery syndrome, intractable low back pain, and leg pain.

**Contraindications, warnings, precautions, side effects.** The Precision Spectra System is contraindicated for patients who: are unable to operate the Precision Spectra System, have failed trial stimulation by failing to receive effective pain relief, are poor surgical risks, or are pregnant. Refer to the Instructions for Use provided with the Precision Spectra System or ControlYourPain.com for potential adverse effects, warnings, and precautions prior to using this product.

**Caution:** Federal (U.S.) law restricts this device to sale by or on the order of a physician.

The Precision Spectra SCS System with ImageReady MRI Technology is “MR-Conditional” only when exposed to the MRI environment under the specific conditions defined in the ImageReady MRI Guidelines for Precision Spectra Spinal Cord Stimulator System.

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