

Signia™ stapling system vs. Echelon™* 3000 stapler

Intelligent stapling –the wise choice.

Adaptive Firing™ technology continuously senses tissue and measures force to automatically adjust firing speed based on tissue thickness to optimize staple formation.^{†,1-3} The Signia™ stapler also provides real-time feedback^{‡,4} on tissue thickness and firing speed at initial clamp and throughout firing.

These are just two of its many technological advantages over the Echelon™* 3000 stapler.

Key features	Medtronic Signia stapler™ with Tri-Staple™ reloads	Ethicon Echelon™* 3000 stapler with GST cartridges
Powered capabilities	Fully powered rotation, articulation, clamping, and firing	Powered firing and articulation only
Life cycle	Power handle: 300 procedures Adapters: 50 procedures	Single procedure, disposable
User feedback	Real-time visual feedback during clamping and firing – and a safety warning for excessive force	Manual, tactile feedback during clamping only
Interchangeable adapters	Yes, with interchangeable functional shaft lengths: Short, standard, and XL (linear stapling)	No, functional shaft length is permanently fixed to handle
Battery	Rechargeable battery	Disposable battery
Waste reduction	1 power handle and 6 adapters replace 300 disposable handles	Handle and lithium battery disposed after every use
Reload options	Fully compatible with all Tri-Staple™ standard and specialty reloads, available in a variety of lengths and sizes	Cartridge-based system that requires multiple handles to fire different staple line lengths
Staple height	Tri-Staple™ technology delivers three rows of varied-height staples with graduated compression to deliver: <ul style="list-style-type: none"> • Less stress^{§,‡,5,6} • Greater perfusion^{§,7} • Superior performance across a broad range of tissue thicknesses^{†,¶,6,8-11} 	Single staple height across all staple rows
Stapler knife blade	New knife blade with every firing	Reusable knife blade

Designed with sustainability in mind

Over the life of its power handle, the Signia™ stapler with Tri-Staple™ reloads produces **38%** less waste than the Echelon™* 3000 stapler with GST cartridges.^{#,12}

[†] Preclinical results may not correlate with clinical performance in humans. [‡] Bench test results may not necessarily be indicative of clinical performance. [§] Compared to flat-faced cartridges with single-height staples. [¶] Compared to Echelon Flex™ green reloads analysis comparing different stapler designs, performance, and impact on tissues under compression using 2-D finite element analysis. [¶] Bench test results may not necessarily be indicative of clinical performance. Compared to Ethicon Echelon Flex™. [#] Total waste based on disposable device component weights and expected ratio of each component over 300 procedures, assumed six firings per procedure.

Confidence for you. Strength for patients.^{†,1-3}

Data shows the Signia™ stapling system delivers more consistent staple lines – with greater staple line security.^{†,‡,1-3} See its unique advantages over the Echelon™ 3000 stapler.



Intelligence

30% greater staple line security^{†,§,12}
driven by Adaptive Firing™ technology



Confidence

3x less likely to bleed^{†,¶,12}
at the staple line



Versatility

Fully compatible with all
Tri-Staple™ standard and
specialty reloads

**Forms the line.
Holds the line.**

Visit us at **Medtronic.com/signia**
to explore the intelligent
Signia™ stapling portfolio.



[†] Preclinical results may not correlate with clinical performance in humans.

[‡] Compared to manual and fixed-speed powered staplers.

[§] Comparing the Signia™ stapler with Tri-Staple™ purple staple lines to Echelon™ 3000 with GST blue staple lines.

[¶] Comparing the Signia™ stapler with Tri-Staple™ tan staple lines to Echelon™ 3000 with GST white staple lines (measured at t = 5 minutes; p = 0.029).

1. Based on internal test report #R2146-173-0, ASA verification testing with slow speed force limit evaluation. 2015.
2. Based on internal test report #R2146-151-0, Powered stapling firing speed DOE analysis and ASA parameters. 2015.
3. Based on internal report #RE00218740, Signia™ stapling adaptive firing technology data calculations and references. Aug. 7, 2019.
4. Based on internal test report #RE00055515, Surgeon evaluation testing Signia™ stapling system sensing technology and real-time feedback. Aug. 4, 2016.
5. Based on internal test report #PCG-007 rev 1, Perfusion into Clamped Media. Sept. 2, 2011.
6. Based on internal test report #PCG-018, 2-D FEA of linear staplers. November 2012.
7. Based on internal test report #2128-002-2, Final analysis of staple-line vascularity using MicroCT. July 2015.
8. Based on internal test report #PCG-001, Tyvek pull-apart test comparing Echelon™ and Tri-Staple™ technology. March 2011.
9. Based on internal test report #PCG-004, Undercrimp comparisons in increasing pads of foam between Echelon™ and Tri-Staple™ technology. January 2012.
10. Based on internal test report #PCG-006, Staple formation comparison between Medtronic EGIA60AXT and Ethicon ECR60G in an ex-vivo tissue model. January 2012.
11. Based on internal test report #PCG-019, Comparative test of Endo GIA™ stapler using black reloads with Tri-Staple™ technology and Ethicon Echelon Flex™ black reloads. June 2014.
12. Based on internal test report #RE00468708 rev C, Echelon™ 3000 competitive evidence final report. July 18, 2025.

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