

**Johnson & Johnson
MedTech**

Surgical Stapling



ECHELON LINEAR™ Cutter

Value analysis summary

Fewer leakage pathways at the staple line.^{1*} Greater control.^{2#}

* Benchtop testing on porcine colon measuring leakage pathway rates at the staple line at 30mmHg, comparing rates of 52.8% for ETHICON™ Linear Cutter [NTLC] (NTLC75 with SR75 at lower (blue) tissue gap setting), 52.8% for Medtronic GIA with Tri-Staple (GIA80MTS with purple medium/thick reloads GIA80MTC), 83.3% for Medtronic GIA with DST (GIA8038S with blue reload GIA8038L), to 27.7% for Echelon Linear Cutter (GLC80 with blue reload GLCR80B) (n=36, p<0.001). Based on benchtop testing and clinical effect is unknown. # In a surgeon usability survey using simulated procedures, 64.9% of surgeons agreed or strongly agreed that the device provided greater control of device placement on tissue when halves are locked vs when the device was unlocked.

About this device

Johnson & Johnson MedTech never stops innovating for surgery’s biggest challenges. With advanced stapling technology, the latest ECHELON LINEAR™ Cutter helps surgeons support patient outcomes.

The ECHELON LINEAR™ Cutter delivers two, double-staggered rows of staples while simultaneously dividing the tissue between rows.

Fewer leakage pathways at the staple line^{1*}

- Gripping surface technology
- 3D stapling technology
- Re-engineered device jaws

Greater control^{2#}

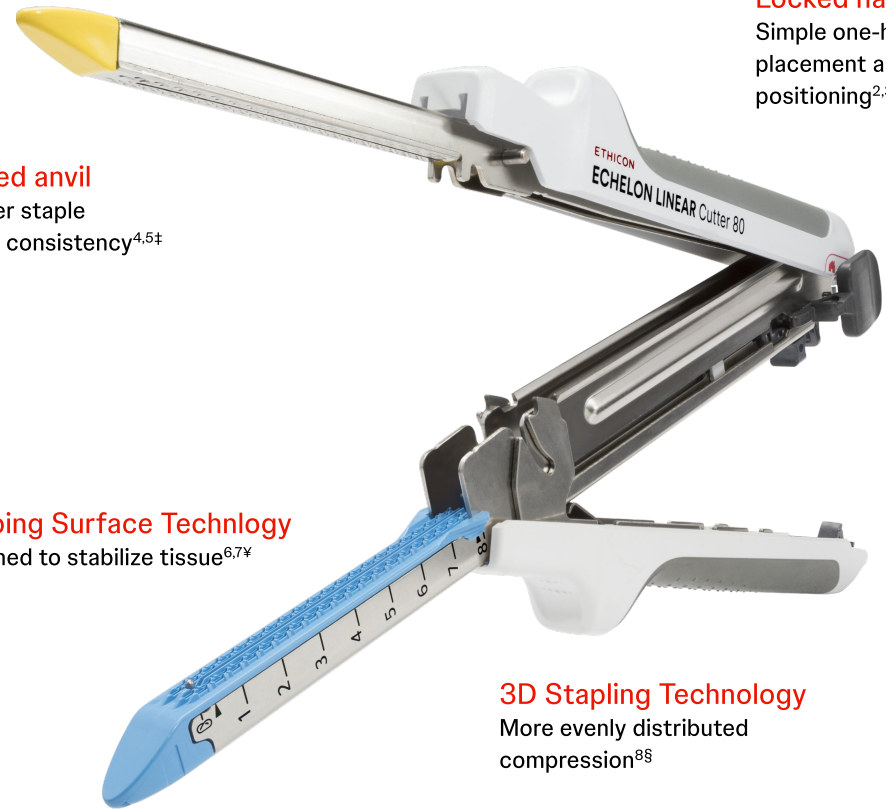
- Designed with locked halves allowing for one-handed device placement^{2,3†}

Curved anvil
Greater staple height consistency^{4,5‡}

Gripping Surface Technology
Designed to stabilize tissue^{6,7¥}

3D Stapling Technology
More evenly distributed compression^{8§}

Locked halves
Simple one-handed placement and positioning^{2,3¶}



* Benchtop testing on porcine colon measuring leakage pathway rates at the staple line at 30mmHg, comparing rates of 52.8% for ETHICON™ Linear Cutter [NTLC] (NTLC75 with SR75 at lower (blue) tissue gap setting), 52.8% for Medtronic GIA with Tri-Staple (GIA80MTS with purple medium/thick reloads GIA80MTC), 83.3% for Medtronic GIA with DST (GIA8038S with blue reload GIA8038L), to 27.7% for Echelon Linear Cutter (GLC80 with blue reload GLCR80B) (n=36, p<0.001). Based on benchtop testing and clinical effect is unknown. # In a surgeon usability survey using simulated procedures, 64.9% of surgeons agreed or strongly agreed that the device provided greater control of device placement on tissue when halves are locked vs when the device was unlocked. †Based upon surgeon usability evaluation, 32 out of 37 responses were in a favorable view of ECHELON LINEAR™ Cutter enabling one-handed positioning and placement when the halves are locked. ‡ Benchtop testing comparing Formed Staple Height standard deviation of ECHELON LINEAR™ Cutter to ETHICON™ Linear Cutter [NTLC], and Medtronic GIA™ with DST™ Technology, averaged across on a range of tissue thickness (1.5-3.3mm), n=32 per device per tissue thickness, p<0.001. Based on benchtop testing and clinical effect is unknown. ¥Benchtop testing in 1.5mm porcine colon measuring tissue slippage failure rate under high cutting force. ECHELON LINEAR™ Cutter with Gripping Surface Technology (GLC80 with GLCR80B) [3.75%], n=12. Based on benchtop testing and clinical effect is unknown. § Staple line compression analysis on Ethylene-Vinyl Acetate (EVA) foam assessing the deformation of foam. ECHELON LINEAR™ Cutter (GLC80 with GLCR80B) had better distributed compression pressure at 7.20% average pressure variation (N=30,320) compared to Medtronic GIA™ with DST™ Technology (GIA8038S with GIA8038L) at 10.93% (N=31980), (p=0.01). Based on benchtop testing and clinical effect is unknown. ¶ Based upon surgeon usability evaluation, 32 out of 37 responses were in a favorable view of ECHELON LINEAR™ Cutter enabling simple one-handed positioning and placement when the halves are locked.

Product overview

Fewer leakage pathways^{1*}

The ECHELON LINEAR™ Cutter, with advanced stapling technology, had 47% fewer leakage pathways at the staple line compared to ETHICON™ Linear Cutter (NTLC) and GIA™ with Tri-Staple™ Technology; and 67% fewer leakage pathways at the staple line compared to GIA™ with DST™ Technology.^{1*}

GST and 3D stapling – the same advanced stapling technologies as on the ECHELON CIRCULAR™ Powered Stapler and ECHELON CONTOUR™ Curved Cutter.

GST - Designed to stabilize tissue^{6,7#}



The ECHELON LINEAR™ Cutter is designed to stabilize and compress the tissue where it is needed, which may result in lower potential of tissue slippage versus traditional linear cutters.^{6,7†}

3D stapling – Reduced risk of leakage pathways at the staple line^{8‡}



3D Stapling Technology provided more evenly distributed compression throughout the staple line[‡], reducing potential leakage pathways.^{8‡}

^{*}Benchtop testing on porcine colon measuring leakage pathway rates at the staple line at 30mmHg, comparing rates of 52.8% for ETHICON™ Linear Cutter [NTLC] (NTLC75 with SR75 at lower (blue) tissue gap setting), 52.8% for Medtronic GIA with Tri-Staple (GIA80MTS with purple medium/thick reloads GIA80MTC), 83.3% for Medtronic GIA with DST (GIA8038S with blue reload GIA8038L), to 27.7% for Echelon Linear Cutter (GLC80 with blue reload GLCR80B) (n=36, p<0.001). Based on benchtop testing and clinical effect is unknown. [#] Benchtop testing in 1.5mm porcine colon measuring tissue slippage failure rate under high cutting force. ECHELON LINEAR™ Cutter with Gripping Surface Technology (GLC80 with GLCR80B) [3.75%], n=12. Based on benchtop testing and clinical effect is unknown. [†] Benchtop testing in 1.5mm porcine colon measuring tissue slippage failure rate under high cutting force. ECHELON LINEAR™ Cutter with Gripping Surface Technology (GLC80 with GLCR80B) [3.75%] compared to ETHICON™ Linear Cutter (NTLC75 with SLR75 at blue tissue gap setting) [15.64%] and Medtronic GIA™ with DST™ Technology (GIA8038S with GIA8038L) [18.83%], n=12. Based on benchtop testing and clinical effect is unknown. [‡] Staple line assessment of compression zones inside of the staple line on Ethylene-Vinyl Acetate (EVA) foam, comparing lower pressure outliers rates of 0.6% for ECHELON LINEAR™ Cutter (GLC80 with GLCR80B, N= 30,320) to 0.8% for Medtronic GIA™ with DST™ Technology (GIA8038S with GIA8038L, N=31,980) (P<0.001). Based on benchtop testing and clinical effect is unknown. [¥] Staple line compression analysis on Ethylene-Vinyl Acetate (EVA) foam assessing the deformation of foam. ECHELON LINEAR™ Cutter (GLC80 with GLCR80B) had better distributed compression pressure at 7.20% average pressure variation (N=30,320) compared to Medtronic GIA™ with DST™ Technology (GIA8038S with GIA8038L) at 10.93% (N=31980), (p=0.01). Based on benchtop testing and clinical

Demonstrated reliable staple formation^{9*}

ECHELON LINEAR™ Cutter with GST and 3D Stapling Technology achieved reliable staple formation across a broad range of tissue thickness.^{9*}

- Re-engineered device jaws delivered 54% less staple height variation versus Medtronic GIA™ with DST™ Technology^{4#}
- Fewer malformed staples compared to Medtronic GIA™ with DST™ Technology^{4†}



* Benchtop testing in porcine tissue. Reliable staple line integrity defined as minimum 0.9 reliability at 90% confidence over the intended tissue thickness range for each reload. The ECHELON LINEAR Cutter accommodates a tissue thickness range of 1.5mm to 3.3mm (measured at 8g/mm², tissue comfortably compressed to closed staple height during firing per IFU). Based on benchtop testing and clinical effect is unknown. # Benchtop testing in 1.5mm porcine colon comparing Formed Staple Height standard deviation of 0.00195" for ECHELON LINEAR™ Cutter (GLC80 with GLCR80B) compared to 0.00421" for Medtronic GIA™ with DST™ Technology (GIA8038S with GIA8038L), n=32, p<0.001. Based on benchtop testing and clinical effect is unknown. † Benchtop testing assessing the staple leg malformed rate in 2.5mm design limit excised porcine tissue, comparing rates of 0.20% malformed rate for ECHELON LINEAR™ Cutter (GLC80 with blue reload GLCR80B) to 11.02% malformed rate for GIA™ with DST™ Technology (GIA8038S with blue reload GIA8038L), (n=32 firings) (p<0.05). Based on benchtop testing and clinical effect is unknown.

Greater control^{2*}

ECHELON LINEAR™ Cutter is the first linear cutter with locked halves to enable one-handed device placement.^{2,3#} It offers surgeons the flexibility to keep the device halves locked or to separate them.

- The ECHELON LINEAR™ Cutter provided greater control of device placement when halves are locked.^{2*}
- ECHELON LINEAR™ Cutter, with its narrow jaws and 4-row staple line, required
 - 50% less force to fire than the 6-row ETHICON™ Linear Cutter (NTLC)^{4†}
 - 42% less force to fire (on indicated tissue) than the 6-row Medtronic GIA™ with Tri-Staple™ Technology^{10‡}



* In a surgeon usability survey using simulated procedures, 64.9% of surgeons agreed or strongly agreed that the device provided greater control of device placement on tissue when halves are locked vs when the device was unlocked.

Based upon surgeon usability evaluation, 32 out of 37 responses were in a favorable view of ECHELON LINEAR™ Cutter enabling one-handed positioning and placement when the halves are locked. † Benchtop testing on porcine colon measuring force to fire on 1.5mm colon with blue reload, comparing means of 7.82 lbf for the 4-row, ECHELON LINEAR™ Cutter to the means of 15.62 lbf for the 6-row, ETHICON™ Linear Cutter (NTLC) (n=32, p<0.001). Based on benchtop testing and clinical effect is unknown.

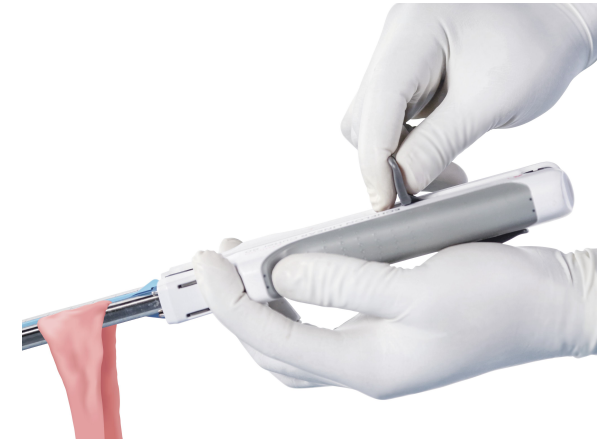
‡ Benchtop assessment on excised porcine colon, comparing average (±standard deviation) force to fire of Medtronic GIA™ with Tri-Staple™ Technology GIA80MTS with purple reload GIA80MTC (13.5lb ±0.82, N=20) to ECHELON LINEAR™ Cutter GLC80 with blue reloads GLCR80B (7.82lb ±0.50, N=32), p<0.001. Based on benchtop testing and clinical effect is unknown.

Ease of use^{2,3*}

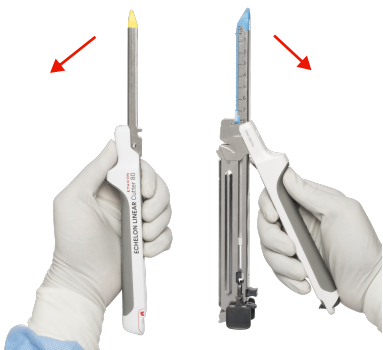
Choose to keep device halves connected for one-handed device placement on tissue.^{2,3#}

Using two hands will help stabilize the device while firing, especially on thick tissue.

Use one of two techniques to separate device halves.
The device halves can be separated by:

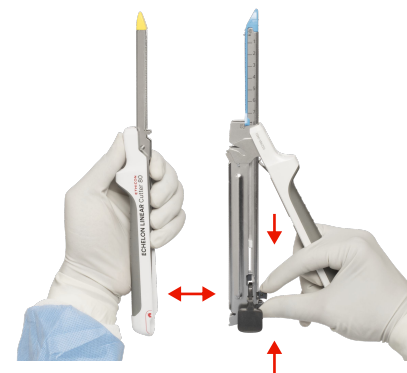


Pull-apart technique



Gently pull the device halves apart to separate.

Pinch technique



Pinch the release levers to decouple the device halves.

* Based upon surgeon usability evaluation, 32 out of 37 responses were in a favorable view of ECHELON LINEAR™ Cutter enabling simple one-handed positioning and placement when the halves are locked.
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Ordering & additional information

Device specs



ECHELON LINEAR™ Cutter



ETHICON™ Linear Cutter



PROXIMATE™ Linear Cutter

	ECHELON LINEAR™ Cutter	ETHICON™ Linear Cutter	PROXIMATE™ Linear Cutter
Product Codes	GLC60, GLC80, GLC100	NTLC55, NTLC75	TCD75, TCT10, TCT55, TCT75, TLC10, TLC55, TLC75, TVC55
Associated Reloads	GLCR60B (60mm, Blue) GLCR60G (60mm, Green) GLCR80B (80mm, Blue) GLCR80G (80mm, Green) GLCR100B (100mm, Blue) GLCR100G (100mm, Green)	SR55 SR75	TVR55, TCR55, TRT55, TCR75 TRD75, TRT75, TCR10, TRT10
Description	Linear Cutter with Reloads Sold Separately	Selectable Linear Cutter with 3D Staples	Linear Cutter with Reload
Device Technology	3D Stapling and Gripping Surface Technology	Selectable Staple Height	Cam Closure Mechanism
Size	60mm, 80mm, 100mm	55mm, 75mm	55mm, 75mm, 100mm
Staple Rows	4	6	4
Closed Staple Height	1.5mm, 2.0mm	1.5mm, 1.8mm, 2.0mm	1.5mm, 1.8mm, 2.0mm
Max Firings	8	12	8
Staple Technology	3D	3D	B-Form
Qty./Box	3 staplers per box 12 reloads per box	3 staplers per box 12 reloads per box	3 staplers per box 12 reloads per box

Ordering information

ECHELON LINEAR™ Cutter

Product Code	Description	Quantity
GLC60	ECHELON LINEAR™ Cutter 60mm	3
GLC80	ECHELON LINEAR™ Cutter 80mm	3
GLC100	ECHELON LINEAR™ Cutter 100mm	3

ECHELON LINEAR™ Cutter Reloads—Reloads sold separately from stapler

Product Code	Description	Reload color	Nominal reload length	Closed staple height	Open staple height	Tissue thickness range	Quantity
GLCR60B	Standard	Blue	60mm	1.5mm	3.7mm	1.5-2.4mm	12
GLCR60G	Thick	Green	60mm	2.0mm	4.5mm	2.0-3.3mm	12
GLCR80B	Standard	Blue	80mm	1.5mm	3.7mm	1.5-2.4mm	12
GLCR80G	Thick	Green	80mm	2.0mm	4.5mm	2.0-3.3mm	12
GLCR100B	Standard	Blue	100mm	1.5mm	3.7mm	1.5-2.4mm	12
GLCR100G	Thick	Green	100mm	2.0mm	4.5mm	2.0-3.3mm	12

1. Ethicon Cornerstone Staple Line Leak Claims Testing, A.9. 01/19/2023. Windchill Document #500897557 (EM_ETH_STAP.303485)
2. Ethicon Echelon Linear Cutter (Cornerstone) Customer Usability Claim Summary Report, A.3. 11/10/2022. Windchill Document #501027381 (EM_ETH_STAP.385852, EM_ETH_STAP.304882.1, EM_ETH_STAP.386049)
3. Ethicon, Cornerstone Design Plan, T.2. 04/09/2024. Windchill Document #DC002975 (EM_ETH_STAP.304882.1, EM_ETH_STAP.386049)
4. Ethicon Cornerstone Stapling Performance Claim Test Completion Report, A.7. 01/30/2023. Windchill Document #500927926 (EM_ETH_STAP.309738, EM_ETH_STAP.305127, EM_ETH_STAP.303737, EM_ETH_STAP.303271)
5. Ethicon, ECHELON LINEAR Cutter Engineering Design Rationale, A.5. 02/16/2024. Windchill Document #501003525 (EM_ETH_STAP.309738)
6. Ethicon, Cornerstone Less Compression Forces on Tissue (Gentler Handling) Claim Completion Report, 12.15.2022. Windchill Document #500964180 (EM_ETH_STAP.385813, EM_ETH_STAP.385809)
7. Ethicon, Echelon Linear Cutter (cornerstone) Tissue Grasping force and Knife Cutting Force Measurement, A.6. 12/15/2022. Windchill Document #501006140 (EM_ETH_STAP.385813, EM_ETH_STAP.385809)
8. Ethicon Cornerstone More Evenly Distributed Pressure Claim Completion Report, B.5. 09/27/2023. Windchill Document #500916693 (EM_ETH_STAP.385415, EM_ETH_STAP.385896, EM_ETH_STAP.385912)
9. Ethicon, ECHELON LINEAR CUTTER (Cornerstone) - SLR-0018 Analysis, B.2. 11/21/2022 Windchill Document #501003504 (EM_ETH_STAP.385496)
10. Ethicon, Completion Report GLC80 vs GIA80 Staple Performance and FTF for 501286560, B.2. 04/25/2024. Windchill Document #501287324 (EM_ETH_STAP.308563)

Please refer always to the Instructions for Use / Package Insert that come with the device for the most current and complete instructions.

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Johnson & Johnson Medical GmbH
Robert-Koch-Str. 1
22851 Norderstedt
Germany

www.jnjmedtech.com

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