King George's Medical University Uttar Pradesh
Lucknow - 226003
Procurement Cell
Phone: 91-0522-2257540 Fax: 91-0522-2257539 Website: www.kgmu.org

No.. 1475 /KGMU/P.C./2026 Date: 07/1/2026

NOTICE

SUBJECT: PROCUREMENT OF FOLLOWING ITEM ON A PROPRIETARY/SINGLE SOURCE BASIS.

KGMU, Lucknow, intends to procure following item(s), manufactured as per details mentioned below, on a Proprietary/Single Source basis from their authorized importers/distributors/dealers, as per enclosed details:-

S.No	Equipment/Item Name	Deptt.	Name of OEM/Manufacturer
1	Lymphopress Machine	Surgery (Gen.)	ARJO, AB, Sweden
2	Reusable Autoclavable Laparoscopic smart stapling system	Surgery (Gen.)	M/s Medtronic India Pvt. Ltd. (Covidien)
3	Access Point	I.T. Cell	Ruckus/Takyon Networks Pvt. Ltd.
4	Harmonic - Unified Energey System (monopolar, bipolar, advanced bipolar and ultrasonic) with hand instruments and accessories	Obstetrics & Gynaecology	Ethicon, Johnson & Johnson MedTech

Proprietary Certificate and proposal/offer for above item, as submitted by manufacturer (OEM) or their authorized importer/distributor/dealer, are attached. These documents are being uploaded for open information to all manufacturers/suppliers to invite any objections, representations or comments on proprietary/single-source nature of procurement within 07 days of the date mentioned above.

Objections/Comments should be submitted to: Finance Officer, KGMU, Lucknow / Concerned Head of Department, KGMU, Lucknow

Failure to submit any objection within stipulated time will be construed as acceptance that no other supplier has objections or equivalent items to offer. The case will then proceed for procurement based on its merits.

Objections/representations should specifically address the following:

1. Whether mentioned equipment/item is manufactured by any other manufacturer besides OEM or its authorized sellers/distributors/dealers.
2. Whether equipment/item fulfills all parameters according to enclosed technical specifications.

Note: In case no objection is received within 07 days, procurement of said item will be carried out through bid on GEM portal.

Finance Officer,
KGMU UP, Lucknow

Lymphopress Machine

K.G.'s Medical University U.P., Lucknow

Department of Surgery(Gen.)

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PROPRIETARY/SPECIFIC BRAND GOODS CERTIFICATE

1.	Item Type/Model No. required along with specification	ASSIST LYMPH, PROFESSIONAL
2.	If the item a spare part attachment or accessory for an existing equipment Yea/No (If Yes, provide details)	No.
3.	Name of the manufacturers/sold distributors of the item proposed by the indenter	ARJO, AB, SWEDEN
4.	Are they sole manufacturers/sold distributors of the item Yes/No	YES
5.	If there any other item with similar/equivalent specification available in the market to meet the job requirement envisaged. Yes/No (If Yes, explain why those alternatives cannot be procured and provide a comparative analysis of the functional advantages/cost-effectiveness of the recommended item)	No,
6.	Efforts made to locate alternative sources of supply or use of substitutes.	PUBUSHED ON KGMU WEBSITE
7.	Why open tender can't be resorted to, for locating alternative source.	GEM TENDER FOR PAC ITEM
8.	Are the proprietary items certified to have reasonable rates ? Yes/No	YES, CERTIFICATE FROM OEM ATTACHED
9.	Any other justification for procuring the item from a single source	ATTACHED

I hereby certify that the above item is required to be procured on a proprietary/single-source basis, as the specified brand is the only known source that meets our functional requirements. Given the unique advantages of this brand, an open tender process would not serve any meaningful purpose in this case and can justifiably be waived.

(Strike out whoever is not applicable)

Head of department of Surgery(Gen.)
K.G. Medical University U.P., Lucknow

Proprietary Article Certificate in the following form is to be provided by the Ministry/Department before procuring the goods from a single source under the provision of sub Rule 166 (i) and 166 (iii) as applicable.

(i) The indented goods are manufactured by M/s Huntleigh Healthcare Limite

(ii) No other make or model is acceptable for the following reasons:
Clinically advanced intermittent pneumatic compression system designed specifically for use of lymphatic and vascular conditions. multi protocol therapy - wave, sequential, Lymph Assist

(iii) Concurrence of finance wing to the proposal vide requested

(iv) Approval of the competent authority vide requested

Head of department of Surgery(Gen.)
K.G. Medical University U.P., Lucknow

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PROPRIETARY ARTICLE CERTIFICATE

We hereby certify that **Huntleigh Healthcare Limited**, are the legal manufacturer of **LymphAssist™ Professional**, developed and produced at our designated facility in the United Kingdom. Huntleigh Healthcare Limited is a 100% subsidiary of **Arjo AB, Sweden**.

LymphAssist™ Professional is a clinically advanced Intermittent Pneumatic Compression (IPC) system designed specifically for the management of lymphatic and vascular conditions. It incorporates proprietary technology that is not available in any other IPC system globally.
The unique features of LymphAssist™ Professional include:

- **Patented LymphAssist™ Therapy Mode**: This exclusive mode replicates the principles of Manual Lymphatic Drainage (MLD) using a directional, rhythmic compression sequence. It is clinically validated and not available in any other IPC device.
- **12 Overlapping Chamber Garments**: Engineered to deliver uniform, gradient compression across the limb, enhancing lymphatic flow. The overlapping design is proprietary to Huntleigh and ensures superior therapeutic outcomes.
- **Multi-Protocol Therapy Options**: Offers three distinct therapy modes—**Wave, Sequential,** and **LymphAssist™**—in a single device, allowing clinicians to customize treatment based on patient condition and tolerance.
- **QuietConcept™ Technology**: Ensures near-silent operation, making it ideal for both clinical and home settings without compromising performance.
- **Intelligent Pressure Regulation**: Automatically adjusts pressure and timing based on the selected therapy mode, ensuring optimal and safe treatment delivery.
- **Exclusive Garment Design**: Includes active expansion inserts and bilateral upper body therapy options, designed specifically for compatibility with LymphAssist™ Professional and not interchangeable with other systems.

The design and technology of LymphAssist™ Professional are proprietary and the intellectual property of Huntleigh Healthcare Limited. We confirm that no other firm is manufacturing this item with this specification and design.

LymphAssist™ Professional is solely imported and marketed in India by **ArjoHuntleigh Healthcare India Private Limited**, a 100% subsidiary of Arjo AB, and sold through their authorized channel partners only.

Samit Kamat
Digitally signed by Samit Kamat
Date: 2025.08.22 19:35:32 +05'30'

Samit Kamat
Director Marketing – South Asia and Middle East

A Legacy
You can trust

For more than 30 years, Huntleigh has been innovating and developing products which enable clinicians assess and manage various vascular conditions.

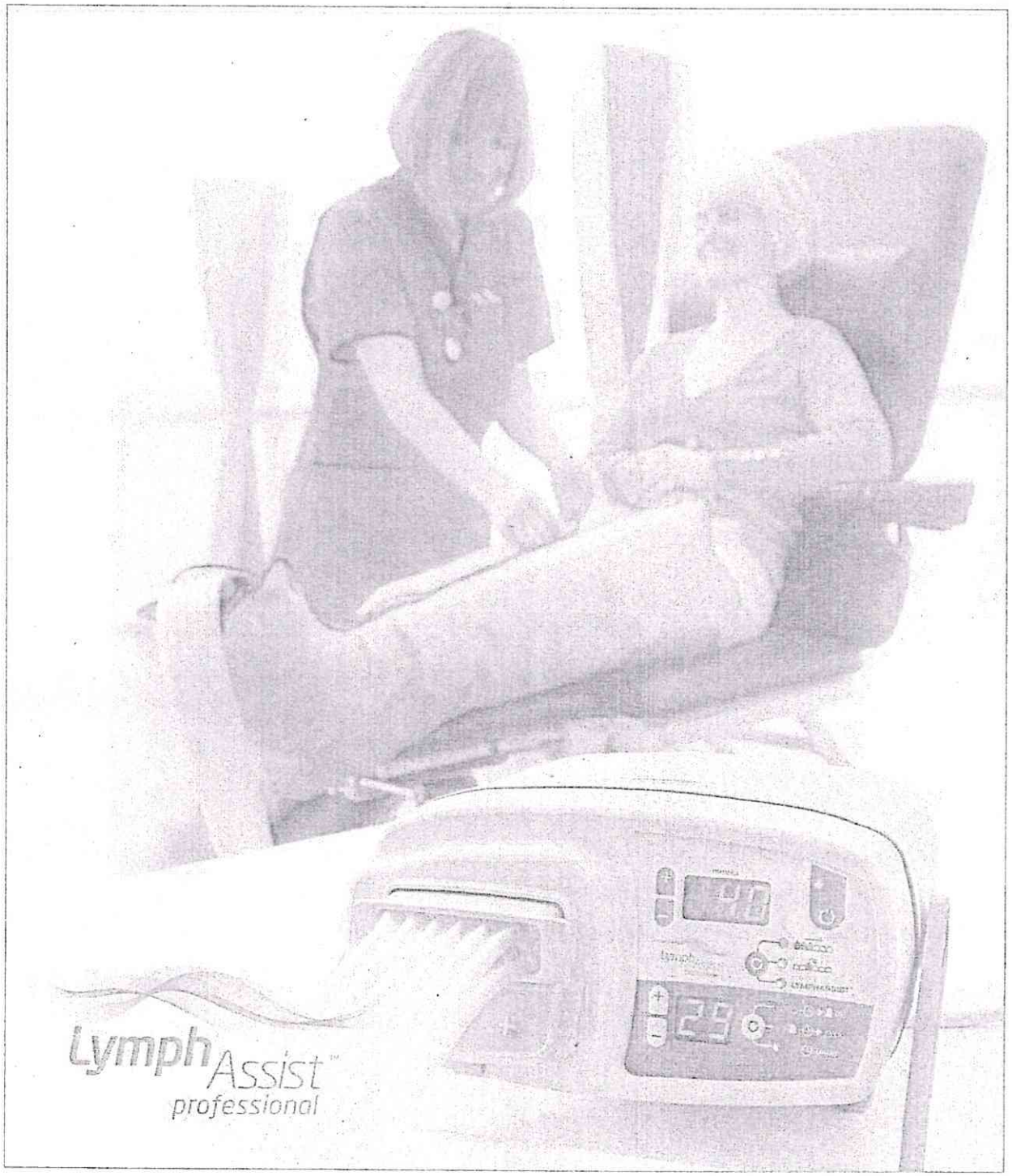
Today, our world class hand held Dopplers and vascular assessment systems are supported with the LymphAssist™ Professional, a 12 chamber Advanced Intermittent Pneumatic Compression system.



LymphAssist™ professional

HUNTLEIGH

Hydroven® 12 series



...performance for life

Designed for patients
Compliance and comfort

The Problem

Disruption of the Lymphatic system has severe and sometimes debilitating implications for the patient. Lymphoedema has no cure but can be successfully managed when diagnosed and treated[1].

The Solution

LymphAssist™ Professional is an advanced Intermittent Pneumatic Compression system (IPC) which has been designed to offer clinicians a multi modal treatment option to manage Lymphoedema and associated conditions.

Developed in conjunction with Manual Lymphatic Drainage (MLD) therapists, Lymphoedema specialists and Tissue Viability nurses, the LymphAssist Professional delivers a gentle and effective treatment for each of your patients.

In addition to the management of Lymphoedema, LymphAssist Professional is effective in the treatment of the following conditions when combined with an individualised monitoring program:

- Acute and chronic wound management
- Chronic venous insufficiency
- Management of Oedema

Choice of three automatic treatment profiles

LymphAssist™ Professional comprises an intelligent pump and a range of 12 chamber arm and or leg garments which can deliver three types of treatment options:

LymphAssist™ Therapy – Exclusive to Hydroven

The unique LymphAssist™ mode replicates the basic principles of Manual Lymph Drainage (MLD). The automatic pressure and multi chamber sequencing helps to promote efficient fluid transfer through the patient's lymphatic system.

The gentle 'directional' rhythmic massaging provided by the LymphAssist™ stimulates the lymphatic vessels encouraging them to transport proteins and waste products away from affected areas.

Graduated Sequential Therapy

Graduated sequential therapy provides a controlled pressure differential between adjacent chambers in each garment. This therapy helps restore the natural hydrostatic balance of the limb being treated.

Wave Therapy

Wave therapy produces a gentle peristaltic cycle for those patients who may be unable to tolerate graduated sequential compression.

The flexibility of this 'three in one' approach provides clinicians with the confidence that treatment can be tailored to address the clinical indications and patient's needs.

The flexibility of each of the profiles allows clinicians to optimise pressure settings and treatment times delivering the most effective treatment for the patient.

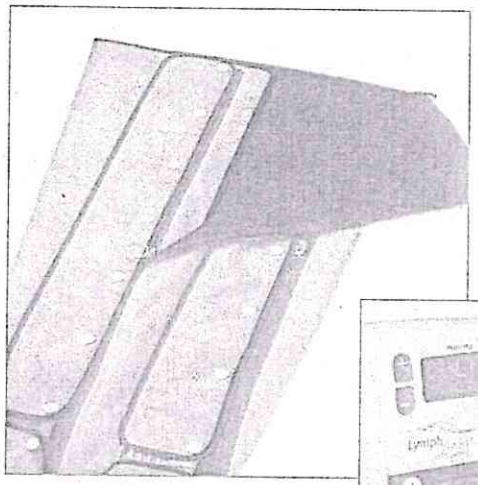
NEW Flexi Hose

The NEW flexi-hose allows the patient to be positioned comfortably without compromising access to system controls or indicators. The easy clean and anti-kink hose assists efficient system set up.

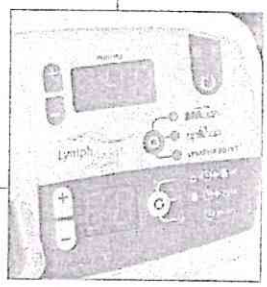
NEW graphical control panel

The NEW graphical control panel incorporating high visibility LED displays separates the main system controls.

Garment pressure and mode is displayed on the upper display, whilst the timing and cycle information is displayed on the lower display. This efficient layout keeps both user and clinician informed of the treatment cycle.



NEW 12 Chamber Garment insert



NEW graphical control panel

Single or bi-lateral assessment

Single or bi-lateral treatment is possible by simply connecting two garments to the LymphAssist™ Professional pump. A simple 'push fit' connector ensures safe and accurate garment connection.

Garments and inserts

The high technology 12 chamber garments incorporate overlapping internal chambers. This design ensures a more effective treatment as well as eliminating any potential internal pressure voids.

Inserts can be used to accommodate larger limbs. The overlapping chambers under the 'zip in' inserts provide total circumferential compression which assists in the effective transport of fluid.

Anti-tamper and lock facility

The pressure, cycle time and treatment options are protected by a lock feature which prevents accidental adjustment of the treatment profile and is ideal for homecare applications.

Specification

LymphAssist™ Professional – Advanced Intermittent Pneumatic Compressions System	
Order code	316XX (XX defined by country variant)
Supply voltage	100VAC to 220VAC
Supply frequency	50 – 60 Hz
Power input	38 – 77 VA
Degree of protection against electric shock	Class II, double insulated Type BF
Degree of protection against liquid ingress	IP21
Mode of operation	Continuous
Size	290mm x 250mm x 130mm (11.4 x 9.8 x 5.1")
Weight	3.8Kg (8.4lbs)
Pressure Range	LymphAssist 15 – 40 mmHg Sequential 15 - 120 mmHg Wave 15 – 100 mmHg All +/-5%
Cycle times	Inflation 30 - 95 sec in 5 sec increments Deflation - 10 - 95 sec in 5 sec increments Treatment time - 10 - 99 minutes or continuous (MAX 2 Hours)
Treatment Modes	LymphAssist, Gradient sequential and Wave

hydroven 12 Series Garments		
Order Code	**Description**	**Size**
	12 Chamber Leg Garments	
316L76S	Leg garment standard width	760mm (30")
316L84S	Leg garment standard width	840mm (33")
316L76W	Leg garment large width	760mm (30")
316L84W	Leg garment large width	840mm (33")
	12 Chamber Arm Garments	
316A68	Arm garment	680mm (26.75")
316A78	Arm garment	780mm (30.6")
	12 Chamber Leg Inserts	
316LI76	Leg insert	760mm (30")
316LI84	Leg insert	840mm (33")
	12 Chamber Arm Inserts	
316AI68	Arm insert	680mm (26.75")
316AI78	Arm insert	780mm (30.6")

Clinical evidence - Intermittent Pneumatic Compression (IPC) and Manual Lymph Drainage provides a synergistic enhancement of the effect of Complex Decongestive Physiotherapy (CDP).

IPC can be used safely and effectively for the treatment of patients with breast carcinoma associated Lymphoedema. The ease of application of IPC as a long term therapeutic intervention suggest that it may warrant more widespread use in this patient population. The therapy is well tolerated and remarkably free from complications[2].

LymphAssist™ professional

References

1 National Lymphedema Network. Position statement of the National Lymphedema network – updated Feb, 2011.

2 Szuba A et al (2002). Decongestive lymphatic therapy for patients with breats carcinoma associated Lymphoedema. Cancer; 95 (11): 2260-2266

HUNTLEIGH ...performance for life

Huntleigh Healthcare Ltd. - Diagnostic Products Division
35 Portmanmoor Road, Cardiff, CF24 5HN, United Kingdom
T: +44 (0)29 20485885 F: +44 (0)29 20492520 E: sales@huntleigh-diagnostics.co.uk
W: www.huntleigh-diagnostics.com

CE 0088

Registered No: 942245 England & Wales. Registered Office:
ArjoHuntleigh House, Houghton Hall Business Park, Houghton Regis, Bedfordshire, LU5 5XF

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As our policy is one of continuous improvement, we reserve the right to modify designs without prior notice.

doppler hydroven
VASCULAR ASSESSMENT AND TREATMENT

WELSH WOUND INNOVATION

We would like to express our sincere appreciation to the Welsh Wound Innovation Centre for their assistance and for allowing access to their facility and resources.

LIT 779346/UK-2

Lymphedema Pump

1. 12 Chamber Lymphedema Pump to provide clinically effective, non-invasive, dynamic compression to the limbs for treatment of wide range of vascular and lymphatic conditions, including venous ulceration, dependent and traumatic oedema and chronic venous insufficiency.
2. Flexible, ergonomic designed to use with 12 chamber arm and leg garments operated by a single pump.
3. The system should offer following treatment options:
    - Gradient sequential therapy: An intensive and effective therapy whereby each cell inflates in sequence and remains inflated until the air is released from each cell simultaneously. A 60% pressure gradient helps restore the natural hydrostatic balance of the limb ensuring maximum comfort and outstanding results.
    - Wave therapy: A more gentle peristaltic cycle with a 60% pressure gradient. When the first chamber is fully inflated to the correct pressure, the second chamber starts to inflate. Then as the second chamber is inflated to the aspired pressure, the first chamber is deflated. This sequence continues for all 12 chambers. This pattern of inflation continues in a distal to proximal direction. The wave therapy is ideal for those patients who cannot tolerate gradient sequential compression or when there is focal discomfort.
    - MLD therapy: A unique patented inflation and deflation sequence, designed according to the principles of MLD, which aims to help clear the proximal lymphatics to assist lymph flow in the affected limb. By mimicking the sequence of pressures applied in MLD in a proximal to distal direction, progressively down the limb, the unique MLD therapy helps promote efficient fluid transfer through the lymphatic system.
4. A choice of pressure and cycle times to tailor therapy to individual patients' needs
5. A timer facility to automatically switch off therapy without the need for intervention plus an override continuous run feature
6. User-friendly control panel with an LED to clearly display system settings
7. Facility to use single or dual garments from a single pump
8. Anti-tamper pressure, cycle time and treatment option lock feature to allow settings to be locked for safe and effective treatment of limbs
9. Polarised push on connectors for safe and accurate garment connection
10. Visual and audible alarm facility to ensure correct pressures are delivered to the patients' limb with minimal disruption to the patient
11. Ergonomically designed casing made from strong impact resistant plastic to make the pump ideal for use in the busy clinic or at home
12. Sleep mode power saving feature
13. Anti-slip feet especially angled for easy viewing of the system control panel for table top or trolley use
14. Arm and leg compression garments should offer the following features:
    - Overlapping chambers provide seamless compression avoiding the problems of ridging and pressure voids on the limb
    - Unique five chamber foot section provides fine compression to promote blood and lymph movement in the vulnerable foot area
    - Overlapping chambers under the zip section of garments and insert pieces allow true circumferential compression for massaging all contours of the limb
    - Unique 12 chamber insert pieces inflate in harmony with the 12 chamber garment and allow the system to provide effective dynamic compression to larger limbs
    - Easy clean, anti-kink tubing for fast and convenient system set up
15. Unique inflatable inserts allow the system to be used on larger limbs, providing true circumferential compression without the extra cost of purchasing additional garments.
16. Lightweight yet durable leg and arm garments with a soft, pliable inner lining allowing inward expansion to massage all contours of the limb.
17. Inflatable foot section on all leg garments ensures pressure is distributed gently around the entire foot, eliminating toe pinching and improving patient concordance.
18. Large ring pull zip ensures easy application and removal of garments when mobility or dexterity is restricted.
19. Quiet, vibration-free pump minimizes disturbance, encourages patient concordance and means the system can fit comfortably into patients' lifestyles

Pump should have below specification:

1. Should work on Power 220 - 240V AC 50Hz

2. Dimension of pump-Size 290 x 250 x 130 mm (10⅔ x 5½ x 5½")
3. Should have Weight 3.8 kg or less
4. Pressure Range : Sequential Mode-15 – 120 mmHg, wave- 15-100 mmHg,Lympassist-15-40 mmHg
5. Cycle Time: Inflation 30–95 seconds in 5 second increments, Deflation10–95 seconds in 5 second increments
6. Treatment time: 10 – 99 minutes or continuous
7. Treatment modes Gradient sequential; Wave; MLD
8. Unit should be European CE certified with 4 digit notified body /BIS.

Pump should be supplied with below garments

1) 12 chamber leg garment-1 pair

Prof Abhinav A Sonkar
Head, Surgery (Gen)

Prof K K Singh
Member, Surgery (Gen)

Prof Awanish Kumar
Member, Surgery (Gen)

Prof Faraz Ahmad
Member, Surgery (Gen)

Prof Sanjeev Kumar
Member, Surgery (Gen)

Dr Pankaj Singh
Member, Surgery (Gen)

Dr Kushagra Gaurav
Member, Surgery (Gen)

Dr Rohit Srivastava
Addl Professor Surgery
RMLIMS (External)

Mr Anjani Mishra
Biomedical Supervisor

Reusable Autoclavable Laparoscopic smart stapling system

K.G.'s Medical University U.P., Lucknow

Department of Surgery(Gen.)

PROPRIETARY/SPECIFIC BRAND GOODS CERTIFICATE

1.	Item Type/Model No. required along with specification	SIGNIA STAPLING LAPAROSCOPIC SYSTEM
2.	If the item a spare part attachment or accessory for an existing equipment Yea/No (If Yes, provide details)	NO.
3.	Name of the manufacturers/sold distributors of the item proposed by the indenter	MEDTRONIC INDIA PVT LTD. (COVIDIEN)
4.	Are they sole manufacturers/sold distributors of the item Yes/No	SOLE MANUFACTURER
5.	If there any other item with similar/equivalent specification available in the market to meet the job requirement envisaged. Yea/No (If Yes, explain why those alternatives cannot be procured and provide a comparative analysis of the functional advantages/cost-effectiveness of the recommended item)	NO.
6.	Efforts made to locate alternative sources of supply or use of substitutes.	YES, WILL BE PUBLISHED ON WEBSITE
7.	Why open tender can't be resorted to, for locating alternative source.	PAC ITEM
8.	Are the proprietary items certified to have reasonable rates ? Yes/No	WILL BE CONFIRMED BY FO KGMU
9.	Any other justification for procuring the item from a single source	IT IS MANUFACTURED BY MEDTRONIC INDIA.

I hereby certify that the above item is required to be procured on a proprietary/single-source basis, as the specified brand is the only known source that meets our functional requirements. Given the unique advantages of this brand, an open tender process would not serve any meaningful purpose in this case and can justifiably be waived.

(Strike out whoever is not applicable)

Head of department of Surgery(Gen.)
K.G. Medical University U.P., Lucknow

Proprietary Article Certificate in the following form is to be provided by the Ministry/Department before procuring the goods from a single source under the provision of sub Rule 166 (i) and 166 (iii) as applicable.

(i) The indented goods are manufactured by M/s MEDTRONIC INDIA

(ii) No other make or model is acceptable for the following reasons:
SIGNIA. LAP STAPLING DEVICE. IS ONLY MANUFACTURED BY MEDTRONIC INDIA.

(iii) Concurrence of finance wing to the proposal vide.... REQUESTED

(iv) Approval of the competent authority vide.... REQUESTED

Head of department of Surgery (Gen.)
K.G. Medical University U.P., Lucknow

Reusable autoclavable Laparoscopic Smart Stapling System

- The Reusable autoclavable Endoscopic Stapling System should be designed for tissue transaction, resection and anastomosis in open and minimally invasive surgical procedures.
- System Technical Specifications
- The system should be a powered stapling platform with electronic control technology that provides consistent staple formation across varying tissue thickness.
- The system should have adaptive firing technology capable of measuring tissue compression and adjusting firing speed automatically to optimize staple formation.
- The system should provide real-time feedback to the surgeon regarding tissue compression and firing progress.
- The system should have a powered handle that reduces manual firing force and improves control during stapling.
- The system should support articulating stapling technology enabling access to difficult anatomical locations.
- The stapler should provide one-handed operation with ergonomic handle design.
- The system should support multiple reload options of various sizes like 30mm, 45mm and 60 mm for different tissue thicknesses.
- The system should provide visual and audible feedback during stapling and firing cycles.
- The system should support staple line reinforcement compatibility for improved staple line security where required.
- The system should have 360-degree shaft rotation capability to enhance surgical access.
- The system should allow multiple firings with the same powered handle using disposable reload cartridge
- USFDA and Eu-CE approved
- Accessories to be Supplied with the System
    1. Smart Power handle - A rechargeable, reusable surgical stapling system with adaptive firing technology, tissue sensing ability, force sensing technology , intelligence enabled with powered articulation/ rotation/firing/ clamping/ jaw opening and offering real-time feedback mechanism – Qty 01
    2. Linear Adapter - Short size shaft, compatible with Smart Power handle (A rechargeable, reusable surgical stapling system with adaptive firing technology, tissue sensing ability, force sensing technology ,intelligence enabled with powered articulation/rotation/firing/ clamping/jaw opening and real-time feedback mechanism). – Qty 01
    3. Linear Adapter - Standard size shaft, compatible with Smart Power handle (A rechargeable, reusable surgical stapling system with adaptive firing technology, tissue sensing ability, force sensing technology, intelligence enabled with powered articulation/rotation/firing/ clamping/jaw opening and real-time feedback mechanism) – Qty 02
    4. Disposable Power Shell for activation of Smart Power handle. – Qty 50
    5. Power cord compatible with Smart Power handle Charger. – Qty 01
    6. Reusable single bay charger- for smart handle. – Qty 01
    7. Reusable insertion guide for smart power handle. – Qty 01
    8. Manual retraction Tool for smart power Handle. – Qty 01
    9. Cartridges. – Qty 300

Prof Abhinav A Sonkar
Head, Surgery (Gen)

Prof K K Singh
Member, Surgery (Gen)

Prof Awanish Kumar
Member, Surgery (Gen)

Prof Surender Kumar
Member, Surgery (Gen)

Prof Faraz Ahmad
Member, Surgery (Gen)

Prof Sanjeev Kumar
Member, Surgery (Gen)

Dr Akshay Anand
Member, Surgery (Gen)

Dr Rohit Srivastava
Addl Professor Surgery
RMLIMS (External)

Mr Anjani Mishra
Biomedical Supervisor

Docusign Envelope ID: 216BFD8C-45C6-41F1-8C52-E770D69AB464

COVIDIEN llc
15 HAMPSHIRE STREET
MANSFIELD, MA 02048

COVIDIEN

Date: 13-Apr-26

Proprietary Article Certificate
To Whomsoever It May Concern

This is to certify that the below mentioned products are the proprietary products of **Covidien llc, 15 Hampshire Street, Mansfield, MA 02048, USA.** The product design and specifications of these products are the proprietary of and controlled by Covidien llc.

Product Code	Product Description
EEAORVIL25A	EEA ORVIL 25MM AUTOMATIC DV
EGIA30AMT	EGIA 30 MED THICK SULU
EGIA30CTAVM	EGIA 30 CURVED VAS MED SULU
EGIA45AMT	EGIA 45 MED THICK SULU
EGIA45AVM	EGIA 45 VASCULAR MED SULU
EGIA45AXT	EGIA 45 EXTRA THICK SULU
EGIA45CTAVM	EGIA 45 CURVED VAS MED SULU
EGIA60AMT	EGIA 60 MED THICK SULU
EGIA60AVM	EGIA 60 VASCULAR MED SULU
EGIA60AXT	EGIA 60 EXTRA THICK SULU
EGIARADMT	ENDO GIA RADIAL RELOAD PURPLE
EGIARADXT	EGIA RADIAL BLK EXT THK RELOAD
EGIATRS60AMT	Endo GIA™ Reinforced Reload with Tri-Staple™ Technology
GIA60MTC	Tri-Staple GIA 60 Purple reload
GIA60MTS	Tri-Staple GIA 60 Purple Stapler with reload
GIA60XTC	Tri-Staple GIA 60 Black reload
GIA60XTS	Tri-Staple GIA 60 Black Stapler with reload
GIA80MTC	Tri-Staple GIA 80 Purple reload
GIA80MTS	Tri-Staple GIA 80 Purple Stapler with reload
GIA80XTC	Tri-Staple GIA 80 Black reload
GIA80XTS	Tri-Staple GIA 80 Black Stapler with reload
HEM3335	33MM HAEMORRHOID 3.5MM STAPLE
HEM3348	33MM HAEMORRHOID 4.8MM STAPLE
SIG30AMT	TriStaple 2.0 30 mm medium/thick Intelligent reload and introducer
SIG30AVM	TriStaple 2.0 30 mm vascular/medium Intelligent reload and introducer
SIG30CTAVM	TriStaple 2.0 30 mm vascular/medium curved tip Intelligent reload and introducer
SIG45AXT	TriStaple 2.0 45 mm Extra Thick Black Intelligent reload
SIG45CTAVM	TriStaple 2.0 45 mm vascular/medium curved tip Intelligent reload and introducer
SIG60AXT	TriStaple 2.0 60 mm Extra Thick Black Intelligent reload
SIGADAPTSHORT	Signia™ Linear Adapter Short
SIGADAPTSTND	Signia™ Linear Adapter
Product Code	**Product Description**
SIGADAPTXL	Signia™ Linear Adapter XL

Docusign Envelope ID: 216BFD8C-45C6-41F1-8C52-E770D69AB464

Covidien llc
15 Hampshire Street
Mansfield, MA 02048

COVIDIEN

SIGC45MT	TriStaple 2.0 45 mm medium/thick Intelligent Cartridge
SIGC45VM	TriStaple 2.0 45 mm vascular/medium Intelligent Cartridge
SIGC60MT	TriStaple 2.0 60 mm medium/thick Intelligent Cartridge
SIGC60VM	TriStaple 2.0 60 mm vascular/medium Intelligent Cartridge
SIGLU45A	TriStaple 2.0 45 mm Intelligent loading unit
SIGLU60A	TriStaple 2.0 60 mm Intelligent loading unit
SIGPHANDLE	Signia™ Power Handle
SIGPSHELL	Signia™ Power Control Shell
SIGSBCHGR	Signia™ Single-Bay Charger
SIGSDL45CTVT	45 mm White Curved Tip Long Small Diameter Reload
SIGSDS30CTV	30 mm Grey Curved Tip Short Small Diameter Reload
SIGSDS30CTVT	30 mm White Curved Tip Short Small Diameter Reload
SIGTRSB45AMT	45mm Medium Thick Reinforced Reload Generation 2
SIGTRSB45AXT	45mm Extra Thick Reinforced Reload Generation 2
SIGTRSB60AMT	60mm Medium Thick Reinforced Reload Generation 2
SIGTRSB60AXT	60mm Extra Thick Reinforced Reload Generation 2
GIA60TMS	GIA60TMS TAN STAPLER W/TRI-STAPLE TECH
GIA80TMS	GIA80TMS TAN STAPLER W/TRI-STAPLE TECH
GIA60TMC	GIA60TMC TAN CARTRIDGE W/TRI-STAPLE TECH
GIA80TMC	GIA80TMC TAN CARTRIDGE W/TRI-STAPLE TECH
VLOCA208L	VLOCA208L V-LOC 180 2-0 ABS RELOAD20CM
VLOCN208L	VLOCN208L V-LOC ESTCH 2-0 NONABS 20CM LP

The above products are manufactured at the following manufacturing site:
M/s Covidien, Formerly United States Surgical, A Division Of Tyco Healthcare Group LP, 60 Middletown Avenue North Haven, CT 06473, Country: United States

Product Code	**Product Description**
133650	PREMIUM SURGICLIP III 9.0
134048	PREMIUM SURGICLIP* L-13.0" TIT
134051	PREMIUM SURGICLIP* II M-9.75
134053	PREMIUM SURGICLIP* II M-11.5
173022	AUTO SUTURE* ENDO CLOSE*
173030	ENDO GRASP* 5MM INSTRUMENT
174001	ENDO BABCOCK* 10MM CLAMP
174209	ENDO MINI-RETRACT* 5MM INSTR.
174301	ENDO MINI-SHEARS* 5MM INSTR
174317	ENDO CLINCH* II 5MM INSTR.
176605	ENDO SCIZ* 5MM HOOK SCISSORS
176643	ENDO SHEARS* 5MM INSTRUMENT
176645	ENDO DISSECT* 5MM INSTRUMENT
Product Code	**Product Description**
176647	ENDO RETRACT* II 10MM INSTR

Docusign Envelope ID: 216BFD8C-45C6-41F1-8C52-E770D69AB464

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MANSFIELD, MA 02048

COVIDIEN

220-50	FRED ANTI-FOG KIT (SINGLE USE)
EEA25	EEA* 25MM SINGLE-USE STAPLER
EEA2535	EEA 25MM 3.5 STAPLES SGL USE
EEA28	EEA* 28MM SINGLE-USE STAPLER
EEA31	EEA* 31MM SINGLE-USE STAPLER
EEA33	EEA* 33MM SINGLE-USE STAPLER
EEAXL25	EEA* XL 25MM SINGLE-USE STAPLR
EEAXL2535	EEAXL 25MM 3.5 STAPLES SGL USE
EGIA60CTAVM	EGIA 60 CURVED VAS MED SULU
GIA10038L	GIA 100-3.8 SINGLE USE LOADING
GIA10038S	GIA 100-3.8 SINGLE USE RELOAD
GIA10048L	GIA 100-4.8 SINGLE USE LOADING
GIA10048S	GIA 100-4.8 SINGLE USE RELOAD
GIA6025L	GIA 60-2.5 SINGLE USE LOADING
GIA6025S	GIA 60-2.5 SINGLE USE RELOADAB
GIA6038L	GIA 60-3.8 SINGLE USE LOADING
GIA6038S	GIA 60-3.8 SINGLE USE RELOADAB
GIA6048L	GIA 60-4.8 SINGLE USE LOADING
GIA6048S	GIA 60-4.8 SINGLE USE RELOADAB
GIA8038L	GIA 80-3.8 SINGLE USE LOADING
GIA8038S	GIA 80-3.8 SINGLE USE RELOADAB
GIA8048L	GIA 80-4.8 SINGLE USE LOADING
GIA8048S	GIA 80 SINGLE USE RELOADABLE S
TA3035L	TA* 30-3.5 SULU BLUE
TA3048L	TA* 30-4.8 SULU GREEN
TA3048S	TA* 30-4.8 SU RELOAD STAPLER
TA30V3L	TA* 30-V3 SULU WHITE
TA30V3S	TA* 30V-3 SU RELOAD STAPLER
TA4535L	TA* 45-3.5 SULU BLUE
TA4535S	TA* 45-3.5 SU RELOAD STAPLER
TA4548L	TA* 45-4.8 SULU GREEN
TA4548S	TA* 45-4.8 SU RELOAD STAPLER
TA6035L	TA* 60-3.5 SULU BLUE
TA6035S	TA* 60-3.5 SU RELOAD STAPLER
TA6048L	TA* 60-4.8 SULU GREEN
TA6048S	TA* 60-4.8 SU RELOAD STAPLER
TA9035L	TA* 90-3.5 SULU BLUE
TA9035S	TA* 90-3.5 SU RELOAD STAPLER
TA9048L	TA* 90-4.8 SULU GREEN
TRIEEA28MT	TriStaple 28mm Medium-Thick EEA Circular Stapler
TRIEEA28XT	TriStaple 28mm Extra Thick EEA Circular Stapler
Product Code	**Product Description**
TRIEEA31MT	TriStaple 31mm Medium-Thick EEA Circular Stapler

Docusign Envelope ID: 216BFD8C-45C6-41F1-8C52-E770D69AB464

COVIDIEN IIc
15 HAMPSHIRE STREET
MANSFIELD, MA 02048

COVIDIEN

TRIEEA31XT	TriStaple 31mm Extra Thick EEA Circular Stapler
TRIEEAXL33MT	TriStaple 33mm Medium-Thick EEA XL size Circular Stapler
TRIEEAXL33XT	TriStaple 33mm Extra Thick EEA XL size Circular Stapler
EGIAUSHORT	EGIA 4 HANDLE SHORT
EGIAUSTND	EGIA 4 HANDLE STANDARD
EGIAUXL	EGIA 4 HANDLE XL
250-30	3X6 ENDOBAG SPECIMEN RETRIEVAL
250-40	5 X 8 ENDOBAG SPECIMEN RETRIEVAL

The above products are manufactured at the following manufacturing site:
M/s Covidien, Building 911-67, Sabanetas Industrial Park, Ponce, Puerto Rico 00731, Country: United States.

Product Code	Product Description
150462	PREMIUM* SKIN STAPLE REMOVER
173016	ENDO STITCH* INSTRUMENT
173023	ENDO STICH 2/0 48 SRDAC DLU SU
173049	ENDO CATCH* II 15MM POUCH
173050G	ENDO CATCH GOLD 10MM SPECIMEN
176625	ENDO CLIP* APPLIER LARG CLIPS
176630B	Endo Clip™ III 5 mm Clip Applier
176657	ENDO CLIP* II MED/LRG APPLIER
8886803712	APPOSE ULC SS 35 WIDE
B11STF	BLADED11MMSTDFIX
B12LGF	BLADED12MMLONGFIX
B12STF	BLADED12MMSTDFIX
B12STFCS	VOFCS 12mm Bladed Trocar
B5STF	BLADED5MMSTDFIX
BPT12STS	BLUNT12MMSTDTHREADEDANCHOR
NONB11STF	NOBLADE11MMSTDFIX
NONB12STF	NOBLADE12MMSTDFIX
NONB15STF	NOBLADE15MMSTDFIX
NONB5LGF	NOBLADE5MMLONGFIX
NONB5STF	NOBLADE5MMSTDFIX
ONB11LGF	VERSAONEBLDLESOPT11LNG
ONB11STF	VERSAONEBLDLESOPT11STD
ONB12LGF	VERSAONE OPT 12MM LNG TROC
ONB12STF	VERSAONE OPT 12MM STD TROC
ONB12STFCS	VOFCS 12mm Optical Trocar
ONB12STS	VERSAONE OPT 12MM SMT TROC
ONB15STF	VERSAONEBLDELESOPT15STD
Product Code	**Product Description**
ONB5LGF	VERSAONE OPT 5MM LNG TROC

Docusign Envelope ID: 216BFD8C-45C6-41F1-8C52-E770D69AB464

COVIDIEN llc
15 HAMPSHIRE STREET
MANSFIELD, MA 02048

COVIDIEN

ONB5STF	VERSAONE OPT 5MM STD TROCA
UNVCA11STF	UNIVERSAL11MMSTDFIXCANNULA
UNVCA12STF	UNIVERSAL12MMSTDFIXCANNULA
UNVCA5LGF	UNIVERSAL5MMLONGFIXCANNULA

The above products are manufactured at the following manufacturing site:
M/s Covidien, Zona Franca de San Isidro, Carretera San Isidro Km 17, Santo Domingo, Dominican Republic, Country: Dominican Republic

Product Code	Product Description
SIGMRET	Signia™ Manual Retraction Tool
SIGRIG	Signia™ Reusable Insertion Guide

The above products are manufactured at the following manufacturing site:
Atalys 6966 Highway 220 ALT S Asheboro, North Carolina, 27205, United States

Product Code	Product Description
WPLGR914	SURGISLEEVE LG RETRACTION RING
WPMD509	MED WOUND PROTECTOR 5 - 9CM
WPSM256	SML WOUND PROTECTOR 2.5 - 6CM
WPXLGR1117	SURGISLEEVE XL RETRACTION RING
WPXSM24	XSM WOUND PROTECTOR

The above products are manufactured at the following manufacturing site:
M/s NPA De Mexico S. De. R. L. De. C. V, Sor Juana Ines de la Cruz- 20150 Interior 5 Cd. Industrial TIJUANA, Baja California MEXICO22444, Country: Mexico

Product Code	Product Description
FCSPASS	VOFCS Reusable Suture Passer

The above products are manufactured at the following manufacturing site:
M/s Ackermann Instrumente GmbH, Eisenbahnstrasse 65-67 D-78604 Rietheim-Weilheim, Baden Wurttemberg Germany D-78604, Country Germany

Signed by:
Colin Jiao
4487DB406AD7473...
April 13, 2026

Colin Jiao
Principal Regulatory Affairs Specialist

Signed by:
Rui Xu
AFBAFB3E2EE9431...
April 13, 2026

Xu Rui
Senior Regulatory Affairs Specialist

Access Point

KING GEORGE'S MEDICAL UNIVERSITY
LUCKNOW-226003
Information Technology Cell
Phone. No.0522-2258880. Ext. 1100 Email Id- itcellkgmu@gmail.com

PROPRIETARY/SPECIFIC BRAND GOODS CERTIFICATE

1	Item / Type / Model No. required along with specification	Access Point R550P
2	If the item a spare part attachment or accessory for an existing equipment Yes / No (If Yes, provide details)	Yes
3	Name of the manufacturers / supplier of the item Proposed by the indenter	Ruckus / Takyon Networks PVT. LTD
4	Are they sole manufacturers / sold distributors of the Item Yes /No	Yes
5	If there any other item with similar / equivalent specification available in the market to meet the job requirement envisaged. Yes /No (If Yes, explain why those alternatives cannot be procured and provide a comparative analysis of the functional advantages / cost-effectiveness of the recommended item)	No
6	Efforts made to locate alternative sources of supply or use of substitutes	Yes
7	Why open tender can't be resorted to, for locating alternative source.	As it is a part of the existing equipment
8	Are the proprietary items certified to have reasonable rates? Yes / No (Attach supporting documents , if applicable)	Yes
9	Any other justification for procuring the item from a single source	No

I hereby certify that the above item is required to be procured on a proprietary/single-source basis, as the specified brand is the only known source that meets our functional requirements. Given the unique advantages of this brand, an open tender process would not serve any meaningful purpose in this case and can justifiably be waived.
(strike out whoever is not applicable)

Head of the Department

29/10/25

KING GEORGE'S MEDICAL UNIVERSITY
LUCKNOW-226003
Information Technology Cell
Phone. No.0522-2258880. Ext. 1100 Email Id- itcellkgmu@gmail.com

---

Proprietary Article Certificate in the following form is to be provided by the Ministry/Departmentbeforeprocuringthegoodsfromasinglesourceunderthe provision of sub Rule 166 (i) and 1 66 (iii) as applicable.

(xvi) The indented goods are manufactured by **Ruckus / M/s Takyon Networks PVT. LTD** No other make or model is acceptable for the following reasons:

- **This is a proprietary product**

_____

_____

_____

(xvii) Concurrence of finance wing to the proposal vide- DC/PHI/567 Dated 11/09/2026

(xviii) Approval of the competent authority vide **Registrar /Finance Officer/Hon'ble Vice Chancellor**

(Signature with date and designation of the indenting officer)

29/10/26

सत्यमेव जयते

दूरसंचार विभाग, भारत सरकार

DEPARTMENT OF TELECOMMUNICATIONS, GOVERNMENT OF INDIA

दूरसंचार अभियांत्रिकी केंद्र

TELECOMMUNICATION ENGINEERING CENTRE

CERTIFICATE OF MANDATORY CONFORMANCE

This is to certify that the product described below conforms to the Essential Requirement issued by TEC under Mandatory Testing and Certification of Telecom Equipment as notified vide Indian Telegraph (Amendment) Rules, 2017.

i.	***Certificate No.:** 594300403	ii.	**Dated:** 19-Aug-2024
iii.	**Certificate Category:** Regular	iv.	**Certificate Type:** MODIFIED
v.	**APPLICANT:** Ruckus Wireless Private Limited, 137, 1st Flr 92/5 Salarpuria Supreme Marathahalli Varthur Hobli Munnekolalu Vill Bangalore 560037	vi.	**ORIGINAL EQUIPMENT MANUFACTURER:** Ruckus Wireless LLC, 350 W Java Drive, Sunnyvale, CA 94089, USA.
vii.	**PRODUCT NAME:** Equipments Operating in 2.4 GHz and 5 GHz Band	viii.	**PRODUCT VARIANT:** Wifi Access Points and CPE
ix.	**PREVIOUS CERTIFICATE NO.:** 594300403	x.	**PREVIOUS CERTIFICATE ISSUED DATE:** 2024-06-27
xi.	**MODEL NO.:** R550	xii.	**FAMILY NAME:** NA
xiii.	**ASSOCIATED MODEL NO.:** As given at Table-1 overleaf	xiv.	**INTERFACES TESTED:** As given at Table-2 overleaf
xv.	**SOFTWARE VERSION:** 114.0.0.0.5585	xvi.	**HARDWARE VERSION:** Rev.C
xvii.	**VALID FROM:** 19-Aug-2024	xviii.	**VALID UPTO:** 26-Jun-2034
xix.	**ER NO.:** TEC59432308		
xx.	**EMI / EMC CLASS:** B		
xxi.	**QR CODE:**		

ranjana sivaram

Digitally signed by ranjana sivaram
Date: 2024.08.19 16:54:48 +05'30'

DIRECTOR (TC-1)

K L Bhawan,

Janpath, New Delhi - 110001

Note:

**1. This certificate is valid for product(s) manufactured in Taiwan and Vietnam only, as per the details at Table-3.*

2. This certificate is issued for model/family name indicated at (xi) above and applicable for associated/ family model(s) mentioned at Table-1, overleaf only.

3. Bill of Material covered under this certificate is given at Table-4.

4. Terms & Conditions mentioned at MTCTE portal (https://www.mtcte.tec.gov.in/) shall be applicable.

Table-1

List of Associated/~~Family~~ Models	
i.	R550p

Table-2

List of Interfaces Tested	
i.	Gigabit Ethernet Electrical
ii.	WiFi

Table-3

List of manufacturing locations (as declared by the applicant) for which this certificate (No. 594300403) is valid:								
S. No.	Product Model number	Contract Manufacturing	Manufacturing Location Address	Contact Person Name (Plant Incharge)	E-mail-ID	Contact number	*Country Of Origin	**Country of Manufacturing
1	R550	Yes	Universal Global Scientific Industrial Co Ltd No 330 Gongye Rd Nantou City Nantou County 54065 Taiwan	Allen Lu	allen_lu@usiglobal.com	8860492212700	Taiwan	Taiwan
2	R550	Yes	Universal Global Scientific Industrial Co Ltd No 4 Ziqiang 3rd Rd Nantou City Nantou County 540027 Taiwan R O C	Allen Lu	allen_lu@usiglobal.com	8860492212700	Taiwan	Taiwan
3	R550p	Yes	Universal Global Scientific Industrial Co Ltd No 330 Gongye Rd Nantou City Nantou County 54065 Taiwan	Allen Lu	allen_lu@usiglobal.com	8860492212700	Taiwan	Taiwan
4	R550p	Yes	Universal Global Scientific Industrial Co Ltd No 4 Ziqiang 3rd Rd Nantou City Nantou County 540027 Taiwan R O C	Allen Lu	allen_lu@usiglobal.com	8860492212700	Taiwan	Taiwan
5	R550	Yes	UNIVERSAL SCIENTIFIC INDUSTRIAL VIETNAM COMPANY LIMITED Land Plot CN4 1H Dinh Vu Industrial Zone Dinh Vu - Cat Hai Economic Zone Dong Hai 2 Ward Hai An District Hai Phong City Vietnam	Allen Lu	allen_lu@usiglobal.com	8860492212700	Vietnam	Vietnam
6	R550p	Yes	UNIVERSAL SCIENTIFIC INDUSTRIAL VIETNAM COMPANY LIMITED Land Plot CN4 1H Dinh Vu Industrial Zone Dinh Vu - Cat Hai Economic Zone Dong Hai 2 Ward Hai An District Hai Phong City Vietnam	Allen Lu	allen_lu@usiglobal.com	8860492212700	Vietnam	Vietnam

*Note: *1. Country of Origin is as per the criteria defined under Custom Rules.*

***2. Country of Manufacturing refers to the place where the Telecom product under certification against product model number given above is manufactured/assembled as complete unit only.*

Table-4

Details of major modules / components (as declared by the applicant) of the model under certification (BILL OF MATERIAL)								
Module Name/Atrtibute Name	Module Code	Module Hardware Version	Module Software Version	Sub Unit Name	Sub Unit Model No.	Remarks	Module present in Main Model	Module present in Associated model-1
Module No.							R550	R550p
EMI/EMC Class of Equipment B						Class B	Y	Y
PCB	APP007					AOSHIKANG PRECISION CIRCUIT (HUIZHOU) CO LTD UL E239218, Min V-1, 105°C	Y	Y
Motherboard	IPQ8070A	Rev.C	v114.0.0.0.5585			R550p- With IoT Chipset using low power BLE & Zigbee radios R550p- Does not have IoT chipset	Y	Y

Details of major modules / components (as declared by the applicant) of the model under certification (BILL OF MATERIAL)								
Module Name/Atrtibute Name	Module Code	Module Hardware Version	Module Software Version	Sub Unit Name	Sub Unit Model No.	Remarks	Module present in Main Model	Module present in Associated model-1
Power Source						Input For Adapter: 100-240VAC ~ 50/60Hz, 0.6A MAX; Input For EUT: 12V 2.1A 25W MAX	Y	Y
POE	PoE30G-AT					PoE: 48V0.5A	Y	Y
Gigabit Ethernet Electrical	QCA8072					R550 has 2 Ethernet Ports; R550p has 2 Ethernet Ports	Y	Y
Wi-Fi Radio 2.4 GHz	QCA5124					2412-2472MHz, 18.01 dBm	Y	Y
Wi-Fi Radio 5 GHz	QCA5154					5180-5700MHz, 22.82 dBm 5745MHz-5825MHz, 23.56dBm	Y	Y

Details of major modules / components (as declared by the applicant) of the model under certification (BILL OF MATERIAL)								
Module Name/Atrtibute Name	Module Code	Module Hardware Version	Module Software Version	Sub Unit Name	Sub Unit Model No.	Remarks	Module present in Main Model	Module present in Associated model-1

*** End of the certificate***

KING GEORGE'S MEDICAL UNIVERSITY
LUCKNOW-226003
Information Technology Cell
Phone. No.0522-2258880. Ext. 1100 Email Id- itcellkgmu@gmail.com

पत्रांक संख्या...DC/P.HI/643 दिनाँक...08.10.2026

सेव में

फैकेल्टी इंचार्ज

कामन इक्यूमेंट सेल

के0जी0एम0यू0, लखनऊ

महोदय

आपके कार्यालय पत्रांक संख्या CE/2026/677 दिनाँक 24/07/2026 के संदर्भ के क्रम में अवगत कराना है कि पत्र के साथ संलग्न समस्त उपकरणों के बिड करने हेतु बिड कैटेगरी पत्र के साथ संलग्नक कर आपके समक्ष अग्रिम कार्यवाही हेतु प्रेषित है।

भवदीय,

डा0 शिउली
को-फैकल्टी इंचार्ज
आई0टी0 सेल
के0जी0एम0यू0, लखनऊ

Wireless LAN Access P

Shopping Cart

NOTIFICATIONS

Filters

Administrative

Intent Of Buying

- [ ] BID/RA
- [ ] PAC

SELECT CONSIGNEES

Include Out Of Stock

Make In India

MSE

Startup

Seller Registered Address

Wireless LAN Access Point (V3) (Q2 Category)

(Category Insights)

INVITE SELLER

Showing 1 - 12 products of 17 products in Wireless LAN Access Point (V3)

Sort by : Price:Low to High

AIR PRO Indoor Wireless LAN Access Point

Seller:Resellers

4.5 - 5.0

Brand: AIR PRO
Min. Qty. Per Consignee: 1

₹ 11,598.00

₹ 21,000.00

45% OFF

Product Compare 0

Compare

Product History 0

Seller Rating

ADD TO CART

Financial

Make/Model Selection

Product Specifications

AIR PRO Indoor Wireless LAN Access Point

Seller:Resellers

4.5 - 5.0

Brand: AIR PRO
Min. Qty. Per Consignee: 1

₹ 11,799.00 69% OFF
~~₹ 38,000.00~~

☐ Compare

ADD TO CART

AIR PRO Indoor Wireless LAN Access Point

Seller:Resellers

4.5 - 5.0

Product Compare 0 Product History 0

Brand: AIR PRO
Min. Qty. Per Consignee: 20

₹ 14,985.00 62% OFF
₹ 39,490.00

☐ Compare

ADD TO CART

QUANTUM NETWORKS Indoor Wireless LAN Access ...

Seller:Resellers

4.5 - 5.0

Brand: QUANTUM NETWORKS
Min. Qty. Per Consignee: 1

₹ 25,292.00 61% OFF
₹ 65,023.00

☐ Compare

ADD TO CART

Product Compare 0 Product History 0

Sophos Indoor Wireless LAN Access Point

Seller:Resellers

4.0 - 4.49

Brand: Sophos
Min. Qty. Per Consignee: 1

₹ 29,900.00 10% OFF
₹ 33,243.00

☐ Compare

ADD TO CART



AIR PRO Indoor Wireless LAN Access Point

Seller:Resellers

4.0 - 4.49

Brand: AIR PRO
Min. Qty. Per Consignee: 1

Product Compare 0 Product History 0

₹ 41,990.00 55% OFF

₹ 92,000.00

Compare

ADD TO CART



QUANTUM NETWORKS Indoor Wireless LAN Access ...

Seller:Resellers

4.5 - 5.0

Brand: QUANTUM NETWORKS
Min. Qty. Per Consignee: 1

₹ 48,975.00 45% OFF
₹ 89,604.00

Compare

ADD TO CART



Product Compare 0 Product History 0

AIR PRO Indoor Wireless LAN Access Point

Seller:Resellers

4.5 - 5.0

Brand: AIR PRO
Min. Qty. Per Consignee: 1

₹ 49,498.00 20% OFF
~~₹ 62,000.00~~

☐ Compare

ADD TO CART



QUANTUM NETWORKS Indoor Wireless LAN Access ...

Seller:Resellers

4.5 - 5.0

Brand: QUANTUM NETWORKS
Min. Qty. Per Consignee: 1

₹ 56,241.00 53% OFF
~~₹ 118,746.00~~

☐ Compare

Products costing more than **₹ 50,000.00** must be compared. Please Compare Product before adding to cart

Product Compare 0 **Product History** 0

HFCL Group Indoor Wireless LAN Access Point

Seller:Resellers

4.5 - 5.0

Brand: HFCL Group
Min. Qty. Per Consignee: 5

₹ 72,000.00 42% OFF
₹ 125,000.00

☐ Compare

Products costing more than ₹ **50,000.00** must be compared. Please Compare Product before adding to cart

HFCL Group Indoor Wireless LAN Access Point

Seller:Resellers

4.5 - 5.0

Brand: HFCL Group
Min. Qty. Per Consignee: 10

₹ 74,000.00 26% OFF
₹ 100,000.00

Product Compare 0 Product History 0

☐ Compare

Products costing more than ₹ **50,000.00** must be compared. Please Compare Product before adding to cart



HFCL Group Outdoor with IP67 Wireless LAN ...

Seller:Resellers

4.5 - 5.0

Brand: HFCL Group
Min. Qty. Per Consignee: 5

₹ 79,000.00 34% OFF
~~₹ 119,180.00~~

☐ Compare

Products costing more than ₹ **50,000.00** must be compared. Please Compare Product before adding to cart

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Wireless LAN Access P

Shopping Cart

NOTIFICATIONS

Filters

Administrative

Intent Of Buying

- [ ] BID/RA
- [ ] PAC

SELECT CONSIGNEES

Include Out Of Stock

Make In India

MSE

Startup

Seller Registered Address

Wireless LAN Access Point (V3) (Q2 Category)

(Category Insights) INVITE SELLER

Showing 1 - 12 products of 17 products in Wireless LAN Access Point (V3)

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Seller:Resellers

4.5 - 5.0

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Min. Qty. Per Consignee: 1

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~~₹ 21,000.00~~

Compare

Product Compare 0 Product History 0

Seller Rating

ADD TO CART

Financial

Make/Model Selection

Product Specifications



AIR PRO Indoor Wireless LAN Access Point

Seller:Resellers

4.5 - 5.0

Brand: AIR PRO
Min. Qty. Per Consignee: 1

₹ 11,799.00 69% OFF
₹ 38,000.00

☐ Compare

ADD TO CART

AIR PRO Indoor Wireless LAN Access Point

Seller:Resellers

4.5 - 5.0

Product Compare 0 Product History 0

Brand: AIR PRO
Min. Qty. Per Consignee: 20

₹ 14,985.00
₹ 39,490.00

62% OFF

Compare

ADD TO CART

QUANTUM NETWORKS Indoor Wireless LAN Access ...

Seller:Resellers

4.5 - 5.0

Brand: QUANTUM NETWORKS
Min. Qty. Per Consignee: 1

₹ 25,292.00
₹ 65,023.00

61% OFF

Compare

ADD TO CART

Product Compare 0 Product History 0

Sophos Indoor Wireless LAN Access Point

Seller:Resellers

4.0 - 4.49

Brand: Sophos
Min. Qty. Per Consignee: 1

₹ 29,900.00 10% OFF
~~₹ 33,243.00~~

☐ Compare

ADD TO CART



AIR PRO Indoor Wireless LAN Access Point

Seller:Resellers

4.0 - 4.49

Brand: AIR PRO
Min. Qty. Per Consignee: 1

Product Compare Product History 0

~~₹ 41,590.00~~ 55% OFF

₹ 92,000.00

Compare

ADD TO CART



QUANTUM NETWORKS Indoor Wireless LAN Access ...

Seller:Resellers

4.5 - 5.0

Brand: QUANTUM NETWORKS
Min. Qty. Per Consignee: 1

₹ 48,975.00
₹ 89,604.00

45% OFF

Compare

ADD TO CART



Product Compare 0 Product History 0

AIR PRO Indoor Wireless LAN Access Point

Seller:Resellers

4.5 - 5.0

Brand: AIR PRO
Min. Qty. Per Consignee: 1

₹ 49,498.00
₹ 62,000.00

20% OFF

☐ Compare

ADD TO CART



QUANTUM NETWORKS Indoor Wireless LAN Access ...

Seller:Resellers

4.5 - 5.0

Brand: QUANTUM NETWORKS
Min. Qty. Per Consignee: 1

₹ 56,241.00
₹ 118,746.00

53% OFF

☐ Compare

Products costing more than **₹ 50,000.00** must be compared. Please Compare Product before adding to cart

Product Compare 0 Product History 0

HFCL Group Indoor Wireless LAN Access Point

Seller:Resellers

4.5 - 5.0

Brand: HFCL Group
Min. Qty. Per Consignee: 5

₹ 72,000.00 42% OFF
~~₹ 125,000.00~~

☐ Compare

Products costing more than ₹ **50,000.00** must be compared. Please Compare Product before adding to cart

HFCL Group Indoor Wireless LAN Access Point

Seller:Resellers

4.5 - 5.0

Brand: HFCL Group
Min. Qty. Per Consignee: 10

₹ 74,000.00 26% OFF
~~₹ 100,000.00~~

Product Compare 0 Product History 0

☐ Compare

Products costing more than ₹ **50,000.00** must be compared. Please Compare Product before adding to cart



HFCL Group Outdoor with IP67 Wireless LAN ...

Seller:Resellers

4.5 - 5.0

Brand: HFCL Group
Min. Qty. Per Consignee: 5

₹ 79,000.00
₹ 119,180.00

34% OFF

☐ Compare

Products costing more than ₹ **50,000.00** must be compared. Please Compare Product before adding to cart

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	Specifications: Wi- Fi Indoor AP (Propitiatory Items)	
S. No	**Parameters**	**Compliance Yes/No**
1	**Product details- Please specify**	
1.1	Please mention Make, Model No. and Part Code	
2	**Radio Specifications**	
2.1	Access Point should be dual-band, dual-radio indoor access point	
2.2	AP should have 2x2 MIMO on 2.4GHz and 2x2 on 5GHz antennas for transmission and receiving. Should support MU-MIMO.	
2.3	AP should support IEEE 802.11 a/b/g/n/ac/ax amendments.	
2.4	AP should provide 23dBm transmit power on both radios as per TRAI-WPC regulatory norms.	
2.6	Antenna should dynamically choose antenna patterns in real-time environment to establish the best possible connection with every device.	
3	**Interface**	
3.1	APs should have Two (2) 1GbE Ethernet ports	
4	**Networking Requirements**	
4.1	AP should have capacity to handle minimum 500 Concurrent devices.	
4.2	AP should be flexible hardware to be deployed as Standalone, Controller-less (Cluster), Controller-based, Cloud-based.	
4.3	Should have IPv6 support, IEEE 802.1Q, Band balancing, airtime fairness, QoS, L2/L3/L4 ACL	
4.4	Configuration should be possible to configure as if controller goes down, still APs should be able to handle client traffic.	
5	**Security & Monitoring**	
5.1	AP should support AES encrypted GRE-based tunnel for data forwarding.	

5.2	AP Should support auth/encryption methods for WLAN configuration: WPA2-AES, PSK, WPA3, IEEE 802.1X/EAP. It should also support Role-Based Access Control, rate-limiting, device fingerprinting	
6	**Management Features**	
6.1	AP should have administrative access through HTTPS GUI, SSH CLI. It should provide WLAN configuration for standalone operations and provisioning tools for controller/cloud operations. If controller config disallows GUI/CLI access it should follow same.	
6.2	AP should have recovery SSID for easy access to CLI console when AP is unreachable through network.	
7	**Mandatory Compliance:**	
7.1	Must be plenum-rate (UL2043).	
7.2	Should have operating temperature of 0-50 °C	
7.3	AP hardware should have been approved by Wireless Planning Commission (TRAI, Govt of India). ETA certificate should be submitted. Wi-Fi alliance certification also mandatory.	
7.4	AP must be MTCTE Certified	
8	**Warranty & Support**	
8.1	AP should come with 5 years Limited warranty and 5 Years OEM TAC support	

Dr.Preeti Agarwal
Faculty In-charge
IT Cell KGMU

Dr.Shiuli
Co-Faculty Incharge
IT Cell KGMU

Dr.Vaibhav Jaiswal
Co-Faculty In-charge
IT Cell KGMU

Dr. Sandeep Bhattacharya
Department of Physiology
KGMU

Prof. Uttam Singh
Hon'ble Vice Chancellor Nominee
SGPGIMS

Mr.Abhishek Nagar
Technical Expert
AKTU

Harmonic - Unified Energey System (monopolar, bipolar, advanced bipolar and ultrasonic) with hand instruments and accessories

Ref No- OG/4354/26

Dt- 5/11/26

KING GEORGE'S MEDICAL UNIVERSITY
Department of Obstetrics and Gynaecology
Lucknow-226003

PROPRIETARY/ SPECIFIC BRAND GOODS CERTIFICATE		
1	Item/ Type/ Model No. required along with specification	DUALTO™ Energy System (Johnson & Johnson Pvt Ltd) – is a Comprehensive surgical energy platform supporting monopolar, bipolar, ultrasonic (HARMONIC™) and advanced bipolar (ENSEAL™) instruments, in single configuration, with compatible instruments and foot pedals.
2	If the item a spare part attachment or accessory for an existing equipment Yes / No (If yes, provide details)	**No.** The item is a new standalone capital equipment purchase for the Department of Obstetrics & Gynaecology.
3	Name of the manufacturers/supplier of the item proposed by the indenter	**M/s Johnson & Johnson Pvt Ltd.** Reg Off: Higi House, L.B.S Marg, Mulund(W), Mumbai 400080
4	Are they sole manufacturers/ sold distributors of the Item. Yes / No	**Yes.** DUALTO™ Energy System is a proprietary platform of M/s Johnson & Johnson Pvt Ltd.
5	If there any other item with similar/ equivalent specification available in the market to meet the job requirement envisaged. Yes / No (If yes, explain why those alternatives cannot be procured and provide a comparative analysis of the functional advantages/cost-effectiveness recommended item)	The Department needs simultaneous activation of two energy instruments from a single generator, so that two operating surgeons can work in parallel during complex gynaecological surgery. This is available only in DUALTO™ Energy System. **Clinical benefits:** • Shorter operating and anaesthesia time, because no instrument-sharing or waiting is needed. • Fewer instrument exchanges, so a lower risk of intra-operative delay. • One platform that covers monopolar, bipolar, ultrasonic and advanced bipolar. • A single generator in place of two units, which saves OT space and cost.
6	Efforts made to locate alternative sources of supply or use of substitutes	The Department reviewed the specifications of comparable generators available in India: **None offers** simultaneous dual-instrument activation from one Unit and a Comprehensive System providing all energy Modalities with minimal OT Footprint.
7	Why open tender can't be resorted to, for locating alternative source.	The clinical requirement of simultaneous dual activation is met only by DUALTO™ Energy System. An open tender would either draw no technically equivalent bid/ substandard products or force the Department to drop a clinically justified requirement. It would also delay patient care.
8	Are the proprietary items certified to have reasonable rates? Yes / No (Attach supporting documents, if applicable)	**Yes.** A price justification will be obtained from the vendor to establish the reasonableness of the quoted rates.

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9	Any other justification for procuring the item from a single source	• Only DUALTO™ Energy System provides simultaneous activation of two energy instruments from a single generator, which the Department's clinical workflow requires. The generators otherwise available permit only one activation at a time. • **Clinical Correlation:** The Department performs complex gynaecological surgery that needs a comprehensive, advanced energy solution. This includes endometriosis excision and Adhesiolysis, lap hysterectomy, myomectomy, adnexal surgery, re-operative pelvic surgery and gynae-oncology procedures, where dense adhesions and distorted anatomy lie close to the bowel, bladder and ureters. These cases need precise dissection, reliable vessel sealing and controlled thermal spread, often with a switch between bipolar, advanced bipolar and ultrasonic energy in the same procedure. • Compatibility with the Department's existing HARMONIC/ ENSEAL instruments. • Single-vendor warranty, service and CMC, with availability of the manufacturer's service support. • Upgradeability: the modular design allows later addition of an energy module or a second generator without replacing the system. • Patient safety and continuity of care, with consistent performance across surgeons and shifts. • Reduced consumable and inventory complexity.

I hereby certify that the above item is required to be procured on a proprietary/single source basis, as the specified brand is the only known source that meets our functional requirements. Given the unique advantages of this brand, an open tender process would not serve any meaningful purpose in this case and can justifiably be waived.
(strike out whoever is not applicable)

5/11/26

Head of the Department

Head of the Deptt.
of Obst. & Gynaecology
K.G. Medical University
LUCKNOW.

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Ref No - OG/4355/26

KING GEORGE'S MEDICAL UNIVERSITY
Department of Obstetrics and Gynaecology
Lucknow - 226003
Ref

Dt - 5/11/26

Proprietary Article Certificate in the following form is to be provided by the Ministry/ Department before procuring the goods from a single source under the provision of sub-Rule 166 (i) and 166 (iii) as applicable.

I. The indented goods are manufactured by: **M/s Johnson & Johnson Pvt Ltd.**

II. No other make or model is acceptable for the following reasons:

- Only DUALTO™ Energy System provides simultaneous activation of two energy instruments from a single generator, which the Department's clinical workflow requires. The generators otherwise available permit only one activation at a time.
- **Clinical Correlation**: The Department performs complex gynaecological surgery that needs a comprehensive, advanced energy solution. This includes endometriosis excision and Adhesiolysis, lap hysterectomy, myomectomy, adnexal surgery, re-operative pelvic surgery and gynae-oncology procedures, where dense adhesions and distorted anatomy lie close to the bowel, bladder and ureters. These cases need precise dissection, reliable vessel sealing and controlled thermal spread, often with a switch between bipolar, advanced bipolar and ultrasonic energy in the same procedure.
- Compatibility with the Department's existing HARMONIC/ ENSEAL instruments.
- Single-vendor warranty, service and CMC, with availability of the manufacturer's service support.
- **Upgradeability:** the modular design allows later addition of an energy module or a second generator without replacing the system.
- Patient safety and continuity of care, with consistent performance across surgeons and shifts.
- Reduced consumable and inventory complexity.

iii. Concurrence of finance wing to the proposal vide: ..... Requested .....

iv. Approval of the competent authority vide: ..... Requested .....

5/11/26

(Signature with date and designation of the indenting officer)

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of Obst. & Gynaecology
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Technical Specifications of 'Harmonic – Unified Energy System (monopolar, bipolar, advanced bipolar and ultrasonic) with hand instruments and accessories

(PAC ITEM)

A. System Configuration & Functional Requirements

1. The system shall be a combined energy platform capable of delivering:
    - Monopolar energy
    - Bipolar energy
    - Ultrasonic energy
    - Advanced RF energy
2. The system shall be capable of soft tissue dissection and vessel sealing up to and including 7 mm.
3. The system shall comprise the following components:
    - Communication Module – 01 Unit
    - User Screen – 01 Unit
    - Energy Module – 02 Units
4. The communication module shall function as the central processing unit of the system.
5. The communication module shall have:
    - Power ON/OFF switch
    - Integrated speakers
6. The user screen shall be touchscreen based with a display size of not less than 12 inches.
7. The system shall provide a single point of user control for all energy modalities.
8. Each energy module shall have ports for connection of:
    - Monopolar instruments
    - Bipolar instruments
    - Advanced RF instruments
    - Ultrasonic instruments
    - Patient return electrode
9. The system shall be modular and capable of operating in single or double configuration as required.
10. The system shall have touch-based controls with drag-and-drop assignment of footswitch functions.
11. The system shall have provision for future connectivity through:

- Bluetooth
- Wi-Fi
- NFC (Near Field Communication)

12. The system shall provide automatic instrument recognition.
13. The system shall support both hand-switch and foot-switch operation.
14. The system shall have storage capability for at least 100 surgeon profiles with procedure-specific settings.

B. Dual Energy Configuration

15. The system shall support simultaneous activation of two instruments in the following combinations:

- Monopolar + Monopolar
- Monopolar + Bipolar
- Bipolar + Bipolar
- Monopolar + Advanced Energy
- Bipolar + Advanced Energy
- Advanced Energy + Advanced Energy

Dr. Neetu Singh
Professor & HOD
Department of OBGYN
RPGMCSRH, Dr. RMLIMS
on long leave

Dr. Anjoo Agarwal	Dr. Rekha Sachan	Dr. Sujata Deo	Dr. Amita Pandey	Dr. Seema Mehrotra	Dr. P.L. Shankhwar	Dr. Renu Singh	Dr. Smriti Agrawal
Professor & Head	Professor	Professor	Professor	Professor	Professor	Professor	Professor

16. The system shall permit simultaneous CUT and COAG activation in dual monopolar mode.
17. The double configuration shall provide:

- Four monopolar ports
- Two bipolar ports
- Two advanced energy ports
- Four foot-pedal receptacles

18. The system shall have universal footswitch receptacles compatible with monopolar, bipolar and ultrasonic energy footswitches.
19. The system shall provide visual and audible intraoperative troubleshooting guidance.
20. Troubleshooting information shall be visible from different positions in the operating room.

C. Electrical Safety & Standards

21. The system shall be Class I Medical Electrical Equipment.
22. The system shall comply with:

- IEC 60601-1
- IEC 60601-1-2
- IEC 60601-2-2
- IEC 60601-1-8

23. The system shall have applicable regulatory approvals such as USFDA and CE certification.

D. Monopolar Energy Modes

24. The system shall provide monopolar cutting modes including:

- Pure Cut
- Blend
- GEM or equivalent mode

25. GEM/equivalent mode shall provide automatic adjustment for effective tissue cutting without manual power changes.
26. The system shall provide coagulation modes including:

- Coag 1
- Coag 2
- Spray
- Soft Coag

27. The system shall provide precise cutting with minimal thermal spread.

E. Bipolar Energy Modes

28. The system shall provide bipolar modes including:

- Micro
- Macro
- Auto

Dr. Neetu Singh
Professor & HOD
Department of OBGYN
RPGMCSRH, Dr. RMLIMS

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on long leave

F. Ultrasonic Energy

29. The system shall support ultrasonic energy instruments.
30. Ultrasonic operating frequency shall be in the range of 50–55.5 kHz.
31. Ultrasonic instruments shall provide pure ultrasonic energy.
32. Ultrasonic instruments shall be capable of sealing vessels up to and including 7 mm.
33. Ultrasonic instruments shall have integrated transducers.
34. Ultrasonic instruments shall provide advanced haemostasis mode.
35. Lateral thermal spread shall be less than 1 mm while using pure ultrasonic energy.

G. Advanced RF Energy

36. The system shall support advanced RF energy instruments.
37. RF hand instruments shall have separate SEAL and CUT controls.
38. RF energy delivery shall be controlled through advanced algorithms for efficient tissue sealing.
39. RF instruments shall be capable of cutting, sealing and coagulating vessels up to and including 7 mm.
40. Vessel seals shall withstand burst pressures up to seven times systolic blood pressure.

H. Scope of Supply

Sr. No.	Description	Qty.
1	Communication Module	01
2	User Screen (12 inch or more)	01
3	Energy Module	02
4	Ultrasonic/Monopolar Footswitch	01
5	Bipolar Footswitch	01
6	Cart/Trolley	01
7	Ultrasonic Handpiece/Transducer for Open Surgery	02
8	Ultrasonic Handpiece/Transducer for Laparoscopic Surgery	02
9	5 mm Laparoscopic Ultrasonic Shear, 18 mm curved blade, 36 cm	05
10	5 mm Laparoscopic Ultrasonic Shear, 15 mm curved blade, 36 cm	25
11	Hand-activated Open Ultrasonic Shear, 17 cm	10
12	5 mm Advanced Bipolar Tissue Sealer, 37 cm	05
13	Disposable PTFE-coated Cautery Pencil	50

Dr. Neetu Singh
Professor & HOD
OBGYN

Dr. Anjoo Agarwal	Dr. Rekha Sachan	Dr. Sujata Deo	Dr. Amita Pandey	Dr. Seema Mehrotra	Dr. P.L. Shankhwar	Dr. Renu Singh	Dr. Smriti Agrawal
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4	Disposable Dual-Plate Patient Return Electrode with Cord	50
15	Any other essential hardware, software, accessories, cables, connectors or items required to make the complete system functional shall be quoted and supplied along with the system. If not specifically quoted, such items shall be deemed to be included and supplied free of cost.	As required

General Clauses:-

1. **Comprehensive Warranty:**
The equipment/system shall be covered by a comprehensive warranty for a period of five (05) years from the date of successful installation, commissioning and acceptance of the system by the University. The warranty shall cover all spare parts, components, consumables/accessories supplied with the system, battery, UPS and other accessories, as applicable, including all parts required for the satisfactory functioning of the system. There shall be no additional cost to the University for repair/replacement of any component covered under warranty.

2. **Comprehensive CMC:**
   - The supplier shall quote Comprehensive Maintenance Contract (CMC) charges separately for each year (6th to 10th) beyond the five (05) year warranty period. The CMC shall become effective immediately after expiry of the warranty period. The CMC shall include preventive maintenance, breakdown maintenance, labour/service charges, all required spare parts and components, and yearly calibration by a reputed/authorized calibration agency in a standard format, wherever applicable.
   - The bidder shall clearly and specifically identify, in the technical as well as financial bid, any parts, components, accessories, consumables or other items which are not covered under the Comprehensive CMC. No exclusion shall be presumed or implied; any item proposed to be excluded from CMC coverage shall be explicitly mentioned by the bidder. In the absence of such specific declaration, all parts, components and accessories necessary for the satisfactory functioning of the equipment shall be deemed to be covered under the Comprehensive CMC.
   - The supplier shall furnish an undertaking to provide CMC support, including necessary upgradation/retrofitment required for continued functioning of the equipment, for the lifetime of the system, subject to availability of technology and OEM support. The bidder shall clearly indicate the number of Preventive Maintenance (PM) visits/calls and breakdown/service calls covered under the CMC in a year.

3. **Timely Renewal of CMC:**
   - In compliance with University Circular No. KGMU/VC/106/2025 dated 12.09.2025, the process for renewal of the CMC shall be initiated well in advance, preferably at least three (03) months prior to expiry of the existing contract period. The onus shall lie entirely with the Seller Firm/OEM to submit the proposal/quotation for renewal of CMC within the stipulated time.
   - The University shall not be held responsible for any delay or resultant gap in CMC coverage arising due to late or non-submission of the renewal proposal by the Seller Firm/OEM. Any breakdown, damage, loss of functionality or other consequential issue occurring during such gap in coverage, which would otherwise have been covered under the CMC, shall remain the responsibility of the Seller Firm/OEM and shall not be attributable to the University.

4. **Delivery, Installation and Commissioning:**
Delivery, installation, testing and commissioning of the complete system, including all standard accessories and components, shall be carried out by the supplier at the client

Dr. Anjoo Agarwal	Dr. Rekha Sachan	Dr. Sujata Deo	Dr. Amita Pandey	Dr. Seema Mehrotra	Dr. P.L. Shankhwar	Dr. Renu Singh	Dr. Smriti Agrawa
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Professor & HOD
on long leave

site. The equipment shall be considered commissioned only after satisfactory demonstration and acceptance by the University/authorized representative.

5. **Hands-on Training:**
The supplier/OEM shall provide comprehensive hands-on training at the client site to the concerned healthcare professionals, technical staff and other designated users regarding operation of the equipment, routine/day-to-day maintenance, cleaning, basic troubleshooting and safety precautions. Training shall be provided without any additional cost to the University.

6. **Customer Care/Local Support Details:**
   - The Seller Firm/OEM shall provide complete details of the designated Customer Care/Local Support Team, including name(s), designation, complete address, contact/mobile number(s), toll-free customer care number, e-mail address(es) and other relevant contact details for lodging complaints and obtaining technical/service support.
   - The Seller Firm/OEM shall ensure that such support remains accessible throughout the warranty and CMC periods. Any change in the designated personnel, contact numbers, e-mail address, address or support arrangements shall be communicated to the University in writing immediately/as and when such change is made, so as to ensure uninterrupted communication and service support.

7. **Grievance Management/Escalation Team:**
   - The Seller Firm/OEM shall provide details of its designated Grievance Management/Escalation Team for resolution of unresolved service-related complaints and grievances. The details shall include the name, designation, complete address, contact/mobile number, toll-free number, e-mail address and escalation matrix, including contact details of the responsible senior officer/authorized representative.
   - The Seller Firm/OEM shall ensure timely acknowledgement and resolution of grievances escalated to this team. Any change in the designated personnel or their contact details shall be communicated to the University in writing immediately/as and when such change is made.

8. **Utility and Site Requirements:**
The bidder shall clearly specify all utility and site requirements necessary for proper installation, commissioning and functioning of the equipment as part of the technical bid. These shall include, but shall not be limited to:
   - Electrical Requirements: Voltage, frequency, phase, maximum/rated power consumption, electrical load, grounding/earthing requirements, UPS requirements/compatibility, etc.
   - Civil/Site Requirements: Minimum room dimensions, floor load-bearing capacity, ventilation/air-conditioning requirements, drainage, water supply, structural modifications, mounting/foundation requirements, access/door dimensions and any other site-preparation requirements.

The bidder shall provide these details in sufficient advance to enable the University to ensure site readiness before installation.

9. **Manuals, Documents and Certificates:**
The supplier shall provide the following in both hard copy and soft copy, wherever applicable:
   - User Manual, Technical Manual and Maintenance Manual in English, along with machine/system diagrams.
   - List of equipment, tools and procedures required for local calibration and routine maintenance.
   - Original Service and Operation Manuals.

Dr. Neetu Singh
Professor & HOD

on long leave

Dr. Anjoo Agarwal	Dr. Rekha Sachan	Dr. Sujata Deo	Dr. Amita Pandey	Dr. Seema Mehrotra	Dr. P.L. Shankhwar	Dr. Renu Singh	Dr. Smriti Agraw
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- Documentation for advanced/preventive maintenance procedures.
- Calibration and Inspection Certificate.
- Any other technical/service documentation necessary for safe operation, maintenance and servicing of the equipment.

10. Point-wise Compliance:

The bidder shall furnish point-wise compliance against each specification/requirement of the tender document, clearly indicating "Complied/Not Complied" against each point. Any deviation shall be specifically mentioned. The bidder shall also clearly indicate any additional features provided in the offered system.

11. Separate Pricing:

Rates shall be quoted separately for the main system/equipment and accessories, wherever applicable. The price schedule shall clearly identify the cost of each major component/accessory.

12. Spare Parts Price Commitment:

The Manufacturer/Supplier shall furnish an undertaking/acceptance to provide price quotations for spare parts/components of the medical device/equipment and other supply items, as and when requisitioned by the Department/University through a valid requisition/Purchase Order, during the useful life of the equipment. The supplier shall clearly indicate the applicable terms and conditions for supply of such spare parts.

Dr. Neetu Singh
Professor & HOD
Department of OBGYN
PGMCSRH, Dr. RMLIMS

Dr. Anjoo Agarwal	Dr. Rekha Sachan	Dr. Sujata Deo	Dr. Amita Pandey	Dr. Seema Mehrotra	Dr. P.L. Shankhwar	on long leave Dr. Renu Singh	Dr. Smriti Agrawa
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Surgery

Ethicon Endo-Surgery, LLC
475 Calle C
Guaynabo, Puerto Rico 00969, USA

PROPRIETARY CERTIFICATE & AGREEMENT FOR REPRESENTATION

To Whom it May Concern:

We, **Ethicon Endo-Surgery, LLC, located at 475 Calle C, Guaynabo, Puerto Rico, 00969, USA,** hereby certify that we are the legal manufacturer of the product codes listed in Annexure 1.

We further certify that **Johnson & Johnson Private Limited**, at 501 Arena Space Off JVLR, Behind Majas Depot, Jogeshwari East Mumbai 400060, India is our affiliate and is authorized to market the products in India through its regional branch offices at Chennai, Delhi, Mumbai, and Kolkata. Furthermore, we, the undersign, on behalf of **Ethicon Endo-Surgery, LLC,** confirm that **Johnson & Johnson Private Limited** and its regional branch offices are authorized to submit offers and commit, sign, finalize, execute orders and to appoint distributors, dealers and liaison agents to sell the complete range of products on our behalf.

Signed for and on behalf of:
Ethicon Endo-Surgery, LLC

EMILY Nesbitt
Electronically signed by: EMILY Nesbitt
Reason: I am approving this document
Date: Feb 17, 2026 16:05:04 EST

Emily Nesbitt
Director – Regulatory Affairs

17-Feb-2026
Date

Annexure 1

Product Code	Product Name
ETHCM	ETHICON COMMUNICATION MODULE
ETHUSC	ETHICON USER SCREEN
ETHEF1	ENERGY SINGLE FOOTSWITCH
ETHERF	ENERGY ROUND FOOTSWITCH
ETHEF2	ENERGY DOUBLE FOOTSWITCH
ETHCRT	ETHICON ENERGY CART
ETHOVK	ENERGY OUTPUT VERIFICATION KEY
ETHEM	ETHICON ENERGY MODULE

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70827 India Due 2/20

Final Audit Report

2026-02-17

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Quotation No: REF/DUALTO/AUG

Date: 11.08.2026

To,
The Head of Department,
Department of Obst & Gynecology,
King George Medical College University,
Lucknow

Kind Attention: Department of Gynecology

Subject: Quotation for DUALTO Total Energy System with combined Technology of Monopolar, Bipolar, Ultrasonic and Advanced RF energy for soft tissue dissection and vessel sealing up to 7 mm through pure Ultrasonic energy.

Dear Sir,

As discussed with you, we are pleased to quote the most competitive rates to your esteemed institution for the above-mentioned AESS Product.

Description of DUALTO: -



DUALTO is the latest and state-of-the-art generator from Johnson & Johnson which combines multiple energy modalities into a single system that is simple to use across procedures, configurable to different settings, and is easily upgradable.

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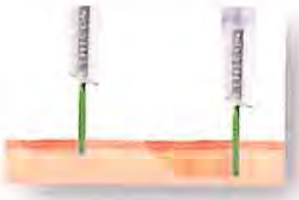
1. **Unified & Modular:** Multiple energy modalities in one, consolidated system – monopolar, bipolar, advanced bipolar, and ultrasonic. The DUALTO Energy system is also modular in nature, meaning it can be configured (Single vs Double) basis the surgical need.

2. **Elevated User Experience:** User-centric interface provides surgeons custom energy settings via surgeon profiles. The system provides step-by-step guidance to the end-user, facilitating easy device setup and connection to multiple energy modalities. It uses Lighted displays, auditory cues, and guided steps for troubleshooting to enable clear feedback that can be seen from any position in the surgical field.

3. **Powerful Energy Delivery:** DUALTO supports improved tissue outcomes with its proprietary ATT & GEM Technology.





GEM Technology: The GEM mode in Monopolar requires no power adjustments to maintain a scalpel-like cut through varying tissue types with minimal thermal damage.

ATT: Adaptive Tissue Technology responds to changing tissue conditions, enabling more precise energy delivery and improved temperature management. ATT powers Harmonic & Enseal devices.

DUALTO is the **only generator on the market** that supports two surgeons activating energy simultaneously, supporting surgeons in complex procedures and improving OR efficiency.

4. **Connected & Upgradeable:** DUALTO performance and maintenance needs can be remotely monitored via Polyphonic Fleet, an online fleet management application powered by J&J MedTech.
   Polyphonic Fleet helps ensure DUALTO is running optimally without disrupting the OR schedule.
   Polyphonic Fleet supports in:

   - Device Installation
   - Device Maintenance (asset management & software upgrades)
   - Accessing J&J's Service Solutions

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The benefits of consumables compatible with DUALTO are as follows:

Harmonic (Ultrasonic energy):

- Precise cutting with minimum lateral damage.
- No electricity passes to or through the patient.
- Multi-functionality reduces instrument exchanges.
- Minimal char and desiccation of tissue produces minimal smoke yielding better visualization.
- Cavitation effect aids in dissection of tissue planes.

Enseal (RF energy) technology are:

- PTC regulates temperature, minimizing sticking, char, smoke and lateral thermal spread due to heat.
- The offset electrode design surrounds the positive electrode with negative electrodes, limiting stray current.
- Minimal lateral thermal spread to ~1mm.
- The I-BLADE™ creates high uniform compression, leading to 7 mm vessel sealing and high burst strengths and allows the surgeon to control the speed of the seal cycle, resulting in improved surgical efficiency.
- Variable probe length for various surgical procedures.

DUALTO conforms to the following International Standards:

- EN (IEC) 60601-1 (with Canadian and US National Deviations)
- EN (IEC) 60601-1-2
- EN (IEC) 60601-2-2
- EN (IEC) 60601-1-8

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3/9/16

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Proposal for DUALTO Energy System:

S. No	Product Description		Qty	Special Offer Price
1	Double DUALTO Generator with the following components:			7,604,100
	User Screen	ETHUSC	1	
	Communications Module	ETHCM	1	
	Energy Module	ETHEM	2	
2	Energy Double Footswitch	ETHEF2	1	
3	Energy Round Footswitch	ETHERF	1	
4	Cart	ETHCRT	1	
5	Harmonic Gray Handpiece	HARHPGR	1	
6	Harmonic Blue Handpiece	HARHPBL	1	
7	Harmonic Ace+ lap Shears 36cm	HAR36	20	
8	Harmonic Focus+ Long 17cm Curved Shears	HAR17F	10	
9	Harmonic 1100 Shears 36cm Length	HAR1136	5	
10	Enseal X1 Curved Tissue Sealer 37cm Length	NSLX137C	5	
11	PTFE Coated Disposable Cautery Pencil	0035H	01 Box	
12	Disposable return Electrode Dual plate	0855CL	01 Box	
	Total Quotation Price for Double DUALTO Set			**7,604,100**

Note: GST @ 5% additional GST will be applicable on the base amount.

We do feel that the above will be in line with your requirements. Should you however have any queries, kindly do not hesitate to get in touch with **Mr Gaurav Sahni** at **+91-9580212122** or at email id **GSahni@its.jnj.com**

Warranty:

Warranty for **DUALTO (DD Bundle+ETHEF2/ETHERF) will be 60 months** from the date of installation.

This warrants the product to free from defects in material and workmanship under normal use. Our obligation will be limited to repair or replacement of the said product or part only. This warranty does not apply to:

- Repair by other parties, which in our opinion affects the product stability or reliability.
- Improper use, negligence or accident.

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Head of the Deptt.
of Obst. & Gynaecology
K.G. Medical University

Johnson&Johnson
MedTech

CMC Pricing:

As discussed, post warranty, we will be covering your device under **CMC** as per the below rates:
CMC 6th year will be charged at 7% of the cost of equipment with 10% escalation Year over Year till the end of service life of equipment.
Note: 18% GST will be applicable on CMC prices.

CMC Offerings include:

OFFERINGS	
Calibration & PMs	1. Annual Preventive Maintenance
	2. Bi-yearly Periodic Test
Breakdown & Repairs	1. Spare Part replacement
	2. Service Charge coverage
	3. Transportation Charge coverage
	4. Standby Allocation
Access to Polyphonic Fleet	1. Device Installation
	2. Fleet Management
	3. Software Upgrades
Yearly Training	Device Care & Maintenance &

TERMS & CONDITIONS FOR SALE:

- **Price is Exclusive of GST @ 5%.** Any other Government Levies will be charged as extra as applicable.
- Price is valid till **30th Sept 2026.**
- Goods will be supplied by our Authorized channel partner
- Delivery within 3-4 weeks on receipt of the confirm order.
- 100% advance to be released along with the order.
- Product will be supplied against written orders.

Yours Sincerely,

Neeraj Tak

Digitally signed by Neeraj Tak
DN: c=US, st=New Jersey, o=Johnson & Johnson, 2.5.4.97=#1f1f1f5f1f1f1

KING GEORGE'S MEDICAL UNIVERSITY, LUCKNOW

DEPARTMENT OF OBSTETRICS & GYNAECOLOGY

JUSTIFICATION FOR PROCUREMENT OF DUALTO™ ENERGY SYSTEM ON PAC BASIS

Subject: Justification for procurement of DUALTO™ Energy System on Proprietary Article Certificate (PAC) basis

1. Background

The Department of Obstetrics & Gynaecology, King George's Medical University (KGMU), Lucknow, proposes procurement of the DUALTO™ Energy System (Ethicon, Johnson & Johnson MedTech) as an advanced electrosurgical platform for obstetric and gynaecological procedures requiring monopolar, bipolar, advanced bipolar and ultrasonic energy modalities.

2. Technical Justification

1. Proprietary technology: The system incorporates GEM Technology and Adaptive Tissue Technology as described by the manufacturer.
2. Device compatibility: The system is designed for compatible HARMONIC™, ENSEAL™ X1 and MEGADYNE™ instruments and associated OEM-specified configurations.
3. Standardisation and interoperability: The proposed system and its compatible accessories are subject to specified connector, electrical and compatibility requirements. The Department therefore requires assurance of complete system interoperability.
4. Integrated platform: The system provides monopolar, bipolar, advanced bipolar and ultrasonic energy delivery on one platform, supporting specialised operative requirements.
5. Safety and performance: The manufacturer's technical documentation identifies applicable IEC 60601-series standards for the equipment.
6. OEM support: OEM/authorised service channels provide maintenance, calibration, technical support and warranty-related services.
7. Clinical continuity: Procurement of a defined compatible system is intended to facilitate uniform operation, staff familiarity, availability of compatible accessories and continuity of specialised surgical services.

3. Basis for PAC Procurement

The proposal is based on the proprietary features of the specified system and the technical compatibility/interoperability requirements associated with the intended surgical instruments and accessories. It is not proposed merely on the basis of brand preference.

Rule 166 of GFR 2017 provides for procurement from a single source in specified circumstances, including where the user department knows that only a particular firm manufactures the required goods and, separately, for standardisation of machinery or spare parts to be compatible with existing equipment, subject to the prescribed technical advice and competent-authority approval. The PAC certificate prescribed under Rule 166 is required before procurement under the applicable single-source provisions.

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Head of the Deptt.
of Obst. & Gynaecology
K.G. Medical University
LUCKNOW.

Accordingly, the PAC route may be considered subject to confirmation of the proprietary status/technical exclusivity by the OEM, technical examination, Finance concurrence, competent-authority approval, and compliance with the procurement rules applicable to KGMU.

4. Important Procurement Safeguard

The Department shall not treat the stated brand or OEM as exclusive solely on the basis of brand preference. Before final procurement, an appropriate PAC/objection notice shall be published as required by the procurement procedure applicable to the University, inviting manufacturers/OEMs or authorised representatives to establish, with documentary evidence, whether any technically equivalent make/model can meet the complete functional, safety, compatibility and interoperability requirements.

Any claim of equivalence shall be examined objectively by the competent Technical Committee/authority. A mere commercial quotation or unsupported claim shall not establish technical equivalence.

5. Price Reasonableness and Approvals

- Valid OEM/PAC certificate and, where applicable, authorised dealership/representation certificate shall be obtained.
- Finance concurrence and approval of the competent authority shall be obtained as required.
- Price reasonableness shall be established before placement of the purchase order, using appropriate documentary evidence and applicable procurement procedures.
- Availability on GeM and the University's applicable procurement procedure shall be checked, wherever relevant.
- Warranty, installation, commissioning, training, preventive maintenance, calibration and after-sales service requirements shall be incorporated in the procurement terms, as applicable.

6. Certification

It is certified that the proposed procurement is based on identified technical, functional and interoperability requirements for specialised obstetric and gynaecological surgical procedures. The PAC proposal shall be processed only after the prescribed technical, financial and administrative checks and approvals.

Submitted for kind consideration and approval.

3/9/25

Head of the Deptt.
of Obst. & Gynaecology
K.G. Medical University
LUCKNOW.

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(DRAFT)

KING GEORGE'S MEDICAL UNIVERSITY, LUCKNOW

DEPARTMENT OF OBSTETRICS & GYNAECOLOGY

NOTICE INVITING OBJECTIONS / CLAIMS

Proposed Procurement of DUALTO™ Energy System on Proprietary Article Certificate (PAC) Basis

Notice No.: _____ Date: _____

1. Proposed Procurement

S. No.	Name of Equipment	Manufacturer / OEM	Proposed Mode
1	DUALTO™ Energy System	Ethicon, Johnson & Johnson MedTech	PAC / Single Source, subject to approval

2. Brief Technical Description

The proposed DUALTO™ Energy System is an advanced electrosurgical energy platform incorporating monopolar, bipolar, advanced bipolar and ultrasonic energy modalities. The manufacturer's technical documentation describes proprietary GEM Technology and Adaptive Tissue Technology and identifies compatibility with specified HARMONIC™, ENSEAL™ X1 and MEGADYNE™ instruments.

The proposed procurement is intended to support specialised obstetric and gynaecological surgical procedures requiring the above energy modalities.

3. Basis for Proposed PAC Procurement

1. Proprietary energy-delivery technologies incorporated in the system.
2. Specific compatibility with the manufacturer's compatible HARMONIC™, ENSEAL™ X1 and MEGADYNE™ instruments.
3. OEM-specified accessory, connector and system configuration requirements.
4. Requirement for technical interoperability, standardisation and continuity of specialised surgical services.
5. Availability of OEM/authorised technical support, maintenance, calibration and warranty-related services.
6. The proposal is based on functional and compatibility considerations and is not intended to constitute brand preference.

The proposal is being considered with reference to Rule 166 of GFR 2017, as applicable/adopted by the University, and subject to the University's own procurement rules, State Government requirements, competent-authority approval and Finance concurrence, wherever applicable.

4. Invitation for Objections / Alternative Equivalent Claims

In the interest of transparency and to ascertain whether any other manufacturer/OEM or authorised representative can offer a technically suitable equivalent, objections/claims are invited from manufacturers/OEMs or their authorised representatives.

Any claimant shall submit documentary evidence establishing, as applicable:

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Head of the Deptt.
of Obst. & Gynaecology
K.G. Medical University
LUCKNOW.

- Technical equivalence with the proposed system;
- Compliance with applicable medical-device and electrical safety requirements;
- Equivalent required monopolar, bipolar, advanced bipolar and ultrasonic functionality;
- Compatibility/interoperability with the required surgical instruments and accessories;
- Relevant regulatory approvals/certifications;
- OEM authorisation and after-sales service arrangements in India; and
- Complete technical literature and other evidence supporting the claim of equivalence.

Mere submission of an objection or commercial quotation shall not, by itself, establish technical equivalence. The claim shall be evaluated by the competent Technical Committee/authority against objective technical and functional requirements.

5. Submission of Objections

Interested manufacturers/OEMs or their authorised representatives may submit their objections/claims, along with complete supporting technical documents, to:

Head,
Department of Obstetrics & Gynaecology,
King George's Medical University,
Lucknow – 226003, Uttar Pradesh

Email: _____
Contact No.: _____

Subject/Envelope: "OBJECTION/CLAIM AGAINST PROPOSED PAC PROCUREMENT OF DUALTO™ ENERGY SYSTEM"

6. Last Date for Submission

Objections/claims complete in all respects shall reach the above office on or before _____ at _____ PM.

Objections/claims received after the prescribed date and time, or without adequate documentary evidence, may not be considered.

7. Important Conditions

- This notice is issued for inviting objections/claims concerning the proposed PAC procurement and for establishing whether a technically suitable equivalent make/model is available.
- This notice is not an invitation to submit commercial quotations and shall not be construed as a commitment to place any purchase order.
- The Department reserves the right to accept or reject any objection/claim after technical examination and to proceed with, modify or cancel the proposed procurement in accordance with applicable rules and approval of the competent authority.
- The final decision shall be taken only after completion of the prescribed technical, financial and administrative examination and obtaining the requisite approvals/concurrence.

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Head of the Deptt.
of Obst. & Gynaecology
K.G. Medical University
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- The PAC route shall be adopted only if the competent authority is satisfied that the applicable conditions for proprietary/single-source procurement are fulfilled.

Sd/-

Head of Department
Department of Obstetrics & Gynaecology
King George's Medical University
Lucknow

3/9/26
Head of the Deptt.
of Obst. & Gynaecology
K.G. Medical University
LUCKNOW.

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Johnson & Johnson

MEDICAL DEVICES
DIVISION OF JOHNSON & JOHNSON PRIVATE LIMITED

Date: 04/11/2026

To,
HOD,
Obstetrics & Gynaecology,
King George's Medical University U.P.,
Lucknow.

Sub: Price Justification for Budgetary Quotation offered for Harmonic- Unified Energy System(Monopolar, Bipolar, Advanced Bipolar and Ultrasonic) with hand instruments and accessories.

Dear Mam,

We, Johnson & Johnson MedTech, affiliated with Ethicon Endo-Surgery, LLC, the OEM of the offered products, hereby certify that the pricing submitted under Budgetary Quotation No. REF/DUALTO/AUG dated 11/08/2026 is not higher than the lowest price quoted or supplied for an identical bundle/construct to any Government or reputed private institution during the current financial year, under identical terms and conditions.

Thanking you and assuring you of our best services at all times.

Yours truly,

Amit Kumar

Authorized Signatory
Ethicon Endo Energy
Johnson & Johnson Ltd.

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ಎಸ್‌ಡಿಎಸ್ ಟಿಆರ್‌ಸಿ ಮತ್ತು ರಾಜೀವ್ ಗಾಂಧಿ ಎದೆರೋಗಗಳ ಸಂಸ್ಥೆ,
SDS TRC & Rajiv Gandhi Institute of Chest Diseases
(An Autonomous Institute, Government of Karnataka)
Reg. No. SOR/BLU/DR/671/09-10 dated: 23-09-2009
(Super speciality Referral Hospital & Post Graduate Institute)

Ref: SDS/TND/16/2026-27 Date:12.10.2026

Letter of Award

To,
M/s. Eswari Medical Specialities
No.35/1, 1st Floor, 3rd Main,
Chamarajpet, Bengaluru-560 018.
E mail: info@eswariindia.com

Sir,

Sub: Letter of Award for the supply and installation of Integrated Advance Electro Surgical Unit with Ultrasonic Energy System to this institution- reg.,
Ref: 1) Tender Notification No. SDS/TND/16/2026-27 dated 02.07.2026
2) Tender Accepting and Negotiation meeting dated 08.10.2026.

*****

With reference to the above, the tender submitted and the amount quoted as per the negotiation for Supply and installation of Integrated Advance Electro Surgical Unit with Ultrasonic Energy System at SDS TRC & RGICD, Bangalore is accepted at an approved as below mentioned. The accepted rates are inclusive of the all mentioned in the tender document.

Sl. No.	Item Name	Quantity	Brand / Mfg Name	Unit Price	Total Amount
1	Integrated Advance Electro Surgical Unit with Ultrasonic Energy System	01 No.	DUALTO Energy System Johnson & Johnson Pvt Ltd		
				Total	
				Performance Security	

As per your tender document submitted on your part you have agreed to supply the said items to the purchaser to the destination specified at your own cost, in such specified quantity as may be specified by the 'Purchaser' in staggered supply and as per terms and conditions of tender document.

You being the supply Contractor declared that you have read and got the same read out for yourself and has understood all the terms and conditions of Tender document and the tender notification which includes the specifications and descriptions of the item and penal clauses in case of default or violation of the contract and agreed to abide by the same in all respect.

Hence, you are hereby informed to remit

ily) as Performance Security Deposit in the form of Demand [illegible] TRC and RGICD, Bangalore. The same will be refunded after the expiry of the contract.

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Further you are directed to enter into agreement on a stamp paper as per government guidelines value with Director, SDS TRC & RGICD and the contract should be signed by the authorized person of the firm. sign the contract agreement form along with the details accepting the terms and conditions of the tender within 7days of the receipt of this Award in the prescribed format given in the tender document.

Note: Bank Guarantee will not be accepted as Performance Security.

The contract supply order / PO shall be issued on receipt of signed agreement and Performance Security Deposit.

Thanking You,

Yours faithfully,

B. Shashi Bhushan 13/10/25.

Director
SDS TRC & RGICD
TRC Post, Bangalore-29

Copy to:

1. Chief Administrative Officer SDS TRC & RGICD, Bangalore
2. Finance officer, SDS TRC & RGICD, Bangalore
3. Resident Medical Officer & Store Officer, SDS TRC & RGICD, Bangalore
4. Main Store, SDSTRC & RGICD, Bangalore,
5. Biomedical Engineer, SDSTRC & RGICD, Bangalore/ Office Copy.

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Johnson & Johnson

MEDICAL DEVICES
DIVISION OF JOHNSON & JOHNSON PRIVATE LIMITED

Date:02/11/2026

OEM Authorization Certificate

To
HOD,
Obstetrics & Gynaecology,
King George's Medical University U.P.,
Lucknow.

Dear Mam,

We, Johnson & Johnson MedTech, affiliated with Ethicon Endo-Surgery, LLC, are the OEM of the Harmonic Unified Energy System (Monopolar, Bipolar, Advanced Bipolar, and Ultrasonic) with associated hand instruments and accessories, manufactured at Ethicon Endo-Surgery, LLC, 475 Calle C, Guaynabo, Puerto Rico 00969, USA. We shall bid, negotiate, and conclude contracts against any tender floated by your hospital for the above products.

The authorization certificate is valid for this FY 26-27 only till 31st March 2027.

Yours faithfully,

(Johnson & Johnson Pvt. Ltd.)

Amit Kumar

Authorized Signatory

Corporate Office: Arena Space, Off JVLR, Behind Majas Depot, Jogeshwari (E), Mumbai 400 060, India
T: +91 22 6664 6464
Registered Office: Higi House, L.B.S. Marg, Mulund (W), Mumbai 400 080.
T: +91-22-2593 6700
Web: www.jnjindia.com CIN: U3311OMH1957PTCO 10928
Email ID:ra-corporatesecretar@its.jnj.com

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Johnson&Johnson
MedTech

Energy



Surgical Energy, Simplified.

The DUALTO™ Energy System

Meet the next chapter of surgical energy delivery.
A new level of operating room efficiency for enhanced patient care.

The ETHICON™ Total Energy System is now referred to as DUALTO™ Energy System, without any changes to its intended use, design, performance, or regulatory status under FDA 510(k) K243067

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Challenges in the OR

The impact of current generators on surgical workflow and patients.

Multiple energy generators and other capital systems take up valuable OR space, create inefficiencies during setup and use, and can impact cases due to complex troubleshooting, varying levels of staff experience, and device reconfiguration disruptions.

Space in the OR

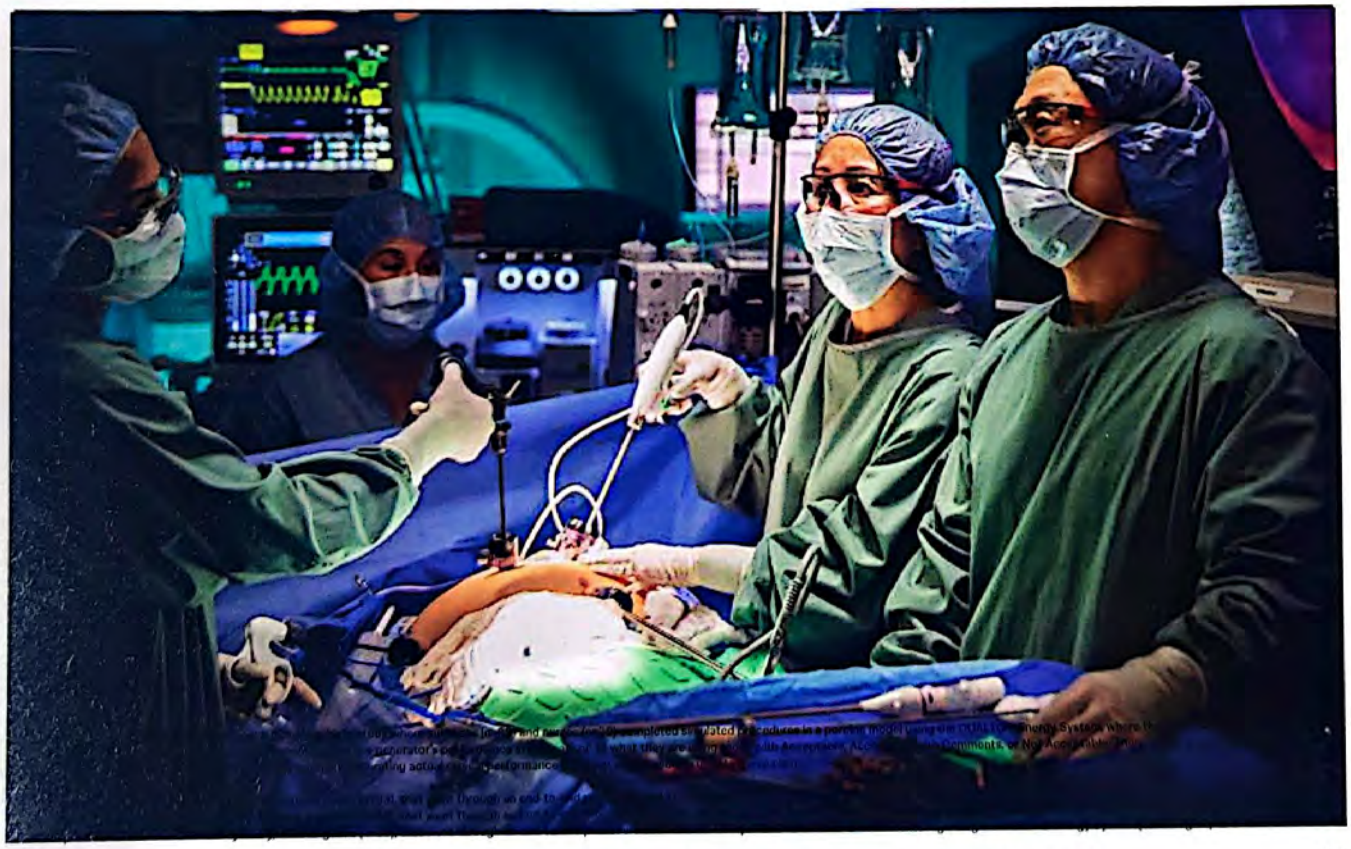
- Current setups with multiple energy generators and other capital systems take up valuable OR space.

Surgical Inefficiencies

- Using multiple energy generators during surgery can increase complexity and disruptions.
- Some surgical teams can spend up to 6 minutes per procedure trying to resolve generator issues.[1A]
- 82% of surgeons surveyed say generator troubleshooting sometimes or frequently impacts surgical flow.[2A]

Setup Delays and Stress

- Setup of multiple systems creates pre-op inefficiencies and stress.
- Streamlined OR setup could help minimize stress levels for surgeons and their clinical teams in the OR.[3A]



The ETHICON™ Total Energy System is now referred to as DUALTO™ Energy System, without any changes to its intended use, design, performance, or regulatory status under FDA 510(k) K243067

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Introducing the DUALTO™ Energy System

Designed to deliver a new level of OR efficiency for enhanced patient care.

The DUALTO Energy System combines multiple energy modalities into a single system that is simple to use across procedures, configurable to different care settings, and is easily upgradable.[1B]

Unified Energy System

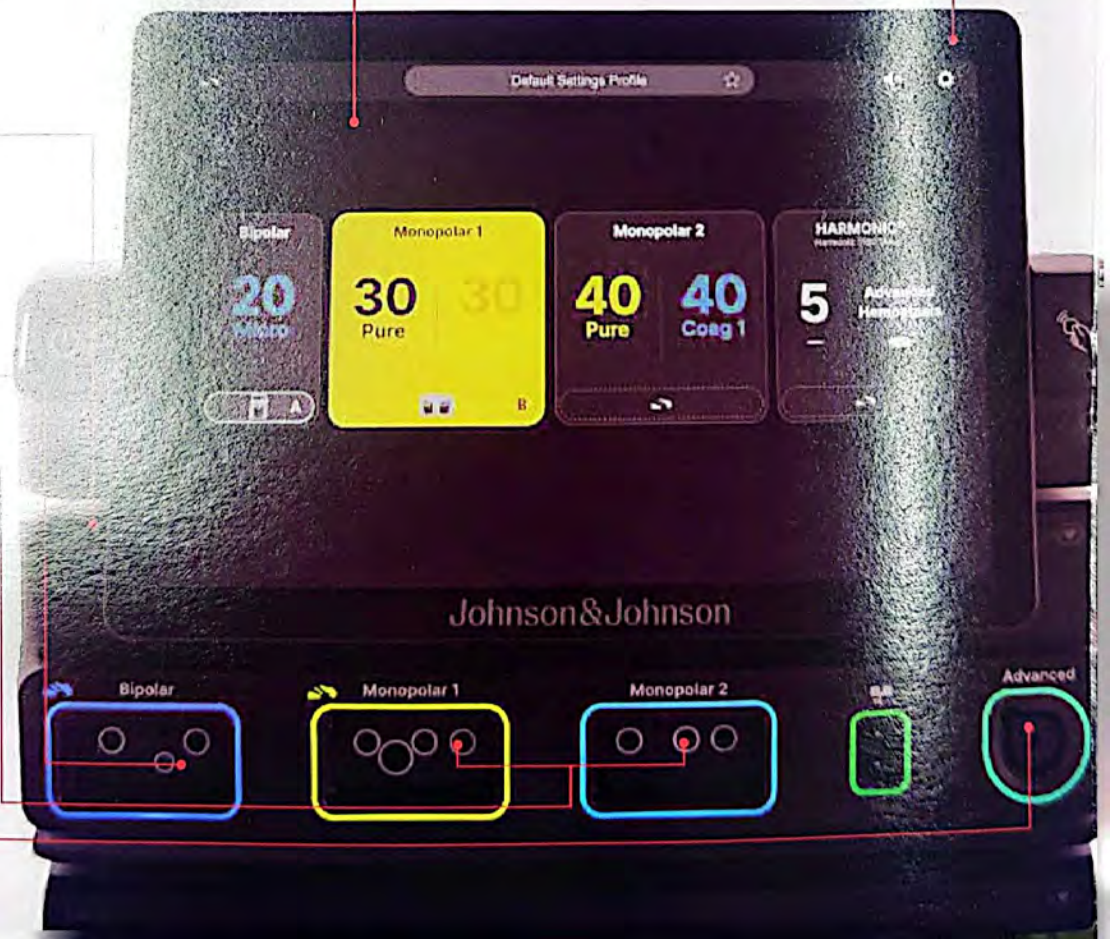
Multiple energy modalities in one, consolidated system – monopolar, bipolar, advanced bipolar, and ultrasonic.

Upgradable and Connected

Designed for cloud-based software updates and system diagnostics through built-in communication technologies.

Elevated User Experience

User-centric interface provides surgeons custom energy settings via surgeon profiles. Provides guided steps for generator setup and troubleshooting.



Standard Bipolar

Standard Monopolar

Advanced Energy Port powers HARMONIC™ and ENSEAL™ devices

1. In a pre-clinical summative usability study, with surgeons (n=33), that went through an end-to-end procedure and afterward responded to a series of statements regarding the ETHICON™ Total Energy System.

The ETHICON™ Total Energy System is now referred to as DUALTO™ Energy System, without any changes to its intended use, design, performance, or regulatory status under FDA 510(k) K243067.

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Consolidating Capital Equipment in the OR

Fewer generators required to support complex procedures vs. separate systems.

Up to 46% **less footprint vs. separate generators.[1C]**

Common System Configurations



GEN11 and Valleylab™ FT10



GEN11 and MEGEN1



GEN11 and Erbe VIO® 3

Two power cords for two separate outlets required for common system configurations.

DUALTO Energy System



Single power cord for all energy modalities compared to multiple.

1. In a R&D study measuring stacked volume of TES and current generator systems in the market. For any stacked generator measurements, the largest length and width of one unit with the combined height of both units was measured. Measurements compare a Double TES with two Energy Modules to four current systems stacked. A Single TES with one Energy Module is up to 23% less footprint compared to two current systems stacked. Footprint defined as the volume of space, either potential floor or boom space, taken up by energy generators.

The ETHICON™ Total Energy System is now referred to as DUALTO™ Energy System, without any changes to its intended use, design, performance, or regulatory status under FDA 510(k) K243067.

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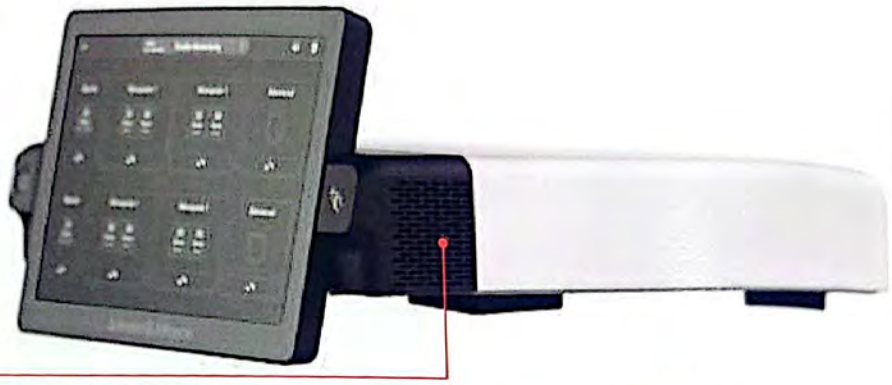
Configurable to OR Needs

Easily add an additional Energy Module for simultaneous energy activation.

Communications Module

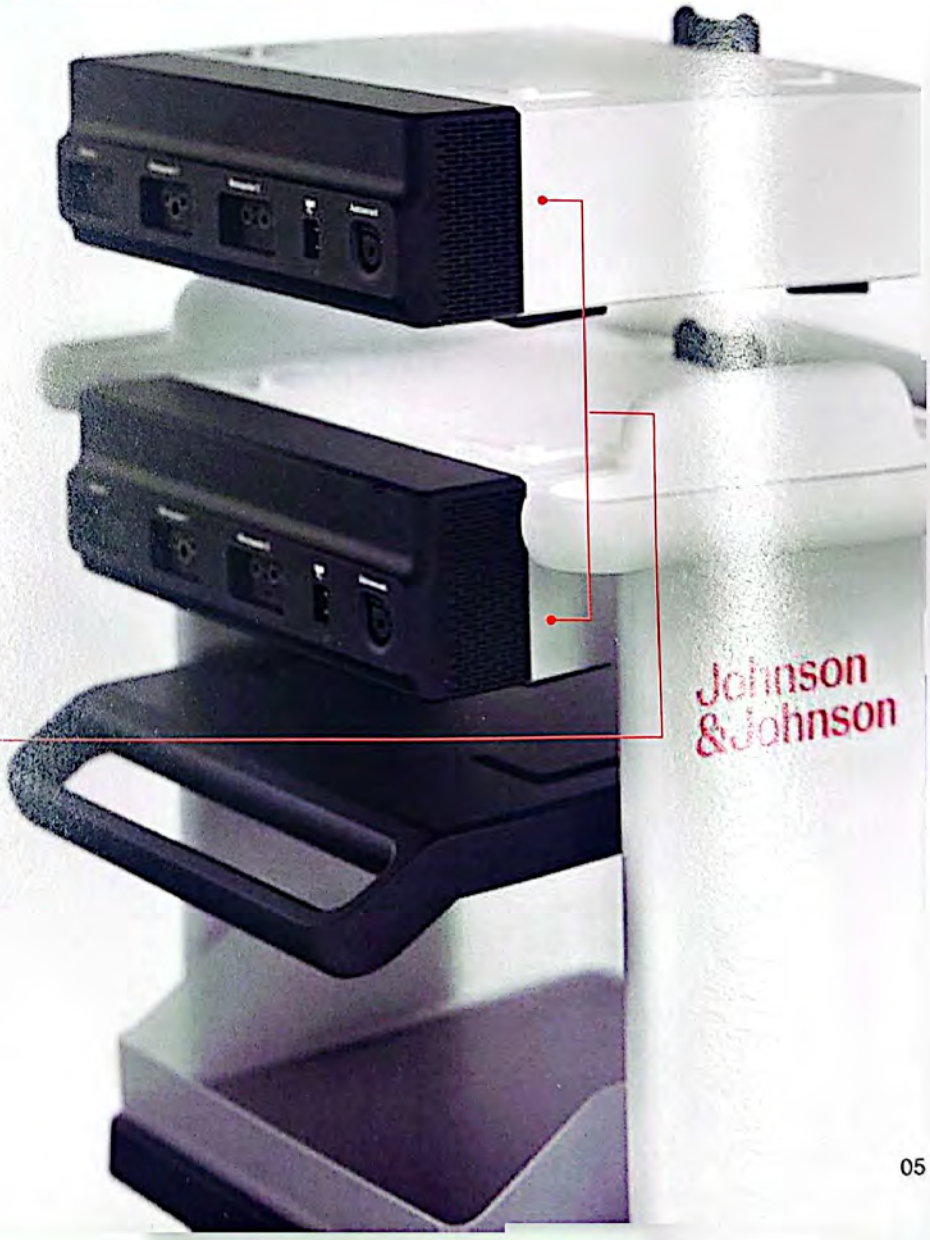
One Communications Module controls a single or double DUALTO. The Communications Module has forward-looking technology installed, such as Wi-Fi, Bluetooth, and NFC, to enable future innovation.



Energy Module

Consolidation of energy modalities in an Energy Module reduces the OR space taken up by equipment.

Flexible architecture enables two Energy Modules to be powered by one Communications Module in a single system.



The ETHICON™ Total Energy System is now referred to as DUALTO™ Energy System, without any changes to its intended use, design, performance, or regulatory status under FDA 510(k) K243067.

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Streamlining Setup

Single interface simplifies the user experience.

Step-by-step guidance enables easy setup and connection to multiple energy modalities.

Touchscreen energy setting adjustments and drag-and-drop footswitch assignment improves ease and speed of the procedure setup.





Personalized surgeon profiles for specific procedures and devices.

Each DUALTO can store up to 100 unique surgeon profiles that save energy settings by surgeon and procedure type. These profiles can be easily exported.

70% of surgeons think the use of surgeon profiles in DUALTO could reduce the risk of errors.[1A]





1. In a pre-clinical summative usability study, with surgeons (n=33), that went through an end-to-end procedure and afterward responded to a series of statements regarding the ETHICON™ Total Energy System.

The ETHICON™ Total Energy System is now referred to as DUALTO™ Energy System, without any changes to its intended use, design, performance, or regulatory status under FDA 510(k) K243067.

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Maximizing Intra-op OR Efficiencies

Simultaneous Energy Delivery

DUALTO is the only generator on the market that supports two surgeons activating energy simultaneously, supporting surgeons in complex procedures and improving OR efficiency.



Actual users delivering simultaneous energy on the DUALTO system in a pre-clinical lab.

Faster Intraoperative Troubleshooting

Lighted displays, auditory cues, and guided steps for troubleshooting enable clear feedback that can be seen from any position in the surgical field.

DUALTO detects and clearly communicates Patient Return Electrode Errors, HARMONIC™ Blade Errors, and ENSEAL™ Metal in Jaw Errors.

90% of surgeons think the DUALTO™ Energy System might reduce the medical staff stress level during surgery by improving diagnostics and equipment troubleshooting.[1A]

Powerful Sealing

DUALTO uses Adaptive Tissue Technology to power HARMONIC™ and ENSEAL™ X1 devices. Adaptive Tissue Technology responds to changing tissue conditions, enabling more precise energy delivery and improved temperature management.[2D]

In addition to standard monopolar modes, DUALTO powers a proprietary Geometric Electron Modulation (GEM) monopolar mode that requires no power adjustments to maintain a scalpel-like cut through varying tissue types with minimal thermal damage.[3E]

18% HARMONIC™ 700 when used on the DUALTO™ Energy System transects thick tissue up to 18% faster than on GEN11.[4F]

25% HARMONIC™ FOCUS+ demonstrates up to 25% faster transection speeds when used with the DUALTO™ Energy System.[5F]





1. In a pre-clinical summative usability study, with surgeons (n=29), that went through an end-to-end procedure and afterward responded to a series of statements regarding the ETHICON™ Total Energy System.
2. vs. HARMONIC ACE™ without Adaptive Tissue Technology.
3. Based on proprietary GEM Technology and pre-clinical porcine testing on abdominal wall dermis that measured thermal damage via histology ($p<0.05$). GEM Technology and test results are achieved when used on the MEGADYNE™ Mega Power generator in GEM Mode only.
4. In a R&D study evaluating performance improvements of the HARMONIC™ 700 instrument family on the ETHICON™ Total Energy System compared to the GEN11 Generator on thick porcine mesentery ($p<0.05$).
5. In a R&D study evaluating performance improvements of the HARMONIC™ Focus+ instrument family on the ETHICON™ Total Energy System compared to the GEN11 Generator on a thick tissue model ($p<0.05$).

The ETHICON™ Total Energy System is now referred to as DUALTO™ Energy System, without any changes to its intended use, design, performance, or regulatory status under FDA 510(k) K243067.

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Saving Post-op Troubleshooting Time

Seamless remote diagnostics and system updates can help the OR to continue running smoothly.

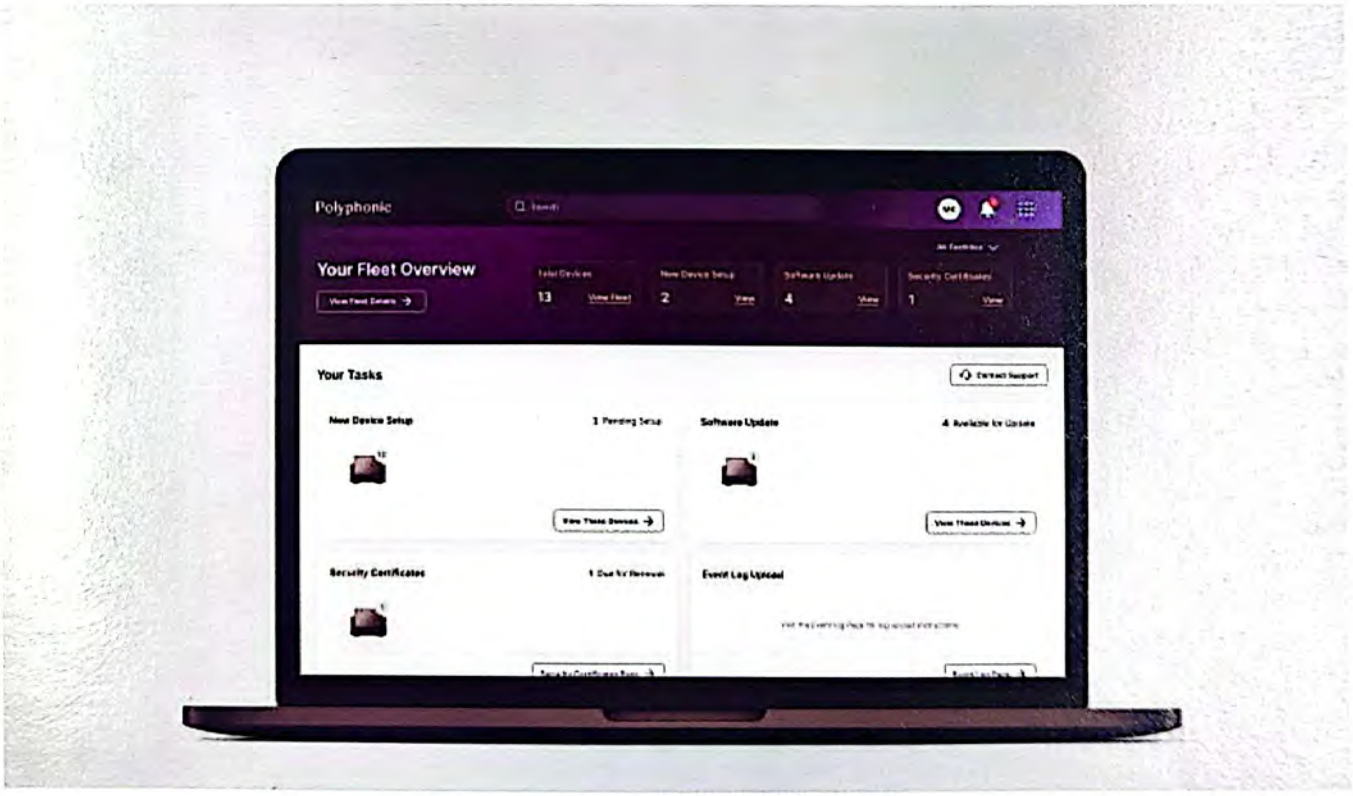
DUALTO performance and maintenance needs can be remotely monitored via Polyphonic™ Fleet, an online fleet management application powered by J&J MedTech. Polyphonic™ Fleet helps ensure DUALTO is running optimally without disrupting the OR schedule.

DUALTO can be easily connected to install software updates, upload event logs, and facilitate remote diagnostics from the biomedical or clinical engineer's office for faster post-op technology troubleshooting.

DUALTO is compliant with the latest FDA Cyber Security Guidance Document and all data at rest and in transit, although non-sensitive, is encrypted.

100%

of biomedical or clinical engineer participants agreed that DUALTO could reduce the time required to perform annual maintenance by 25%.[1A]



Polyphonic™ Fleet

1. In a summative usability study, with hospital Biomedical Engineers (n=15), that went through a simulated installation and annual preventative maintenance process, and afterward responded to a series of statements regarding the ETHICON™ Total Energy System.

The ETHICON™ Total Energy System is now referred to as DUALTO™ Energy System, without any changes to its intended use, design, performance, or regulatory status under FDA 510(k) K243067.
**Polyphonic™ Fleet is currently under development.

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Ordering & Additional Information

Generator Elements

Product Code	Description	Product Image	Quantity	Compatible With
ETHCM	DUALTO™ Communications Module		1	The DUALTO™ Energy System with up to 2 Energy Modules
ETHUSC	DUALTO™ User Screen		1	
ETHEM	DUALTO™ Energy Module		1	All HARMONIC™, ENSEAL™ and MEGADYNE™ instruments

Packages

Product Code	Description	Product Image	Quantity	Compatible With
ESTES	DUALTO™ Single		1	All HARMONIC™, ENSEAL™ and MEGADYNE™ instruments
ESTESP	DUALTO™ Single Package*		1	
EDTES	DUALTO™ Double		1	
EDTESP	DUALTO™ Double Package**		1	

Accessories

Product Code	Description	Product Image	Quantity	Compatible With
ETHCRT	DUALTO™ Energy Cart		1	The DUALTO™ Energy System with up to 2 Energy Modules
ETHEF2	Energy Double Footswitch		1	The DUALTO™ Energy System
ETHEF1	Energy Single Footswitch		1	
ETHERF	Energy Round Footswitch		1	
ETHOVK	Energy Output Verification Key		1	
2255JTES	MEGADYNE™ Energy Signal Cable		1	Connects to MEGADYNE™ Smoke Evacuator, MESE1

For more information, contact your local J&J MedTech representative or visit **jnjmedtech.com**

*Single DUALTO Package includes ESTES, ETHCRT and ETHEF2
**Double DUALTO Package includes EDTES, ETHCRT and ETHEF2

References

A. Ethicon, Emergo Mantle Marketing Claims Report. 05/08/2024. Windchill Document #501949635
B. Ethicon, Emergo Mantle Marketing Claims Report. 05/08/2024. Windchill Document #501949635. Ethicon Communications Module, Ethicon User Screen, and Ethicon Energy Cart Operator's Manual
C. Ethicon, Mantle Space Claim Measurement Study. 10/17/2024. Windchill Document #502047373
D. Ethicon, HAR36 DV- ROIN 6175- Blade Heat. 10/30/2013. Windchill Document #PRC053965. Ethicon, HARMONIC ACE™ 5mm Diameter Shears + Adaptive Tissue Technology Instructions for Use
E. Ethicon, MEGADYNE™ ACE Blade Thermal Damage Claims. 10/31/2017. Windchill Document #PSP005780. Ethicon, MEGADYNE™ ACE Blade 700 Instructions for Use
F. Ethicon, Mantle Harmonic Claims. 10/17/2024. Windchill Document #502071965

For complete indications, contraindications, warnings, precautions, and adverse reactions, please reference full package insert.

The third-party trademarks used herein are trademarks of their respective owners.

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Disclaimer :
This document is intended solely for healthcare professionals for educational purposes. It does not replace the Instructions for Use. For complete indications, contraindications, warnings, and precautions, refer to the official product labeling. No claims herein should be interpreted as guaranteeing clinical outcomes.

Johnson & Johnson Private Limited
Higi House, L.B.S. Marg, Mulund (W), Mumbai 400 080.

Last updated on December 8, 2025.

Johnson&Johnson
MedTech

Energy



DUALTO™ Energy System Technical Information

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Intelligent Energy Delivery for Optimal Device Performance

Desired tissue effects start with a highly capable generator designed to handle a variety of tissue conditions. The algorithms adjust so surgeons don't have to.

Heritage of Smart Technology

The DUALTO™ Energy System provides intelligent energy delivery built on 60 years of combined experience in basic and advanced energy.

Its smart algorithms adjust every millisecond to changes in tissue and device conditions so surgeons don't need to compensate or use multiple generators to complete surgical tasks.

Optimized Energy Delivery

DUALTO offers the industry standard monopolar and bipolar modes that can be used for cutting tissue and controlling bleeding.

For monopolar applications, its Geometric Electron Modulation (GEM) mode requires no power adjustments by the user to maintain a scalpel-like cut through varying tissue types with minimal thermal damage.

Powering Advanced Devices

In addition, DUALTO runs proprietary advanced algorithms for advanced bipolar and ultrasonic applications.

DUALTO uses Adaptive Tissue Technology algorithms to power HARMONIC™ and ENSEAL™ X1 devices. Adaptive Tissue Technology responds to changing tissue conditions, enabling more precise energy delivery and improved temperature management.[1A]



1. vs. HARMONIC ACE™ without Adaptive Tissue Technology

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Monopolar Modes

The Cut and Coag modes surgeons expect with special cut modes for precise energy delivery.

Monopolar Modes

Mode	Tissue Effect	Tissue Effect Description	Dessication	Foot Pedal	Power Levels
GEM High		Least hemostasis and most precision with a scalpel-like cutting effect		Cut	N/A
GEM Low		Similar cutting effect as GEM High with more tactile feedback		Cut	N/A
Pure Cut *Cut Default*		Standard cutting effect		Cut	0 – 300
Blend Cut		Mixture of Cut and Coag, cutting effect with higher level of hemostasis than Pure		Cut	0 – 200

Mode	Tissue Effect	Tissue Effect Description	Dessication	Foot Pedal	Power Levels
Soft		Coagulation and desiccation occurs at a slower rate with deeper thermal penetration		Coag	0 – 120
Soft Low		└ Slower and deeper Soft tissue effect		Coag	0 – 120
Soft Medium		└ Balance between low and high Soft tissue effects		Coag	0 – 120
Soft High		└ Faster and shallower Soft tissue effect		Coag	0 – 120
Coag 1 *Coag Default*		Coagulation effect while allowing electrode to move through the tissue for dissection		Coag	0 – 120
Coag 2		More mild delivery of coagulation than Coag 1 during dissection		Coag	0 – 120
Spray		Most hemostasis and least precision, provides hemostasis in a broad area with less depth-of-tissue damage		Coag	0 – 120

Shared Coag: Available in the single DUALTO configuration, this mode enables two surgeons to deliver coagulation at the same time, dynamically sharing the output power.



Depending on the mode selected, the User Screen will light up yellow for Cut mode and blue for Coag mode.

When set up in a Double DUALTO configuration with two Energy Modules and a monopolar device plugged into a port on each module, DUALTO can power simultaneous monopolar energy delivery.



Touchscreen number pad enables user to change power levels.

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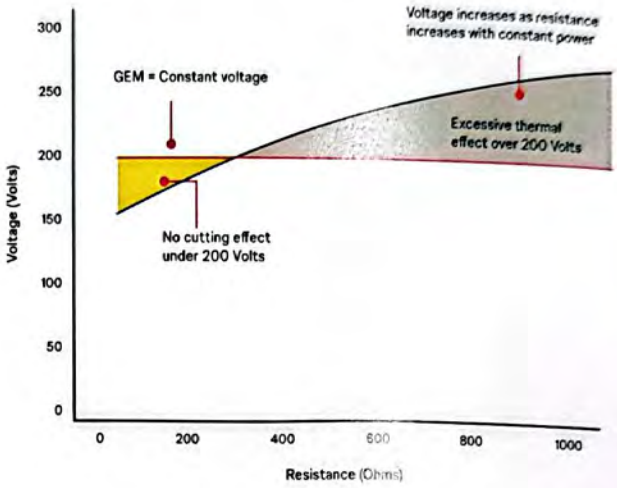
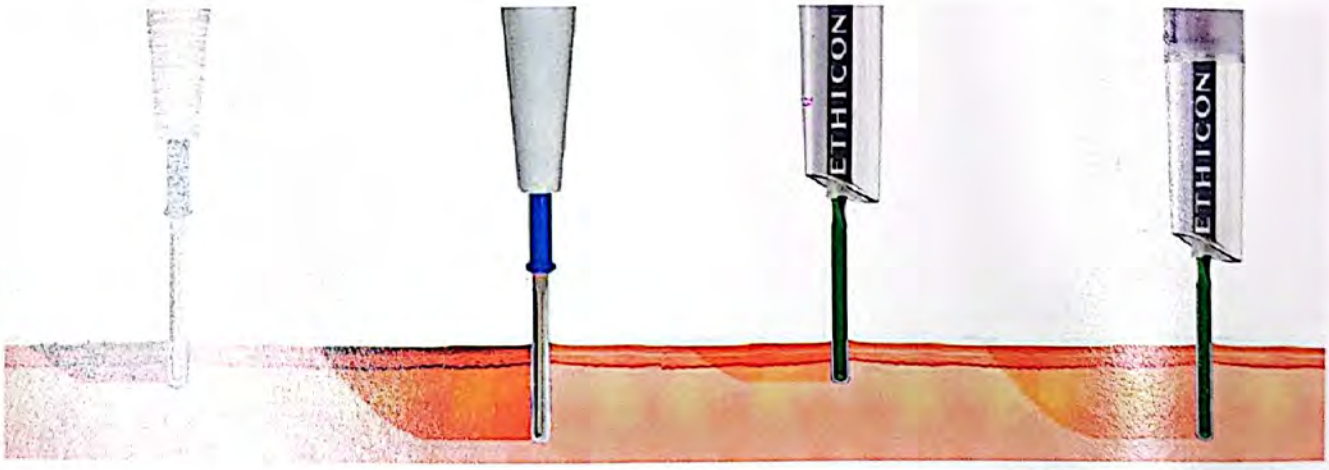
DUALTO GEM Technology

A scalpel-like cut when speed and minimal thermal damage matter.

- Most monopolar modes use constant power energy delivery (Pure Cut, Coag).
- With constant power modes, the power output remains constant as impedance, or load resistance, increases. In these modes, the voltage increases as the resistance increases to keep power constant, causing additional dessication of the tissue.
- GEM Technology focuses energy to the tapered edges of compatible monopolar blades and modulates the power level based on tissue impedance instead of modulating voltage. This allows the generator to maintain the constant minimum voltage required for cutting with minimal thermal damage, regardless of the depth of a cut or the varying tissue thickness encountered.

- An optimal "GEM effect," requires the tapered GEM blade and the use of the GEM mode on the DUALTO™ Energy System.





Same power distributed across blade in superficial and deep cuts results in additional dessication of the tissue.

Constant voltage maintains consistent cutting with minimal thermal damage in superficial and deep cuts.

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Bipolar Modes

Micro and Macro support standard bipolar applications.



DUALTO can accommodate standard bipolar devices. The User Screen will light up blue for bipolar mode. When setup in a Double DUALTO configuration with two Energy Modules and a bipolar device plugged into a port on each module, DUALTO can power simultaneous bipolar energy delivery.



Touchscreen number pad enables user to change power levels.

Bipolar Modes

Mode	Tissue Effect	Dessication	Tissue Effect Description	Foot Pedal	Power Levels
Micro *Bipolar Default*			Least thermal spread and more precision, designed for all standard bipolar applications	Double Footswitch: Coag Single Footswitch: Bipolar	0–80
Macro			Less precise energy delivery, more rapid onset of power	Double Footswitch: Coag Single Footswitch: Bipolar	0–80

Bipolar Advanced Settings



By selecting the 'Advanced Settings' icon for bipolar, the Current Meter and Current Meter Tone can be toggled on and off.



The Current Meter provides a visual graph of the amount of current flow between the tips of the bipolar instrument.

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Advanced Energy Delivery

Adaptive Tissue Technology

Using the science of device-tissue interaction, Adaptive Tissue Technology optimizes energy delivery to achieve balanced tissue effects. In HARMONIC™ and ENSEAL™ X1 devices, these algorithms:

- Sense changes in tissue and device conditions
- Respond with the optimal amount of energy
- Deliver greater surgical precision and performance[1B]

As Johnson & Johnson MedTech releases device innovation, DUALTO is built to power even more advanced algorithms. For example, HARMONIC™ 1100 and 700 utilize an improved Adaptive Tissue Technology that lowers the device's maximum blade temperature.



Sensing and Adapting

Sealing

Strong and secure sealing of vessels up to 7mm*

Thermal Management

Minimal lateral spread
Reduced thermal damage

Ultrasonic and Advanced Bipolar Modes

Mode	Foot Pedal	Power Levels
HARMONIC™	Double Footswitch: MIN - Coag MAX - Cut	• All Harmonic instruments have Power levels 1-5 • Advanced Hemostasis Algorithm available on HARMONIC™ 1100, 700 and ACE+7
ENSEAL™ X1	Double Footswitch: Coag Single Footswitch: Bipolar	N/A



1. As compared to HARMONIC™ devices without Adaptive Tissue Technology
*Does not apply to all HARMONIC™ devices
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Communications Module

One Communications Module controls a single or Double DUALTO utilizing a single power cord.

Ethernet Port

The Ethernet port enables biomedical or clinical engineers to connect DUALTO to the hospital network for initial system provisioning, event log upload for troubleshooting, and software updates as needed.

Energy Signal Port

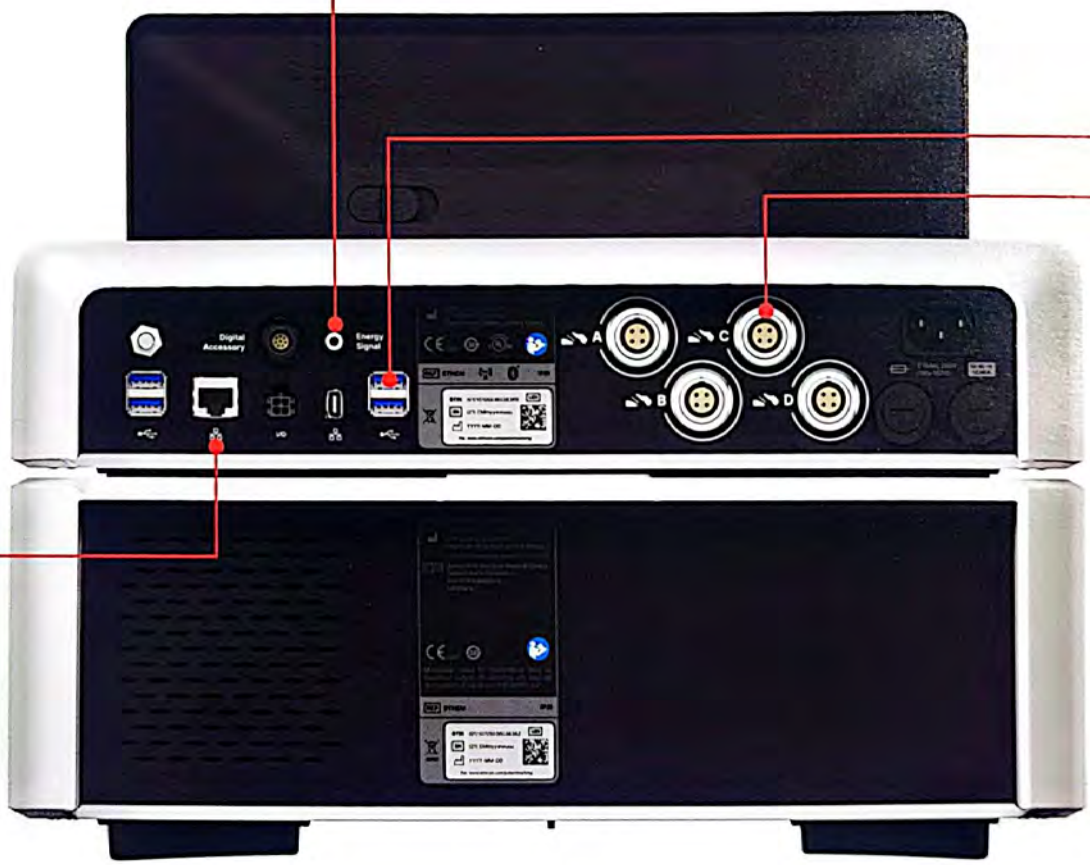
The energy signal port enables users with the MEGADYNE™ Energy Signal Cable to auto-turn on smoke evacuation during energy delivery.

Footswitch Ports

The Communications Module has four universal footswitch ports, allowing users to plug any DUALTO pedal into any port on the back, and easily assign or switch foot pedal port assignment throughout the case using drag-and-drop functionality on the User Screen.

USB Port

The USB port allows users to export or import surgeon profiles on any DUALTO system and export DUALTO event logs.



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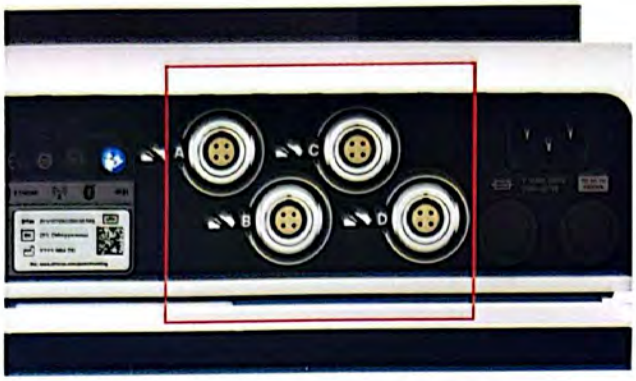
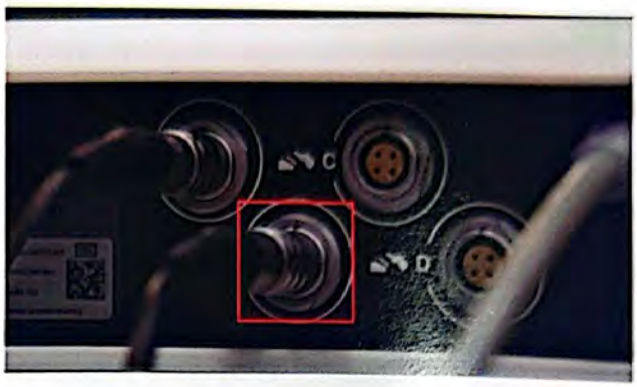
Footswitch Assignment



The footswitch ports on the back of the Communications Module allow up to four footswitches to be easily connected and assigned to any instrument port.



To insert footswitches, align the red dot on the connector with the port.



When footswitches are attached, icons will appear on the User Screen. Footswitches can be dragged by finger to any energy modality.

Once assigned, the icon of the footswitch will be visible underneath the port settings and the footswitch indicator will light up next to the assigned port on the Energy Module.

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Hand Piece Remaining Uses

If using a Hand Piece with a HARMONIC™ instrument, the remaining uses of the Hand Piece can be found in System Information under Settings.



Step 1



Step 2



Step 3

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09

Product Specifications

Mode	Mode Description	Maximum Peak Voltage (volts)	Maximum current (amps)	Max. power (watts)	Crest factor	Output frequency (kHz)
HARMONIC™*	Allows for use with HARMONIC™ ultrasonic surgical instruments that are indicated for soft tissue incisions when bleeding control and minimal thermal injury are desired.	300V RMS *Unless otherwise specified in instrument IFU*	*Maximum current specified in instrument IFU*	60 *Unless otherwise specified in instrument IFU*	N/A	*Operating frequency specified in instrument IFU*
ENSEAL™	Allows for the use of ENSEAL™ electrosurgical instruments during open or laparoscopic surgery to cut and seal vessels and to cut, grasp, and dissect tissues.	100V RMS *Unless otherwise specified in instrument IFU*	*Maximum current specified in instrument IFU*	200 *Unless otherwise specified in instrument IFU*	N/A	*Operating frequency specified in instrument IFU*
Bipolar Micro	Delivers consistent power to provide a tissue effect designed for all standard bipolar applications and a precise and controlled bipolar effect.	270	1.7	80	1.5	430
Bipolar Macro	Delivers a more rapid onset of power and higher voltage power output compared to Micro.	330	1.7	80	1.5	430
Auto Bipolar	Delivers energy when forceps close on tissue, delay can be set from 0-2 seconds. Available in either Micro or Macro.	*Refer to mode selected*				
GEM └ GEM High └ GEM Low	Automatically controls the output power of the generator to provide a consistent cutting effect. Little hemostasis is achieved in this mode. GEM blade needed to deliver best tissue effects. └ Designed to provide surgical speed and efficiency. └ Provides approximately half the power of GEM High mode and is designed to provide more tactile feedback than GEM High mode.	420	1.1	150	1.6	400
Pure Cut	Provides a standard cutting effect.	970	2.2	300	1.6	400
Blend	Provides cutting effects and higher level of hemostasis than GEM or Pure.	1700	1.1	200	2.4	400
Coag1	Designed to allow the active electrode to efficiently move through tissue for coagulation with dissection.	3200	1.1	120	5.6	6.0 µs Pulse @30kHz
Coag2	Delivers a more gradual onset of energy for mid-delivery of coagulation with dissection.	3200	1.1	120	5.6	6.0 µs Pulse @30kHz
Shared Coag	Designed to enable two surgeons to deliver coagulation at the same time, dynamically sharing the output power.	*Refer to mode selected*				
Spray	Designed to provide hemostasis in a broader area with less depth-of-tissue damage when compared to desiccation.	3600	1.1	120	6.5	6.0 µs Pulse @30kHz
Soft Coag └ Soft High └ Soft Medium └ Soft Low	Designed to provide coagulation and desiccation at a slower rate with deeper thermal penetration. └ Faster and shallower tissue effect. └ A balance between low and high tissue effects. └ Slower and deeper tissue effect.	280	2.2	120	1.7	400

*Electrical output into the HARMONIC™ transducer

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Additional Specifications

Conforms to the Following Standards

Standard	
EN (IEC) 60601-1 *With Canadian and US National Deviations*	Medical electrical equipment – Part 1: General requirements for basic safety and essential performance
IEC 60601-1-8	General requirements, tests and guidance for alarm systems in medical electrical equipment
IEC 60601-2-2	Particular requirements for the basic safety and essential performance of high frequency surgical equipment and high frequency surgical accessories
IEC 60601-1-2	Medical electrical equipment – Part 1-2: General requirements for basic safety and essential performance - collateral standard: electromagnetic compatibility – requirements and tests
IEC 60601-1-6	Medical electrical equipment – Part 1-6: General requirements for safety – Collateral standard: Usability
IEC 60601-2-18	Medical electrical equipment – Part 2-18: Particular requirements for the basic safety and essential performance of endoscopic equipment

Transport and Storage Conditions

Transport and Storage Conditions	
Temperature	-25 °C - +70 °C
Humidity	10% - 95% RH non-condensing

Dimensions and Weight

Weight	kg
Energy Module	7.7
Twin Footswitch	3.6
Single Footswitch	2.0
Round Footswitch	0.5
Output Verification Key	0.085
Communications Module	5.7
User Screen	1.8

Dimensions	cm (H)
Single DUALTO™ Configuration	29.4
Double DUALTO™ Configuration	41.5

Overall Dimensions	cm (W x D x H)
Energy Module	38.1 x 42.6 x 13.2
Twin Footswitch	34.2 x 22.1 x 10.2
Single Footswitch	16.9 x 22.2 x 6.0
Round Footswitch	10.2 x 10.2 x 3.8
Output Verification Key	8.8 x 4.6 x 8.2
Communications Module	38.1 x 42.6 x 9.8
User Screen	29.7 x 9.6 x 19.7
Display Size	16.3 x 26.2

The ETHICON™ [illegible] System is now referred to as DUALTO™ Energy System, without any changes to its intended use, design, performance, or regulatory status under FDA 510(k) K243087

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Device Compatibility

Johnson & Johnson MedTech Device Compatibility

ENSEAL™, HARMONIC™ and MEGADYNE™ instruments are compatible with the DUALTO™ Energy System.

Monopolar Compatibility

- Third-party monopolar accessory instruments must have RF voltage peak ratings >= 4,000 Vpeak for use with DUALTO. If accessories do not meet this rating, please consult the Third-Party manufacturer's IFU for recommended rated voltage. Power settings may need to be limited to accommodate accessory voltage ratings.
- Monopolar compatibility testing was completed with a 11.5 ft (3.5 m) maximum cable length for the monopolar footswitch accessory in Figure B and a 17 ft (5.2 m) maximum cable length for the monopolar hand switch connector shown in Figure A.
- A complete list of accessories compatible with the DUALTO™ Energy System are listed in the table on page 14.

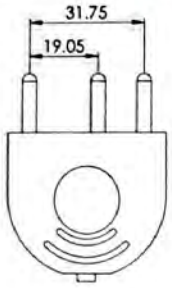

Figure A.
Monopolar Connector - Compatible with Both Monopolar Ports

Plug utilizes 4 mm banana pins. Minimum banana pin length is 14.66 mm and maximum banana pin length is 18.16 mm.

All monopolar accessory instruments must have the above connector configurations to be compatible with TES.

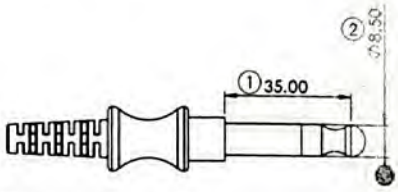

Figure B.
Monopolar Foot Switching Accessory - Compatible with Monopolar Port 1

Dimension 1 represents the minimum distance from the front of the port to the sphere end of the plug. Minimum distance from the front of the connector to the sphere end of the plug is 35.0mm and maximum length is 46.7mm.

Dimension 2 represents the plug diameter.

Bipolar Compatibility

- Third-party bipolar accessory instruments must have RF voltage peak ratings >= 310 Vpeak for use with DUALTO. If accessories do not meet this rating, please consult the Third-Party Manufacturer's IFU for recommended rated voltage.
- Power settings may need to be limited to accommodate accessory voltage ratings.
- Bipolar compatibility testing was completed with a 17.3 ft (5.3 m) maximum cable length for both types of bipolar prong connectors shown in Figures C and D.

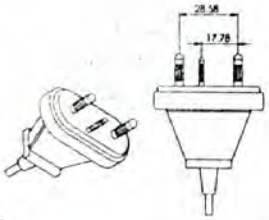

Figure C.
Bipolar 3-Prong Connector with Switching

All bipolar accessory instruments must have the above connector configurations to be compatible with DUALTO™.

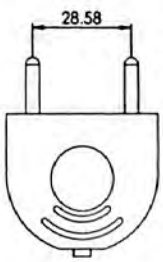

Figure D.
Bipolar 2-Prong Connector

Plug utilizes 4 mm banana pins. Minimum banana pin length is 14.84 mm and maximum banana pin length is 18.16 mm.

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Device Compatibility

Return Electrode Compatibility

- Acceptable DUALTO operation resistance range: 0 to 135 ohms and less than 40% increase from initial measured resistance value.
- The use of return electrodes other than those specified in the approved return electrode list shown on page 14 may result in increased emissions or decreased immunity of the DUALTO™ Energy System.
- Return electrode compatibility testing was completed with a 15.5 ft (4.7 m) maximum cable length for a dual plate return electrode and 21.3 ft (6.5 m) with the MEGADYNE™ MEGA SOFT™ Dual Reusable Pad.
- A complete list of accessories compatible with the DUALTO™ Energy System are listed in the table on page 14.

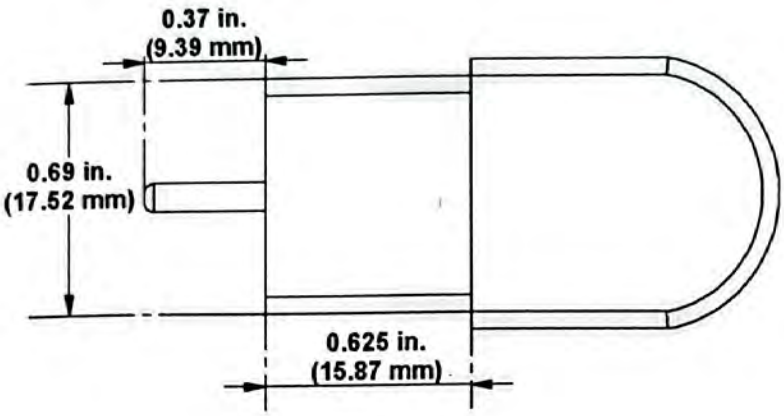

Figure E.
Return Electrode Plug dimensions

The DUALTO™ Energy System Return Electrode Receptacle has the dimensions shown above.

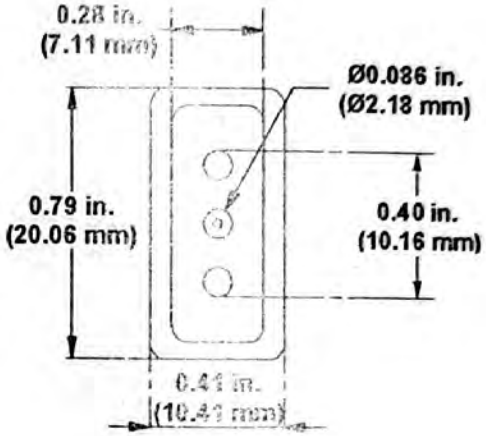

Figure F.
Return Electrode Plug dimensions

All return electrodes must have the above connector configurations to be compatible with DUALTO™.

Device Compatibility

DUALTO Energy System Components

Item Description	Catalog Number
Energy Single Footswitch	ETHEF1
Energy Round Footswitch	ETHERF
Energy Double Footswitch	ETHEF2
Energy Cart	ETHCRT
Energy Output Verification Key	ETHOVK

Compatible Instruments

Item Description	Catalog Number
HARMONIC™ ACE+ Shears	HAR23, HAR36
HARMONIC™ ACE 500 Shears	HAR23CN, HAR36CN
Reprocessed HAR23 and HAR36 with ATT	HAR23R, HAR36R
HARMONIC™ FOCUS+ Shears	HAR9F
Reprocessed HARMONIC™ FOCUS+ Shears with ATT	HAR9FR
HARMONIC™ FOCUS+ Long Shears	HAR17F
HARMONIC™ FOCUS 500 Shears	FCS509CN
HARMONIC™ 5MM X 23CM, 36CM, AND 45CM Shears	HARGC23, HARGC36, HARGC45
HARMONIC™ ACE+7 Shears	HARH23, HARH36, HARH45
Reprocessed HARMONIC™ ACE+7 Shears	HARH23R, HARH36R, HARH45R
HARMONIC™ 1100 Shears	HAR1120, HAR1136
HARMONIC™ 700 Shears	HAR723, HAR736, HAR745
HARMONIC™ Gray Hand Piece	HARHPGR, HARHPGRCN
HARMONIC™ Blue Hand Piece	HARHPBL, HARHPBLCN
HARMONIC™ SYNERGY® Blades	SNGCB, SNGHK, SNGHK2
Hand-Switching Adapter	HSA08
HARMONIC™ Blades	HC325, HDH05, HBC05 (*only when used with HSA08)
HARMONIC™ Accessories, Torque Lock Blade Wrench	TLB01
ENSEAL™ X1 Straight Jaw Tissue Sealer	NSLX125S, NSLX137S
ENSEAL™ X1 Curved Jaw Tissue Sealer	NSLX125C, NSLX137C, NSLX145C
ENSEAL™ X1 Large Jaw Tissue Sealer	NSLX120L
ENSEAL™ X1 TS CRV JAW 5 MM 25 CM, 37 CM, AND 45 CM	X125CCN, X137CCN, X145CCN
ENSEAL™ X1 TS STRT JAW 5 MM 25 CM AND 37 CM	X1255CN, X137SCN
ENSEAL™ X1 TS CV JAW ART 5 MM 37 CM AND 45 CM	X137CACN, X145CACN
ENDOPATH™ Bipolar Forceps	5DCD
ENDOPATH™ Dissector Scissors	5DCS
POWERSTAN™ Bipolar Scissors and Cables	BP100, BP120, BP310, BP320, BP340, BP360, BP520, BP540, BP560, BP720, BP910, BP940
ENDOPATH™ Electrosurgery PROBE PLUS™ II System and Accessories	EPH02, EPH04
ENDOPATH™ Electrosurgery PROBE PLUS™ II Electrode Shafts	EPS01, EPS02, EPS03, EPS04, EPS05, EPS06, EPS07
ENDOPATH™ Bipolar Forceps and Reusable Cables	EBF01, EBF02, EBC02, EBC05
MEGADYNE™ E-Z CLEAN™ Coated Blade Electrodes	0012, 0012M, 0012A, 0012AM, 0012C, 0014A, 0014AM, 0014, 0014M
MEGADYNE™ E-Z CLEAN™ Coated Needle Electrodes	0013, 0013M, 0016A, 0016AM, 0016, 0016M
MEGADYNE™ E-Z CLEAN™ Coated Ball Needle Electrodes	0013, 0013M, 0013A
MEGADYNE™ E-Z CLEAN™ Coated Ball Electrodes	0015, 0009
MEGADYNE™ E-Z CLEAN™ Coated Specialty Electrodes	0028, 0028M, 0029, 0029M
MEGADYNE™ MEGA FINE™ Needle Electrodes	0110, 0116A, 0119, 0119A, 0120, 0121

Item Description	Catalog Number
MEGADYNE™ E-Z CLEAN™ Protective Nose Cone Electrodes	0012MD, 0012AMD, 0014AMD, 0014MD, 0013MD
MEGADYNE™ Stainless Steel Blade Electrodes	0312, 0312M, 0312A, 0312AM, 0314A, 0314, 0314M
MEGADYNE™ Stainless Steel Needle Electrodes	0313, 0313M, 0316AM, 0316, 0316M
MEGADYNE™ Stainless Steel Ball Electrodes	0300, 0315
MEGADYNE™ ACE BLADE™ 700 Soft Tissue Dissectors	ME7251C, ME7251E, ME725MC, ME725ME
MEGADYNE™ Telescoping Smoke Evacuation Soft Tissue Dissectors	ME7251ST, ME725M1ST, ME725T, ME725M1T
MEGADYNE™ Rocker Switch Pencils	0030, 0030H, 0030L, 0030HL, 0038, 0038H, 0039, 0039H
MEGADYNE™ Button Switch Pencils	0035, 0035L, 0035H, 0035HL, 0037, 0037H
Foot Control Pencil with Stainless Steel Electrode and holster	FC39H
MEGADYNE™ MEGA SOFT™ Universal Plus Reusable Patient Return Electrode	0847
MEGADYNE™ MEGA SOFT™ Universal Plus Dual Reusable Patient Return Electrode	0848
MEGADYNE™ MEGA SOFT™ Universal Reusable Patient Return Electrode	0845
MEGADYNE™ MEGA SOFT™ Universal Dual Reusable Patient Return Electrode	0846
MEGADYNE™ MEGA SOFT™ Reusable Patient Return Electrode	0830
MEGADYNE™ MEGA SOFT™ Dual Reusable Patient Return Electrode	0835
MEGADYNE™ MEGA SOFT™ Pediatric Reusable Patient Return Electrode	0840
MEGADYNE™ MEGA SOFT™ Universal Dual Patient Return Electrode	0800
MEGADYNE™ MEGA SOFT™ 2000 Reusable Return Electrode	0825
MEGADYNE™ MEGA SOFT™ Cables and Accessories	M2K01, M2K02, M2K07, M2K08, M2K09
Patient Return Electrodes with pre-attached cords	0850C, 0855CL, 0855CN, 0865C
E-Z CLEAN™ Laparascopic Electrodes	0017, 0018, 0018C, 0018CS, 0019, 0019L, 0019S, 0019LS, 0020, 0020L, 0020S, 0020LS, 0021, 0021L, 0021S, 0021LS, 0022, 0022S, 0024, 0100, 0100L, 0100S, 0100LS
MEGADYNE™ Reusable Foot Control Cord	0075
MEGADYNE™ Smoke Evacuator	MESE1
MEGADYNE™ Energy Signal Cable	2255JTES
Smoke Evacuation Pencils	ECVV120, ECVV220
MEGADYNE™ MINI VAC™ Smoke Evacuator	251010J, 251015J, 252510, 252510EC
MEGADYNE™ Suction Coagulators	004010J, 004025, 004125, 004225, 004325
MEGADYNE™ LLETZ Loop Electrodes (Square and Round)	0410, 0420, 0430, 0440, 0450, 0460, 0470, 0480, 0490
MEGADYNE™ Bipolar Forceps Cables	4005J
Rocker Switch Pencil with No Electrode	3030HT
Button Switch Pencil with No Electrode	3035HT
E-Z CLEAN™ Custom Blade Electrodes	C117J, C117M

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Warranty & Maintenance

Recommended Maintenance

- Annual safety checks, preventative maintenance and calibration testing.
- See product service manual for calibration testing specifics.
- If safety checks and preventative maintenance show generator is out of tolerance, service may be required.
- Output verification can be performed by customers using the Output Verification Key accessory and most electrosurgical analyzers. See the DUALTO™ Energy System Service Manual for analyzer requirements.
- Johnson & Johnson MedTech offers service packages which cover preventative maintenance and output verification. Please see the DUALTO™ Energy System Service Brochure for details.





Energy Output Verification Key

Available Support

- Please contact your local Johnson & Johnson MedTech representative or find service contact information using Polyphonic™ Fleet.

Manufacturer's Warranty and Service Offering

- Repair and loaner costs are covered for one year under normal use and maintenance.
- Unspecified use voids the manufacturer's warranty. This includes any covered equipment used with instruments which may have been reprocessed, refurbished, repaired or altered by anyone other than Johnson & Johnson MedTech or its authorized representatives.
- Preventative maintenance and output verification are not covered by the manufacturer's warranty.
- Please see the DUALTO™ Energy System Service Solutions Brochure for current extended warranty offerings.

Ordering & Additional Information

Generator Elements

Product Code	Description	Product Image	Quantity	Compatible With
ETHCM	DUALTO™ Communications Module		1	The DUALTO™ Energy System with up to 2 Energy Modules
ETHUSC	DUALTO™ User Screen		1	
ETHEM	DUALTO™ Energy Module		1	All HARMONIC™, ENSEAL™ and MEGADYNE™ instruments

Packages

Product Code	Description	Product Image	Quantity	Compatible With
ESTES	DUALTO™ Single		1	All HARMONIC™, ENSEAL™ and MEGADYNE™ instruments
ESTESP	DUALTO™ Single Package*		1	
EDTES	DUALTO™ Double		1	
EDTESP	DUALTO™ Double Package**		1	

Accessories

Product Code	Description	Product Image	Quantity	Compatible With
ETHCRT	DUALTO™ Energy Cart		1	The DUALTO™ Energy System with up to 2 Energy Modules
ETHEF2	Energy Double Footswitch		1	The DUALTO™ Energy System
ETHEF1	Energy Single Footswitch		1	
ETHERF	Energy Round Footswitch		1	
ETHOVK	Energy Output Verification Key		1	
2255JTES	MEGADYNE™ Energy Signal Cable		1	Connects to MEGADYNE™ Smoke Evacuator, MESE1

For more information, contact your local Johnson & Johnson MedTech representative or visit **jnjmedtech.com**

*DUALTO Single Package includes ESTES, ETHCRT and ETHEF2
**DUALTO Double Package includes EDTES, ETHCRT and ETHEF2

References
A. Ethicon, HAR 28 Dy, ROIN 6176. Blade Heat. 10/30/2013. Windchill Document #PRC053965. Ethicon, HARMONIC ACE™ 5mm Diameter Shears + Adaptive Tissue Technology Instructions For Use
B. Ethicon. Memorandum: HAR & ACE Size and Adaptive Tissue Technology Comparison Intra-operative and Histopathology. 06/29/2017. Windchill Document #PSP005693
The ETHICON™ Total Energy System is now referred to as DUALTO™ Energy System, without any changes to its intended use, design, performance, or regulatory status under FDA 510(k) K243067.

For complete indications, contraindications, warnings, precautions, and adverse reactions, please reference full package insert.

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Disclaimer:
This document is intended solely for healthcare professionals for educational purposes. It does not replace the Instructions for Use. For complete indications, contraindications, warnings, and precautions, refer to the official product labeling. No claims herein should be interpreted as guaranteeing clinical outcomes.

Johnson & Johnson Private Limited
Higi House, L.B.S. Marg, Mulund (W), Mumbai 400 080.

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