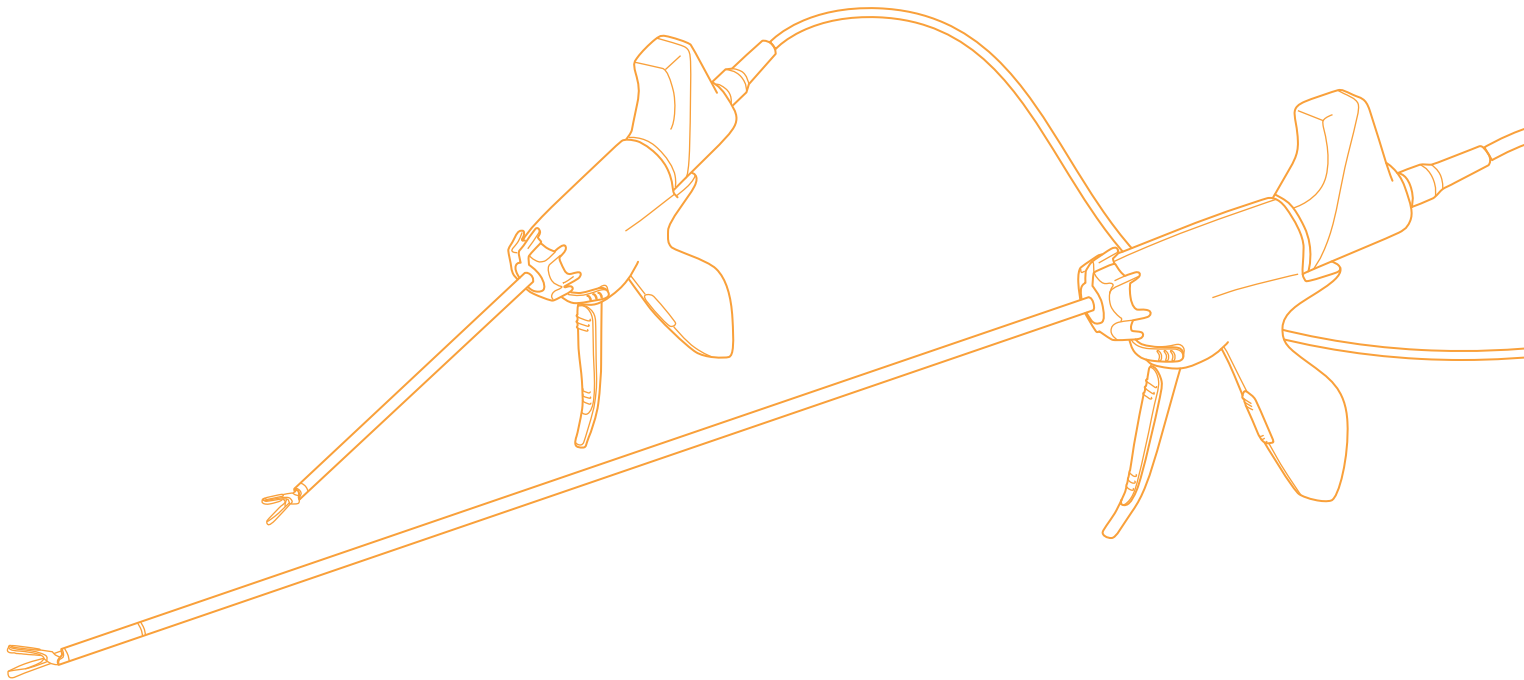


LOTUS

TORSIONAL ULTRASONIC SCALPEL



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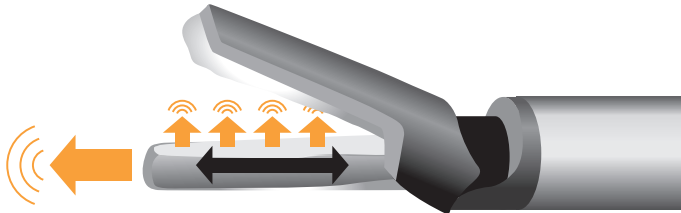
4. Device compatibility

IMPORTANT NOTICE

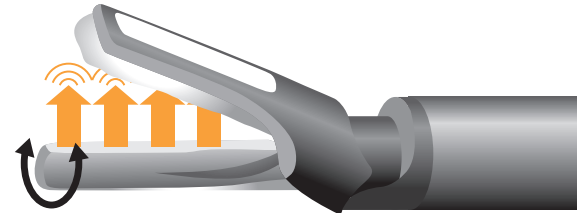
This quick reference guide is a brief summary of the operating instructions, it is not a substitute for the User Manual. For full instructions on the operation of this equipment please refer to the LOTUS Series 4 User Manual.

1.1 | TECHNOLOGY

LOTUS torsional technology



Schematic illustration



Schematic illustration

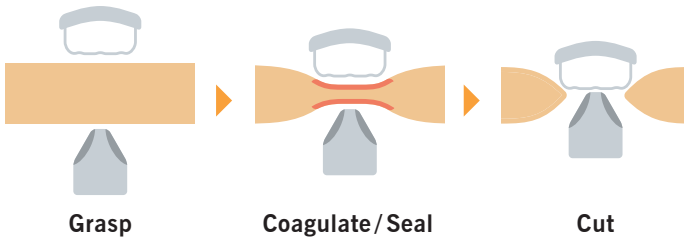
Conventional ultrasonic instruments

Energy is fed in the axial direction through the tip of the instrument. This leads to high stray energy dissipation at the tip of the instrument. As a result, unintentional distal drilling into tissue is a common cause of concern.

LOTUS torsional ultrasonic scalpel

The LOTUS system's energy is perpendicular (90 degrees) to the axis of the blade. This coupled with the blade geometry focuses the energy into the jaw area. LOTUS also offers enhanced safety by reducing the risk of inadvertent damage from stray distal energy.

1.2 | EFFECTS ON TISSUE







The cutting speed of the LOTUS ultrasonic scalpel is directly related to the pressure on the trigger. The clear tactile feedback enables precise cutting control by the surgeon.

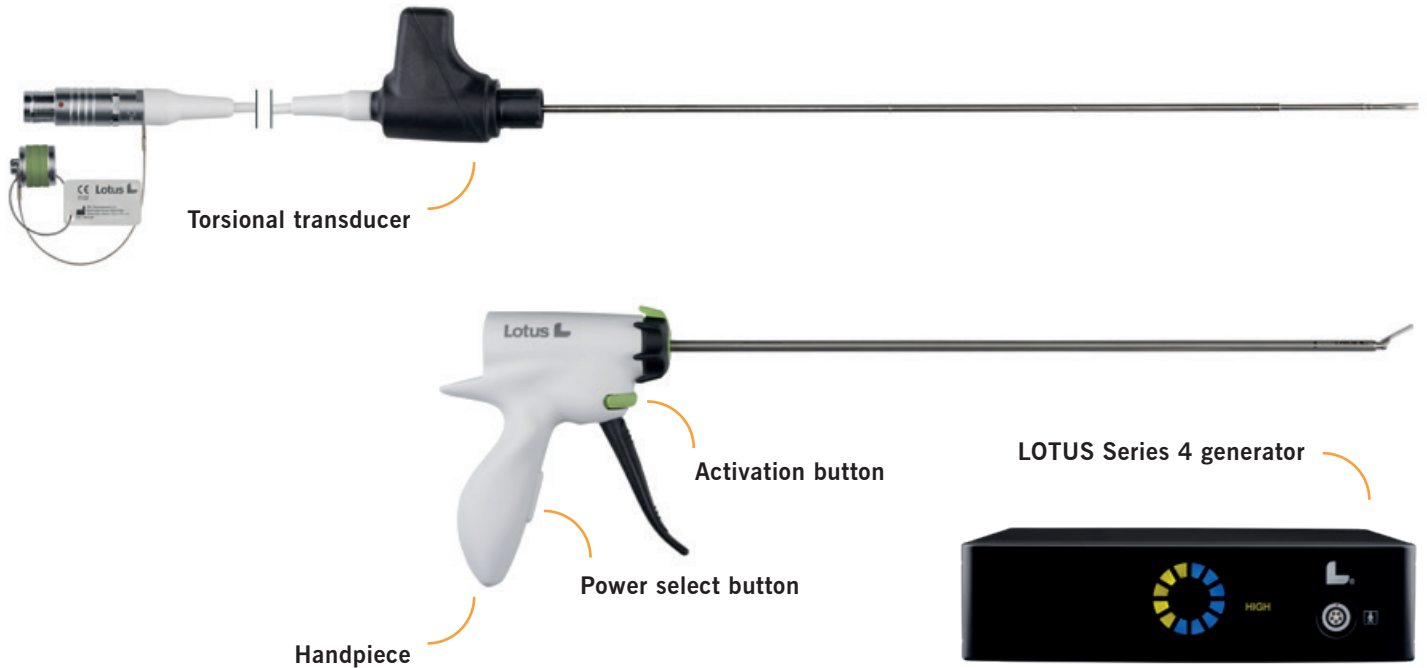
1.3 | APPLICATIONS

LOTUS can be used for haemostatic dissection of all types of soft tissues: large pedicles, vascular structures and even tough tissues such as the cervix or scar tissue.

Specialist surgical areas:

-  Gynaecology
-  Urology
-  Thoracic surgery
-  General surgery
 - Upper Gastro-Intestinal
 - Colorectal
 - HPB
 - Bariatric Surgery

2.1 | SYSTEM OVERVIEW



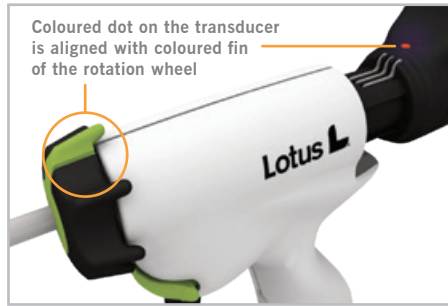
2.2 | SET-UP OF HANDPIECE AND TRANSDUCER



Rotate the coloured fin on the rotation wheel to 12 o'clock.

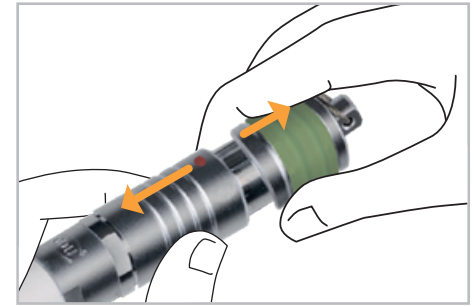


Open the jaw by releasing the spring loaded trigger.



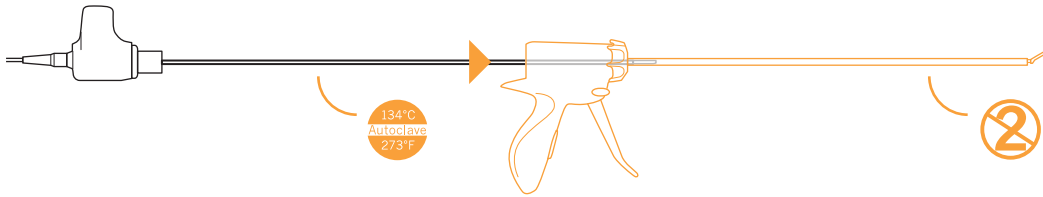
Ensure the coloured dot on the transducer is aligned with the coloured fin of the rotation wheel.

Ensure that the jaw is in the open position and then push the transducer and handpiece together.



To remove the end cap, hold the ribbed area of the connector cap between thumb and forefinger and pull back the ribbed sleeve of the cap. **Do not remove the end cap until it has been passed out of the sterile field.**

Align the red dot on the connector with the red dot on the generator cable socket and push together. To remove the connector, pull back the ribbed sleeve of the connector in the same way.



LOTUS torsional transducer
Tool-less instrument assembly

Handpiece
Simple plug and
play set-up

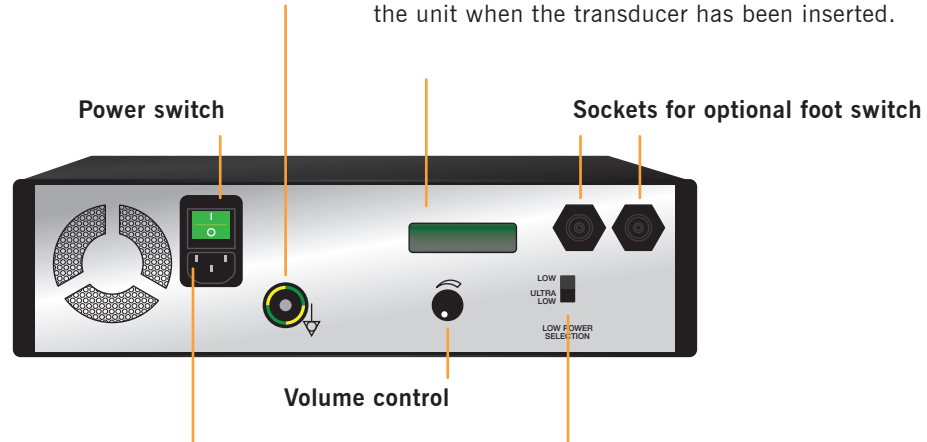


2.3 | GENERATOR



Equipotential connection

The lifetime of the transducer is limited to 250 minutes. It is stored within the instrument and can be read on the rear of the unit when the transducer has been inserted.

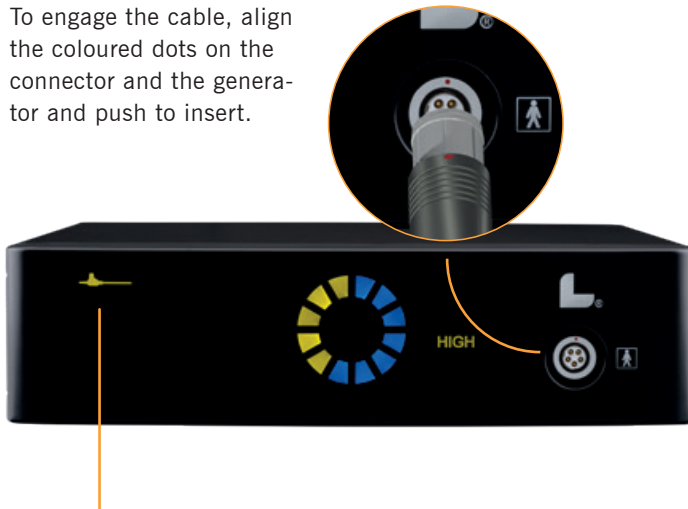


IEC Power socket

The mains power switch is located on the rear of the unit. As soon as the generator is turned on, all the symbols on the generator will briefly illuminate to ensure that the LED displays are working.

The switch on the rear of the unit allows you to alter the LOW power setting. This enables you to switch between ULTRA LOW and LOW power. you can still switch back to HIGH power using the Power Select button

To engage the cable, align the coloured dots on the connector and the generator and push to insert.



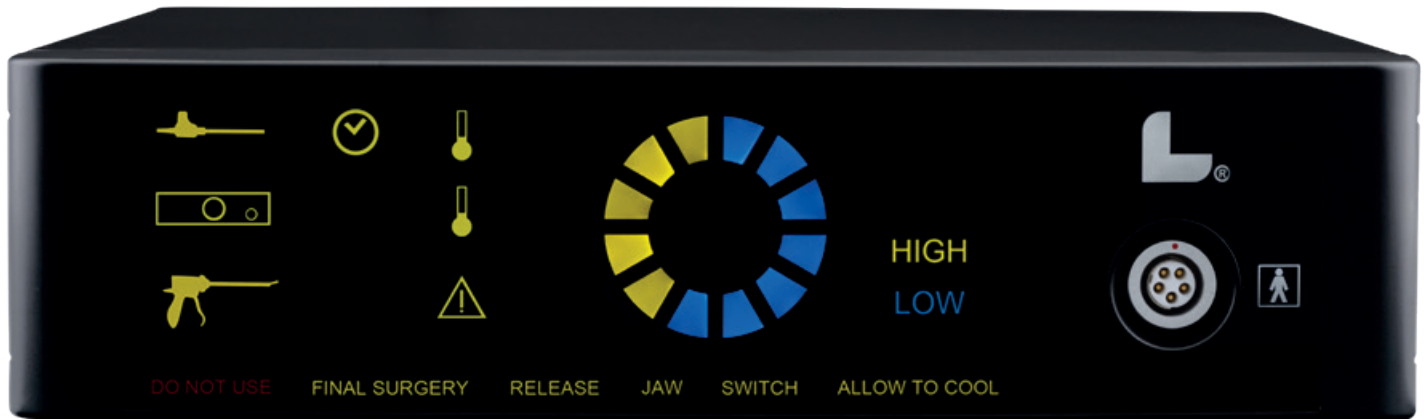
When the activation button is depressed, the transducer symbol on the generator lights up.












Power Select button



To start using the device, first press the Power Select button. The system will be initialised on LOW power. To switch to HIGH power press the Power Select button again.

2.4 | EXPLANATION OF SYMBOLS



SYMBOLS	DESCRIPTION OF SYMBOLS	MEANING	ACTION REQUIRED
	Transducer symbol not illuminated.	Transducer has reached the end of its operating lifetime.	Transducer must be replaced.
	Transducer symbol lights up briefly.	Transducer has been recognised.	
	Transducer symbol is continually illuminated.	Transducer must be serviced after the operation.	Return the decontaminated transducer for servicing.
	Transducer symbol lights up when the activation button is depressed.	Unit activated, instrument in use.	
	Only the “L” LED is illuminated.	Before initialisation the generator is in standby mode.	Briefly press the Power Select button to begin.
	“LOW” illuminated.	The unit is switched to the LOW power setting.	Switch between the HIGH and LOW power setting using the Power Select button.
	“HIGH” illuminated.	The unit is switched to the HIGH power setting.	Switch between the HIGH and LOW power setting using the Power Select button.

SYMBOLS	DESCRIPTION OF SYMBOLS	MEANING	ACTION REQUIRED
 RELEASE SWITCH	RELEASE and SWITCH warning symbols illuminated.	<ul style="list-style-type: none"> - Power Select button or activation button is being pressed during initialisation. - Power Select button remains depressed after the power setting has been changed. 	Release the Power Select button. The generator will automatically restart.
 RELEASE SWITCH	RELEASE and SWITCH warning symbols as well as Handpiece and Clock symbols illuminated.	The handpiece has been used for longer than 25 seconds in a single activation. The unit has paused for safety.	Release the activation button. The generator will automatically restart.
 ALLOW TO COOL	Warning, ALLOW TO COOL, Thermometer and Transducer symbols illuminated.	The transducer or the waveguide is getting warm.	<ul style="list-style-type: none"> - Remove transducer from handpiece and wipe off using a damp swab to cool instantly. - Transducer may be defective or damaged and must be replaced.
 RELEASE JAW	Warning symbol, RELEASE JAW symbol and Transducer symbol illuminated.	Handpiece being gripped too tightly.	Release handpiece trigger and activation button. The generator will automatically reset in 1–2 seconds.

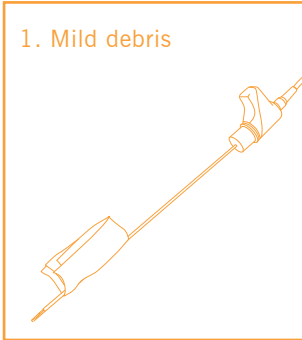
SYMBOLS	DESCRIPTION OF SYMBOLS	MEANING	ACTION REQUIRED
 <p>FINAL SURGERY</p>	Warning symbol, Clock symbol, FINAL SURGERY and Transducer symbol illuminated.	The transducer has reached more than 98% of its operating lifetime.	The operation in progress can be completed. After the transducer is unplugged from the generator, it will be disabled and can no longer be used.
 <p>DO NOT USE</p>	Warning symbol, Clock symbol, DO NOT USE and Transducer symbol illuminated.	After the “FINAL SURGERY” symbol was illuminated, the transducer was mistakenly reapplied and connected. The transducer can no longer be used.	Please replace the transducer.

CONTRAINDICATIONS AND WARNINGS:

For a full list of warnings, indications and contraindications for use, please refer to the full User Manual, a copy of which was supplied with the equipment.

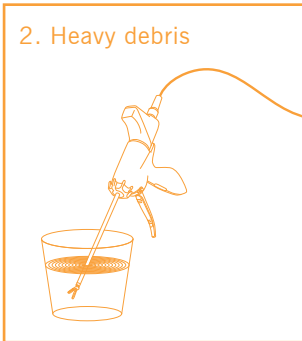
3. | CLEANING IN THE STERILE FIELD

1. Mild debris



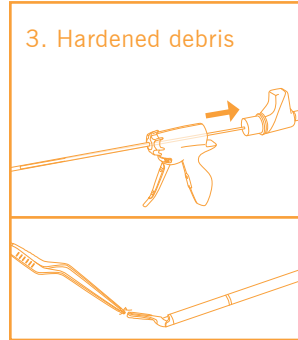
Clean the transducer's waveguide and the jaw of the handpiece with a damp swab. Remove the transducer from the handpiece if required.

2. Heavy debris

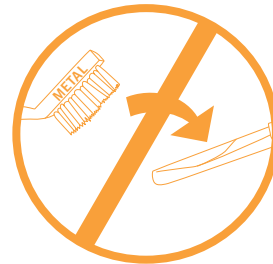


Submerge the instrument in water or saline and depress the activation button. To remove remaining debris, wipe off the transducer's waveguide and the jaw of the handpiece with a damp swab afterwards.

3. Hardened debris



Remove the transducer from the handpiece. Clean the transducer's waveguide with a damp swab. Debris around the handpiece jaw mechanism can be removed using forceps or a damp swab as required. Take care not to damage the jaw of the handpiece by using excess force or bending it.



IMPORTANT: Avoid using metal objects to clean debris from the waveguide as this may cause scratches and other damage.

WE RECOMMEND AVOIDING ALL METAL ON METAL CONTACT WITH THE WAVEGUIDE INCLUDING CUTTING CLIPS AND TOUCHING GRASPERS ETC.

4. | DEVICE COMPATIBILITY

LOTUS dissecting shears



TYPE	L		REF
Open surgery 200, curved jaw	176 mm	Handpiece (disposable, 10 per package)	DS4-200CD
		Transducer (reusable)	ES4-200CT*
Laparoscopy 400, curved jaw	349 mm	Handpiece (disposable, 10 per package)	DS4-400CD
		Transducer (reusable)	ES4-400CT*
Bariatric surgery 500, curved jaw	434 mm	Handpiece (disposable, 10 per package)	DS4-500CD
		Transducer (reusable)	ES4-500CT*

* only for LG4 Series 4 generators with software version Issue 6 or later.

LOTUS liver resector



TYPE	L		REF
Open surgery 200, straight jaw	176 mm	Handpiece (disposable, 10 per package)	LR4-200SD
		Transducer (reusable)	LR3-200
Laparoscopy 400, straight jaw	349 mm	Handpiece (disposable, 10 per package)	LR4-400SD
		Transducer (reusable)	LR3-400

BOWA

A C A D E M Y

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