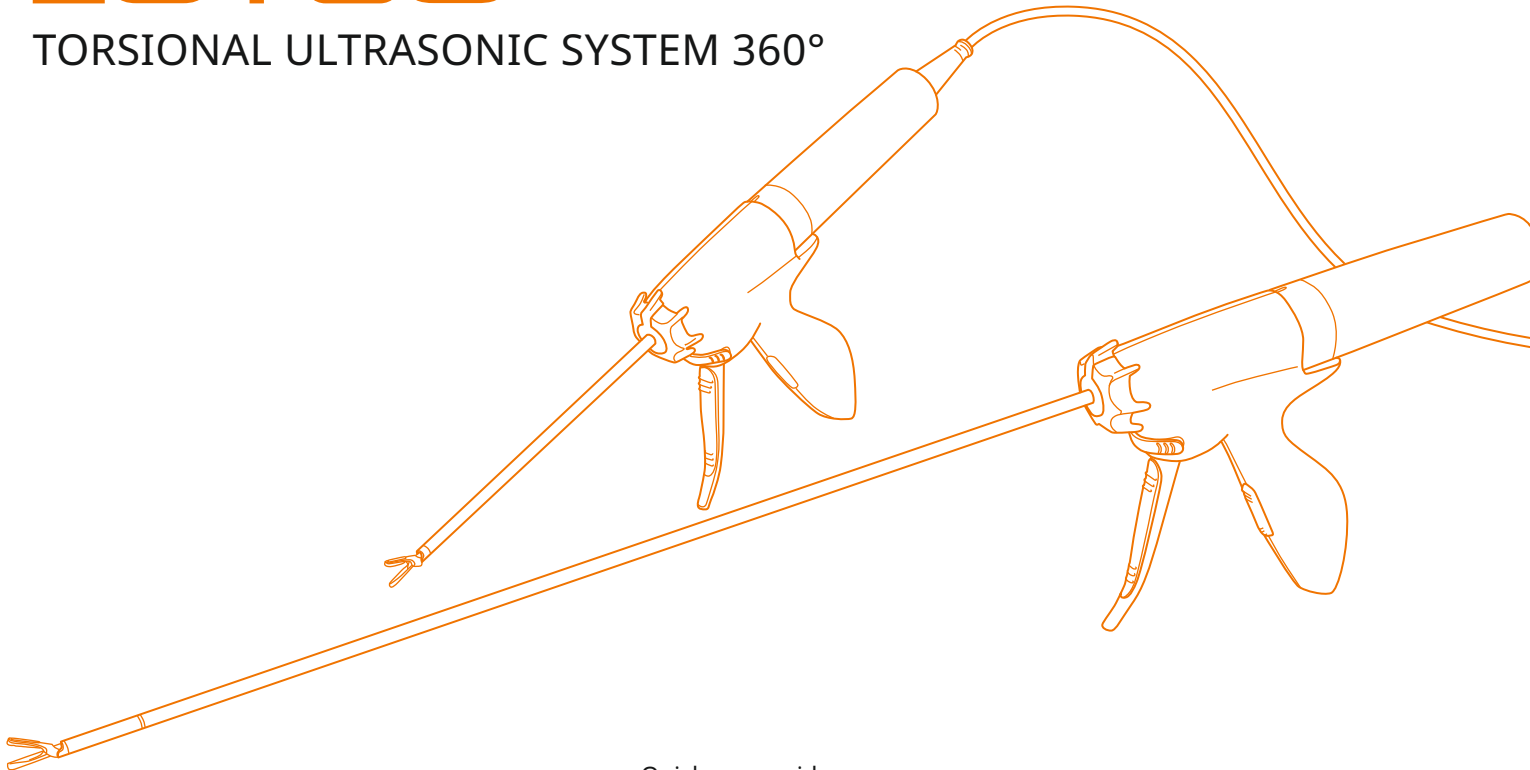


LOTUS

TORSIONAL ULTRASONIC SYSTEM 360°



Quick user guide

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IMPORTANT INFORMATION

This quick guide is a brief summary of the most important working steps and information. It does not replace the instructions for use. For detailed instructions, please carefully read the instructions for use of the LOTUS series 4.

1.1 | TECHNOLOGY

LOTUS torsional technology

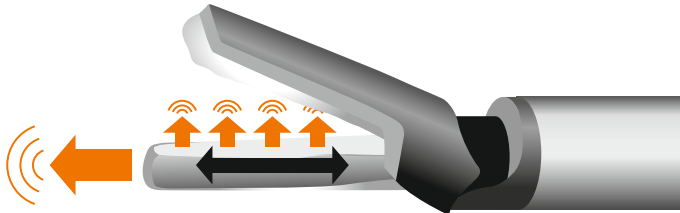


Diagram showing the functional principle

Conventional ultrasonic instruments

Energy is directed lengthwise through the tip of the instrument. This leads to high losses from energy dissipation at the instrument tip. Inadvertent distal drilling into the tissue is a possible consequence.

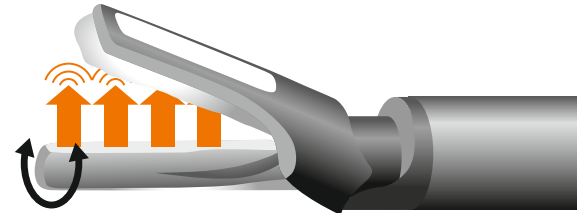
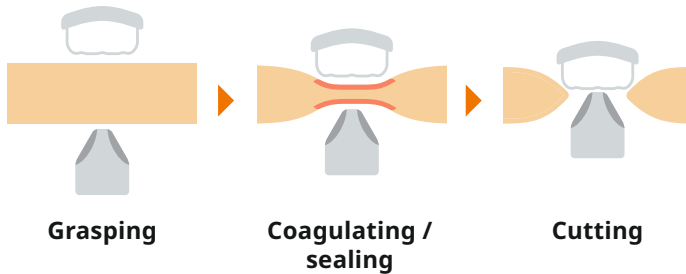


Diagram showing the functional principle

LOTUS torsional ultrasonic system

The energy of the LOTUS system is directed perpendicular (90 degrees) to the axis of the blade. Coupled with the blade geometry, the energy is focused in the region of the jaw. Due to the reduction of the risk of inadvertent damage from distal energy dissipation, LOTUS also affords a higher level of safety.

1.2 | TISSUE EFFECTS







The contact pressure exerted on the handle has a direct influence on the cutting speed of the LOTUS ultrasonic scalpel.
The clear tactile feedback affords the surgeon very precise control over the cut.

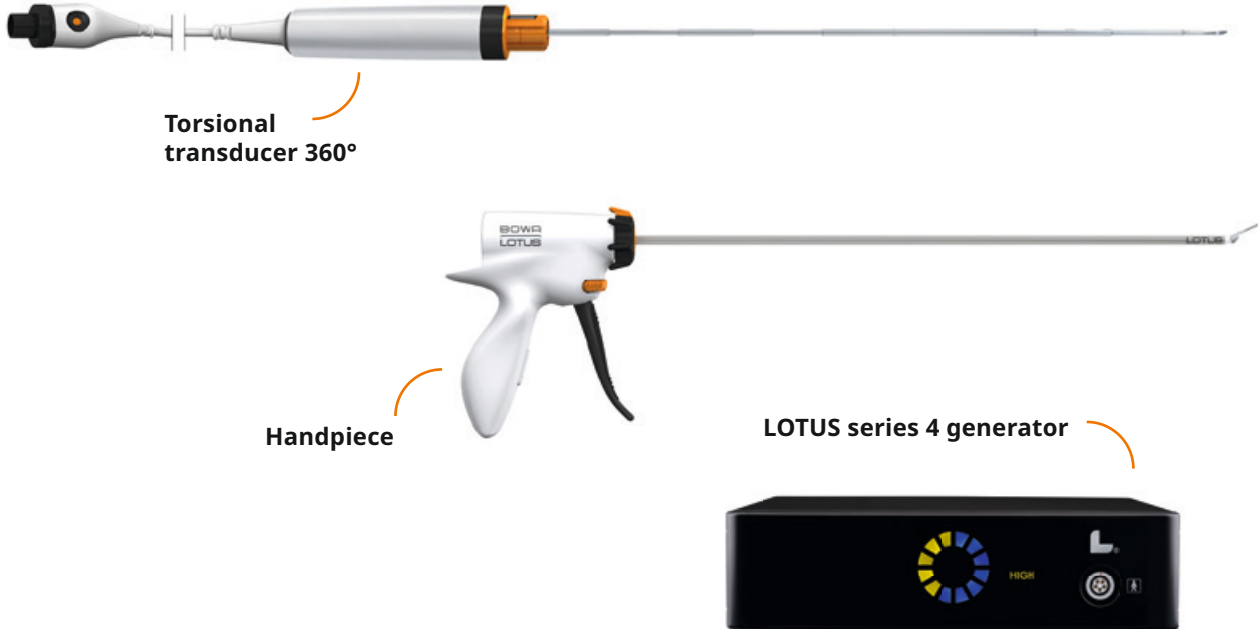
1.3 | APPLICATIONS

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

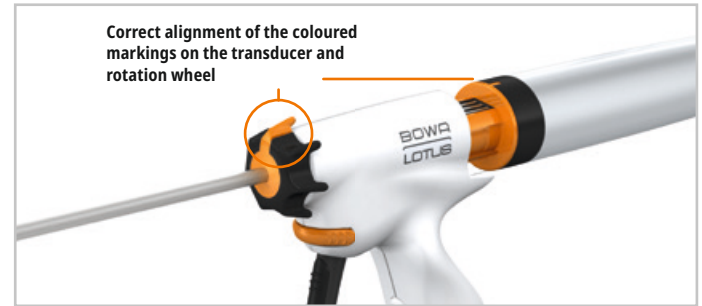
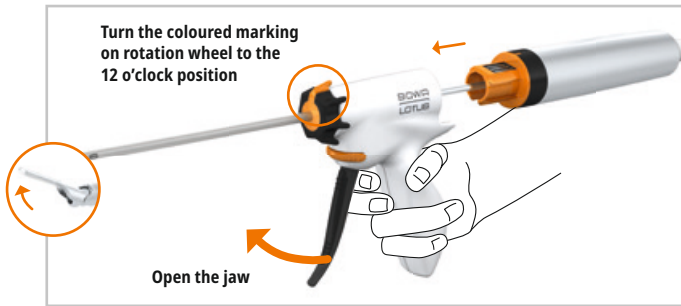
Surgical specialities:

-  General surgery
-  Gynaecology
-  Urology
-  Thoracic surgery

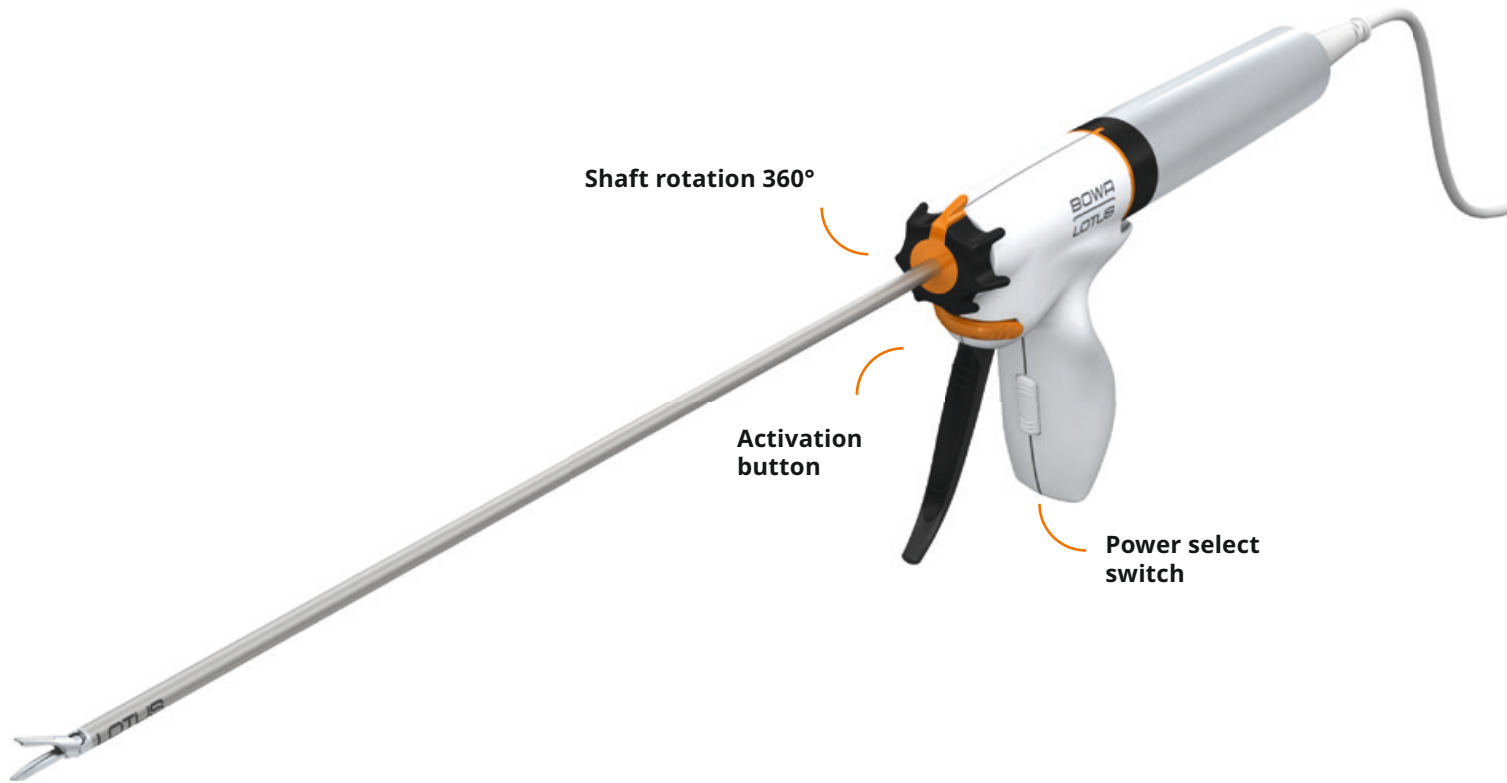
2.1 | SYSTEM OVERVIEW



2.2 | SET-UP OF HANDPIECE AND TRANSDUCER



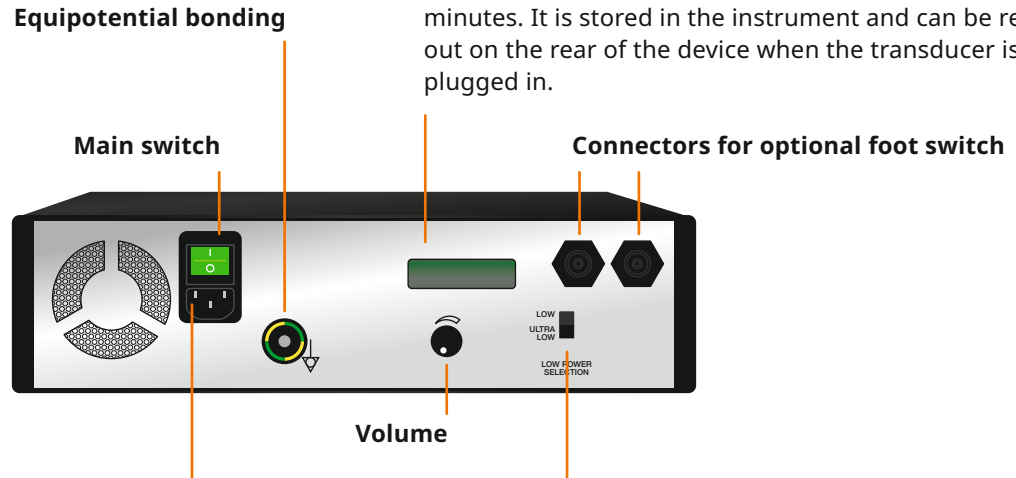
- Open the jaw by operating the handpiece.
- Turn the coloured marking on the rotation wheel to the 12 o'clock position.
- Make sure that the coloured markings on the transducer and rotation wheel are aligned with each other.
- Make sure that the jaw is open and then slide the transducer and handpiece together.
- This does not require any tools.



2.3 | GENERATOR



The service life of the transducer is limited to 250 minutes. It is stored in the instrument and can be read out on the rear of the device when the transducer is plugged in.

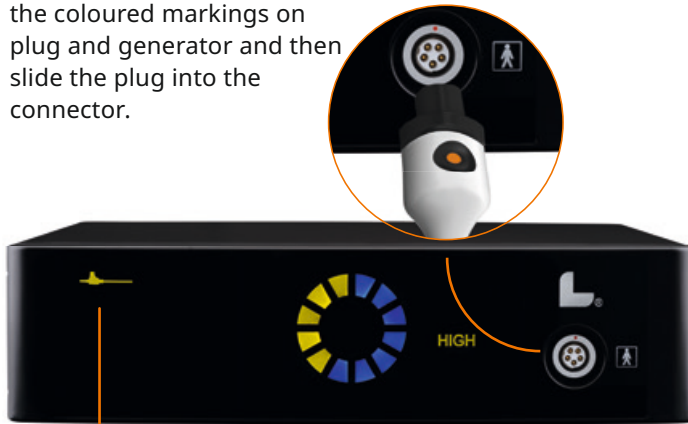


Socket for mains cable

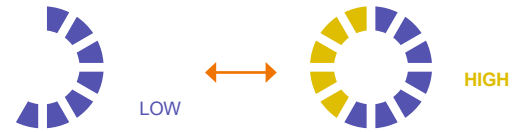
The power switch allowing the generator to be switched on is situated on the rear of the device. Once the generator is switched on, all generator symbols light up briefly to ensure that the LED display works properly.

The switch on the rear of the device can be used to adapt the LOW power setting. You can switch between ULTRA LOW and LOW power levels. The HIGH level can then still be activated with the power select switch.

To connect the cable, align the coloured markings on plug and generator and then slide the plug into the connector.



If you press the activation button, the transducer symbol on the generator lights up as an indicator.














Power select switch



To use the device, press the power select switch first. The system is initialised at the LOW power level. To switch to the HIGH power level, press the power select switch again.

2.4 | DEFINITION OF SYMBOLS



SYMBOLS	DESCRIPTION OF SYMBOLS	MEANING	ACTION REQUIRED
	Transducer symbol does not light up.	Transducer has reached the permissible service life.	Transducer needs to be replaced.
	Transducer symbol lights up briefly.	Transducer has been recognised.	
	Transducer symbol lights up continuously.	Transducer needs to be serviced after the surgery.	Return the decontaminated transducer for servicing.
	Transducer symbol lights up when the activation button is pressed.	Activation symbol indicating that the instrument is in use.	
	Only the “L” lights up.	The generator stays in standby mode before initialisation.	Briefly press the power select switch to start up.
	“LOW” lights up.	The system is switched on at the “LOW” power level.	Use the power select switch to change between “HIGH” and “LOW” energy settings.
	“HIGH” lights up.	The system is switched on at the “HIGH” power level.	Use the power select switch to change between “HIGH” and “LOW” energy settings.

SYMBOLS	DESCRIPTION OF SYMBOLS	MEANING	ACTION REQUIRED
	Warning symbol, "RELEASE" and "SWITCH" light up.	<ul style="list-style-type: none"> - The power select button or the activation button is being pressed during initialisation. - The power select button is pressed and held after the power level was switched. 	Release the power select button. The generator automatically undergoes a re-start.
	Warning symbol, "RELEASE" and "SWITCH" and symbols "Handpiece" and "Clock" light up.	Long-term activation for more than 25 seconds. The device takes a short pause for safety reasons.	Release the activation button. The generator automatically undergoes a re-start.
	The warning symbol and the symbols "ALLOW TO COOL", "Thermometer" and the transducer symbol light up.	The transducer or the acoustic waveguide gets warm.	<ul style="list-style-type: none"> - Take the transducer out of the handpiece and wipe it down with a moist swab to cool it down immediately. - The transducer may be defective or damaged and needs to be replaced.
	The warning symbol, "RELEASE JAW" and the transducer symbol light up.	Pressing too hard on the hand-piece.	Release the handle lever and the activation button. The generator resets automatically after 1–2 seconds.

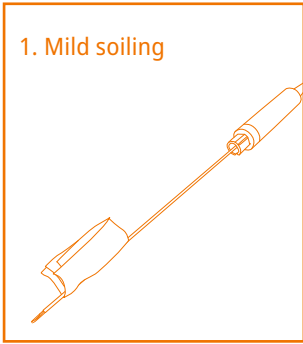
SYMBOLS	DESCRIPTION OF SYMBOLS	MEANING	ACTION REQUIRED
 <p data-bbox="108 252 343 281">FINAL SURGERY</p>	<p data-bbox="373 154 730 244">The warning symbol, the symbols “Clock”, “FINAL SURGERY” and the transducer symbol light up.</p>	<p data-bbox="754 154 1106 210">The transducer has reached more than 98 % of its service life.</p>	<p data-bbox="1131 154 1461 305">The surgery can be completed. After disconnecting the transducer from the generator, the transducer is deactivated and cannot be used again.</p>
 <p data-bbox="108 476 343 505">DO NOT USE</p>	<p data-bbox="373 344 708 434">The warning symbol, “Clock”, “DO NOT USE” and the transducer symbol light up.</p>	<p data-bbox="754 344 1106 563">The transducer was inadvertently reprocessed and connected again after the message “FINAL SURGERY” had been shown. The transducer cannot be used any longer.</p>	<p data-bbox="1131 344 1482 372">Please replace the transducer.</p>

CONTRAINDICATIONS AND WARNINGS:

For a complete list of the warnings, indications and contraindications, please refer to the complete instructions for use enclosed with the device.

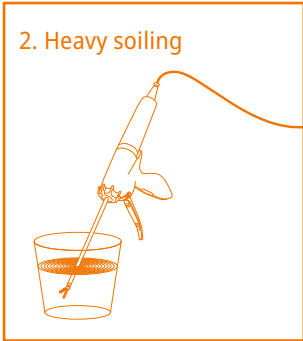
3. | CLEANING IN STERILE AREA

1. Mild soiling



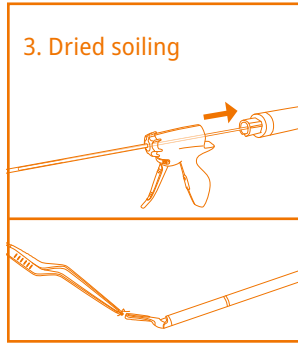
Clean the acoustic waveguide of the transducer and the jaw of the handpiece with a moist cloth. Take the transducer out of the handpiece for this purpose, if required.

2. Heavy soiling

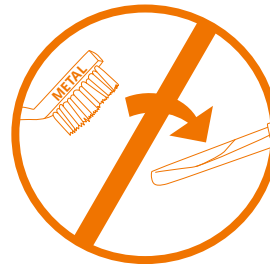


Immerse the instrument in a vessel containing sterile water or saline solution and press the activation button. In order to remove any residual soiling, wipe down the acoustic waveguide of the transducer and the jaw of the handpiece with a moist cloth.

3. Dried soiling

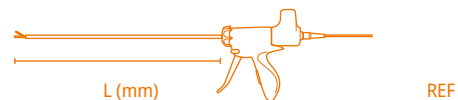
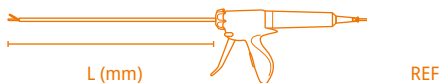


Take the transducer out of the handpiece. Clean the acoustic waveguide of the transducer with a moist swab. Soiling around the jaw mechanism can be removed with forceps or a wet swab as appropriate. Make sure not to damage the jaw on the handpiece through excessive force or bending.



IMPORTANT: Do not use any metal objects to remove soiling from the acoustic waveguide as this may lead to scratches or other damage. **WE RECOMMEND THAT YOU PREVENT ANY AND ALL CONTACT OF METAL OBJECTS WITH THE ACOUSTIC WAVEGUIDE (E.G. BLADES, CLIPS, TOUCHING GRASPING FORCEPS, ETC.).**

4. | COMPATIBILITIES



LOTUS dissecting shears, rotatable 360°

Open surgery 200 / 360°, curved jaw	176	Handpiece (disposable, 10 pcs. / PU)	DS5-200CD
		Transducer (reusable)	ES5-200CT
Laparoscopy 400 / 360°, curved jaw	349	Handpiece (disposable, 10 pcs. / PU)	DS5-400CD
		Transducer (reusable)	ES5-400CT
Bariatric surgery 500 / 360°, curved jaw	434	Handpiece (disposable, 10 pcs. / PU)	DS5-500CD
		Transducer (reusable)	ES5-500CT

LOTUS dissecting shears

Open surgery 200, curved jaw	176	Handpiece (disposable, 10 pcs. / PU)	DS4-200CD
		Transducer (reusable)	ES4-200CT
Laparoscopy 400, curved jaw	349	Handpiece (disposable, 10 pcs. / PU)	DS4-400CD
		Transducer (reusable)	ES4-400CT
Bariatric surgery 500, curved jaw	434	Handpiece (disposable, 10 pcs. / PU)	DS4-500CD
		Transducer (reusable)	ES4-500CT

LOTUS liver resector, rotatable 360°

Open surgery 200 / 360°, straight jaw	176	Handpiece (disposable, 10 pcs. / PU)	LR5-200SD
		Transducer (reusable)	LR5-200ST
Laparoscopy 400 / 360°, straight jaw	349	Handpiece (disposable, 10 pcs. / PU)	LR5-400SD
		Transducer (reusable)	LR5-400ST

LOTUS liver resector

Open surgery 200, straight jaw	176	Handpiece (disposable, 10 pcs. / PU)	LR4-200SD
		Transducer (reusable)	LR3-200
Laparoscopy 400, straight jaw	349	Handpiece (disposable, 10 pcs. / PU)	LR4-400SD
		Transducer (reusable)	LR3-400

BOWA

A C A D E M Y

BOWA MEDICAL

BOWA-electronic GmbH & Co. KG
Heinrich-Hertz-Strasse 4 – 10
72810 Gomaringen | Germany

Phone +49 7072 6002-0
Fax +49 7072 6002-33
info@bowa-medical.com
bowa-medical.com



SRA Developments Ltd

a BOWA-electronic GmbH & Co. KG company
Bremridge House, Bremridge,
Ashburton, Devon, TQ13 7JX, UK