CURIS®

4 MHz Radiofrequency Generator and RaVoR™ Bipolar Electrodes

4 MHz RADIOFREQUENCY

AutoRF™

p³ pulsed power performance

product design award

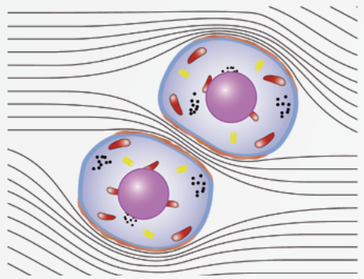
PRECISION ELECTROSURGERY
Made in Germany

Technology

Impedance-controlled 4 MHz Radiofrequency Technology

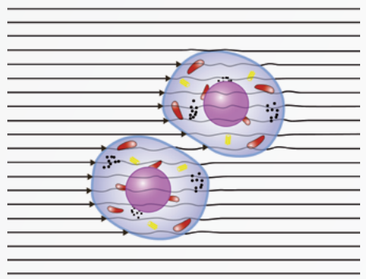
The higher the frequency, the less the resistance of biological tissue to electromagnetic fields – up to the point where cell membranes are capacitively coupled. This effect is created by the CURIS® 4 MHz radiofrequency generator in all monopolar and bipolar modes. As a result, energy is administered gently and in a highly focused fashion. Precise monopolar cuts are possible while lateral heat damage is kept to a minimum*[1].

Conventional electrosurgical units (between 300-500 kHz)



The electromagnetic field concentrates between the cells and heats up only the outer layer.

CURIS® 4 MHz Radiofrequency Generator



Cell membranes are conductive and the energy is absorbed evenly inside the cells. The result are highly focused tissue effects.

Source: Holder, D. S. "Brief introduction to Bioimpedance" in: Electrical Impedance Tomography — Methods, History and Applications. IOP Publishing Ltd 2005

p³™ Technology

p³™, which stands for pulsed power performance, is active in all coagulation modes of the CURIS® 4 MHz radiofrequency generator. Radiofrequency energy is delivered in about 50 small packages per second. Due to the pulsed power output, there are short breaks between the individual packages, giving the tissue enough time to absorb the energy. Highly focused, yet gentle coagulation with minimal thermal damage is possible.

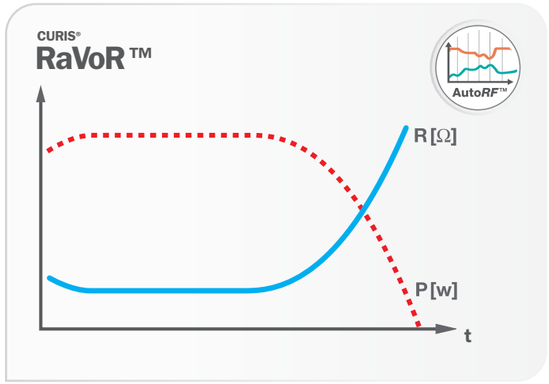
*[1]: Hoffmann T. K. et al., Comparative analysis of resection tools suited for transoral robot-assisted surgery, European Archives Otorhinolaryngology, 2013

CURIS® 4 MHz Radiofrequency Generator

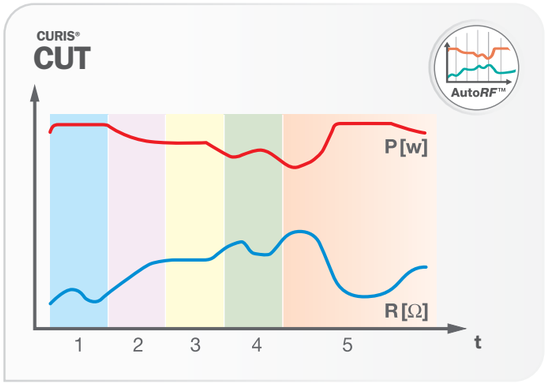
CURIS® : one device - many applications

CURIS® : Precision thanks to Auto*RF*™

Auto*RF*™ is a smart impedance control function that will tailor the power output of the CURIS® 4 MHz radiofrequency generator to the tissue condition. Whether it is cutting through different types of tissue (such as mucosa, muscle, fat, or connective tissue) or altering tissue conditions during coagulation, the Auto*RF*™ feature will deliver adapted power output as required by the different tissue impedance. When dissecting different types of tissue in one cut (skin, fat, muscles), the unit has to process and respond to the Auto*RF*™ data in a flash. For this reason, the CURIS® has two microprocessors for additional safety and speed.

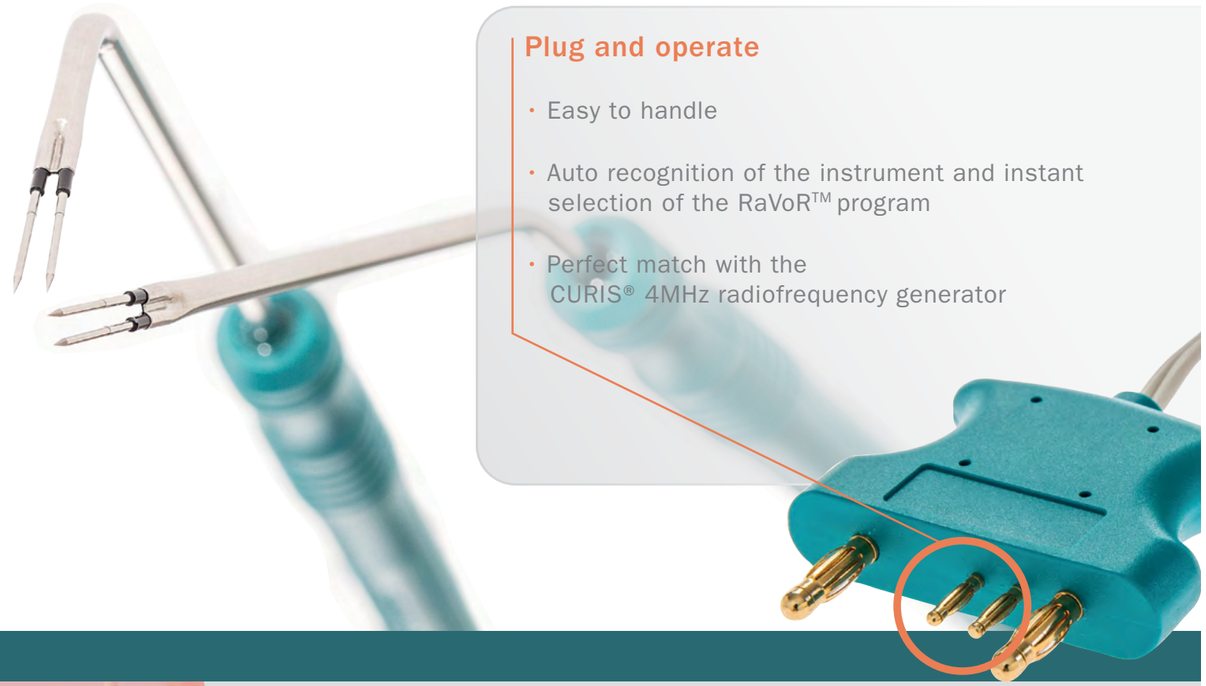


RaVoR™ mode: The pulsed power output with short intervals between the individual packages gives enough time for the coagulated tissue to absorb the applied energy. Illustration only.



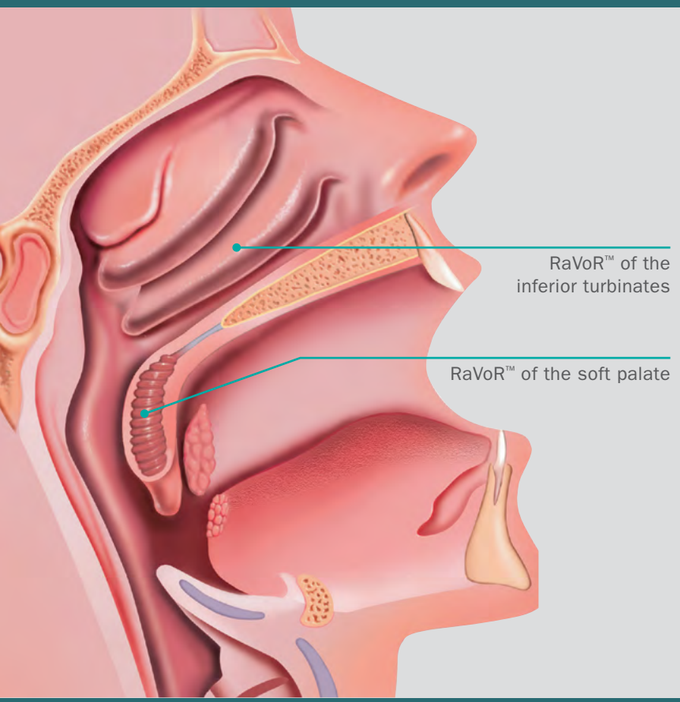
Monopolar cutting: Sections 1 to 5 illustrate the different kinds of tissue and cutting speeds to which the unit adjusts its power output automatically. "R" signifies electric tissue resistance and "P" the actual power output. Illustration only.

RaVoR™ Bipolar Electrodes



Plug and operate

- Easy to handle
- Auto recognition of the instrument and instant selection of the RaVoR™ program
- Perfect match with the CURIS® 4MHz radiofrequency generator



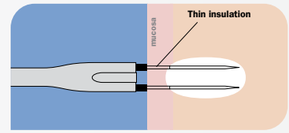
ENT

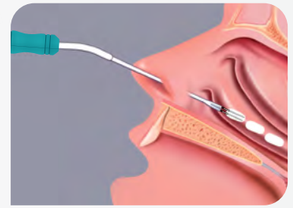
RaVoR™ (Radiofrequency Volume Reduction) of the inferior turbinates and soft palate is an interstitial application for submucosal tissue shrinkage. Precise delivery of energy and smart power adjustment depending on actual tissue impedance aid in creating consistent and repeatable lesions. As soon as the right size of a lesion has been achieved, the CURIS® 4 MHz radiofrequency generator will automatically stop the activation (AUTO STOP mode), and give an acoustic signal.

RaVoR™ of the inferior turbinates

single-use

70 44 62
RaVoR™ bipolar electrode
for the inferior turbinates, single-use
working length: 103 mm



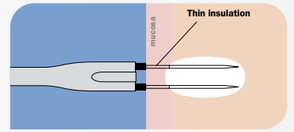


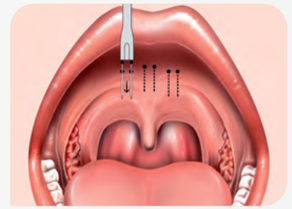
Schematic view of the **puncture sites** for the application of radiofrequency energy of the **hypertrophic turbinates.**

RaVoR™ of the soft palate

single-use

70 44 95
RaVoR™ bipolar electrode
for the soft palate, single-use
working length: 110 mm





Puncture sites for the application of radiofrequency energy in the **soft palate**

Sold through Sutter Exclusive Partners

CURIS® Basic Equipment

CURIS® Basic Equipment

Qty.	REF	Description
1	**36 01 00-03**	CURIS® 4 MHz radiofrequency generator (incl. mains cord, user's manual and test protocol)
1	**36 01 14**	Foot switch two pedals for CURIS® (cut & coag), 4 m cable (~13 ft)
1 (x50)	**36 02 29**	Disposable split patient plates
1 (x50)	**36 44 04**	Disposable monopolar pencils

CURIS® Storage / Transport

36 09 00
Fuego trolley

Fuego Trolley

The trolley has a solid design and guarantees that the CURIS® 4 MHz radiofrequency generator will not shift. It also comes with a hook to mount the footswitch.

Two storage baskets for accessories and documentation.

99 01 10
CURIS® Trolley Case

CURIS® Trolley Case

The CURIS® trolley case is ideally suited to preserve your radiofrequency generator from damage.

PRECISION ELECTROSURGERY
Made in Germany

RF output max.	performance	oper. frequency
monopolar		
CUT 1 (unmodulated)	100 W ± 20 % 600 Ω	4.0 MHz
CUT 2 (modulated)	80 W ± 20 % 600 Ω	4.0 MHz
CONTACT (coag)	80 W ± 20 % 400 Ω	4.0 MHz
SOFTSPRAY (coag)	60 W ± 20 % 600 Ω	4.0 MHz
bipolar		
BICUT 1	80 W ± 20 % 300 Ω	4.0 MHz
BICUT 2	80 W ± 20 % 300 Ω	4.0 MHz
EXCISE (cut)	80 W ± 20 % 300 Ω	4.0 MHz
MACRO (coag)	80 W ± 20 % 50 Ω	4.0 MHz
PRECISE (coag)	50 W ± 20 % 50 Ω	4.0 MHz
RaVoR™	40 W ± 20 % 50 Ω	4.0 MHz

Modulation frequency	33 kHz
Mains supply	100-240 V; 50/60 Hz
Measurements W x H x D	320 mm x 170 mm x 385 mm
Weight	approx. 5.0 kg
Mode of operation	Intermittent INT 10 s / 30 s equals 25 % ED
Standards	DIN EN 60601-1; DIN EN 60601-2-2
Safety class	I
EMC (Interference suppr.)	EN 60601-1-2
Type	CF (cardiac floating) defibrillator safe
German MPG class.	II b
Quality assurance	EN 13485

Valid for generators from version: 0604

Disclaimer: The information presented herein has been carefully researched and compiled with the help of specialist physicians. They are not meant to serve as a detailed treatment guide. They do not replace the user instructions for the medical devices used. Sutter accepts no liability for the treatment results beyond the mandatory legal regulations.

Sutter

PRECISION ELECTROSURGERY
Made in Germany

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