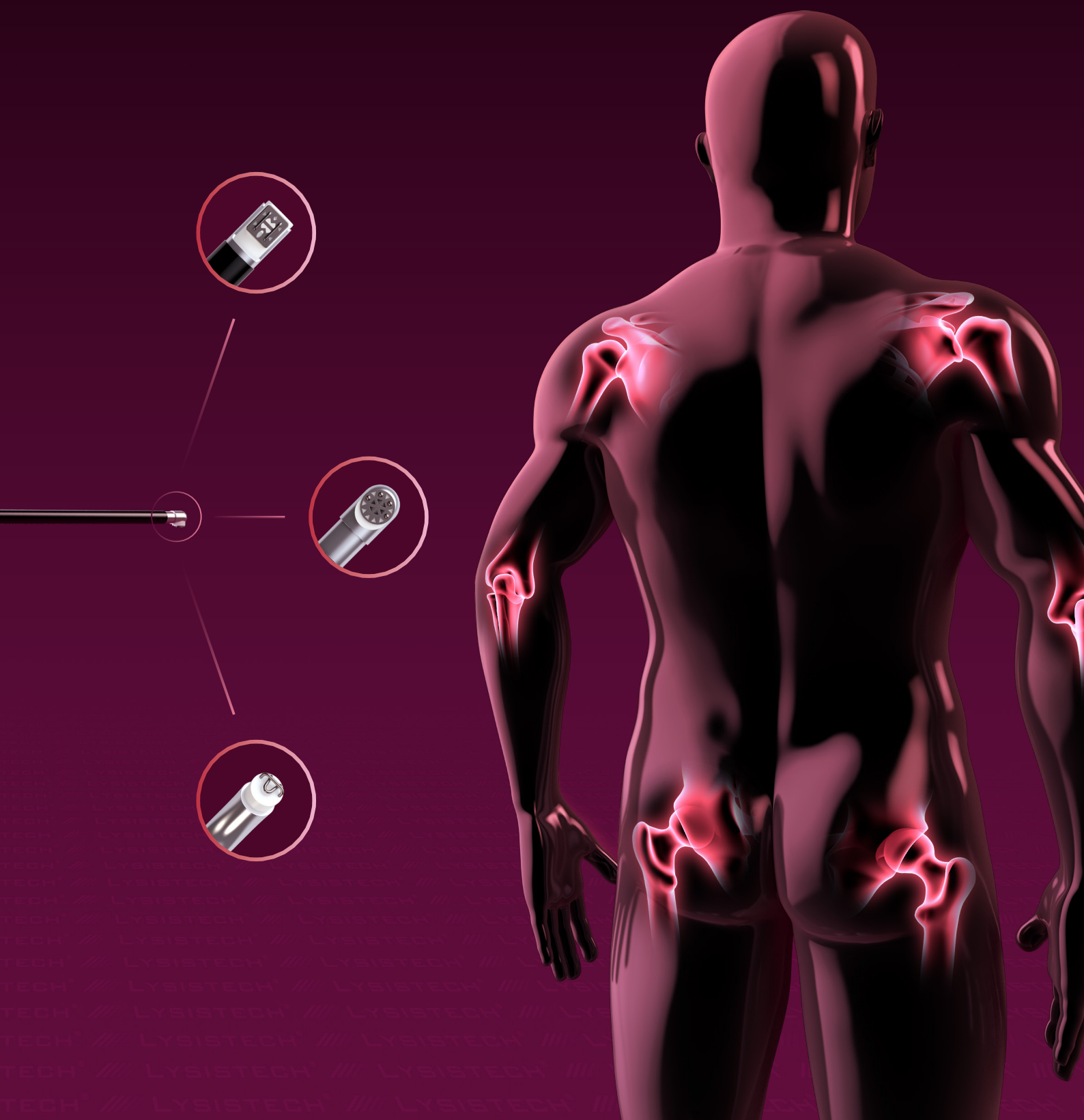




LYSISTECH[®]

SPORTS MEDICINE

RF-PLASMA TREATMENT DIVISION



ABOUT US:

Lysistech AG and its partners strive for innovative development, production and marketing of medical equipment, especially laser systems and radio-frequency systems for minimally invasive surgery. Our products range from generators to the corresponding fibre-optic laser probes and radio-frequency (RF) plasma electrodes.

As one of the leading providers of the most diverse and wide-ranging laser and RF therapies, the Lysistech is particularly committed to the constant development and improvement of medical treatment techniques, giving top most priority to safety and cost-efficiency.

With premium-quality laser and RF systems and all the related equipment, Lysistech gives you the opportunity to broaden and optimise the range of treatments you offer in order to ensure the highest levels of patient satisfaction. Lysistech offers you unique solutions that allow you to focus fully on the treatment of your patients.

WHY LYSISTECH?

Lysistech stands for the solution (or lysis) of medical challenges.

-Product Development Team at Lysistech-

Our clients' satisfaction is the main focus of all our actions. Along with our suppliers, we ensure that all our products are always of excellent quality.

Based on this deep cooperation, we are able to adjust our products to the individual requirements of our partner hospitals, consistently optimising the user-friendliness and effectiveness of our treatments. This approach allows us to continually set new milestones in the area of minimally invasive surgery.

Sports Medicine with our RF-Plasma Surgery Range

The Technology 1

Top Products 2

Product Range 3

Product Description 4



/// The technology

HOW PLASMA EXCISION WORKS

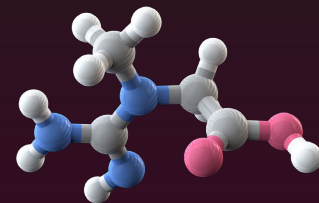
Low-Temperature Plasma Excision

Plasma excision (RF-plasma ablation) is a controlled, non-thermally regulated procedure. Bipolar radio frequency (RF) energy is transmitted through a conductive medium (e.g. saline solution) to generate a precisely focused, charged plasma field. The plasma field has enough energy to break down the molecular bonds in the tissue. The tissue is disintegrated at relatively low temperatures (40 °C–70 °C).¹

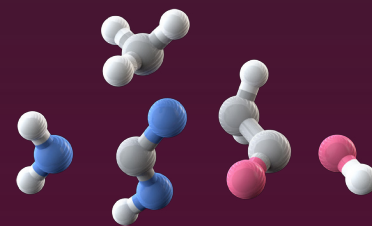
Since the RF current does not flow directly through the tissue during the ablation procedure, there is only minimal heating of the tissue. The result is volumetric ablation of the target tissue with minimal damage to the surrounding healthy tissue.

During the ablation, high voltage is applied to the electrically conductive fluid (e.g. saline solution), which is located between the electrode and the tissue. The high voltage converts the fluid into an ionised vapour layer (plasma).

The plasma contains ions in excited state that hit the tissue at a high speed and break down the molecular bonds. This results in the formation of simple molecules such as small hydrocarbons and gases, which are drawn off from the operation site through the plasma electrode using suction, effectively removing the tissue.

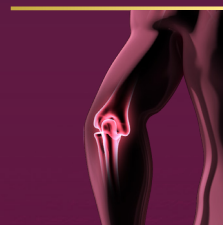


A typical large organic molecule (protein) before the ablation procedure with RF-plasma



The plasma field breaks breaks down molecular bonds, allowing controlled ablation

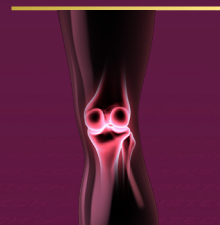
POSSIBLE APPLICATIONS OF THE TECHNOLOGY IN ARTHROSCOPY:



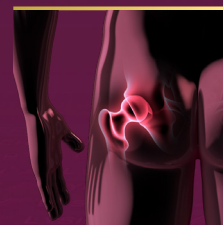
ELBOW



SHOULDER



KNEE



HIP

/// The Technology

OUR TOP PRODUCT: MasterVac 90

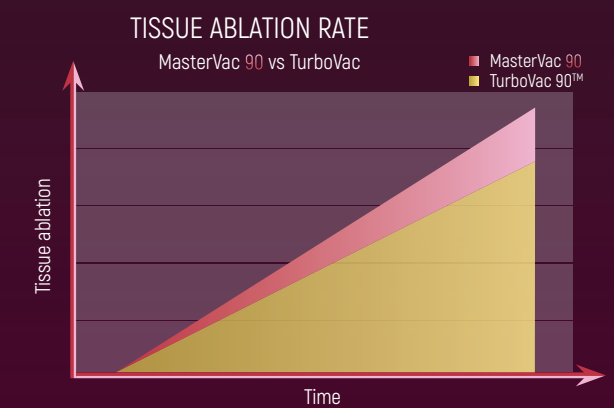


MasterVac 90

- Our best-seller in the sports medicine segment
- A multi-functional instrument for arthroscopic interventions in the knee and shoulder area
- Improved visibility & ablation performance through integrated suction & precise ablation field generation

Performance up to 20% higher

- More efficient than standard arthroscopic RF electrodes in the market
- More effective and gentle than other arthroscopic shavers³
- The temperature of the ablation field changes the molecular cytokine profile, promoting the self-healing process²



OUR SYSTEM: Effcient 1

The Effcient 1 generator is one of the most dynamic systems on the RF therapy market. The systematic connection between our RF-plasma electrodes and Effcient 1 creates a powerful and responsive plasma layer for rapid ablation, which remains highly precise. The Effcient system provides a unique combination of features, designed for a smooth and trouble-free surgical procedure.

System features:

- Our multi-polar electrodes in the Effcient system generates a stable plasma layer, which allows rapid, high-performance ablation
- Controllable coagulation in the new Effcient range staunches severe haemorrhage sites while allowing better visibility.
- Automatic instrument protection in the new Effcient range automatically cuts off power in the immediate vicinity of metal objects, or in the event of contact with them. RF energy supply is restored only after a safe distance has been established between the instrument and the metal object.



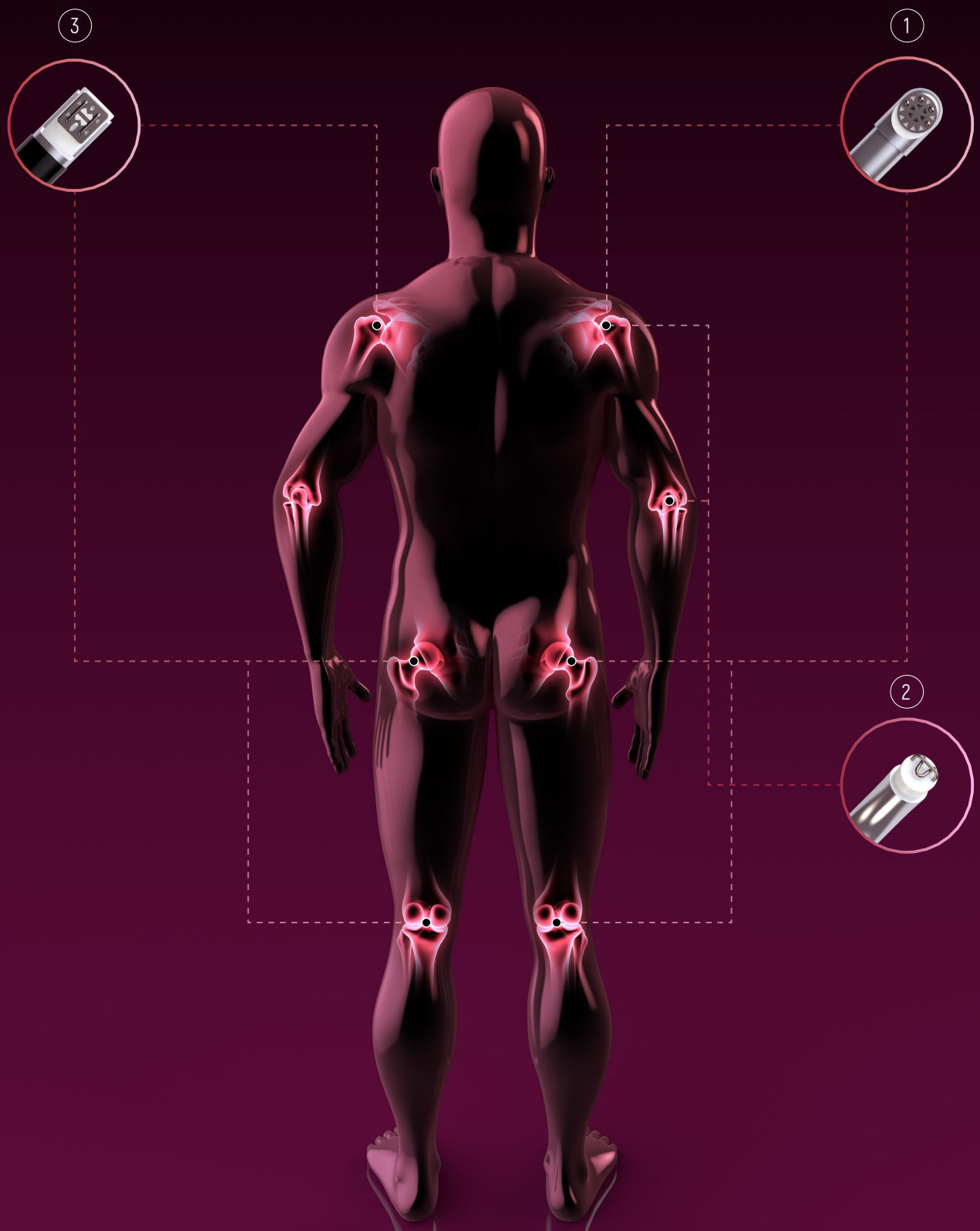
TECHNICAL FEATURES

OUTPUT POWER	AC 220V/50 Hz
INPUT POWER	750 VA
POWER SETTINGS	1-10*
CONTROLLABLE COAGULATION	YES

Product Range

Product Description

OUR RANGE OF PRODUCTS FOR YOUR SPORTS MEDICINE REQUIREMENT:



1 MasterVac 90

The MasterVac 90 electrode allows extensive and highly precise tissue debridement in the following procedures:

- Subacromial decompression (acromioplasty)
- ACL/PCL debridement (notchplasty)
- Synovectomy
- Bursectomy

TECHNICAL FEATURES	
Bending angle	90°
Shaft diameter	4.00 mm
Tip diameter	5.25 mm
Integrated suction	Yes
Integrated cable	Yes
Ablation area	≤ 200 μm
Power setting*	7-9



2 Sinew 50

- Bending angle: 50°
- Shank diameter: 3.75 mm
- Effective ablation of tissue through integrated suction and optimal visibility
- Particularly effective in the knee due to its bevelled electrode tip



3 NeoVac 90

- Bending angle: 90°
- Shank diameter: 3.75 mm
- Effective ablation of tissue through integrated suction and optimal visibility
- An extremely slim design ensures higher precision in narrow joints

OUR PRODUCT RANGE BASED ON INDICATION*:

PRODUCT DESCRIPTION	PRODUCT NUM-										
		NOTCHPLASTY	SYNOVECTOMY	BURSECTOMY	LABRUM TEAR RESECTION	TFCC INJURY OF THE WRIST	CHONDROPLASTY	LATERAL RELEASE	ACROMIOPLASTY	MEINISCECTOMY	
MasterVac 90	LAC405E	X	X	X	X				X		
Sinew 50	LAC404		X							X	
NeoVac 90	LAC390	X	X	X	X				X		
Efficent 1	LARS600	X	X	X	X	X	X	X	X	X	

* Possible applications listed here are for information purposes only and may differ based on user experience.

References

1. Stalder KR, Woloszko J, Brown IG, Smith CD. Repetitive Plasma Discharges in Saline Solutions. Applied Physics Letters 2001;79:4503-4505.
2. Enochson, L., Sönnergren, H. H., Mandalia, V. I., & Lindahl, A. (2012). Bipolar radiofrequency plasma ablation induces proliferation and alters cytokine expression in human articular cartilage chondrocytes. Arthroscopy: The Journal of Arthroscopic & Related Surgery, 28(9), 1275-1282.
3. King, J. S., Green, L. M., Bianski, B. M., Pink, M. M., & Jobe, C. M. (2005). Shaver, bipolar radiofrequency, and saline jet instruments for cutting meniscal tissue: a comparative experimental study on sheep menisci. Arthroscopy: The Journal of Arthroscopic & Related Surgery, 21(7), 844-850.
4. Woloszko J, Stalder KR, Brown IG. Plasma Characteristics of Repetitively-Pulsed Electrical Discharges in Saline Solutions Used for Surgical Procedures. IEEE transactions on plasma science 2002; 30 (3): 1376-1383.

NeoVac 90

MasterVac 90



Sinew 50

Lysistech AG

Kohlmahd 2 | 9485 Nendeln | Liechtenstein

Tel.: +423 230 20 22 | Fax: +423 230 20 23

E-Mail: kontakt@lysistech.li | Web: www.lysistech.com