



ENDOSCOPES FOR MINIMALLY INVASIVE SPINE SURGERY



**PRODUCT
OVERVIEW**

ENDOSCOPES

Endoscopic examinations and procedures have become an indispensable part of modern medicine. joimax® specializes in complete systems for minimally invasive procedures on the spinal column and offers a wide range of endoscopes for this purpose.

The state-of-the-art products are always developed based on scientific expertise as well as on the needs and requirements of physicians and patients with the aim of optimal handling, best patient treatment and rapid recovery.

joimax® ENDOSCOPES – THE RIGHT ONE FOR EVERY INDICATION

All segments of the spine can be treated with joimax® endoscopes. Both, transforaminal and interlaminar accesses to the spinal canal are possible as well as intradiscal interventions. In addition, spinal endoscopy enables targeted pain treatment at facet joints and the sacroiliac joint (SIJ).

joimax® endoscopes are available in a variety of designs to provide optimal access to individual pathology with the smallest possible trauma and the largest possible working space. For this purpose, the endoscopes differ in outer diameter, working channel diameter, optical angle, irrigation channel diameter, working length, and overall length.

The possibility of irrigation and suction with joimax® endoscopes allows a constant full view of the operating field.

joimax® endoscopes can be autoclaved up to 134°C for 18 minutes at a maximum of 2.2 bar.

OPEN DISSECTION OR ENDOSCOPIC INCISION?

Endoscopic spinal surgery can be used to treat herniated discs, spinal canal stenoses and facet syndrome quickly and minimally invasively. Therefore, just a small incision of a few millimeters is required. The surrounding tissue is simply stretched without cutting, and natural access to the spinal canal, e.g. the foramen intervertebral, is used. In contrast to open microsurgical procedures, the back muscles and other tissue remain almost intact.

4K
UHD

BRILLIANT VISIBILITY UP TO 4K UHD

The latest generation of joimax® endoscopes provides an excellent view in the entire surgical field and are adapted to the specific fields of application, indications and pathologies.

With the complete 4K UHD system, you get the perfect image: camera, endoscope and screen complement each other perfectly and lead to the best image quality.

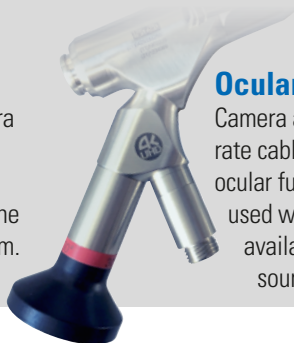
TWO OPTIONS TO CONNECT A CAMERA:

Combo / C-Version

User-friendly combined camera cable adapter for camera and light source in single cable technology. To be used with the joimax® Camsource® LED system.

Ocular / O-Version

Camera and light source with separate cable (two-cable technology; ocular funnel technology). Can be used with most commercially available camera and light source systems.

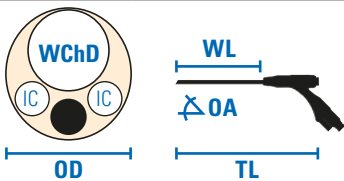


REF	Description	Compatible Systems	OD	WChD	OA	WL	TL
ENDOSCOPES FOR TRANSFORAMINAL PROCEDURES							
FS5831120C	FHD Foraminoscope®	TESSYS® Thx	5.8	3.1	45°	120	200
FS58311200	thoracic						
FS6342181C	FHD Foraminoscope®	TESSYS®	6.3	3.7	30°	171	251
FS63421810							
FS6342181C-4K	4K UHD Foraminoscope®	TESSYS®	6.4	3.7	30°	171	251
FS63421810-4K							
FS6342181-15C	FHD Foraminoscope®	TESSYS®	6.3	3.7	15°	171	251
FS6342181-150							
FX6342208C	FHD Foraminoscope® XT	TESSYS® XT	6.3	3.7	30°	208	288
FX63422080							
FX6342208C-4K	4K UHD Foraminoscope® XT	TESSYS® XT	6.4	3.7	30°	207	287
FX63422080-4K							
FS7347171C	FHD Foraminoscope®	TESSYS® TranSAP	7.3	4.7	30°	171	251
FS73471710							
FS7347171-15C	FHD Foraminoscope®	TESSYS® TranSAP	7.3	4.7	15°	171	251
FS7347171-150							

ENDOSCOPES FOR INTERLAMINAR PROCEDURES							
LS6342125C	FHD Laminoscope®	iLESSYS®, MultiZYTE® Facet/Sacroiliac	6.3	3.7	30°	125	205
LS63421250							
LS7347150C	FHD Laminoscope® Pro	iLESSYS® Pro	7.3	4.7	15°	150	230
LS73471500							
LS1006125C	FHD Laminoscope® Delta	iLESSYS® Delta	10	6	15°	125	205
LS10061250							

ENDOSCOPES FOR CERVICAL PROCEDURES							
CH402100C	FHD Cervical Hybridscope	CESSYS® Ventral	2.6/3.9	2.1	9°	100	194
LS7347068C	FHD Laminoscope®	CESSYS® Dorsal	7.3	4.7	15°	68	148
LS73470680	CESSYS® Dorsal						
MS5830125C	FHD Multiscope	MultiZYTE® Facet Cervical	5.8	3.1	30°	125	205
MS58301250							

NUCLEOSCOPES FOR INTRADISCAL PROCEDURES							
PS2730246C	FHD Nucleoscope Lumbar	intENTS® Lumbar	2.7	–	30°	246	306
PS27302460							300
PS1909132C	FHD Nucleoscope Cervical	intENTS® Cervical	1.9	–	9°	132.5	217
PS19091320							

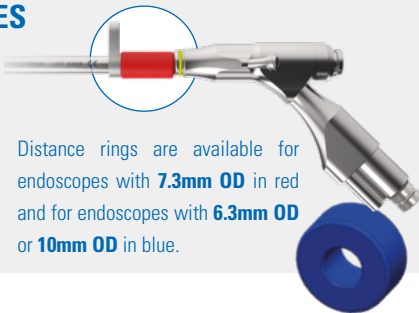


OD = Outer diameter
WChD = Working channel diameter
IC = Irrigation channel diameter (see inside)
All lengths and diameters in millimeters (mm)

OA = Optical angle
WL = Working length
TL = Total length

DISTANCE RINGS FOR WORKING TUBES

The distance ring slides onto the endoscope before it is inserted into the working tube. As a result, the endoscope is aligned with the working tube or stands a few millimeters back. This ensures better orientation and easier handling as the endoscope is held at a fixed position.

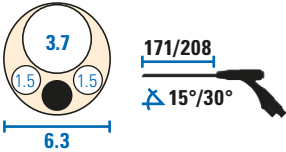


Distance rings are available for endoscopes with **7.3mm OD** in red and for endoscopes with **6.3mm OD** or **10mm OD** in blue.

ENDOSCOPES – THE RIGHT ONE FOR EVERY INDICATION

ENDOSCOPES FOR TRANSFORAMINAL PROCEDURES AT THE THORACIC AND LUMBAR SPINE

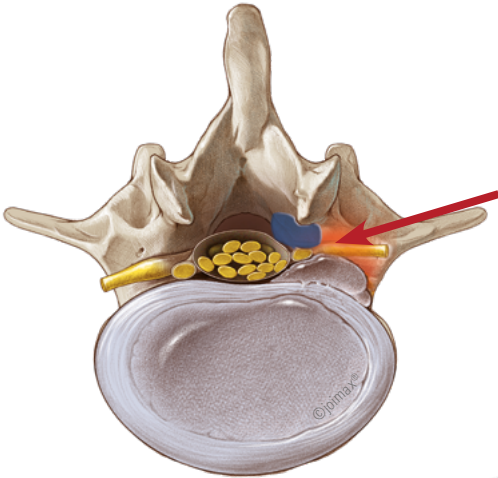
TESSYS® / TESSYS® 17



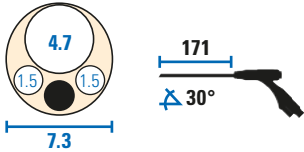
Foraminoscopes® are part of the **TESSYS® (Transforaminal Endoscopic Surgical System)** systems. They are available in four versions.

The **TESSYS®** method uses the **transforaminal access** via the Kambin triangle to remove a herniated disc or to treat a foramen stenosis. Herniated discs and sequestering tissue are removed directly through the foramen, which is gradually extended with special reamers or drills.

Even recess stenoses are treated transforaminal with joimax® Shaver Blades for gentle removal of soft and bony tissue.



TESSYS® TransAP



Foraminoscopes® are available in three lengths, depending on the spinal segment to be treated. The respective outer diameters are selected accordingly. The 45° optical angle of the smaller **Foraminoscope® thoracic** is ideal for full visualization in small spaces, especially in the thoracic region.

TESSYS® 7thx

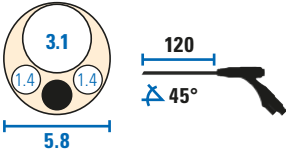


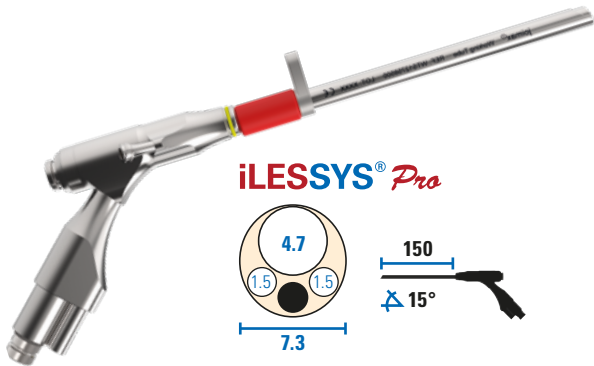
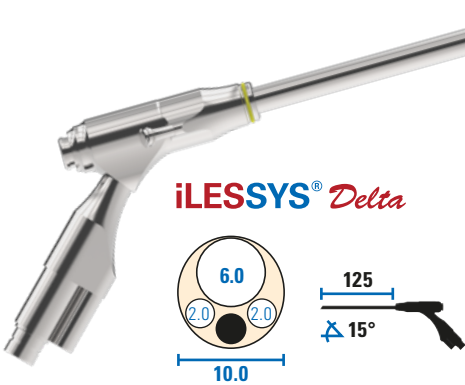
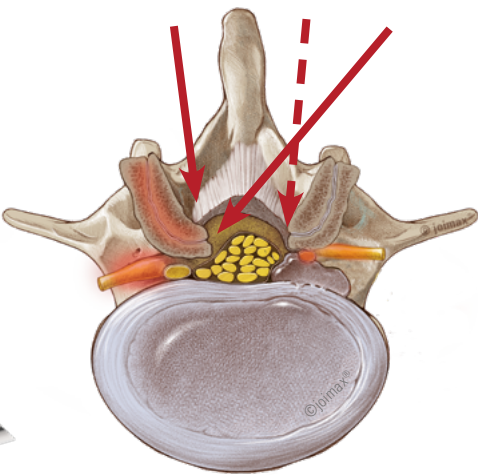
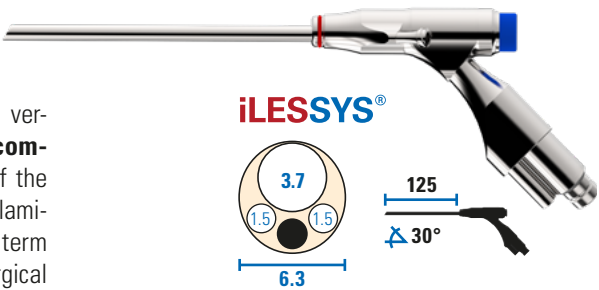
Fig.: TESSYS® Foraminoscope®
with 171mm working length in original size

ENDOSCOPES FOR INTERLAMINAR SURGERY AND DORSAL PAIN THERAPY

Laminoscopes® are available in three versions. They are used for interlaminar **decompression** or **deherniation**, especially of the lower lumbar spine with its large interlaminar windows. joimax® has defined the term **iLESSYS®** (InterLaminar Endoscopic Surgical System) method for this.

The **iLESSYS®** standard system is characterized by the smaller **Laminoscope®**, which is also used for pain treatment of the sacroiliac joint (SIJ).

iLESSYS® Pro enables ipsi- and contralateral intraspinal bony decompression/deherniation due to the larger endoscope length. With the **iLESSYS® Delta** system, even central stenoses can be completely treated. It allows comprehensive removal of bony structures due to its larger working tube.

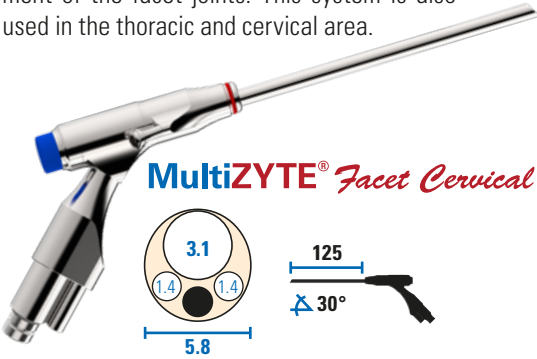


The shorter **Laminoscope® CESSYS® Dorsal** is used for cervical procedures using the **CESSYS®** method (see top right).



ENDOSCOPES FOR FACET JOINT AND SACROILIAC JOINT TREATMENT

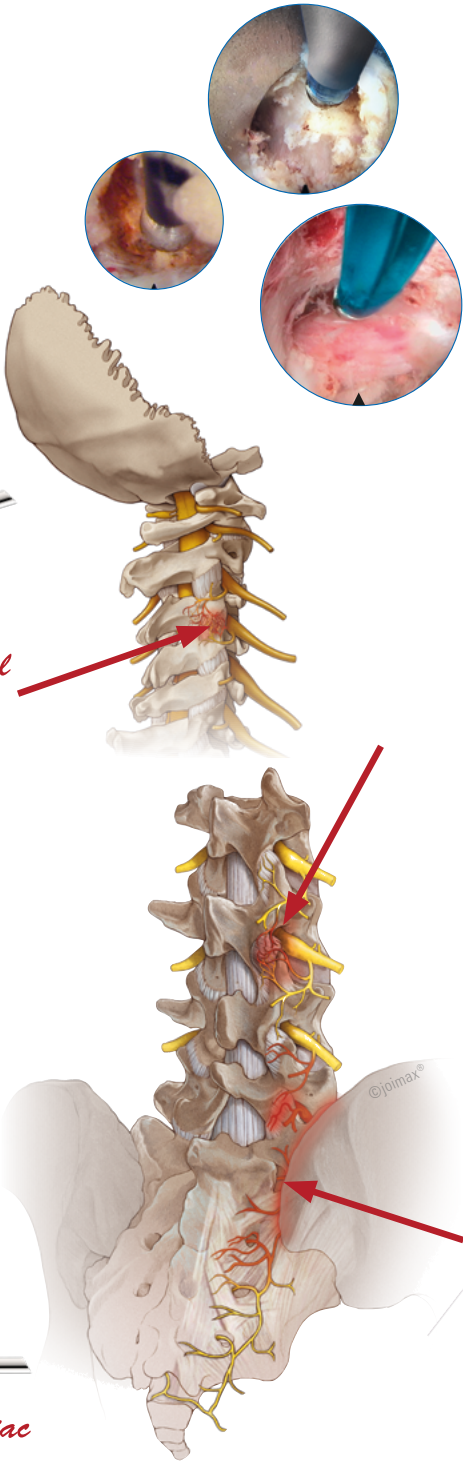
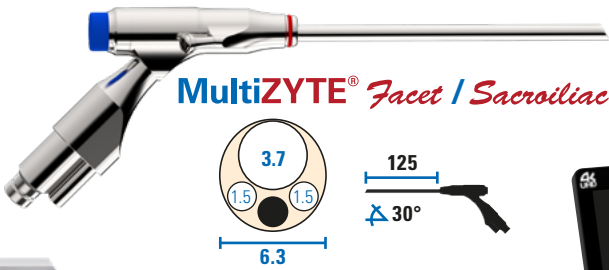
The **MultiZYTE®** (Endoscopic Facet and Sacroiliac Treatment Set) **Facet Method** uses the endoscope for minimally invasive pain treatment of the facet joints. This system is also used in the thoracic and cervical area.



MultiZYTE® Sacroiliac is used for the treatment of the sacroiliac joint (SIJ) with a **Laminoscope®** (see left).

In both cases, hypertrophic and inflammatory tissue are removed, the joint capsule is opened, and the pain-conducting nerve of the dorsal ramus medialis or the pain-conducting nerves emerging from the sacral foramina are treated.

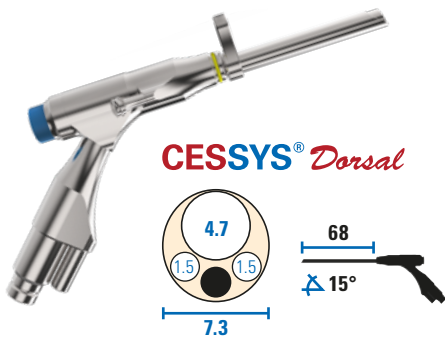
Various RF/HF probes, Legato® (monopolar and bipolar) and Vaporflex® (see pictures above right) are used, which are operated with the Endovapor® 2.



THE COMPLETE 4K UHD SYSTEM FOR THE PERFECT PICTURE

Camera, endoscope and monitor are perfectly suited for best image quality.





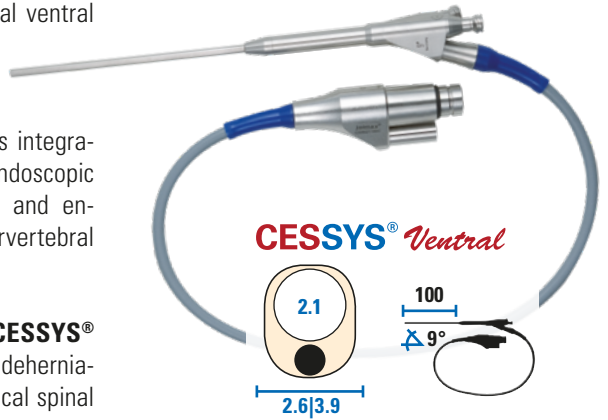
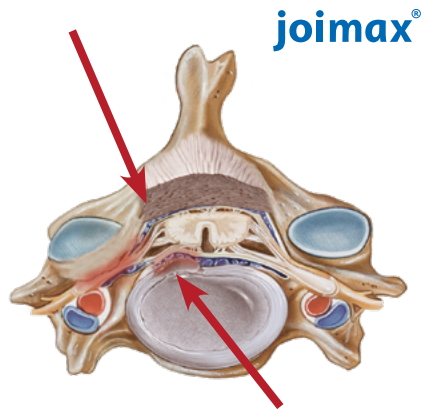
CESSYS® Dorsal

ENDOSCOPES FOR CERVICAL SURGERY

Cervical disc herniations and spinal canal stenoses can be treated with special ventral or dorsal endoscopes.

The small **cervical hybridscope** is integrated into the **CESSYS® (Cervical Endoscopic Surgical System) Ventral** System and enables ventral access through the intervertebral disc space.

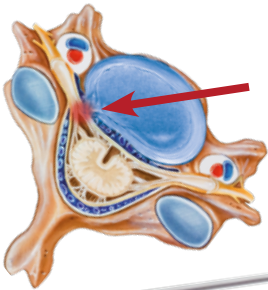
With the larger **Laminoscope® CESSYS® Dorsal**, larger decompressions and dehorniations can be treated within the cervical spinal canal via the posterior access.



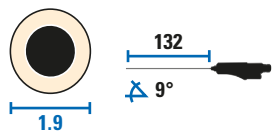
CESSYS® Ventral

ENDOSCOPES FOR INTRADISCAL PROCEDURES

joimax® offers two nucleus therapy sets for the intradiscal treatment of nerve compression and discogenic pain.



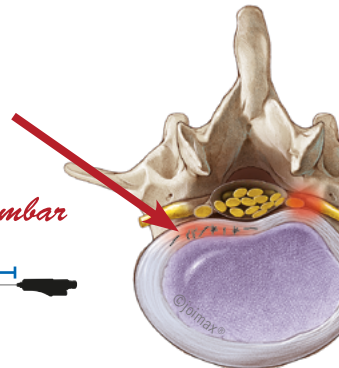
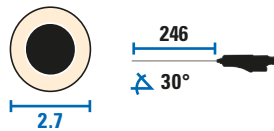
intENTS® Cervical



Using **Nucleoscopes**, the volume of the nucleus pulposus is reduced under visual control to achieve decompression of the nerve root.

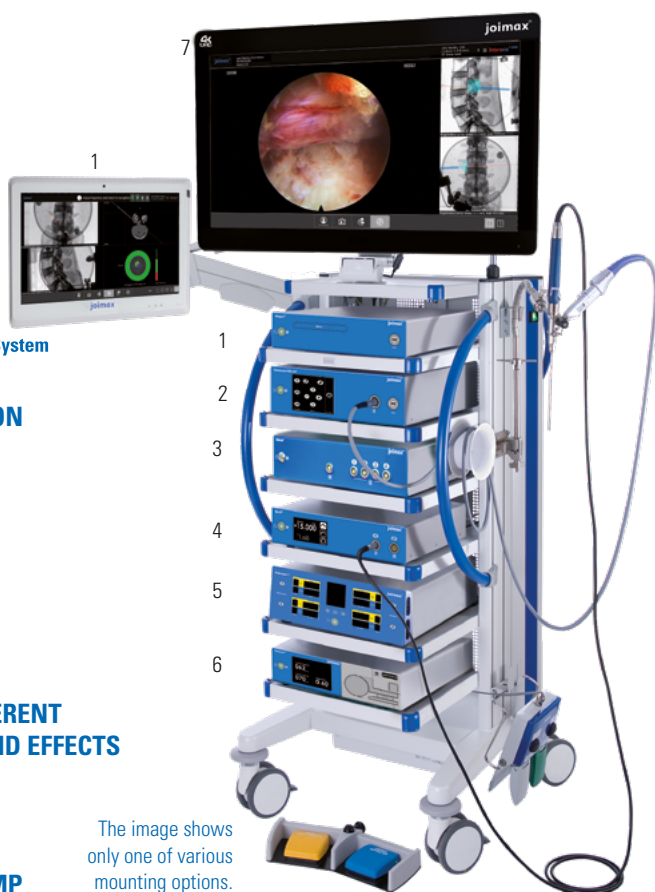
The **intENTS® (Interventional Endoscopic Surgical System) Lumbar** System contains the regular **Nucleoscope**, while the **intENTS® Cervical** System uses the smaller **Nucleoscope Cervical** for fine structures and very small spaces.

intENTS® Lumbar



The optimal solution for spinal surgery and neurosurgery.
All devices are aligned with each other and are specifically
designed for the treatment of sensitive structures.

- 1 **Vitegra®**
Visual Integration System
FULLY INTEGRATED DIGITAL
DOCUMENTATION SYSTEM
- 2 **Camsource® LED**
Camera & Light Source System
BRILLIANT IMAGES UP TO 4K
- 3 **Intracs® em**
Integrated Navigation Tracking & Control System
SIMPLE AND SAFE
ELECTROMAGNETIC NAVIGATION
- 4 **Shrill®**
Shaver Drill System
MULTI-FUNCTIONAL DRILL
AND RESECTION SYSTEM
- 5 **Endovapor® 2**
Multi Radio Frequency System
COMBINES A VARIETY OF DIFFERENT
ELECTRO-SURGICAL MODES AND EFFECTS
- 6 **Versicon®**
Versatile Irrigation Control
MULTI-RANGE IRRIGATION PUMP
FOR CLEAR VISIBILITY AND FLEXIBLE USE
- 7 **JFMS 2620 | 3220 | 314K**
HIGH DEFINITION MEDICAL
DISPLAYS FHD AND 4K UHD



The image shows
only one of various
mounting options.

For Intracs® em, FDA registration is in process.

joined minimal access

joimax® GmbH

Amalienbadstrasse 41, RaumFabrik 61
76227 Karlsruhe, Germany

Phone +49 (0) 721 255 14-0
Fax +49 (0) 721 255 14-920
E-Mail info@joimax.com
Net www.joimax.com

joimax®, Inc.

140 Technology Drive, Suite 150
Irvine, CA 92618, USA

Phone +1 949 859 3472
Fax +1 949 859 3473
E-Mail info@joimaxusa.com
Net www.joimax.com

joimax® Asia.

Rykadan Capital Tower,
135 Hoi Bun Road,
Kwun Tong, Hong Kong

Phone +852 29116418
E-Mail asia@joimax.com
Net www.joimax.com

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