



PLDD – Percutaneous Laser Disc Decompression

*diamax® 1550 – the innovative system
for minimally invasive spinal disc surgery*

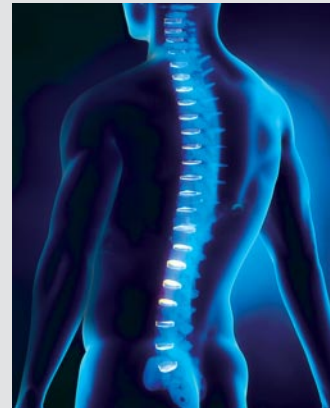
PLDD - Percutaneous Laser Disc Decompression with the diomax® 1550

*The innovative system for minimally
invasive spinal disc surgery*

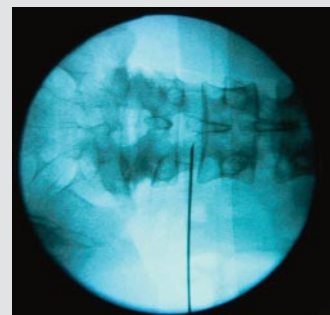
- Faulty posture at work and lack of physical activity are just two of the numerous reasons why so many of us wrestle with back pain.
- Today, it is postulated that 70% to 85% of the Western world will suffer degenerative back pain during their lifetime. In 10% of cases this pain becomes chronic.*
- In particular, protruding and herniated discs can cause aggravating pain which may even radiate to the patient's extremities.
- With the modern laser system diomax® 1550 and its accessories, KLS Martin offers a minimally invasive modality for Percutaneous Laser Disc Decompression (PLDD).

Benefits of PLDD:

- **Local anaesthesia** allows the treatment of patients at risk.
- **Very short operating time** compared with open procedures
- Low rate of **complications** and postoperative inflammation
- **Fine-needle with very small puncture site** and therefore no need for sutures
- Immediate significant **pain relief and mobilization**
- Shortened **hospital stay and rehabilitation**



MRI of a herniated disc. Courtesy of the National Clinical Neuroscience Institute in Budapest, Hungary.



PLDD: Both fine-needle and fiber are introduced into the diseased disc under fluoroscopy.

* Waddell, G., *Low back disability. A syndrome of Western civilization.* Neurosurg Clin N Am, 1991. 2(4): p. 719-38.

Waddell, G., *Low back pain: a twentieth century health care enigma.* Spine (Phila Pa 1976), 1996. 21(24): p. 2820-5.

“The diomax® 1550 laser by KLS Martin is a rapid and effective treatment modality for herniated discs. Its wavelength of 1,550 nm is ideal for vaporizing the nucleus pulposus.

The accessories permit simple access, and the thin fibers allow precise control of the thermal effect in the tissue. This minimally invasive technique is something that I do not want to miss anymore.”

Dr. Norbert Lekka
National Clinical Neuroscience Institute,
Budapest, Hungary



The innovative PLDD system from KLS Martin comprises the diode-laser diomax® 1550, a PLDD introducer set, and a fine bare fiber.

- Due to the high water content of the nucleus pulposus the wavelength of the diomax® 1550 is absorbed very well and rapidly induces optimum vaporization.
- The thin flexible bare fiber combines the best possible spot size with the greatest accuracy.
- The bare fiber can be introduced quickly through the long fine-needle and easily locked in place with the Y-adapter.



Quincke tip spinal needle



Fine-needle with adapter and inserted bare fiber

Specifications diode-laser diomax® 1550	
Laser power	0.1 W – 15 W
Wavelength	1550 nm
Laser mode	Continuous-wave and pulsed
Pulse type	Single, multiple, and cyclic pulses
User interface	Soft keys and rotary push button
Display	TFT color display and color ring
Programs	Memory for 50 programs
Storage	Activation and error memory
Laser class	4
Pilot laser wavelength	635 nm
Pilot laser class	3 R
Pilot laser power	3 mW ± 20%, adjustable 2% – 100%, continuous and blinking with 0.5 Hz / 1 Hz / 2 Hz / 3 Hz / 4 Hz / 5 Hz
Weight	13.8 kg
Dimensions (W x H x D)	381 mm x 195 mm x 390 mm

Order information	
79-520-01-04	Diode-laser diomax® 1550
79-700-00-04	Introducer set for PLDD, sterile, single use, comprising: <ul style="list-style-type: none"> ■ Fine-needle, 18 G, 20 cm ■ Y-adapter with Luer-Lock port
79-700-40-04	Bare fiber 400 µm single use
79-111-00-04	Fiber preparation set, autoclavable
Optional:	
79-700-30-04	Bare fiber 300 µm single use
79-700-41-04	Bare fiber 400 µm, autoclavable

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