# Metrum CryoFlex www.metrum.com.pl

medical devices manufacturer

# **SWING** surgical diode laser

The latest SWING diode laser by Metrum CryoFlex is the first Polish laser with 1470nm wavelenght power 17 i 40 Watt
wavelenght 1470 nm
time of impulse from 0.2 ms
weight 12 kg



PLDD (Percutaneous Laser Disc Decompression) along with IDET (Intradiscal Electrothermal Therapy) and nerve cryoablation are recognized as minimally invasive procedures in managing radicular spine pain due to facet disorders.





Diode laser made by Metrum Cryoflex is the first surgical laser of high power, manufactured in Poland. All systems in the unit are carefully selected by Metrum Cryoflex R&D division.

# Why diode laser SWING is the best unit for PLDD procedures?

Surgical laser SWING is equipped with a special diode working on 1470nm wavelength. The 1470nm laser light beam has suitably low melanin and hemoglobin absorption for skin penetration and respectively high water and fat absorption for selective photothermolysis. The wavelenght of the 1470nm laser is absorbed by cellular water 40 times better than the wave of 980nm laser and 60 times better than the wave of Nd:YAG 1064nm laser.

PLDD procedure is most effective when device operates on low power and in ultra pulse mode (1.2ms) which radically decreases side effects: carbonization, necrosis, increased gas amount. SWING works in three modes: single impulse, impulse in 'packages' and continuous.

## **Application**

Indications for laser nucleoplastics include disc bulges without ruptures in annulus fibrosus and disc space collapse. The best effects are obtained when disc bulge is no bigger than 6mm.

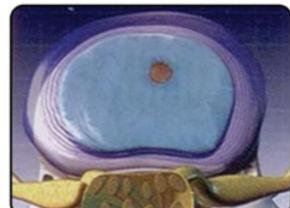
### **Procedure**

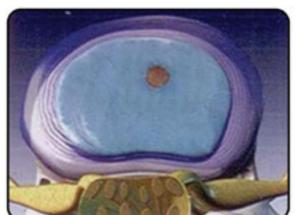
PLDD procedure is performed using local anesthesia. Optical fiber is inserted in special cannula under fluoroscopic guidance. After applying contrast to the facet it is possible to check cannula's position and the condition of the disc bulge. Starting laser initiates decompression and lowers intradiscal pressure.

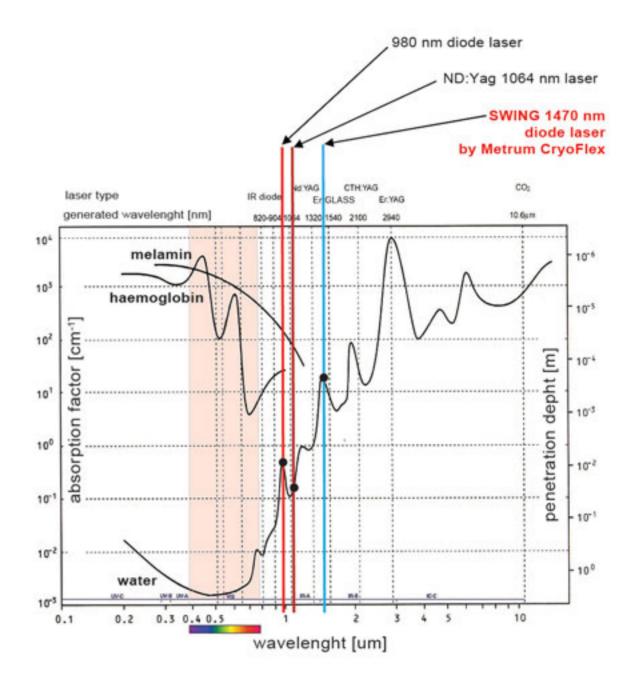
The procedure is done from the posterior-lateral approach with no interference to vertebral canal, therefore, there is no possibility of damaging dural sac in case of operating on higher segments or spinal roots. It is a reparative treatment, but there is no possibility to reinforce annulus fibrosus. During PLDD disc volume is minimally decreased, however, disc pressure can be significantly lowered. In case of using laser to disc decompression, small amount of nucleus pulposus evaporates.

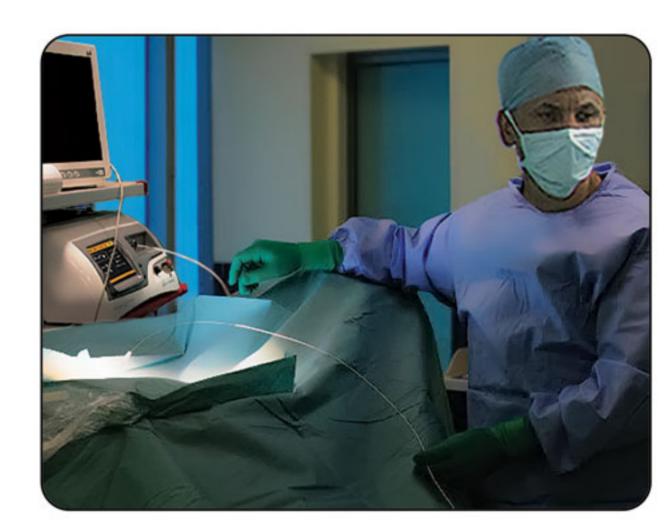












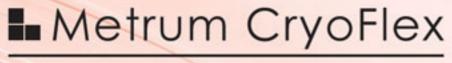
### Optical fibers and accessories

Our offer includes:

- Whole range of optical fibers (disposable, reusable) in different sizes: 200, 400, 600 um.
- Fiber varying according to radiation: barefiber (light to the front), sidefire fiber (light on the side), radial fiber (360°).
- Fibers specially designed for direct or endoscopic approach.
- Fibers ending with standard connector to laser (SMA 905).
- Other accessories: sliders, cannulas and mandrins for fiber insertion into body cavities, ceramic scissors, fiber strippers, safety glasses.



Medical Devices Manufacturer we have medical device's quality management system ISO 13485:2003



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