

A stylized illustration of a human spine from the neck to the lower back. The vertebrae are shown in a light blue/purple hue. Several intervertebral discs are highlighted in a glowing pink/magenta color. Two circular callouts, one around the cervical (neck) region and one around the lumbar (lower back) region, emphasize the areas where the ESP pads are used. The background is a dark, textured blue.

CP·ESP®

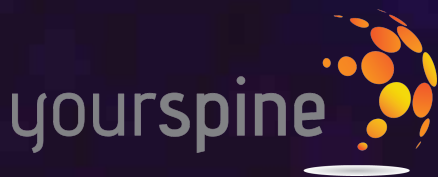
# ESP

ELASTIC SPINE PAD®

A unique concept to replace lumbar and cervical discs  
and preserve spinal motion

LP·ESP®

Distribuidor exclusivo em Portugal:



**FH** ORTHOPEDICS®

# A MONOBLOC TOTAL THAT RESTORES

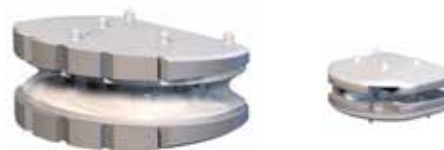


## THE CERVICAL PROSTHESIS

- Heights from 5mm to 7mm
- Improved stability thanks to its anatomical design and spikes
- Easy and fast implantation
- Benefits from over 10 years of development
- 6 degrees of freedom
- Adaptive center of rotation
- No surface bearing for increased lifetime
- Improved stability
- Shock absorbing

## DESIGNED TO REPRODUCE NATURAL PROPERTIES

	Natural Disc	CP-ESP
<b>Flexion(A/P) &amp; Extension</b>	7° / 7°	7° / 7°
<b>Lateral inclination</b>	6° / 6°	5° / 5°
<b>Axial rotation</b>	4° / 4°	3.5° / 3.5°



NORMAL POSITION



FLEXION



AXIAL ROTATION

The ESP disc prosthesis is made of 2 titanium alloy end-plates and an elastomeric cushion. The spikes on the end-plates outer surfaces improve primary fixation. The combination of a hydroxyapatite (HA) coating on top of a T40 rough surface are considered as one of the best existing coating insuring good bony fixation over time. The titanium alloy used for the end plates allows clear medical imaging.

# DISC PROSTHESIS

## NATURAL DISC FUNCTIONS



EXTENSION



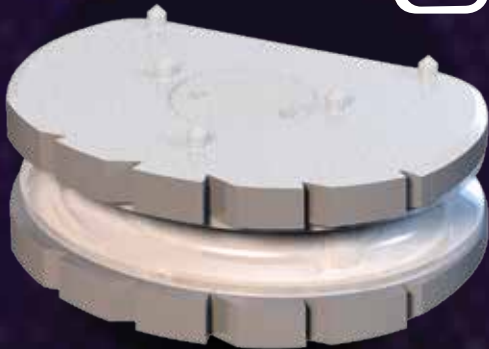
LATERAL FLEXION



COMPRESSION

- Between the 2 titanium end-plates the elastomeric parts are injected for controlled resistance to compression, flexion and rotation. These elastomeric parts are concentric and their fixation prohibits micro motion. The materials used for the implants have been tested for biocompatibility according to the ISO standard 10993.
- Minimally invasive anterior approach which allows reduced hospital stay and improves rehabilitation
- LP-ESP tested up to 40 million cycles
- ESP should give a significant reduction in pain severity, re-establish lumbar curvature and natural disc functions
- ESP allows quick return to normal daily activities

LP·ESP®

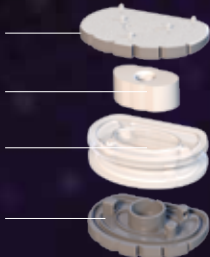


T40 + HAP

SILICONE INNER CORE (ELASTIC NUCLEUS)

POLYCARBONATE URETHANE ANNULUS

TITANIUM PLATES



### THE LUMBAR PROSTHESIS

- Over 10 years of research and development
- 10 years of follow up (since 2004)
- 6° of freedom
- Primary stability thanks to spikes allowing the prosthesis to be implanted anteriorly as well as antero-laterally and to face difficult soft tissue situations
- Adaptive center of rotation
- No surface bearing for an increased lifetime
- Improved stability
- Shock absorbing
- Designed to fit and restore patient lordosis

### DESIGNED TO REPRODUCE NATURAL PROPERTIES

	Natural Disk	LP-ESP
Flexion(A/P) & Extension	2.6 to 4.7 Nm per degree	2 Nm per degree
Lateral inclination	5°	3.5°
Translation	YES	YES
Axial rotation	4 to 6 Nm per degree	2 Nm per degree
Axial compression	1500 to 3000 N per mm	2 Nm per degree
Elastic return	YES	YES

## ORIGIN OF THE DEVELOPMENT:

Concept of a "Silent Block" ESP®

The development of the ESP disc range originally came from Professor Roy Camille, from La Pitié Salpêtrière Teaching Hospital in Paris (France). After inventing the pedicle screw which became the gold standard for Spine fusions, Pr. Roy Camille started to work on analysing the natural disc properties and designed a prosthesis to restore these.

## LP-ESP INDICATIONS

- Lumbar discopathy that is resistant to medical treatment
- Lumbar discopathy disease after treatment of a herniated disc
- Radiculopathy by a recurrence of a disc hernia  
(except for excluded hernias)

## CP-ESP INDICATIONS

The CP-ESP cervical disc prosthesis is designed for specific indications detailed in the sales literature, such as:  
Symptomatic cervical discopathy, defined as (radicular) pain and/or a functional/neurological deficit in the neck the arm with at least one of the following pathologies confirmed by imaging (computerised tomography, MRI or radiography) and having resisted medical treatment for at least 6 months.

- Herniated nucleus pulposus
- Spondylitis (defined by the presence of osteophytes)
- Radicular compression
- Discal hernia
- Nerve compression

### CERVICAL DISCS



Reference	Designation
264363	Size 1 (13X15) height 5
264364	Size 1 (13X15) height 6
264365	Size 1 (13X15) height 7
264366	Size 2 (14X17) height 5
264367	Size 2 (14X17) height 6
264368	Size 2 (14X17) height 7
264369	Size 3 (15X20) height 5
264370	Size 3 (15X20) height 6
264371	Size 3 (15X20) height 7

### LUMBAR DISCS



Reference	Designation
255682	Inclination 7° height 10
255683	Inclination 7° height 12
255687	Inclination 9° height 10
255688	Inclination 9° height 12
255690	Inclination 11° height 10
255691	Inclination 11° height 12

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