

# eDisc™

by Theken



### Natural biomechanics

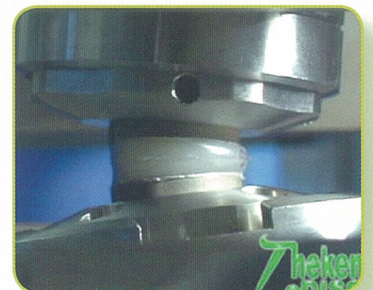
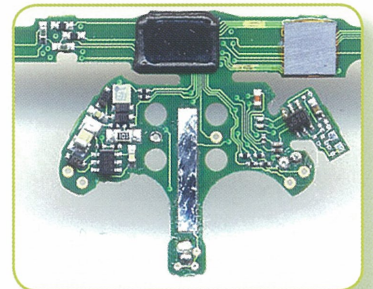
Physiologic design mimics the natural disc by restoring six degree of freedom elastic motion.

### Revolutionary microelectronics

Embedded microelectronics redefines post operative patient management with built-in load sensing and wireless telemetry.

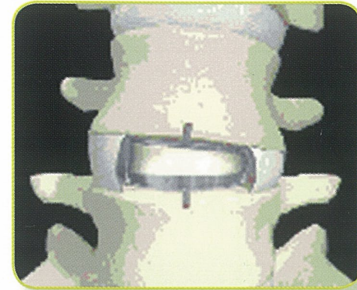
### Theken developed polymer

Theken developed elastomeric polymer is tailored to withstand the motions and loads of the lumbar spine.



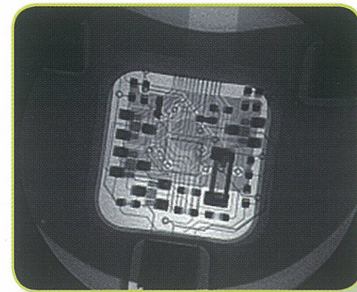
## Natural Biomechanics

Restoring the elastic load bearing characteristics of the natural disc is important for the proper redistribution of the motion segment loads among the facets, ligaments, muscles, remaining annulus and the artificial disc. Proper load sharing in the motion segment and allowing motion in all degrees of freedom is expected to preserve the long term pain-free function of all load bearing elements of the spine.



## Revolutionary Microelectronics

Theken and its partners developed and miniaturized a microelectronic module which revolutionizes intra-operative and post-operative patient management. The eDisc is the first artificial disc to incorporate microelectronics. The information gathered from the eDisc empowers surgeons to better manage their patient's post-operative course. It is specifically targeted at helping to limit patients to moderate activity during the crucial post op period when migration, dislodgement and bone ingrowth are concerns. It may also aid the surgeon in detecting auto-fusion and facilitating a patient's return to work.



## Theken TH200 Polymer

Three years of development has resulted in a polymer with superior crack growth resistance, greater hydrolytic stability and enhanced oxidation resistance. Commercially available implantable urethanes have not been optimized for the demanding application of a spinal disc. Theken has generated in vitro data demonstrating TH200 outperforms its competitors in these important mechanical and bi durability properties.

