



STERNTM FIX

**Sternal
Stabilization
System**

ADAPTATIVE
STERNAL CLOSURE

CARBON
PEEK MATRIX

Implantable compound
for a BONE-LIKE modulus

Carbon fiber reinforced PEEK

This implantable compound combines a high-performance polymer, PEEK-OPTIMA® Natural, with CARBON FIBER for a bone-like tailored stiffness and a more flexible fixation.



MATERIAL STIFFNESS SIMILAR TO BONE

The **exceptional fiber-to-matrix bond** can reduce the occurrence of stress at the bone-implant interface by more **closely matching cortical bone stiffness**.

This results in a **reduced risk of bone cut-through**.

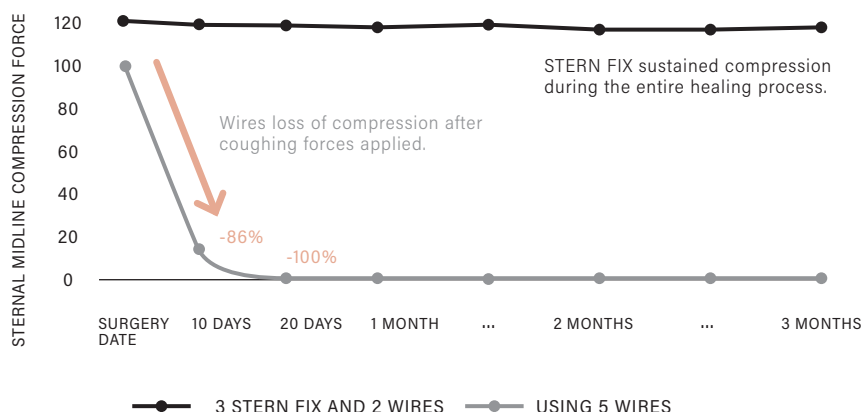
The implant **adapts to the bone thickness and quality**.



CONTINUOUS STERNAL COMPRESSION

STERNAL UNION

DURING 1.8M CYCLES (3 MONTHS HEALING PROCESS) APPLYING NORMAL BREATHING AND COUGHING FORCES.* [1]



The combination STERN FIX + wires provides a continuous contact between the two halves of the sternum (STERNAL UNION), with a sustained compression strength during the entire healing process, even after high forces of separation (like coughing) are applied.

When using traditional wires closure, mechanical testing results showed a significant loss of compression after coughing forces were applied (-86%), up until completely losing the initial closing strength obtained at the beginning of the wires implantation.

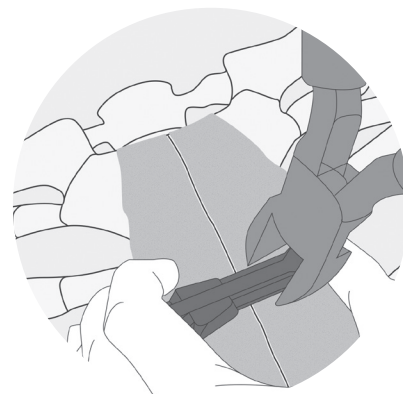
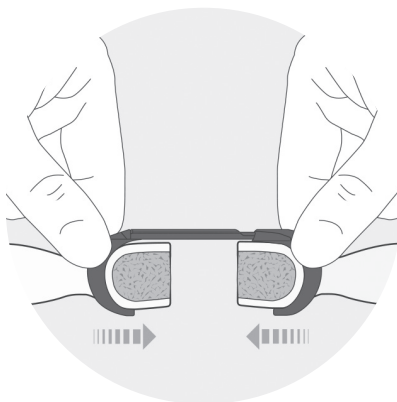
EASY IN / OUT

Intuitive application method with reduced number of instruments.

Atraumatic design.

Needle-free implant that helps avoid injuries caused by sharp metal.

Quick re-entry with a standard wire cutting tool.



* The mechanical test simulated repeated cycles of normal breathing (91.2 N) combined with coughing periods (327.7 N)

[1] J. Adams et al., "Comparison of force exerted on the sternum during a sneeze versus during low-, moderate-, and high-intensity bench press resistance exercise with and without the valsalvamanuever in healthy volunteers". The American Journal of Cardiology. 2014, vol. 113, no. 6, pp. 1045-1048.