



## STERNAL CLOSURE DEVICE

The new solution  
to sternal closure



Recommended for the prevention and  
cure of sternal pseudarthrosis

The sternal closure device enables uncomplicated sternal osteosynthesis to be performed, is easy to apply, and readily adapts to the shape of the sternum.

The device is produced in bio-compatible titanium alloy which enables NMR techniques to be used. The Sternal Closure Device is comprised of two hooks connected by a ratchet rod. One of the hooks is fixed at one end, while the second hook can be moved along the ratchet rod. A sternal closure applying forceps is used to bring the movable hook towards the fixed hook along the ratchet rod. This device allows perfect, progressive sternal compression to be achieved.

### Ancillary Instruments

#### 1- Sternal closure applying forceps

The Sternal Closure Applying Forceps is comprised of two jaws that are used to grip the two hooks of the Sternal Closure Device and bring them towards one another along the ratched rod.

#### 2- Sternal Closure Cutting Forceps

The Sternal Closure Cutting Forceps is used to cut off the excess ratchet rod at the base of the movable hook and to cut the middle of the ratchet rod in two in case immediate entry into the chest cavity is indicated.

#### 3- Sternal Closure Screwdriver

The Sternal Closure Screwdriver is used to loosen the screw on the fixed hook in order to remove the device.

## A new, quick and safe system

### PRINCIPLE :

2 or 3 Sternal closure devices are required depending on the length of the sternum : one is applied to the manubrium and one or two others to the body of the sternum. The closure devices are positioned perpendicular to the major axis of the sternum. The two hooks are applied laterally to the sternum in the two matching intercostal spaces.

### A simplified operating technique

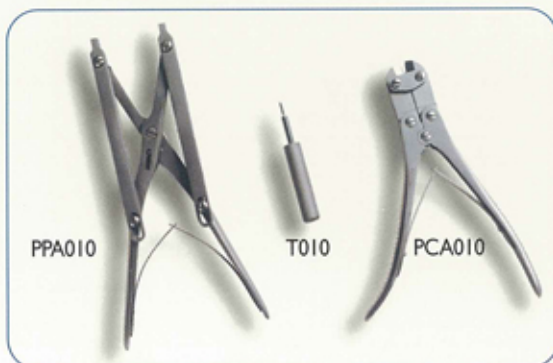
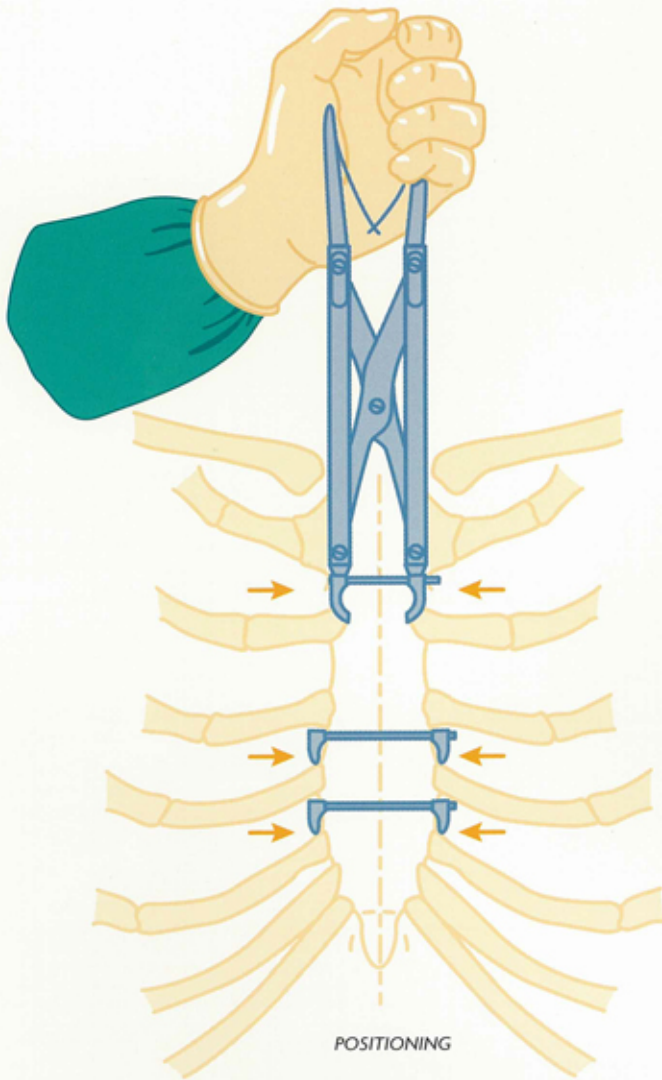
- 1 • Dissect the two intercostal spaces close to the sternum using accepted surgical techniques in order to clear the two lateral edges of the sternum in the area to which the two hooks of the closure device will be applied.

#### CAUTION :

- Take care not to damage the subjacent internal mammary artery.
  - Take care not to make a subjacent pleural opening in the anterior mediastinal-costal recess.
- 2 • Use the applying forceps to bring the two hooks towards one another such that the distance between the two hooks allows positioning of the closure device rod against the front surface of the sternum and the hook in the prepared parasternal intercostal space.
  - Each hook is in contact with the lateral edge of the sternum; the shape, height and width of the hooks are designed to fit the sternum.
  - 3 • When the 2 or 3 closure devices have been fitted, check the positioning and, if necessary, use the applying forceps until the two sides of the sternum are compressed.
  - 4 • Use the cutting forceps to cut off the excess rod at the base of the movable hook.
  - If necessary position a haemostatic compress in the intercostal space in contact with the closure device to ensure haemostasis. The width of the hooks ensures sternal compression without cutting the sternum.
  - If further surgery is required the closure device may be removed immediately either by using cutting forceps to cut the rack rod in two or by loosening the screw that fastens the fixed hook to the rod.
  - The operating technique is identical for pseudarthrosis. The technique should include a stage in which the two sides of the sternal bone are stripped until macroscopically healthy bone is reached before the closure devices are used for the closing procedure.

### REFERENCES :

STERNAL CLOSURE DEVICE : \_\_\_\_\_ **ASC010**  
APPLYING FORCEPS : \_\_\_\_\_ **PPA010**  
CUTTING FORCEPS : \_\_\_\_\_ **PCA010**  
SCREWDRIVER : \_\_\_\_\_ **T010**



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