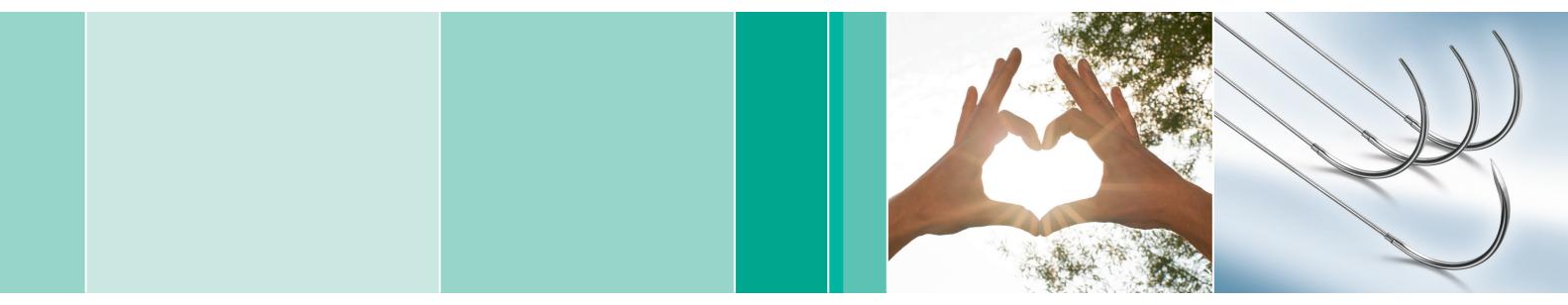
# **Sternum Care**

Reliable solutions for Sternal Closure Steelex<sup>®</sup> Sternum Set, PremiCron<sup>®</sup> Sternum Set and Bone Wax.



Closure Technologies

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# **Sternum Care**

# **Reliable solutions for Sternal Closure**



#### Sternal Closure today

Closing the sternum is almost the last step to be taken after long high demanding cardiac or thoracic surgical procedures. It is the last step but not the least important. **Sternum closure must be reliable, easy and fast.** 

Over one million median sternotomies are performed worldwide yearly and the results of the closure depend heavily on having the adequate products. Complications are not frequent but they are severe when they happen.

B. Braun designs reliable solutions for every sternal closure.

There are different approaches in performing a sternotomy. There is the traditional median sternotomy or the partial sternotomy that can be performed when limited exposure is adequate. **Bone Wax** may be used to stop sternum bleeding after performing the sternotomy.

There are also many techniques for closing the sternum. It may be closed for instance peristernally or intrasternally needing the adequate needle for each approach. In order to pass through the sternum maximal penetration is needed so a needle with 'sternum' point (HRS) would be recommendable whereas for going around the sternum a blunt (HRN) or short cutting (HRC) would be more recommendable.

The gold standard product for closing the sternum is steel wire (Steelex<sup>®</sup> Sternum Set) as it is a fast, reliable and easy way to close the sternum. However polyester (PremiCron<sup>®</sup> Sternum Set) is also used for protecting the sternum in some cases.

B. Braun offers products designed to provide flexible solutions for sternal closure.







Complete median sternotomy

Partial upper sternotomy

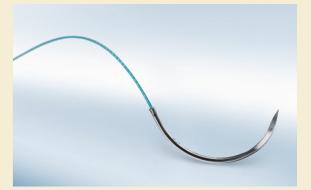
Lower partial sternotomy





### Steelex<sup>®</sup> Sternum Set – for general sternal closure

PremiCron<sup>®</sup> Sternum Set – for delicate sternal closure



Bone Wax – for sternal hemostasis





Passion for Cardiovascular Surgery

# **Sternum Care – Steelex® Sternum Set**

Reliable solutions for every Sternal Closure

# Specific tip design

#### Steelex® Sternum Set

Stainless Steel monofilament armed with high quality needles for a sternal closure in cardiac surgery procedures.

#### Features

- High quality surgical Stainless Steel (316 L) monofilament Sets
- Armed with the adequate range of round bodied needles with blunt cutting and/or sternum tips
- Available in lengths of 45 and 75 cm

### Benefits

- Exceptional tensile strength to hold bone and tissue without rupture
- Atraumatic flexible wires for high anatomical conformity to bone and tissue and easy handling
- Gentle passage through tissue and bone

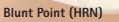
### Steelex® Sternum Set needles

New high performance needles for an easy and atraumatic passage. Designed for achieving excellent bending strength and strong needle to thread attachments.

### Secure Axial attachment

Our secure needle to thread attachment is available with rotating tip for easier handling and less chances of wire kinking as well as with fixed attachment.





for peristernal approach In order to avoid accidental punctions in patient or surgeon.



## Sternum Point (HRS)

for intrasternal approach Superior sternum penetration thanks to it's 1/3 cutting tip.

Short Cutting Point (HRC)

for peristernal approach

Passion for Cardiovascular Surgery



# **Sternum Care – Steelex® Sternum Set**

For Sternum Closure

| Product overview     |                                      |  |  |  |  |  |
|----------------------|--------------------------------------|--|--|--|--|--|
| Structure            | Monofilament (Steelex <sup>®</sup> ) |  |  |  |  |  |
| Colour               | Metallic (Steelex <sup>®</sup> )     |  |  |  |  |  |
| Chemical composition | Stainless steel                      |  |  |  |  |  |
| Coating              | Uncoated                             |  |  |  |  |  |
| Origin               | Metal                                |  |  |  |  |  |
| Sizes                | USP 1 (4 metric) - USP 7 (9 metric)  |  |  |  |  |  |
| Type of absorption   | Non-absorbable                       |  |  |  |  |  |
| Sterilisation        | Ethylene oxide or gamma-irradiation  |  |  |  |  |  |



| Needle  | Thread                        | USP metric |          |        |                      |                      |                      |                      |  |
|---|-------------------------------|------------|----------|--------|----------------------|----------------------|----------------------|----------------------|--|
| length<br>mm                                      | length<br>cm                  | 1<br>4     | 2<br>5   | 3<br>6 | 4<br>6               | 5<br>7               | 6<br>8               | 7<br>9               |  |
| 1/2 circle round bodied needle with sternum point |                               |            |          |        |                      |                      |                      |                      |  |
| HRS 40  | 4 x 45                        | G0617835   | G0617838 |        |                      |                      |                      |                      |  |
| HRS 48  | 4 x 45<br>4 x 45 axial        |            |          |        | G0617784<br>G0617792 | G0617717<br>G0617733 | G0617814<br>G0617806 | G0617795<br>G0617796 |  |
| HRS 48  | 45<br>45 axial                |            |          |        |                      | G0617555<br>G0617545 | G0617556<br>G0617546 |                      |  |
|   | Sow 75<br>75 axial            |            |          |        |                      | G0617579<br>G0617563 |                      |                      |  |
| HRS 60  | 4 x 45<br>4 x 45 axial        |            |          |        |                      | G0617742<br>G0617741 |                      |                      |  |
|   | 2 x 75<br>2 x 75 axial        |            |          |        |                      | G0617776<br>G0617750 |                      |                      |  |
| HRS 60  | 45<br>45 axial                |            |          |        |                      | G0617864<br>G0617865 |                      |                      |  |
|   | 75<br><sup>Sow</sup> 75 axial |            |          |        |                      | G0610008<br>G0617040 |                      |                      |  |

### Steelex<sup>®</sup> Sternum Set in the most convenient Packaging

Long Pack with various pack quantities and sizes

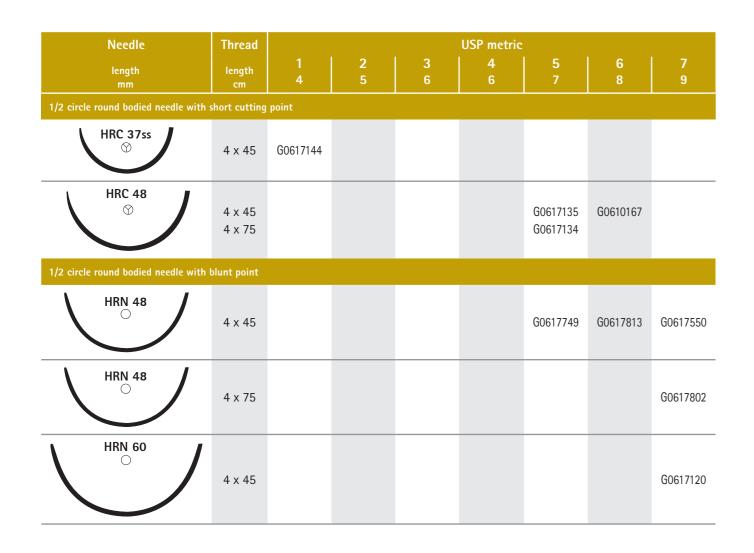
- Avoids memory effect
- Oval winding saving space package (SOW)
- Ready to use
- Available as COMBO (different points in one box for combined approach)

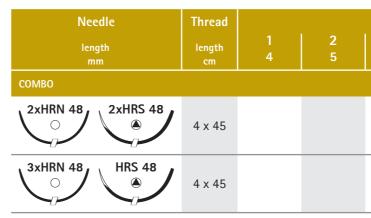




# **Sternum Care – Steelex® Sternum Set**

For Sternum Closure





| 3<br>6 | USP metric<br>4<br>6 | 5<br>7   | 6<br>8   | 7<br>8   |
|--------|----------------------|----------|----------|----------|
|        |                      | G0617880 | G0617881 | G0617882 |
|        |                      | G0617995 | G0617996 |          |

# Sternum Care – PremiCron<sup>®</sup> Sternum Set

Reliable solutions for every Sternal Closure

#### Features

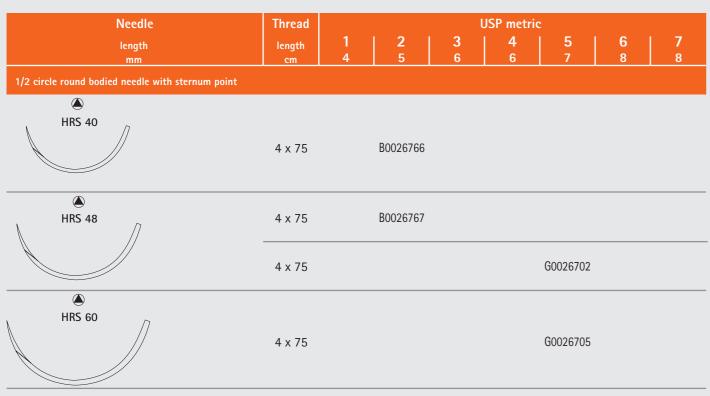
- Synthetic non-absorbable braided polyester
- Armed with sternum point needles

### **Benefits**

- Excellent knotting and handling properties
- Great bone protection thanks to high flexibility
- High tensile strength to keep sternum stable

### Recommended for:

- Pediatric use
- Stainless steel allergic patients
- Weak sternum protection
- Probable reoperations



# **Bone Wax / Bone Wax Stick**

# Mechanical hemostasis of the Sternum

### Features

Bone Wax is a sterile mixture of beeswax (70 %) and vaseline (30 %) to stop bleeding in bones.

#### Benefits

- Direct spreading onto the bleeding sternum
- No need to be moulded or kneaded

### Advantages

- Soft, easy to shape and apply only 'hand-warm'
- Practical, transparent double peel-packs

### Recommended for:

Bone hemostasis after Sternotomy

### Stick format

#### Advantages

- Easy handling
- Unique, practical lipstick format

